



Quest® QoreStor™ 7.0.1

Command Line Reference Guide



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Legend

-  **CAUTION:** A CAUTION icon indicates potential damage to hardware or loss of data if instructions are not followed.
-  **IMPORTANT, NOTE, TIP, MOBILE, or VIDEO:** An information icon indicates supporting information.

QoreStor Command Line Reference Guide
Updated - February 2021
Version - 7.0.1

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Introduction to the Quest® QoreStor™ Command Line Reference Guide

This guide provides detailed information for managing Quest® QoreStor™ data backup operations by using the QoreStor command line interface (CLI).

About the QoreStor CLI documentation

This document provides information about using the QoreStor command line interface (CLI) for managing your data backups, performing a variety of data storage operations, and using containers to meet your backup storage needs.

NOTE: The QoreStor CLI provides one method for managing QoreStor, with the other being the QoreStor graphical user interface (GUI). In some instances, the QoreStor CLI might provide additional features and options that are not available in the QoreStor GUI and vice versa.

Other information you may need

The following table lists the documentation available for QoreStor. The documents listed in this table are available on the Quest support website by selecting your specific QoreStor version at:

<http://support.quest.com/QoreStor>

Table 1: QoreStor documentation

Document	Description
QoreStor Installation Guide	Provides information on installation and operation requirements, supported platforms as well as procedures for installing QoreStor.

Document	Description
QoreStor User Guide	Provides information on configuring and using QoreStor.
QoreStor Release Notes	Provides the latest information about new features and known issues with a specific product release.
QoreStor Command Line Reference Guide	Provides information about managing QoreStor data backup and replication operations using the QoreStor command line interface (CLI).
QoreStor Interoperability Guide	Provides information on supported infrastructure components.
QoreStor Virtual Machine Deployment Guide	Provides information on deploying the QoreStor virtual machine on VMware ESX or Microsoft Hyper-V.
Additional whitepapers	Instructions and best practices for configuring additional Quest and third-party applications to work with QoreStor.

i **NOTE:** Check for the latest documentation updates and release notes at <http://support.quest.com/qorestor>. Read the release notes first because they contain the most recently documented information about known issues with a specific product release.

Introducing Quest® QoreStor™

Quest® QoreStor™ is a software-defined secondary storage platform based on Quest's proven DR Appliance's resilient deduplication and replication technologies. With QoreStor, you can break free of backup appliances and accelerate backup performance, reduce storage requirements and costs, and replicate safer and faster to the cloud for data archiving, disaster recovery and business continuity.

QoreStor supports all of the major backup software applications in use today and can lower your backup storage costs to as little as \$.16/GB while reducing your total cost of ownership. QoreStor achieves these results using patented Rapid technology as well as built-in, variable block-based deduplication and compression.

Lower costs and maximize the return on your IT investment by leveraging virtually any storage hardware, virtualization platform or cloud provider. QoreStor also supports many backup software solutions — so it's not just for Quest. Simple to deploy and easy to manage, QoreStor enables you to shrink replication time, improve data security and address compliance requirements.

QoreStor helps you to:

- Reduce on-premises and cloud storage costs with industry-leading deduplication and compression.
- Accelerate backup completion with protocol accelerators and dedupe.
- Shrink replication time by transmitting only changed data.
- Improve data security and comply with FIPS 140-2.
- Maximize return on investment for existing data protection technologies.
- Lower total cost of ownership through all-inclusive licensing.

QoreStor includes the following features:

- Hardware and software agnostic platform
- Next-generation storage dedupe engine
- Built-in protocol accelerators
- Support for a wide variety of data backup installations and environments.

Understanding the QoreStor CLI

The QoreStor command line interface (CLI) provides the most efficient method for managing the status, data capacity, storage savings, and throughput of data containers. While some QoreStor functions can be managed through the QoreStor GUI, the CLI provides full access to all QoreStor features and functions.

Accessing the QoreStor CLI commands

This guide assumes that your QoreStor system has been deployed in the proper network location and is accessible to your workstation.

Accessing the CLI commands

To access the command line interface for QoreStor:

1. Using the terminal emulation application of your choice, connect to your QoreStor server.
2. At the system prompt, enter the username for an account with sufficient privileges. By default this is the **qsadmin** account:
 - Type `qsadmin`
 - Press **<Enter>**
3. At the password prompt, enter the password for the **qsadmin** account (the default is **St0r@ge!**):
 - Type `St0r@ge!`
 - Press **<Enter>**
4. Enter the desired command at the prompt. To view the available QoreStor CLI commands, type **help**.

Alternatively, you may access the command line interface through the QoreStore web terminal in the QoreStor GUI.

To access the Web Terminal

5. On the QoreStor UI, select **System** to expand the menu. Click **Terminal**
6. In the **Username** field, enter the desired user name. You will be prompted for the password.

 **NOTE:** QoreStor includes a custom shell implementation that simplifies and secures command line access. During installation, QoreStor creates the **qsadmin** user account with the permissions and configurations necessary to run QoreStor commands. Unless absolutely necessary, Quest recommends using the **qsadmin** account for CLI access. The default credentials are:
user: qsadmin
password: St0r@ge!
7. Click **Connect to** authenticate and access the terminal.

8. To view the list of available QoreStor commands, enter **help** at the prompt.

i | **NOTE:** Refer to the QoreStorCommand Line Reference Guide for more detailed information on QoreStor CLI commands.

9. To log out of the terminal, enter **exit** at the prompt.

i | **NOTE:** When using Internet Explorer 11 to access the QoreStor UI, the Terminal page is displayed directly after logging in to QoreStor. The QoreStor navigation menu is not displayed and use of other UI functions is not supported.

QoreStor Command Usage

The following command groups are available in the QoreStor CLI. Click on the command to view information on using that command.

While in the QoreStor CLI, run the following command for more information on each command group:

<command name> --help show

- [alerts](#)
- [authenticate](#)
- [cloud_tier](#)
- [connection](#)
- [diagnostics](#)
- [email_alerts](#)
- [email_stats](#)
- [fc](#)
- [iscsi](#)
- [maintenance](#)
- [ndmp](#)
- [object_container](#)
- [object_direct](#)
- [ost](#)
- [performance_tier](#)
- [rda](#)
- [replication](#)
- [sc_manager](#)
- [schedule](#)
- [seed](#)
- [stats](#)
- [storage_group](#)
- [system](#)
- [user](#)
- [vtl](#)

Alerts Commands

This topic introduces the set of QoreStor CLI commands that enable you to perform the following tasks:

- Display system alerts and events.

Alerts Command Usage

This topic introduces the **alerts** command usage:

- **alerts --show [options]**
- **alerts --help**



NOTE: If you specify a command without supplying the expected value or option, you will be prompted to provide the correct value or option.

alerts --show

Description

Displays the current list of system events.



NOTE: The default is to display the 30 most recent events (this example is intentionally brief). The count and index options can also be used to filter the list of events (**alerts --show --events --count <number>**).

Syntax

```
alerts --show [--events] [--index <[-]number>] [--count <number>] [--all]
              [--alerts] [--index <[-]number>] [--count <number>] [--all]
              [--summary]
```

Where

```
--events      Display events.
--alerts      Display alerts.--index      Starting index to display / -num recent events
to skip.
--count       Count of alerts or events to display.
--all         Display all events / alerts.
--summary     Displays total number of alert messages.
```

Result

```
alerts --show --events
Index  Severity  Time                Event Message
188    INFO     2018-06-07 18:07:28 Successfully authenticated User admin.
187    INFO     2018-06-07 18:03:54 Optimization initialized on container "NVBU1".
186    INFO     2018-06-07 18:03:54 Container "NVBU1" is configured to access over
RDS by the following clients: * ('*' means access for everyone).
185    INFO     2018-06-07 18:03:54 Container "NVBU1" created successfully.
184    INFO     2018-06-07 18:02:34 Successfully authenticated User admin.
```

alerts --help

Description

Displays the listing of alerts and related options for using the QoreStor CLI.

Syntax

```
alerts --help
```

Result

Usage:

```
alerts --show [--events] [--index <[-]number>] [--count <number>] [--all]
              [--alerts] [--index <[-]number>] [--count <number>] [--all]
```

```
[--summary]
```

```
alerts --help
```

```
alerts <command> <command-arguments>
```

<command> can be one of:

```
--show           Displays system alerts and events.
```

For command-specific help, please type `alerts --help <command>`

For example:

```
alerts --help show
```

Authenticate Commands

This topic introduces the set of QoreStor CLI commands that let you configure QoreStor so it can authenticate with the Microsoft Windows Active Directory Services (ADS).

For information about specific authenticate commands, see [Authenticate Command Usage](#).

Authenticate Command Usage

This topic introduces the **authenticate** command usage:

- **authenticate --show [options]**
- **authenticate --join [options]**
- **authenticate --leave [options]**
- **authenticate --update --kerberos**
- **authenticate --add [options]**
- **authenticate --delete [options]**
- **authenticate --set --user <user name>**
- **authenticate --guestmode [options]**
- **authenticate --server_signing --mode <auto|mandatory|disabled|show>**
- **authenticate --help**

i | **NOTE:** If you specify a command without supplying the expected value or option, you will be prompted to provide the correct value or option.

authenticate --show

Description

Displays the current status of the Microsoft Active Directory Service (ADS) domain, or if it is not joined, it can display the status of any authorized local CIFS user.



NOTE: If this command is entered, but the QoreStor has not joined the ADS to any domain, the following message is displayed.

```
This system has not joined any domain.
```

Syntax

```
authenticate --show [--users] [--domain <domain name>] [--login_group] [--server_signing]
```

Where

<code>--users</code>	Lists all local CIFS users.
<code>--domain</code>	Lists time and IP/hostname information for the DC.
<code>--login_group</code>	Lists login group.
<code>--server_signing</code>	Display current CIFS Server signing settings.

Result

```
Domain: ads.storage.local
```

If you have joined the ADS to a designated domain and you want to see the authorized users, enter the `authenticate --show --users` command to display the current status:

```
authenticate --show --users
administrator2
administrator
```

authenticate --join

Description

Joins the QoreStor to an Active Directory Services (ADS) domain when you specify the ADS domain name and a valid user (administrator) for that domain.



NOTE: When attempting to join the ADS domain, the administrator password is required for that domain to ensure that the join operation is successful. Supported domain names are limited to 64 characters in length and can only consist of a combination of A-Z, a-z, 0-9, and two special characters: a dash (-) and a period (.).



NOTE: If you had previously joined the QoreStor to an ADS domain before running Restore Manager (RM), after it completes you must manually rejoin the desired ADS domain using the `authenticate --join` command.

Syntax

```
authenticate --join --domain <domain name> [--ou <org-unit name>] --user <user name>
[--domain-join-cli]
```

Where

<code>--domain</code>	Name of ADS domain to join.
<code>--ou</code>	Name of the organizational unit to join.
<code>--user</code>	Name of ADS user with permissions to join the domain.
<code>--domain-join-cli</code>	Alternate join method to join domain

Result

```
Enter password for administrator@ads.storage.local:
Successfully joined domain ads.storage.local
Disabling NTP service... done.
Updated Windows Access Server Configuration.
Updated Kerberos configuration.
Updated machine password.
Updated DNS.
Restarting Windows Access Server... done.
```

i **NOTE:** The `--ou` command is optional and allows for defining a specific organizational group in the ADS that requires its own administrative access rights (such as an executive management or finance group). In case of multiple organizational groups, use the following format:
"`<topLevelOU/middleLevelOU/LowerLevelOU/TargetOU>`"

authenticate --leave

Description

Enables a QoreStor to leave a Microsoft Active Directory Services (ADS) domain when you provide a valid administrator password.

Syntax

```
authenticate --leave [--user <user name>] [--force]
```

Where

```
--user      Name of ADS user with permissions to leave the domain.
--force      Leave the domain without informing ADS.
```

Result

```
Enter password for administrator@ads.storage.local:
Successfully left domain ads.storage.local.
Updated Windows Access Server configuration.
Updated Kerberos configuration
Restarting Windows Access Server... done.
Enabling NTP service... done.
```

i **NOTE:** The `--force` command is optional and allows the QoreStor to leave the ADS domain when communication between the system and the ADS domain is lost and the `--leave` operation is pending or in progress.

authenticate --update

Description

Updates a Microsoft Active Directory Service (ADS) Kerberos configuration (Kerberos is a computer network authentication protocol).

Syntax

```
authenticate --update --kerberos
```

Where

```
--kerberos    Updates kerberos configuration.
```

Result

```
Updated kerberos configuration.
```

authenticate --add

Description

Adds a new local CIFS workgroup user for CIFS authentication (and administrative tasks) after you provide and confirm the CIFS user password.

Syntax

```
authenticate --add [--user <user name>] [--login_group <DOMAIN\LOGIN GROUP>]
```

Where

```
--user          Name of local CIFS user to add.  
--login_group    Name of login group to add (<domain>\<login group>)
```

Result

```
Enter password for new CIFS user administrator2:  
Re-enter password for new CIFS user administrator2:  
Added CIFS user administrator2.
```

authenticate --delete

Description

Deletes an existing local CIFS workgroup user from CIFS authentication (and administrative tasks).

Syntax

```
authenticate --delete [--user <user name>] [--login_group <DOMAIN\LOGIN GROUP>]
```

```
--login_group    Name of login group to add (<domain>\<login group>)
```

Result

```
Deleted CIFS user administrator2.
```

authenticate --set

Description

Sets the password for an existing local CIFS workgroup user.

Syntax

```
authenticate --set --user <user name>
```

Where

--user Name of local CIFS user.

Result

```
Enter new password for CIFS user administrator2:
Re-enter new password for CIFS user administrator2:
Changed administrator2's password.
```

i **NOTE:** The QoreStor administrator that manages the QoreStor has a different set of privileges than does the CIFS user administrator. For example, only the QoreStor administrator can change the password for the CIFS user administrator.

authenticate --guestmode

Description

Configures all CIFS shares for guest-only access.

Syntax

```
authenticate --guestmode [--enable] [--disable]
```

Where

--enable Enable only guest access CIFS shares.
--disable Disable only guest access for CIFS shares.

Result

```
Restarting Windows Access Server... done.
```

i **NOTE:** If you attempt to enable guestmode for all CIFS shares when the QoreStor is already joined to an ADS domain by (using the QoreStor CLI `authenticate --guestmode --enable` command), the following error message displays: *This node is already joined to domain <domainname>. Please leave the domain before enabling the guest-only mode.*

authenticate --server_signing

Description

Configures the server signing for Common Internet File System (CIFS) on a QoreStor.

The QoreStor CLI `--server_signing --mode` command has the following arguments:

- **auto** — Configures authentication via server signing to be automatically performed.
- **mandatory** — Configures authentication via server signing as mandatory, or the connection will be dropped.
- **disabled** — Disables authentication via server signing so that no connections are accepted.

Syntax

```
authenticate --server_signing --mode <auto|mandatory|disabled>
```

Where

`--mode` Mode of Server Signing.

Result

Successfully added server signing to auto.

authenticate --help

Description

Displays the list of all authenticate-related options that can be used as a reference when using the QoreStor CLI.

Syntax

```
authenticate --help
```

Result

Usage:

```
authenticate --show [--users]
                  [--domain <domain name>]
                  [--login_group]
                  [--server_signing]

authenticate --join --domain <domain name>
                  [--ou <org-unit name>]
                  --user <user name>
                  [--domain-join-cli]

authenticate --leave [--user <user name>]
                  [--force]

authenticate --update --kerberos
```

```

authenticate --add [--user <user name>]
                    [--login_group <DOMAIN\LOGIN GROUP>]

authenticate --delete [--user <user name>]
                    [--login_group <DOMAIN\LOGIN GROUP>]

authenticate --set --user <user name>

authenticate --guestmode [--enable]
                    [--disable]

authenticate --server_signing --mode <auto|mandatory|disabled>

authenticate --help

authenticate <command> <command-arguments>

<command> can be one of:
    --show            Displays current ADS domain, authorized local CIFS users and login
group.
    --join            Joins an ADS domain.
    --leave           Leaves an ADS domain.
    --update          Updates ADS configuration.
    --add             Creates a local workgroup user for CIFS authentication.
    --delete          Deletes a local workgroup user from CIFS authentication.
    --set             Sets the password for a local workgroup user.
    --guestmode       Configures all CIFS shares for guest only access.
    --server_signing  Configures server signing for CIFS.

For command-specific help, please type authenticate --help <command>
eg:
    authenticate --help show

```

Cloud_tier

This topic introduces the set of QoreStor CLI commands that allow you to manage, configure, and display connection-related settings for cloud_tiers on a QoreStor server. For more information, see [Container Command Usage](#) .

Cloud_tier Command Usage

This topic introduces the **cloud_tier** command usage:

- **cloud_tier --show [options]**
- **cloud_tier --add [options]**
- **cloud_tier --update [options]**
- **cloud_tier --delete [options]**

- **cloud_tier --setpassphrase**
- **cloud_tier --enable [options]**
- **cloud_tier --purge-ssl-certificate**
- **cloud_tier --src_cont_list [--cloud_archive]**
- **cloud_tier --help**

cloud_tier --show

Description

Displays the current cloud connection details..

Syntax

```
cloud_tier --show [--verbose]
                [--cloud_archive]
```

Where

```
--verbose          Display more details.
--cloud_archive    View details of cloud archive
```

Result

```
Cloud_tier Name : DefaultCloudTier
Cloud_tier Compression Type : Fast
Cloud_tier Encryption Set : On
Cloud_tier Encryption Type : Static
Cloud_tier Rotate Period : 0
Cloud_tier Passphrase set : Yes
```

cloud_tier --add

Description

Adds a new cloud connection.



NOTE: You will need your cloud provider connection string to properly configure the cloud tier.

For Azure:

The Connection String can be found in your Azure portal under Storage Accounts >Access keys > Connection string

For AWS S3 and compatible platforms:

AWS Connection String to be formed from the Security credentials in the below format.

```
"accesskey=<ABDCEWERS>;secretkey=< >; loglevel=warn; region=<aws-region>;"
```

The correct Region Name can be obtained from

https://docs.aws.amazon.com/general/latest/gr/rande.html#s3_region

Syntax

```
cloud_tier --add --cloud_container <bucket name> --cloud_provider <AWS-
S3|AZURE|Wasabi-S3|Google-S3|IBM-S3|S3-Compatible>
    [--cloud_archive_service <S3-Glacier|S3-Deep-Archive>]
    [--archive_retention_in_warm <1 to 365 days>]
    [--archive_role_arn <archive role arn>]
```

where

<code>--cloud_container</code>	Name of the cloud container. Valid values are [a-z,A-Z,0-9,'-'].
<code>--cloud_provider</code>	Name of the cloud service provider. Valid values are [a-z,A-Z,0-9,'-'].
<code>--cloud_archive_service</code>	Name of the cloud archive service. Valid values are [a-z,A-Z,0-9,'-'].
<code>--archive_retention_in_warm</code>	Valid values are [0-9], default 7 days. Value entered is in days and counted from date of restore.
<code>--archive_role_arn</code>	Valid values are [a-z,A-Z,0-9,'_','-',':', '/', '/']

Result

```
Enter AWS cloud connection string to connect to container <name>:
Checking if container [<name>] is empty...
Container empty test pass. Container [<name>] in the cloud is empty.
Connection credentials validated successfully.
Cloud Tier created successfully.
```

cloud_tier --update

Description

Updates a cloud connection details.

Syntax

```
cloud_tier --update [--cloud_password]
    [--cloud_archive]
    [--archive_retention_in_warm <1 to 365 days>]
    [--archive_role_arn <archive role arn>]
```

Where

<code>--cloud_password</code>	Updates cloud connection password.
<code>--cloud_archive</code>	Update connection for cloud archive
<code>--archive_retention_in_warm</code>	Valid values are [0-9], default 7 days. Value entered is in days and counted from date of restore.
<code>--archive_role_arn</code>	Valid values are [a-z,A-Z,0-9,'_','-',':', '/', '/']

Result

Enter cloud connection string to connect for storage_group <cloud_tier name> :
Connection credentials validated successfully.
Cloud Tier updated successfully.

cloud_tier --delete

Description

Deletes an existing cloud connection.

Syntax

```
cloud_tier --delete [--cloud_archive]
```

Where

--cloud_archive Deletes the cloud archive and its connection

Result

Storage Group "DefaultCloudTier" has been deleted.

cloud_tier --setpassphrase

Description

sets passphrase to a cloud connection.

Syntax

```
cloud_tier --setpassphrase [--cloud_archive]
```

Where

--cloud_archive Set passphrase for cloud archive connection

Result

Storage Group "DefaultCloudConnector" updated successfully.
Passphrase updated successfully.

cloud_tier --enable

Description

Enable cloud replication for source container.

Syntax

```
cloud_tier --enable --src_name <name>
           [--cloud_archive]
```

Where

--src_name Name of the source container. Valid values are [a-z,A-Z,0-9,'-'].

--cloud_archive Enable connection for cloud archive

Result

Successfully enabled cloud replication.

cloud_tier --purge-ssl-certificate

Description

Remove the cached self signed ssl certificate.

Syntax

```
cloud_tier --purge-ssl-certificate
```

Result

cloud_tier --src_cont_list

Description

Displays the source container list of an existing cloud connection.

Syntax

```
cloud_tier --src_cont_list
           [--cloud_archive]
```

Where

--cloud_archive Displays cloud archive tier connection source containers list

Result

Cloud source container entries are:
ObjectContainer (groupid: 3)

cloud_tier --help

Description

Displays the list of **cloud_tier** related options that can be used as a reference when using the QoreStor CLI.

Syntax

```
cloud_tier --help
```

Result

```
cloud_tier --show [--verbose]
                [--cloud_archive]

cloud_tier --add --cloud_container <bucket name>
                --cloud_provider <AWS-S3|AZURE|Wasabi-S3|Google-S3|IBM-S3|S3-Compatible>
                [--cloud_archive_service <S3-Glacier|S3-Deep-Archive>]
                [--archive_retention_in_warm <1 to 365 days>]
                [--archive_role_arn <archive role arn>]

cloud_tier --update [--cloud_password]
                [--cloud_archive]
                [--archive_retention_in_warm <1 to 365 days>]
                [--archive_role_arn <archive role arn>]

cloud_tier --delete [--cloud_archive]

cloud_tier --setpassphrase [--cloud_archive]

cloud_tier --enable --src_name <name>
                [--cloud_archive]

cloud_tier --purge-ssl-certificate

cloud_tier --src_cont_list [--cloud_archive]

cloud_tier --help

cloud_tier <command> <command-arguments>

    <command> can be one of:
    --show                                Displays the current cloud connection
details.
    --add                                Adds a new cloud connection.
    --update                             Updates a cloud connection details.
    --delete                             Deletes an existing cloud connection.
    --setpassphrase                      sets passphrase to a cloud connection.
    --enable                             Enable cloud replication for source
container.
    --purge-ssl-certificate              Remove the cached self signed ssl certificate.
    --src_cont_list                      Source container list of an existing cloud
connection.

For command-specific help, please type cloud_tier --help <command>
eg:
cloud_tier --help show
```

Connection

This topic introduces the set of QoreStor CLI commands that allow you to manage, configure, and display connection-related settings for containers on a QoreStor server. For more information, see [Container Command Usage](#).

Connection Command Usage

This topic introduces the connection command usage:

- **connection --show [options]**
- **connection --add --name [options]**
- **connection --update [options]**
- **connection --delete [options]**
- **connection --enable [options]**
- **connection --disable [options]**
- **connection --help**

i | **NOTE:** If you specify a command without supplying the expected value or option, you are prompted to provide the correct value or option.

connection --show

Description

Displays the current connections on a container.

i | **NOTE:** In addition to displaying the current status of an existing container connection, this command also verifies if an existing container connection is disabled (by listing its status as offline).

Syntax

```
connection --show [--name <name>] [--type <NFS|CIFS|OST|RDS|NDMP|ISCSI>] [--verbose]
```

Where

```
--name      Name of container. ABC
--type      Type of sharing (NFS|CIFS|OST|RDS|NDMP|ISCSI).
--verbose    Show further details.
```

Result

Container Name	Connection Type
Target	RDS
avc	RDS

Other Examples

Display the complete status of all existing container connections by using the **--verbose** command on a QoreStor (this example only shows a partial display of the total output):

```
Container Entry ID      : 1
Container Name          : NV_QS1
RDS connection Entry ID : 1
RDS connection Quota    : Unlimited
RDS connection Used Capacity : 257.0 GiB
RDS connection Enabled  : Yes
RDS connection status   : Available
```

connection --add

Description

Adds a new connection to a container.

Syntax

```
connection --add --name <name> --type <NFS|CIFS|OST|RDS|NDMP|ISCSI>
    [--clients <ip address>]
    [--dma <ip address>]
    [--initiator <IQN, ip address, hostname, or WWPN>]
    [--rootmap <nobody | root | administrator>]
    [--options <NFS | CIFS mount export options>]
    [--capacity <Positive decimal number>]
```

Where

```
--name      Name of container.
--type      Type of sharing required (NFS|CIFS|OST|RDS|NDMP|ISCSI).
--clients   Restrict NFS/CIFS access to this list of comma separated hosts.
--dma       Restrict NDMP access to this DMA host.
--initiator  Restrict ISCSI/FC access to this ISCSI/FC initiator.
--rootmap    How to map root for NFS.
--options    mount options NFS (rw,ro,insecure), CIFS(hide,unhide, sync
always=<yes/no>,valid users).
--capacity   OST usable capacity in Gigabytes.
```

Result

```
Successfully added connection entry.
OST connection Quota      : 10
OST connection Enabled    : Yes
```

connection --update

Description

Updates or modifies the connection values on an existing container connection on a QoreStor. The **--capacity** command option lets you specify a positive decimal number to represent the capacity size (in Gigabytes (GB)) of an OST container.

i | **NOTE:** OST container connections are unlimited by default, and RDS type container connections only support unlimited capacity.

Syntax

```
connection --update --name <name>
    --type <NFS|CIFS|OST|RDS|NDMP|ISCSI>
    [--clients <ip address>]
    [--dma <ip address>]
    [--initiator <IQN, ip address, hostname, or WWPN>]
    [--rootmap <nobody | root | administrator>]
    [--options <NFS | CIFS mount export options>]
    [--capacity <Positive decimal number>]
```

Where

--name	Name of container.
--type	Type of sharing required (NFS CIFS OST RDS NDMP ISCSI).
--clients	Restrict NFS/CIFS access to this list of comma separated hosts.
--dma	Restrict NDMP access to this DMA host.
--initiator	Restrict ISCSI/FC access to this ISCSI/FC initiator.
--rootmap	How to map root for NFS.
--options	mount options NFS (rw,ro,insecure), CIFS(hide,unhide).
--capacity	OST usable capacity in Gigabytes.

Result

```
Successfully updated connection entry.
OST connection Quota           : 200 GiB
OST connection Used Capacity   : 0.0 GiB
OST connection Enabled         : Yes
```

connection --delete

Description

Deletes an existing container connection.

Syntax

```
connection --delete --name <name> --type <NFS|CIFS|OST|RDS|NDMP|ISCSI> [--clients
<ip address>]
```

Where

```
--name      Name of container.
--type      Type of sharing to remove (NFS|CIFS|OST|RDS|NDMP|ISCSI).
--clients   List of comma separated hosts.
```

Result

Successfully deleted connection entry.

connection --enable

Description

Enables access to a container through a connection.

Syntax

```
connection --enable --name <name> --type <NFS|CIFS|OST|RDS>
```

Where

```
--name      Name of container.
--type      Type of sharing (NFS|CIFS|OST|RDS).
```

Result

```
Successfully updated connection entry.
RDS connection Quota           : Unlimited
RDS connection Used Capacity   : 257.0 GiB
RDS connection Enabled        : Yes
```

connection --disable

Description

Disables access to a container through a connection.

Syntax

```
connection --disable --name <name> --type <NFS|CIFS|OST|RDS>
```

Where

```
--name      Name of container.
--type      Type of sharing (NFS|CIFS|OST|RDS).
```

Result

```
Successfully updated connection entry.
OST connection Quota           : Unlimited
OST connection Used Capacity   : 5.0 GB
OST connection Enabled        : No
```

connection --help

Description

Displays the listing of user and related options that you can use as a reference when using the QoreStor CLI.

Syntax

```
connection --help
```

Results

Usage:

```
connection --show
    [--name <name>]
    [--type <NFS|CIFS|OST|RDS|NDMP|ISCSI>]
    [--verbose]

connection --add --name <name>
    --type <NFS|CIFS|OST|RDS|NDMP|ISCSI>
    [--clients <ip address>]
    [--dma <ip address>]
    [--initiator <IQN, ip address, hostname, or WWPN>]
    [--rootmap <nobody | root | administrator>]
    [--options mount options NFS (rw,ro,insecure), CIFS (hide,unhide,sync
always=<yes/no>,valid users)]
    [--capacity <Positive decimal number>]

connection --update --name <name>
    --type <NFS|CIFS|OST|RDS|NDMP|ISCSI>
    [--clients <ip address>]
    [--dma <ip address>]
    [--initiator <IQN, ip address, hostname, or WWPN>]
    [--rootmap <nobody | root | administrator>]
    [--options <NFS | CIFS mount export options>]
    [--capacity <Positive decimal number>]

connection --delete --name <name>
    --type <NFS|CIFS|OST|RDS|NDMP|ISCSI>
    [--clients <ip address>]

connection --enable --name <name>
    --type <NFS|CIFS|OST|RDS>

connection --disable --name <name>
    --type <NFS|CIFS|OST|RDS>

connection --help

connection <command> <command-arguments>
<command> can be one of:
    --show          Displays the current connections on a container.
```



```
--add      Adds a new connection to a container.
--update   Updates an existing connection.
--delete   Deletes an existing connection.
--enable   Enables access to a container through a connection.
--disable  Disables access to a container through a connection.
```

For command-specific help, please type `connection --help <command>`
eg:
`connection --help show`

Container

This topic introduces the set of QoreStor CLI commands that allow you to perform the following tasks:

- Display the status of all current containers (summary or detail)
- Create (and name) new containers
- Delete existing containers

Container Command Usage

This topic introduces the **container** command usage:

- **container --show [options]**
- **container --add --name [options]**
- **container --update [options]**
- **container --delete --name [options]**
- **container --marker --name <name> [--enable options] [--disable options]**
- **container --cloud_policy [options]**
- **container --delete_files --name <name>**
- **container --add_uac [options]**
- **container --delete_uac [options]**
- **container --update_uac [options]**
- **container --show_uac [options]**
- **container --help**

i | **NOTE:** If you specify a command without supplying the expected value or option, you will be prompted to provide the correct value or option.

container --show

Displays the current list of containers.

Syntax

```
container --show [--name <name>] [--verbose]
```

Where

--name Display details for a specific container.
--verbose Display more details.

Result

```
container --show --name vRanger_Fast
Container's Group ID           : 4
Container's Group Name        : vRanger_PTY
Container Name                 : vRanger_Fast
Container Path                 : /containers/vRanger_Fast
Container Marker               : None
RDS connection Quota          : Unlimited
RDS connection Used Capacity   : 10.0 GiB
RDS connection Enabled        : Yes
RDS connection status         : Available
```

Other Examples

Displays the detailed status of an existing container that you specify by name using the **container --show --name --verbose** command:

```
Container Entry ID           : 1
Container's Group ID         : 0
Container's Group Name       : DefaultGroup
Container Name               : NV_QS1
Container Path               : /containers/NV_QS1
Container Marker             : None
Container Created On         : Fri Apr 20 06:09:46 2018
Container Created Ver        :
Container Created Bld        : 174
RDS connection Entry ID     : 1
RDS connection Quota        : Unlimited
RDS connection Used Capacity : 257.0 GiB
RDS connection Enabled      : Yes
RDS connection status       : Available
```

container --add

Description

Creates and names a new container in QoreStor.

i | **NOTE:** If a storage group name is not provided, the container will be placed in Default Group.



NOTE: Container names and storage group names cannot exceed 32 characters in length. Container names cannot start with a number, and the /, #, and @ special characters are not allowed. Valid values for the container and storage group name are [a-z, A-Z, 0-9, and '_'].

Syntax

```
container --add --name <name>
    [--type <VTL>]
    [--tape_size <800GB|400GB|200GB|100GB|50GB|10GB>]
    [--no_of_drives <1-60>]
    [--is_oem <yes|no>]
    [--oem_vendor <QUEST>]
    [--group_name <name>]
```

Where

```
--name          Name of the container. Valid values are [a-z,A-Z,0-9,'-' and '_' for
non-VTL containers] and maximum of 32 characters.
--type          Type of the container.
--tape_size     Tape size <800GB|400GB|200GB|100GB|50GB|10GB>
--no_of_drives  Number of Drives (applicable to FC containers only)
--is_oem        Is OEM <yes|no>
--oem_vendor    oem_vendor <QUEST>
--group_name    Name of the storage group. Valid values are [a-z,A-Z,0-9,'-' and '_']
and maximum of 32 characters.
```

Result

Container "acme99" created successfully.

container --update

Description

Updates the specified container.

Syntax

```
container --update --name <name> [--no_of_drives <1-60>][--cloud_replication <yes|no>]
```

Where

```
--name          Name of the container. Valid values are [a-z,A-
Z,0-9,'-' and '_' for non-VTL containers] and maximum of 32 characters.
--no_of_drives  Number of Drives (applicable to FC containers only)
--cloud_replication <yes|no>
```

Result

```
The FC service will be restarted for this change to take effect, Do you want to
continue? (yes/no) [n]? y
Successfully updated Container FC1's number of drives as 32.
```

container --delete

Description

Deletes the files and the existing container on which the files reside in a QoreStor when using the **--name** option with **--delete_files** command.

Syntax

```
container --delete --name <name> [--delete_files]
```

Where

```
--name           Name of container.
--delete_files    Deletes the files in the container.
```

Result

WARNING: All the data in the container acme4 will be deleted!

```
Do you want to continue? (yes/no) [n]? y
Please enter the administrator password:
Container "default_ost" marked for deletion. Please run "maintenance --filesystem --
reclaim_space" to recover the storage space.
```

i | **NOTE:** Be aware that it may take a fair amount of time for the QoreStor file and container deletion processes to complete and update the system status. For details on deleting the files within an OST container, see [container --delete_files](#).

container --marker

Description

Enables or disables a marker type or an automatic marker setting type (Auto) on an existing container in the QoreStor. To enable or disable the automatic marker setting type on an existing container, substitute **Auto** in place of a specific marker type (for example, Networker in the CLI command).

Syntax

```
container --marker [--enable <Auto|CommVault|Networker|TSM|ARCserve|HP_
DataProtector|Unix_Dump|BridgeHead|TiNa|Acronis>]
                [--disable <Auto|CommVault|Networker|TSM|ARCserve|HP_DataProtector|Unix_
Dump|BridgeHead|TiNa|Acronis>]
                --name          <name>
```

Where

```
--enable          Enable marker of given type.
--disable          Disable marker of given type.
--name            Name of container.
```

Result

Marker updated successfully.

Other Examples

Disables a Networker marker on an existing container in the QoreStor:

```
container --marker --disable networker --name acme99
Marker updated successfully.
```

container --cloud_policy

Description

Cloud policy for a replication primary container.

Syntax

```
container --cloud_policy [--age_of_file <1 hours to 70 years (in hours)>]
    [--incl_file_ext <file extension list>]
    [--excl_file_ext <file extension list>]
    [--incl_file_regex <file regex pattern>]
    [--excl_file_regex <file regex pattern>]
    [--incl_dir <include directory list>]
    [--excl_dir <exclude directory list>]
    [--on_prem_reten_age <1 hours to 70 years (in hours)>]
    [--reset <incl_file_ext|incl_file_regex|excl_file_ext|excl_file_regex|incl_dir|excl_
dir>]
    --name <name>
```

Where:

--age_of_file	Age of file in hours to be pushed to cloud.
--incl_file_ext	Comma separated list of file extensions of files to be pushed to cloud. (Ex: .jpg,.gz)
--excl_file_ext	Comma separated list of file extensions of files to be excluded from pushing to cloud. (Ex: .jpg,.gz)
--incl_file_regex	separated list of regular expressions files to be pushed to cloud. (Ex: .jpg .gz)
--excl_file_regex	separated list of regular expressions files to be pushed to cloud. (Ex: .jpg .gz)
--incl_dir	Comma separated list of directories in which files under those directories needs to be pushed to cloud. (Ex: /inc_dir1/,/inc_dir2)
--excl_dir	Comma separated list of directories in which files under those directories that should be excluded from pushing to cloud. (Ex: /excl_dir1/,.excl_dir2)
--on_prem_reten_age	Age in number of hours the on_prem data that is uploaded to cloud should be retained.
--reset	reset incl_file_ext, excl_file_ext, incl_dir or excl_dir.
--name	Name of container.

Result

container --delete_files

Description

Deletes only the data files in a container, and leaves the container intact.

Syntax

```
container --delete_files --name <name>
```

Where

```
--name    Container Name
```

Result

Error: Connection needs to be disabled first.

i **NOTE:** This command is only supported on OST/RDA connection type containers and the connection to the container must be disabled before you can delete its files. For details, see [connection --disable](#) . To delete the files and the existing OST container on which the files resides, see [container --delete](#) .

container --add_uac

Description

Add user access control to the container. Mode is [RW | RWD]

Syntax

```
container --add_uac --name <name> --user <user name> --mode <RW|RWD>
```

Where

```
--name    Name of container.  
--user    Name of the user.  
--mode    Access permissions for the user: {RW | RWD}
```

Result

Successfully updated container with uac for user "<user name>"

container --delete_uac

Description

Delete user access control to the container.

Syntax

```
container --delete_uac --name <name> --user <user name>
```

Where

```
--name    Name of container.  
--user    Name of the user.
```

Result

Successfully deleted uac for user "<user>" from the container

container --update_uac

Description

Update user access control to the container. Mode is [RW | RWD]

Syntax

```
container --update_uac --name <name> --user <user name> --mode <RW|RWD>
```

Where

```
--name    Name of container.  
--user    Name of the user.  
--mode    Access permissions for the user: {RW | RWD}
```

Result

Successfully updated container with uac for user "<user>"

container --show_uac

Description

Show user access controls of all users (or just specified user) of the container.

Syntax

```
container --show_uac [--name <name>] [--user <user name>]
```

Where:

```
--name    Name of container.  
--user    Name of the user.
```

Result

The UAC configuration will be displayed.

```
container: <name>, user: <user>, user_id: 6, access: RW
```

container --help

Description

Displays the list of container-related options that can be used as a reference when using the QoreStor CLI.

Syntax

```
container --help
```

Result

```
container --show
    [--name <name>]
    [--verbose]

container --add --name <name>
    [--type <NFS|CIFS|OST|RDS>]
    [--tape_size <800GB|400GB|200GB|100GB|50GB|10GB>]
    [--no_of_drives <1-60>]
    [--is_oem <yes|no>]
    [--oem_vendor <QUEST>]
    [--group_name <name>]
    [--src_name <name>]

container --update --name <name>
    [--no_of_drives <1-60>]
    [--cloud_replication <yes|no>]

container --delete --name <name>
    [--delete_files]

container --marker
    [--enable <Auto|CommVault|Networker|TSM|ARCserve|HP_DataProtector|Unix_
Dump|BridgeHead|TiNa|Acronis>]
    [--disable <Auto|CommVault|Networker|TSM|ARCserve|HP_DataProtector|Unix_
Dump|BridgeHead|TiNa|Acronis>]
    --name <name>

container --cloud_policy
    [--age_of_file <1 hours to 70 years (in hours)>]
    [--incl_file_ext <file extension list>]
    [--excl_file_ext <file extension list>]
    [--incl_file_regex <file regex pattern>]
    [--excl_file_regex <file regex pattern>]
    [--incl_dir <include directory list>]
    [--excl_dir <exclude directory list>]
    [--on_prem_reten_age <1 hours to 70 years (in hours)>]
    [--reset <incl_file_ext|incl_file_regex|excl_file_ext|excl_file_regex|incl_dir|excl_
dir>]
    --name <name>
```



```

container --delete_files --name <name>

container --add_uac --name <name>
    --user <user name>
    --mode <RW|RWD>

container --delete_uac --name <name>
    --user <user name>

container --update_uac --name <name>
    --user <user name>
    --mode <RW|RWD>

container --show_uac
    [--name <name>]
    [--user <user name>]

container --help

container <command> <command-arguments>
<command> can be one of:
    --show           Displays the current list of containers.
    --add            Adds a new container.
    --update         Updates a container.
    --delete         Deletes an existing container.
    --marker         Enables/Disables marker for an existing container.
    --cloud_policy   Cloud policy for a replication primary container.
    --delete_files   Deletes the files in the container.
    --add_uac        Add user access control to the container. Mode is [RW | RWD]
    --delete_uac     Delete user access control to the container.
    --update_uac     Update user access control to the container. Mode is [RW | RWD]
    --show_uac       Show user access controls of all users (or just specified user) of
the container.

For command-specific help, please type container --help <command>
eg:

container --help show

```

Email_alerts Commands

This topic introduces the set of QoreStor CLI commands that enable you to perform the following tasks:

- Configure the Alert email service.
- Enable and/or disable email alerts notification.
- Test your email configuration.

Email_alerts command usage

This topic introduces the **email_alerts** command usage:

- **email_alerts --clear-config**
- **email_alerts --enable**
- **email_alerts --disable**
- **email_alerts --status**
- **email_alerts --configure**
- **email_alerts --test-email**
- **email_alerts --help**

email_alerts --clear-config

Removes the stored alert email configuration.

Syntax

```
email_alerts --clear-config
```

Result

The current configuration will be cleared.

email_alerts --enable

Enables the QoreStor Alert email service.

i | **NOTE:** The Alert email service must be configured before it can be enabled. Refer to [email_alerts --configure](#) for more information.

Syntax

```
email_alerts --enable
```

Result

Service enabled successfully.

email_alerts --disable

Disables the QoreStor Alert email service.

Syntax

```
email_alerts --disable
```

Result

Service disabled successfully.

email_alerts --status

Returns the status of the email_alerts service.

Syntax

```
email_alerts --status
```

Result

Service is not running.

email_alerts --configure

Provides interactive prompts to configure email relay, sender name and email address, recipients, CC recipients, and BCC recipients.

Syntax

```
email_alerts --configure
```

Result

```
qsadmin@esc-vm-qsspl > email_alerts --configure
Please enter the SMTP Relay FQDN or IP address:
Please enter the sender's email address:
Please enter the sender's name: QS Admin
Please enter the list of recipient email addresses:
Please enter the list of email addresses to be CC'ed:
Please enter the list of email addresses to be BCC'ed:
```

email_alerts --test-email

Sends a test email to validate your configuration.

Syntax

```
email_alerts --test-email
```

Result

Success: Test email sent.

email_alerts --help

Description

Displays the listing of **email_alerts** options for using the QoreStor CLI.

Syntax

```
email_alerts --help
```

Result

Usage:

```
email_alerts --clear-config | --enable | --disable | --status | --configure |  
--test-email | --help
```

```
email_alerts <command>
```

<command> can be one of:

<code>--clear-config</code>	removes the stored alert email configuration
<code>--enable</code>	enables the QoreStor Alert Email service
<code>--disable</code>	disables the QoreStor Alert Email service
<code>--status</code>	checks that QoreStor Alert Email service is running
<code>--configure</code>	interactive prompts to configure email relay, sender name and email address, recipients, CC recipients, and BCC recipients
<code>--test-email</code>	send a test email

For command-specific help, please type `email_alerts --help <command>`

For example:

```
email_alerts --help show
```

Email_stats Commands

This topic introduces the set of QoreStor CLI commands that enable you to perform the following tasks:

- Configure the email statistics report service.
- Enable and/or disable email statistics notification.
- Test your email configuration.

Email_stats command usage

This topic introduces the **email_stats** command usage:

- **email_stats --clear-config**
- **email_stats --enable**
- **email_stats --disable**
- **email_stats --status**
- **email_stats --configure**
- **email_stats --test-email**
- **email_stats --help**

email_stats --clear-config

Removes the stored configuration.

Syntax

```
email_stats --clear-config
```

Result

The current configuration will be cleared.

email_stats --enable

Enables the QoreStor Stats email service.

i | **NOTE:** The Stats email service must be configured before it can be enabled. Refer to [email_stats --configure](#) for more information.

Syntax

```
email_stats --enable
```

Result

Service enabled successfully.

email_stats --disable

Disables the QoreStor Stats email service.

Syntax

```
email_stats --disable
```

Result

Service disabled successfully.

email_stats --status

Returns the status of the email_stats service.

Syntax

```
email_stats --status
```

Result

Service is not running.

email_stats --configure

Provides interactive prompts to configure email relay, sender name and email address, recipients, CC recipients, and BCC recipients.

Syntax

```
email_stats --configure
```

Result

```
qsadmin@esc-vm-qsspl > email_stats --configurePlease enter the SMTP Relay FQDN
or IP address:

Please enter the sender's email address:

Please enter the sender's name:

Please enter the SMTP Password (if a password is not required, leave this field
blank):

Please enter the list of recipient email addresses:

Please enter the list of email addresses to be CC'ed:

Please enter the list of email addresses to be BCC'ed:

Please enter the time when the report should be sent (in HH:MM format): 00:00
```

email_stats --test-email

Sends a test email to validate your configuration.

Syntax

```
email_stats --test-email
```

Result

```
Success: Test email sent.
```

email_stats --help

Description

Displays the listing of **email_stats** options for using the QoreStor CLI.

Syntax

```
email_stats --help
```

Result

```
Usage:
    email_stats --clear-config | --enable | --disable | --status | --configure | -
    -test-email | --help
```

```
email_alerts <command>
<command> can be one of:
    --clear-config      removes the stored stats email configuration
    --enable            enables the QoreStor Stats Email service
    --disable           disables the QoreStor Stats Email service
    --status            checks that QoreStor Stats Email service is running
    --configure         interactive prompts to configure email relay, sender name and email
address, recipients, CC recipients, and BCC recipients
    --test-email        send a test email

For command-specific help, please type email_alerts --help <command>
For example:
    email_stats--help show
```

iSCSI

The iSCSI commands allow you to manage iSCSI connections when you are using virtual tape library (VTL) containers.

ISCSI Command Usage

This topic introduces the QoreStor CLI commands that allow you to manage iSCSI connections when you are using virtual tape library (VTL) containers. These commands include:

- **iscsi --show**
- **iscsi --setpassword**
- **iscsi --sessions**
- **iscsi --help**

iscsi --show

Description

This command displays iSCSI information including the iSCSI CHAP user name in the current QoreStor system.

Syntax

```
iscsi --show [--user]
```

Where

```
--user    Show CHAP user name
```

Result

```
user : iscsi_user
```

Syntax

```
iscsi --show
```

Result

```
Target 1 :
  System information:
    Driver: iscsi
    State: ready
  I_T nexus information:
  LUN information:
    LUN: 0
      Type: controller (Controller)
      Backing store path: None
    LUN: 1
      Type: passthrough (L700)
      Backing store path: /dev/sg12
    LUN: 2
      Type: passthrough ( ULT3580-TD4)
      Backing store path: /dev/sg2
    LUN: 3
      Type: passthrough ( ULT3580-TD4)
      Backing store path: /dev/sg8
    LUN: 4
      Type: passthrough ( ULT3580-TD4)
      Backing store path: /dev/sg11
    LUN: 5
      Type: passthrough ( ULT3580-TD4)
      Backing store path: /dev/sg4
    LUN: 6
      Type: passthrough ( ULT3580-TD4)
      Backing store path: /dev/sg5
    LUN: 7
      Type: passthrough ( ULT3580-TD4)
      Backing store path: /dev/sg6
    LUN: 8
      Type: passthrough ( ULT3580-TD4)
      Backing store path: /dev/sg10
    LUN: 9
      Type: passthrough ( ULT3580-TD4)
      Backing store path: /dev/sg3
    LUN: 10
      Type: passthrough ( ULT3580-TD4)
      Backing store path: /dev/sg9
    LUN: 11
      Type: passthrough ( ULT3580-TD4)
      Backing store path: /dev/sg7
  Account information:
    iscsi_user
  Target 1 ACL information:          10.250.249.221
administrator@satyan-vm1 >
```


iscsi --setpassword

Description

This command sets the password for the iSCSI CHAP user.

Syntax

```
iscsi --setpassword
```

Result

```
WARNING: All existing iSCSI sessions will be terminated!
Do you want to continue? (yes/no) [n]? yes
Enter new CHAP password:
Re-type CHAP password:
administrator@test-vm1 >
```

iscsi --sessions

Description

This command displays the current iSCSI sessions in the current DR system.

Syntax

```
iscsi --sessions
```

Result

```
iSCSI client(s) information:
Container: test_vtl
Target IQN:
Initiators Connected: iqn.1991-05.com.microsoft:win-t16n70kqii4.testad.test.local
```

iscsi --help

Description

Displays the list of iSCSI-related command options that can be used as a reference when using the QoreStor CLI.

Syntax

```
iscsi --help
```

Result

```
Usage:
iscsi --show [--user]
iscsi --setpassword
```

```
iscsi --sessions
iscsi --help
```

```
command> <command-arguments>
<command> can be one of:
--show           Displays command specific information.
--setpassword    Set CHAP password
--sessions       Show iSCSI sessions
```

For command-specific help, please type `iscsi --help <command>`
eg:
`iscsi --help show`

Maintenance

The QoreStor CLI **maintenance** commands lets you display the system maintenance repair progress, and manage the data repair and state of a QoreStor system.

i | **NOTE:** Whenever the QoreStor enters or exits from the **Maintenance** mode state, communication via OST, RDA, CIFS, and NFS is lost.

The **maintenance --filesystem** commands perform maintenance operations on the QoreStor file system, the **maintenance --diags** command allow you to create and view diagnostic bundles for your QoreStor system.

i | **NOTE:** This set of maintenance commands provide some functionality that is not available in the QoreStor GUI. To check the status of the QoreStor server, use the QoreStor CLI **system --show** command to display the current status.

Maintenance command

This topic introduces the **maintenance** command usage:

NOTE: Using some of the maintenance command options could result in the deletion of data. Carefully observe the warnings (for example, running the scan without running the repair). If you have questions, do not perform these QoreStor CLI command options without first contacting Technical Support.

- **maintenance --filesystem**
 - **--scan_report [verbose]**
 - **--repair_status [verbose]**
 - **--repair_history [verbose]**
 - **--scan_restart [verify_data | verify_rda_metadata | verify_metadata]**
 - **--repair_now**
 - **--reclaim_space**
 - **--stop_reclaim_space**
 - **--clear_quarantine**

- **--start_scan** [verify_data | verify_rda_metadata | verify_metadata] [--storage_group <name>]
- **--stop_scan**
- **maintenance --diags**
 - **--collect**
 - **--show**
 - **--delete <name>**
 - **--delete_all**
- **maintenance --disaster_recovery** [options]
- **maintenance --help**

NOTE: If you specify a command without supplying the expected value or option, you are prompted to provide the correct value or option.

maintenance --filesystem [--scan_status]

Description

Displays the current filesystem checker status and scan progress for a QoreStor.

Syntax

```
maintenance --filesystem --scan_status
```

Result

```
Filesystem checker           : Scan in progress
Filesystem check status:
DataBlock Consistency Checker Stats
=====
Phase                        : INODE CRAWL
Inode check                  : IN PROGRESS
Inodes processed             : 3200 / 3498
Time left (approx)           : 4 secs
Cont Name      TotalInodes  Checked      Corrupted      Missing Data Orphan
-----
backup                                0
container29                          0
backupsys-60_replicate                                71826

Data block check              : COMPLETED
Data blocks processed         : 422 / 422
Corrupted data chunks         : 0
Data chunk refcount mismatch  : 0
Recomputed bytes out          : 1383308872
Recomputed bytes in           : 6107833613
Recomputed % Savings          : 77.351890%
Time left (approx)            : 0
```

```
Data block check                : NOT STARTED
Namespace Consistency Checker Stats
=====
Namespace check                : NOT STARTED
```

maintenance --filesystem --scan_report

Description

Displays the current filesystem checker report, which is generated by the QoreStor CLI `maintenance --filesystem [--start_scan [verify_data | verify_rda_metadata | verify_metadata]] [--storage_group <name>]` command.

Syntax

```
maintenance filesystem --scan_report [verbose]
```

Result

```
Filesystem check report
=====
Report generated at           : Fri Dec 9 08:23:05 2016

There are no problems detected.
```

maintenance --filesystem [--repair_history [verbose]]

Description

Displays the filesystem checker history for a QoreStor.

Syntax

```
maintenance --filesystem --repair_history
```

Result

```
Filesystem check time          : Wed Nov 23 21:59:10 2016
Dry run finished at           : Wed Nov 23 21:59:14 2016
Release version                : 4.0.0254.0
Build                          : 62141
Data verification              : Not Enabled
Scan mode                      : Normal scan
Result                         : No inconsistencies discovered.
Storage Group(s)              : sg2

Filesystem check time          : Tue Nov 29 22:13:54 2016
Dry run finished at           : Tue Nov 29 22:15:57 2016
Release version                : 4.0.0254.0
Build                          : 62141
Data verification              : Not Enabled
```

```

Scan mode                : Normal scan
Result                   : No inconsistencies discovered.
Storage Group(s)         : All

Filesystem check time    : Tue Nov 29 22:20:12 2016
Dry run finished at      : Tue Nov 29 22:20:28 2016
Release version          : 4.0.0254.0
Build                   : 62141
Data verification        : Enabled
Scan mode                : Normal scan
Result                   : No inconsistencies discovered.
Storage Group(s)         : sg2

```

maintenance --filesystem [--scan_restart]

Description

Restarts file system checker to generate updated report.

i | **NOTE:** Argument **verify_data** validates data with pre-built checksum. Argument **verify_rda_metadata** scans only OST and RDA containers. Argument **verify_metadata** scans only the namespace for all containers.

Syntax

```
maintenance --filesystem --scan_restart [verify_data| verify_rda_metadata | verify_
metadata]
```

Result

Successfully restarted filesystem scan.

maintenance --filesystem [--repair_now]

Description

Repairs any filesystem issues in a QoreStor based on the repair report findings.

Syntax

```
maintenance --filesystem [--repair_now]
```

Result

```

Make sure ocafsd service is stopped...DONE
Start ocafsd service in maintenance mode...DONE
Cleaner backlog is empty
Stopping the ocafsd.....DONE
Repairing storage group "DefaultGroup"
ofsck.exe --rpcport 9917 --repair_from_report --disk_journal_path Q:\Repository
\ocaroot\journals --nvm_journal_path Q:\Repository\ocaroot\journals --group_id
0

```

```

Quarantine enabled
Unlinked ofस्क marker files.
ofस्क.exe --rpcport 9917 --repair_from_report --disk_journal_path Q:\Repository
\ocaroot\journals --nvm_journal_path Q:\Repository\ocaroot\journals --group_id
0 - rc = 0
Ofस्क run complete
Start ocafsd service in operational mode.....
.....
.....
.....
.....DONE

```

maintenance --filesystem --reclaim_space

Description

Reclaims disk space that was formerly occupied by data in the recycle bin in a QoreStor using the Cleaner process. This command is what is commonly referred to as “manually” running the Cleaner process to reclaim disk space.

Syntax

```
maintenance --filesystem --reclaim_space
```

Result

Successfully started cleaner.

maintenance --filesystem [--stop_reclaim_space]

Description

Stops Cleaner running in run-once mode (as the result of executing the **--reclaim space** command)

Syntax

```
maintenance --filesystem --stop_reclaim_space
```

Result

Successfully stopped cleaner.

maintenance --filesystem [--clear_quarantine]

Description

Clears a specialized quarantine folder that collects data files considered corrupted after attempts have been made to perform repairs by the filesystem. The maintenance --filesystem CLI commands should only be performed when the QoreStor is in its **Maintenance** mode. This command should not need to be run on a regular basis (it should only be run when a lengthy period of time has elapsed or you feel that the space in the quarantine folder needs to be reclaimed).

Syntax

```
maintenance --filesystem --clear_quarantine
```

Result

Successfully performed quarantine cleanup.

maintenance --filesystem [--start_scan [verify_data | verify_rda_metadata | verify_metadata] [--storage_group <name>]

Description

Starts filesystem checker to check for consistency issues in storage groups.

- i** **NOTE:** Argument `verify_data` validates data with pre-built checksum. Argument `verify_rda_metadata` scans only OST and RDA containers. Argument `verify_metadata` scans the namespace for all containers.
- i** **NOTE:** Using this command places the files system into a read-only mode and pauses all active replications. When the QoreStor enters **Maintenance** mode, an alert is sent that indicates this operational change.

Syntax

```
maintenance --filesystem --start_scan verify_data --storage_group SCTest1
```

Result

This operation will make the filesystem read-only and pause all active replications. "verify_data" option will check for data consistency issues in the filesystem. This might take long time to complete.

Do you want to continue (yes/no) [n]? y

Please enter the administrator password:

Filesystem check started successfully.

To see the status, please run "maintenance --filesystem --scan_status".

If you enter the `maintenance --filesystem --scan_restart` command when the QoreStor is not in **Maintenance** mode, the following output is displayed at the system prompt:

```
maintenance --filesystem --scan_restart
```

"Operation not supported as system is not in maintenance mode.

To be able to restart scan, filesystem check must be running or waiting".

maintenance --filesystem [--stop_scan]

Description

Stops the filesystem scan process that verifies the data contained in a QoreStor.

Syntax

```
maintenance --filesystem --stop_scan
```

Result

This operation will stop the filesystem checker and put the system back into operational mode.

Do you want to continue (yes/no) [n]? y

Please enter the administrator password:

Filesystem check stopped successfully.

maintenance --diags --collect

Description

Generates a new diagnostics log file that represents the current state of a QoreStor. This command option is only available in the CLI.

Syntax

```
maintenance --diags --collect
```

Result

Collecting logs...

tar: esc-kvm-qs1.ocarina.local_2018-06-07_10-18-04/oca_cores/*: File removed before we read it

Diagnostics log location: /var/diagnostic_logs/esc-kvm-qs1.ocarina.local_2018-06-07_10-18-04.lzip
/opt/qorestor/bin

Compressing package... Done

maintenance --diags --show

Description

Displays a list of the diagnostics log files. The diagnostics log files are a collection of all QoreStor-related information that describe the current state of your system.

Syntax

```
maintenance --diags --show
```

Result

```
maintenance --diags --show
```

Diagnostics log location: /var/diagnostic_logs

qorestor_2018-06-06_08-24-07.lzip	42219418
qorestor_2018-06-06_12-09-26.lzip	42005069

Done

maintenance --diags --delete <name>

Description

Deletes the named diagnostics file.

Syntax

```
maintenance --diags --delete qsvm1_2018-06-06_10-31-19.lzip_
```

Result

```
Deleting diagnostics qsvm1_2018-06-06_10-31-19.lzip_
```

maintenance --diags --delete_all

Description

Deletes all of the diagnostics files on a QoreStor server.

! CAUTION: Carefully consider before using the `--delete_all` command. If you delete all diagnostics log files without first saving them to another location, all previous system status information that they contained is lost and unrecoverable.

Syntax

```
maintenance --diags --delete_all
```

Result

```
Deleting all diagnostics
```

maintenance --disaster_recovery

Description

Begins a disaster recovery of the QoreStor server using data archived to a cloud tier.

Syntax

```
maintenance --disaster_recovery --cloud_string <name>
--container_name <name>
--cloud_provider_type <name>
--passphrase <name>
[--logfile <name>]
```

Where

<code>--cloud_string</code>	cloud connection string.
<code>--container_name</code>	cloud container name.
<code>--cloud_provider_type</code>	cloud provider type.
<code>--passphrase</code>	passphrase.
<code>--logfile</code>	log file path.

Result

Filesystem disaster recovery started successfully.

maintenance --help

Description

Displays the list of maintenance-related options that can be used as a reference when using the QoreStor CLI.

Syntax

```
maintenance --help
```

Result

Usage:

```
maintenance --filesystem [--scan_status]
    [--scan_report [verbose]]
    [--repair_status [verbose]]
    [--repair_history [verbose]]
    [--scan_restart [verify_data | verify_rda_metadata | verify_metadata]]
    [--repair_now]
    [--reclaim_space]
    [--stop_reclaim_space]
    [--clear_quarantine]
    [--start_scan [verify_data | verify_rda_metadata | verify_metadata]]
    [--storage_group <name>]
    [--stop_scan]
    [--shutdown]
```

```
maintenance --diags [--collect]
    [--show]
    [--delete <name>]
    [--delete_all]
```

```
maintenance --disaster_recovery --cloud_string <name>
    --container_name <name>
    --cloud_provider_type <name>
    --passphrase <name>
    [--logfile <name>]
```

```
maintenance --help
```

```
maintenance <command> <command-arguments>
```

<command> can be one of:

--filesystem	Maintenance operations on filesystem.
--diags	Diags operations.
--disaster_recovery	Disaster recovery

For command-specific help, please type `maintenance --help <command>`
eg:
`maintenance --help filesystem`

NDMP

The NDMP commands allow you to manage NDMP connections when you are using virtual tape library (VTL) containers.

NDMP Command Usage

This topic introduces the QoreStor CLI commands that allow you to manage NDMP connections when you are using virtual tape library (VTL) containers. These commands include:

- `ndmp --show`
- `ndmp --update [options]`
- `ndmp --help`

ndmp --show

Description

This command displays the NDMP username and port number being used in the current QoreStor system.

Syntax

```
ndmp --show
```

Result

```
# ndmp --show
NDMP User: ndmp_user
NDMP Port: 10000
```

ndmp --update

Description

This command allows you to update and set the port number of the NDMP server. (The default port is 10000.)

Syntax

```
ndmp --update [--port <number>]
```

Where

`--port` Set the port number of NDMP server.

Result

```
WARNING: Updating NDMP port involves restarting NDMP services.  
Do you want to continue (yes/no) [n]? y  
Successfully updated NDMP to use port 10001.  
Restarting NDMP service ... done.
```

ndmp --help

Description

Displays the list of NDMP-related command options that can be used as a reference when using the QoreStor CLI.

Syntax

```
ndmp --help
```

Result

Usage:

```
ndmp --show  
ndmp --update  
ndmp --help
```

```
ndmp <command> <command-arguments>
```

<command> can be one of:

```
--show    Displays command specific information.
```

For command-specific help, please type `ndmp --help <command>`

eg:

```
ndmp --help show
```

Object_container

This topic introduces the set of QoreStor CLI commands that allow you to manage, configure, and display connection-related settings for object containers on a QoreStor server.

object_container command usage

This topic introduces the **object_container** command usage:

- **object_container --show [options]**
- **object_container --add [options]**
- **object_container --update [options]**
- **object_container --encryption [options]**
- **object_container --delete_data**

- **object_container --delete**
- **object_container --setpassphrase**
- **object_container --bucket [options]**
- **object_container --policy [options]**
- **object_container --help**

object_container --show

Description

Displays the current list of object_container.

Syntax

```
object_container --show [--verbose]
                    [--endpoint]
```

Where

```
--verbose      Display more details.
--endpoint     Display Object container service endpoint.
```

Result

```
Storage_group Name                               : ObjectStorageGroup
Storage_group Compression Type                   : Fast
Storage_group Encryption Set                     : Off
Storage_group Encryption Type                    : Off
Storage_group Rotate Period                      : 0
Storage_group Passphrase set                     : No
Storage_group Quota limit                        : Unlimited
ObjectStorageGroup's Containers
-----
ObjectContainer
```

object_container --add

Description

Adds a new object container

Syntax

```
object_container --add [--quota <Quota value in GiB or TiB>][--use_http <yes|no>]
```

Where

```
--quota      Quota value in GiB or TiB.  
--use_http   <yes|no>
```

Result

```
Container "ObjectContainer" created successfully.  
Successfully added connection entry.  
OBJECT connection Enabled      : Yes  
Adding object role to backup_user user...Done.  
Creating default bucket: default-bucket...Done.  
Object container created successfully.
```

object_container --update

Description

Updates an existing object container

Syntax

```
object_container --update [--quota <Quota value in GiB or TiB>] [--use http <yes|no>]
```

Where

```
--quota      Quota value in GiB or TiB.  
--use_http   <yes|no>
```

Result

```
Storage Group "ObjectStorageGroup" updated successfully.
```

object_container --encryption

Description

Updates encryption settings of an object container.

Syntax

```
object_container --encryption [--set <ON | OFF>] [--mode < static | internal >] [--  
interval <7 days to 70 years>]
```

Where

```
--set      Valid values are On and Off.  
--mode      Valid values are static and internal.  
--interval  Valid values are between 7 days to 70 years (in days).
```

Result

```
Storage Group "ObjectStorageGroup" updated successfully.
```

object_container --delete_data

Description

Deletes object_container and its data.

Syntax

```
object_container --delete_data
```

Result

```
WARNING: All the data in the container ObjectStorageGroup will be deleted!
Do you want to continue? (yes/no) [n]? y
Please enter the root password:
Container "ObjectContainer" marked for deletion. Please run "maintenance --
filesystem --reclaim_space" to recover the storage space.
Cleaning up local namespace lock files. Please wait...Done.
```

object_container --delete

Description

Deletes an existing object_container.

Syntax

```
object_container --delete
```

Result

```
WARNING: All the data in the container ObjectStorageGroup will be deleted!
Do you want to continue? (yes/no) [n]? y
Please enter the root password:
Storage Group "ObjectStorageGroup" has been deleted.
Object Storage Group deleted.
```

object_container --setpassphrase

Description

Sets passphrase to an object container.

Syntax

```
object_container --setpassphrase
```

Result

```
Enter new passphrase:
Re-type passphrase:
Storage Group "ObjectContainer" updated successfully.
Passphrase updated successfully.
```

object_container --bucket

Description

Create, delete, or list buckets in an object container.

Syntax

```
object_container --bucket [--create][--enable-object-lock] [--name <bucket name>][--
delete] [--name <bucket name>][--set-lock] [--name <bucket name>] [--mode
<compliance|governance|none>]

    [--valid-days <1 to 36500 days>] [--valid-years <1 to 100 years>][--set-retention] [-
name <bucket name>] [--retention-mode <compliance|governance>]

    [--valid-days <1 to 36500 days>] [--valid-years <1 to 100 years>] [--object-prefix
<anything>][--show] [--name <bucket name>][--list]
```

Where

--create	Creates a bucket.
--delete	Deletes a bucket.
--enable-object-lock	enable object locking
--set-lock	Set object lock configuration for a bucket.
--set-retention	Set object retention for objects with a given prefix.
--show	Show the given bucket details.
--name	bucket name
--mode	Object lock configuration mode for a bucket. Valid values are "Compliance" or "Governance".
--retention-mode	Object lock configuration retention mode for an object prefix. Valid values are "Compliance" or "Governance".
--valid-days	Object lock configuration validity for a bucket in days.
--valid-years	Object lock configuration validity for a bucket in years.
--object-prefix	Object prefix to set retention
--list	list all buckets.

Result

```
> object_container --bucket --create --name testbucket

Successfully created bucket: teststbucket.
```


object_container --policy

Description

Set or show policy of an object container.

Syntax

```
object_container --policy [--set] [--policy_type <readonly|readwrite|none>] --name  
<user name> [--show] --name <user name>
```

Where

```
--set          Set a policy to the user.  
--show         Show a policy to the user.  
--policy_type  Valid values are "readonly" or "readwrite" or "none".  
--name         user name
```

Result

```
> object_container --policy --show --name backup_user  
Object container user policy: readwrite
```

object_container --help

Description

Displays the list of **object_container** related options that can be used as a reference when using the QoreStor CLI.

Syntax

```
object_container --help
```

Result

```
object_container --show [--verbose]  
                  [--endpoint]  
  
object_container --add [--quota <Quota value in GiB or TiB>] [--use_http <yes|no>]  
  
object_container --update [--quota <Quota value in GiB or TiB>] [--use_http <yes|no>]  
  
object_container --encryption [--set <ON | OFF>]  
                             [--mode < static | internal >]  
                             [--interval <7 days to 70 years>]  
  
object_container --delete_data  
  
object_container --delete
```

```
object_container --setpassphrase
```

```
object_container --bucket [--create] [--enable-object-lock] [--name <bucket name>]      [--
delete]          [--name <bucket name>] [--set-lock] [--name <bucket name>]
                  [--mode <compliance|governance|none>] [--valid-days <1 to 36500 days>] [--valid-years
<1 to 100 years>]
                  [--set-retention] [--name <bucket name>] [--retention-mode <compliance|governance>]
[--valid-days <1 to 36500 days>]
                  [--valid-years <1 to 100 years>] [--object-prefix <anything>]
                  [--show] [--name <bucket name>]
                  [--list]
```

```
object_container --policy [--set] [--policy_type <readonly|readwrite|none>] --name
<user name>
                  [--show] --name <user name>
```

```
object_container --help
```

```
object_container <command> <command-arguments>
```

<command> can be one of:

--show	Displays the current list of object_container.
--add	Adds a new object_container.
--update	updates an object_container.
--encryption	updates encryption settings of an object_container.
--delete_data	Deletes object_container container and its data.
--delete	Deletes an existing object_container.
--setpassphrase	sets passphrase to an object_container.
--bucket	Create, delete or list buckets in an object_container.
--policy	Set or show policy of object_container user.

For command-specific help, please type `object_container --help <command>`

eg:

```
object_container --help show
```

Object_direct

This topic introduces the set of QoreStor CLI commands that allow you to manage and display object direct settings for a QoreStor server.

object_direct command usage

This topic introduces the **object_direct** command usage:

- **object_direct --show [options]**
- **object_direct --update [options]**
- **object_direct --update_sentinal**
- **object_direct --help**

object_direct --show

Description

Displays the current list of **object_direct** connection details

Syntax

```
object_direct --show
```

Result

```
Object_direct:
Cloud provider name      :AZURE
Cloud container name     :od-azure-container
```

object_direct --update_sentinel

Description

Updates Object Direct cloud connection details and creates sentinel in the given cloud bucket. This command should be used when the cloud connection fails during QoreStor installation in Object Direct mode, which takes the system to Manual Intervention mode.

The cloud provider name and cloud container or bucket name are to be passed as arguments. The command prompts for connection string. QoreStor comes to Operational mode after successful completion of the command.

Syntax

```
object_direct --update_sentinel --cloud_container <bucket name> --cloud_provider <AWS-S3|AZURE|Wasabi-S3|Google-S3|IBM-S3|S3-Compatible>
```

Where

```
--cloud_container      Name of the cloud container. Valid values are [a-z,0-9,'-', '.', '.'].
--cloud_provider       Name of the cloud service provider. Valid values are [a-z,A-Z,0-9,'-'].
```

Result

```
Enter AZURE cloud connection string to connect to container <container>: ( connection string here )
```

```
Checking if container [<container>] is empty...
Container empty test pass. Container [<container>] in the cloud is empty.
Connection credentials validated successfully.
Object Direct Connection updated successful. Restarting the filesystem service.
```

```
Filesystem service re-started successfully.
```

object_direct --update

Description

Updates Object Direct cloud connection details. This command can be used to change the connection string, for example to change the secret key or to change the protocol for cloud connection (http or https). Command prompts for the connection string.

The cloud provider or the cloud bucket cannot be changed

Syntax

```
object_direct --update
```

Result

Enter Google-S3 cloud connection string to connect to container *<container>*:

object_direct --help

Description

Displays the list of **object_direct** related options that can be used as a reference when using the QoreStor CLI.

Syntax

```
object_direct --help
```

Result

```
object_direct --show
```

```
object_direct --update_sentinel --cloud_container <bucket name> --cloud_provider <AWS-S3|AZURE|Wasabi-S3|Google-S3|IBM-S3|S3-Compatible>
```

```
object_direct --update
```

```
object_direct --help
```

```
object_direct <command> <command-arguments>
```

<command> can be one of:

--show	Displays the current list of object_direct.
--update_sentinel	Updates an object direct cloud connection details and creates sentinel.
--update	Updates an object direct cloud connection details.

For command-specific help, please type `object_direct --help <command>`

eg:

```
object_direct --help show
```

OST

This topic introduces the set of OpenStorage Technology-related QoreStor CLI commands that enable you to perform the following tasks:

- Display command-specific information
- Delete the OST client
- Update the attributes of the OST client
- Limit the bandwidth consumed by OST
- List or clean up partial images

OST Command Usage

This topic introduces the **ost** command usage:

- **ost --show [options]**
- **ost --update --opdup_encryption [options]**
- **ost --delete_client [options]**
- **ost --update_client [options]**
- **ost --limit --speed --target [options]**
- **ost --partial_images --containerid [options] --delete [Partial image path] --timeout <number of seconds>**
- **ost --help**



NOTE: If you specify a command without supplying the expected value or option, you will be prompted to provide the correct value or option.

ost --show

Description

Displays the current OpenStorage Technology (OST) configuration information for QoreStor. Parameters are described as follows:

- **config** — Displays OST configuration.
- **file_history** — Display(s) history of last 10 OST optimized duplication image file(s).
- **name** — OST container name.
- **active_files** — Display(s) current OST image files being replicated.
- **name** — OST container name.
- **clients** — Displays OST clients.
- **limits** — Replication speed limits.

Syntax

```
ost --show [--config] [--file_history] [--name <name>] [--active_files] [--name <name>] [--clients] [--limits]
```

Where

```
--config          Displays OST configuration.

--file_history     Display(s) history of last 10 OST optimized duplication image
file(s).

--name            OST container name.

--active_files     Display(s) current OST image files being replicated.

--name            OST container name.

--clients         Displays OST clients.

--limits          Replication speed limits.
```

Result

```
OST Login Entry User      : backup_user
OST OPDUP Encryption      : Not Enabled
```

i **NOTE:** To display other types of OST configuration information, substitute the `--file_history`, `--name <name>`, or `--clients` options in the QoreStor CLI command.

Other Examples

Display the last 10 replicated files that were processed via the DMA optimized duplication process for an OST container (in this example, the container is “ost.”) by running the following:

```
ost --show --file_history --name ost
```

Data replication history:

File	Peer	IP	Peer	ID	Savings	Bytes
Throughput	Replicated	At:	Encryption			
/1481068800/w1	10.250.240.232	10	100.00%	107374182400Bytes		
1075139KiB/s	2016-12-07 07:58:19	None				

Display the OST clients, by running the command: `ost --show --clients`

OST Client(s)	IP Address	Type	Plugin	OS	Backup
Software	Last Access	Connection(s)	Mode		
sekhar-w12-h58	10.250.213.14	OST	4.0.273.0	Windows Server 2012 64-bit	
NetBackup 7.702.16	--	0		Dedupe	

i **NOTE:** The displayed output when using the QoreStor CLI `ost --show --clients` command could indicate a fourth type of mode value. Depending upon the client, this value would normally display **Auto**, **Dedupe**, **Passthrough**, or **Default**. However, you could potentially display a mode value of **Mixed**, which indicates that you had changed the mode using the QoreStor CLI while the client is still connected.



NOTE: Be aware that the mode for clients that were connected to the OST media server before configuration changes might be different than what is shown in the displayed output when using the QoreStor CLI `ost --show --clients` command. The configuration changes will be updated and reflect any future connections.

To verify the current state of an OST client, you can check these two sources:

- QoreStor CLI, using the `ost --show --clients` command
- QoreStor GUI, displaying the System Configuration page

These sources display information about the connected and configured clients. For example, when a system is connected to multiple times, these sources show the number of connections to that client and the mode. You can also change the mode from dedupe to the other supported modes. When this is done the displayed mode will change, but any active connections will remain. There are essentially two possible modes: **Dedupe** and **Passthrough**. To verify the current mode of an OST client, you can check these two sources of client statistics:

- QoreStor CLI, using the `stats --container --name` command
- QoreStor GUI, displaying the **System Configuration** page

In the **Storage Groups** page, click **Container Details** under the corresponding storage group to display the **Client Statistics** table. If the Network Savings level in this table displays some savings and the displayed Bytes Ingested value is different from the displayed Bytes Transferred, this indicates that the OST clients are working in the **Dedupe** mode. If not, this indicates that the OST containers are working in the **Passthrough** mode.

ost --update

Description

Sets the type of encryption that will be used by OST initiated opdup replication.

Syntax

```
ost --update --opdup_encryption <none | aes128 | aes256>
```

Where

```
--opdup_encryption    Type of encryption to use on the wire.
```

Result

```
OST OPDUP encryption updated to  aes128
```

ost --delete_client

Description

This command deletes the OST client and any edits that have been made to its default values. The next time a connection is established between the client and the QoreStor server, the default OST connection settings will be used. Deleting an OST client using this CLI command does not affect data already written to QoreStor.

Syntax

```
ost --delete_client --name <OST Client Hostname>
```

Where

```
--name      Host name
```

Result

Successfully deleted OST client acme-99.

ost --update_client

Description

Updates the attributes of an OST client (OST client name and mode). The OST client modes are **auto**, **passthrough**, and **dedupe**. However, the OST client operating mode depends upon how it is configured in QoreStor.

- **Auto** — Auto mode in QoreStor functions the same as Dedupe mode.
- **Passthrough** — The OST client passes all data to QoreStor for dedupe processing. This is also known as “server-side dedupe”.
- **Dedupe** — The OST client processes hashing on the data. This is also known as “source-side dedupe” and is the default mode. Source-side deduplication is resource intensive. On machines with less than four cores, or on 32-bit machines, performance may be reduced.

Syntax

```
ost --update_client --name <OST Client Hostname> --mode <auto|passthrough|dedupe>
```

Where

```
--name      Hostname of client
```

```
--mode      OST modes (auto, dedupe, passthrough)
```

i | **NOTE:** You may be able to force writes for OST clients running in the **Passthrough** mode using the QoreStor CLI mode **--dedupe** command. The change in OST client mode is effective on the next backup operation when you are using Veritas NetBackup. (If you are using Veritas Backup Exec, you will need to restart this service for it to recognize that a new mode has been configured.)

Result

OST client updated successfully.

ost --limit

Description

Limits the bandwidth consumed by OST (OpenStorage Technology) for a system you define by IP address or hostname (**--target**), by which you define the speed in kilobytes/second (KBps), megabytes/second (MBps), gigabytes/second (GBps), or an unlimited bandwidth (default).

Syntax

```
ost --limit --speed <<num><KBps|MBps|GBps> | default> --target <ip address | hostname>
```

Where

```
--speed    OST speed limit (eg. 10MBps).  
--target    DR replication target name or IP address.
```

Result

```
Successfully updated OST bandwidth limit for acmesys-49 to 10 MBps.  
Changing traffic control policies ... done.
```

ost --partial_images

Description

Lists or cleans up partial images.

- **Container id** — ID of container.
- **Partial image path** — OST partial image path to delete.
- **Timeout** — Maximum timeout (in seconds) to list partial images.

Syntax

```
ost --partial_images --containerid <Container id> [--delete <Partial image path>] [--  
timeout <> 0>]
```

Where

```
--containerid  Container ID.  
--delete       OST partial image path to delete  
--timeout       Maximum timeout(in seconds) to list partial images.
```

Results

```
Image Name: K12  
Image Date: 1481535029  
Image Policy: DPA  
Image Path: /1481500800/K12  
Image Size: 251821817856  
Image Status: 0
```

ost --help

Description

Displays the list of OpenStorage Technology (OST) ost-related options that can be used as a reference when using the QoreStor CLI.

Syntax

```
ost --help
```

Result

Usage:

```
ost --show [--config]
           [--file_history] [--name <name>]
           [--active_files] [--name <name>]
           [--clients]
           [--limits]

ost --update --opdup_encryption <none | aes128 | aes256>

ost --delete_client --name <OST Client Hostname>

ost --update_client --name <OST Client Hostname>
           --mode <auto|passthrough|dedupe>

ost --limit --speed <<num><KBps|MBps|GBps> | default>
           --target <ip address | hostname>

ost --partial_images --containerid <Container id>
           [--delete <Partial image path>]
           [--timeout <> 0>]

ost --help

ost <command> <command-arguments>
<command> can be one of:
    --show                Displays command specific information.
    --update              Updates the OST settings.
    --delete_client       Deletes the OST client.
    --update_client       Updates attributes of the OST client.
    --limit               Delete existing bandwidth rules for all
ports and set new throttling limits for OST replication over WAN.
    --partial_images      List or cleanup partial images.
```

Performance_tier

This topic introduces the set of QoreStor CLI commands that allow you to manage, configure, and display connection-related settings for performance tiers on a QoreStor server. For more information, see [Container Command Usage](#).

Performance_tier command usage

This topic introduces the **performance_tier** command usage:

- **performance_tier --show [options]**
- **performance_tier --add [options]**
- **performance_tier --update [options]**
- **performance_tier --encryption [options]**
- **performance_tier --setpassphrase**
- **performance_tier --test-iops [options]**
- **performance_tier --help**

performance_tier --show

Description

Displays the details of PerformanceTier storage_group.

Syntax

```
performance_tier --show [--verbose]
```

Where

```
--verbose    Display more details.
```

Result

```
Storage_group Name           : PerformanceTier
Storage_group Compression Type : Fast
Storage_group Encryption Set  : On
Storage_group Encryption Type : Static
Storage_group Rotate Period   : 30
Storage_group Passphrase set   : Yes
Storage_group Mapped Enclosure : /test01
Storage_group Quota limit      : Unlimited
PerformanceTier's Containers
-----
test123
rdacont
```

performance_tier --add

Description

Adds a new performance tier.

Syntax

```
performance_tier --add --path <enclosure filesystem dir> [--compression_mode
<fast|best>][--quota <Quota value in GiB or TiB>]
```

Where

--path Absolute directory path for exclusively mapped enclosure.
--compression_mode Valid values are Fast and Best.
--quota Quota value in GiB or TiB.

Result

Running IOPS tests on /QS_perftier, takes few minutes
Sequential and Random IOPS tests passed on /QS_perftier

WARNING: IO will be stopped during storage addition.

Do you want to continue (yes/no) [n]? y
Storage Group "PerformanceTier" created successfully.
SG map added to DB successfully. Now issuing storage expansion CLI
It may take a few minutes to restart the operations ...

performance_tier --update

Description

Updates a performance tier.

Syntax

```
performance_tier --update --compression_mode <fast|best> [--quota <Quota value in  
GiB or TiB>]
```

Where

--compression_mode Valid values are Fast and Best.

--quota Quota value in GiB or TiB.

Result

Storage Group "PerformanceTier" updated successfully.

performance_tier --encryption

Description

Updates encryption settings of a performance tier.

Syntax

```
performance_tier --encryption [--set <ON | OFF>] [--mode < static | internal >] [--  
interval <7 days to 70 years>]
```

Where

--set Valid values are On and Off.

--mode Valid values are static and internal.

--interval Valid values are between 7 days to 70 years (in days).

Result

Storage Group "PerformanceTier" updated successfully.

performance_tier --setpassphrase

Description

Sets passphrase to a performance tier.

Syntax

```
performance_tier --setpassphrase
```

Result

```
Enter new passphrase:
Re-type passphrase:
Storage Group "PerformanceTier" updated successfully.
Passphrase updated successfully.
```

performance_tier --test-iops

Description

Run IOPS tests on performance tier.

Syntax

```
performance_tier --test-iops --path <enclosure filesystem dir>
```

Where

--path Path to the data storage.

Result

```
Running IOPS tests on /test01, takes few minutes
Sequential and Random IOPS tests passed on /test01
Running IOPS tests on /test01, takes few minutes
Sequential min required IOPS: 2000
Sequential current IOPS: 72990
Random min required IOPS: 850
Random current IOPS: 1464
Sequential and Random IOPS tests passed on /test01
Total Capacity bytes: 966053068800
Total Free bytes: 966019186688
```

performance_tier --help

Description

Displays the list of **performance_tier** related options that can be used as a reference when using the QoreStor CLI.

Syntax

```
performance_tier --help
```

Result

```
performance_tier --show [--verbose]
```

```
performance_tier --add --path <enclosure filesystem dir>
                    [--compression_mode <fast|best>]
                    [--quota <Quota value in GiB or TiB>]
```

```
performance_tier --update --compression_mode <fast|best>
                    [--quota <Quota value in GiB or TiB>]
```

```
performance_tier --encryption [--set <ON | OFF>]
                    [--mode <static | internal >]
                    [--interval <7 days to 70 years>]
```

```
performance_tier --setpassphrase
```

```
performance_tier --test-iops --path <enclosure filesystem dir>
```

```
performance_tier --help
```

```
performance_tier <command> <command-arguments>
```

<command> can be one of:

--show	Displays the details of PerformanceTier storage_group.
--add	Adds a new performance tier.
--update	Updates a performance tier.
--encryption	Updates encryption settings of a performance tier.
--setpassphrase	Sets passphrase to a performance tier.
--test-iops	Run IOPS tests on performance tier.

For command-specific help, please type `performance_tier --help <command>`

eg:

```
performance_tier --help show
```

RDA

The set of **RDA** commands have the following functions:

- Displays command specific information.
- Deletes the Rapid Data Access (RDA) client.

- Updates attributes of a Rapid Data Access (RDA) client.
- Limits bandwidth consumed by Rapid Data Access (RDA) when replicating over a WAN link.
- Lists or cleans up partial images.

RDA Command Usage

The following commands are run for **RDA**:

- **rda --show**
- **rda --update**
- **rda --delete_client**
- **rda --update_client**
- **rda --limit**
- **rda --partial_images**

rda --show

Description

The command displays the RDA-specific configurations.

Syntax

```
rda --show
    [--config]
    [--file_history] [--name <name>]
    [--active_files] [--name <name>]
    [--clients]
    [--limits]
```

Where

<code>--config</code>	Displays RDA configuration.
<code>--file_history</code>	Display(s) history of last 10 RDA optimized deduplication image files.
<code>--name</code>	RDA container name.
<code>--active_files</code>	Display(s) current active RDA image files being replicated
<code>--name</code>	RDA container name.
<code>--clients</code>	Displays RDA clients.
<code>--limits</code>	Replication speed limits.

For example, to show the RDA clients, run the command: `rda --show --clients`

Results

RDA Client (s)	IP Address	Type	Plugin	OS	Backup Software	Last Access	Connection(s)	Mode
qorestor_1	10.230.36.58	RDS	4.1.0.224	Windows Server 2012 64-bit	NetVault	Jun 7 10:50:32	2	Default

NOTE: The displayed output when using the `rda --show --clients` command indicates a fourth type of mode value. Depending upon the client, this value equals Auto, Dedupe, Passthrough, or Mixed. Mixed indicates that you changed the mode while the client is still connected.

NOTE: The mode for clients that are connected to the RDA media server before configuration changes might be different than what is displayed when using the `rda --show --clients` command. The configuration changes are updated to reflect any future connections.

To verify the current state of an RDA client, you can check the two sources:

- QoreStor CLI, using the `rda --show --clients` command
- QoreStor GUI, displaying the Clients page

These sources display information about the connected and configured clients. When a system is connected multiple times, these sources show the number of connections to that client and the mode. You can also change the mode from **dedupe** to the other supported modes. When this is done the displayed mode changes, but any active connections remains. There are essentially two possible modes: **Dedupe** and **Passthrough**. To verify the current mode of an RDA client, you can check the two sources of client statistics:

- QoreStor CLI, using the `stats --container --name` command
- QoreStor GUI, displaying the Container Statistics page

In the Container Statistics page, click the Client Statistics tab (under Connection Type: RDS) to display the Client Statistics table. If the Network Savings level in this table displays some savings and the displayed Bytes Ingested value is different from the displayed Bytes Transferred, it indicates that the RDA clients are working in the **Dedupe** mode. If not, it indicates that the RDA containers are working in the **Passthrough** mode.

rda --update

Description

Sets the type of encryption that will be used by RDA initiated opdup replication.

Syntax

```
rda --update --opdup_encryption <none | aes128 | aes256>
```

Where

`--opdup_encryption` Type of encryption to use on the wire.

Result

RDS OPDUP encryption updated to aes128

rda --delete_client

Description

The command deletes the Rapid Data Access (RDA) client and any edits that were made to its default values. The next time a connection is established between the client and the QoreStor, the default RDA connection settings will be used. Deleting an RDA client using this CLI command does not affect data already written to the QoreStor.

Syntax

```
rda --delete_client --name <RDA Client Hostname>
```

Where

--name Host name

For example, to delete the client TEST-W2K8-02, run the command:

```
rda --delete_client --name TEST-W2K8-02
```

Result

Rapid Data Access (RDA) client TEST-W2K8-02 deleted successfully.

rda --update_client

Description

The command updates the attributes of a Rapid Data Access (RDA) client. The RDA client modes are **auto**, **passthrough**, and **dedupe**. If a RDA client has four or more CPU cores, it is considered to be dedupe-capable. However, the RDA client operating mode depends upon how it is configured in the QoreStor. For details, see [ost --update_client --name <OST Client Hostname> --mode <auto|passthrough|dedupe>](#).

Syntax

```
rda --update_client --name <RDA Client Hostname> --mode <auto|passthrough|dedupe>
```

Where

--name Hostname of client

--mode RDA modes (auto, dedupe, passthrough)

For example, to update the client mode as passthrough for the **BabuK-W2K8-02** client, run the command: rda

```
--update_client --name BabuK-W2K8-02 --mode passthrough
```

Result

Rapid Data Access (RDA) client BabuK-W2K8-02 with mode Pass-through added successfully.

/p>

rda --limit

Description

The command limits the bandwidth consumed by RDA when replicating over a WAN link.

Syntax

```
rda --limit --speed <<num><KBps|MBps|GBps> | default> --target <ip address | hostname>
```

Where

--speed RDA speed limit (eg. 10mbps).
--target DR replication target name or IP address.

Result

Successfully updated bandwidth limit for testbackup to 4 GBps.

rda --partial_images

Description

Lists or cleans up partial images.

- **Container id** — ID of container.
- **Partial image path** — RDA partial image path to delete.
- **Timeout** — Maximum timeout (in seconds) to list partial images.

Syntax

```
rda --partial_images --containerid <Container id> [--delete <Partial image path>] [--  
timeout <> 0>]
```

Where

--containerid Container ID.
--delete RDA partial image path to delete
--timeout Maximum timeout(in seconds) to list partial images.

Results

```
Image Name: rda_SOAK-MAX_DR4300-20_100M_soakw78_20160916053405-seed273481828  
Image Date: 00  
Image Policy: RDA  
Image Path: /0000000000/rda_SOAK-MAX_DR4300-20_100M_soakw78_20160916053405-  
seed273481828  
Image Size: 104857600  
Image Status: 0
```

rda --help

Description

Displays the list of RDA-related options that can be used as a reference when using the QoreStor CLI.

Syntax

```
rda --help
```

Result

```
rda --show [--config]
           [--file_history] [--name <name>]
           [--active_files] [--name <name>]
           [--clients]
           [--limits]

rda --update --opdup_encryption <none | aes128 | aes256>

rda --delete_client --name <RDA Client Hostname>

rda --update_client --name <RDA Client Hostname> --mode <auto|passthrough|dedupe>

rda --limit --speed <<num><KBps|MBps|GBps> | default> --target <ip address |
hostname>

rda --partial_images --containerid <Container id> [--delete <Partial image path>] [--
timeout <> 0>]

rda --help

rda <command> <command-arguments>
<command> can be one of:
    --show                Displays command specific information.
    --delete_client       Deletes the Rapid Data Access (RDA) client.
    --update_client       Updates attributes of a Rapid Data Access (RDA) client.
    --limit               Delete existing bandwidth rules for all ports and set new thr
limits for RDA replication over WAN.
    --partial_images      Lists or cleans up partial images.

For command-specific help, please type rda --help <command>
eg:
    rda --help show
```

Replication

To allow QoreStor replication operations, ensure that TCP ports 9904, 9911, 9915, and 9916 are enabled. For more information about supported ports for the QoreStor, see the *QoreStor Administrator Guide*.

The Replication QoreStor CLI command and its options allow you to manage the status of all current replication relationships and tasks on a system by:

- Displaying the current replication process status information
- Creating and defining new replication links or relationships to containers
- Deleting specific replication links
- Starting and stopping the replication process between source and target containers
- Limiting the bandwidth consumed during replication
- Resynchronizing replication between source and target containers
- Troubleshooting replication connection issues

i | **NOTE:** You can set a replication schedule for daily replication operations. For details, see [schedule --add --day <day of the week> \[--start_time <hh:mm>\] \[--stop_time <hh:mm>\] \[--cleaner\] \[--replication\]](#).

Replication Command Usage

This topic introduces the **replication** command usage:

- **replication --show [options]**
- **replication --add --name --role --peer [options]**
- **replication --update --name --role --peer [options]**
- **replication --delete --name --role [options]**
- **replication --start --name --role [options]**
- **replication --stop --name --role [options]**
- **replication --limit --speed --target [options]**
- **replication --resync --name --role [options]**
- **replication --troubleshoot --peer**
- **replication --help**

i | **NOTE:** If you specify a command without supplying the expected value or option, you will be prompted to provide the correct value or option.

replication --show

Description

Displays the current status of all existing replication containers (and respective roles) in the QoreStor.

Syntax

```
replication --show [--air]
                  [--name <name>]
                  [--role <source | target>]
                  [--verbose]
                  [--limits]
```

Where

```
--air      Auto Image replication enabled.
--name     Name of container.
--role     Role of container.
--verbose  Display more details.
--limits   Replication speed limits.
```

Result

Container Name	Replication Role	Status
backup	Source, Target	Enabled
acme-59	Source	Enabled
acmeStorage1	Source	Enabled
acmeStorage2	Source	Enabled
acmeStorage3	Target	Enabled

replication --add

Description

Adds a new replication link to a container on the QoreStor, for which you need to define its name, role, peer IP address/hostname , peer name, peer group name, user name on the peer system, and encryption level to apply. The peer group name is the name of the remote container's group to replicate to/from, and this parameter is applicable only if a remote container is not present.

There are three options for encryption:

- none,
- aes128 (Advanced Encryption Standard) which uses 128-bit cryptographic keys
- aes256 (using 256-bit AES cryptographic keys).

If the username is a domain login (for example, domain\username), ensure that '\' characters and spaces are either escaped or in quotes.

i | **NOTE:** Make sure that the data container you intend to replicate already exists. If it does not, the following error message displays: *Error: Container <container_name> does not exist.*

Syntax

```
replication --add --name <name>
      --role <source | target>
      --peer <ip address | hostname>
      [--peer_name <name>]
      [--peer_group_name <name>]
      [--replication_traffic <ip address | hostname>]
      [--encryption <none | aes128 | aes256>]
      [--username <user name>]
      [--air]
```

Where

```
--name      Name of container to replicate.
--role      Role of container.
--peer      Peer appliance IP address/name of replication network
```

```

interface(s).
--peer_name           Name of remote container to/from replicate.
--peer_group_name     Name of remote container's group to/from replicate. Only
applicable if remote container is not present
--replication_traffic IP address/name of local dedicated replication network
interface(s).
--encryption          Type of encryption to use on the wire.
--username            Username on peer system.
--air                 Auto Image replication enabled.

```

Result

```

Enter password foradministrator@10.250.240.192:
Replication entry created successfully.
Replication Container      : backup
Replication Role          : Source
Replication Target        : 10.250.240.192
Replication Target IP     : 10.250.240.192
Replication Target Mgmt Name : 10.250.240.192
Replication Target Mgmt IP  : 10.250.240.192
Replication Local Data Name : QS2K-01
Replication Local Data IP   : 10.250.208.232
Replication Target Container : backup
Replication Enabled        : Yes
Replication Compression Enabled: Yes
Replication Encryption     : AES 128-bit

```

i | **NOTE:** To verify that you have successfully added a replication link to the QoreStor (or to view the current status of existing containers), see [replication --show](#).

replication --update

Description

Updates an existing replication link to a container in a QoreStor and allows you to change the corresponding role, peer IP address or host name, the encryption being used, and user name based on the QoreStor CLI command options you specify.

Syntax

```

replication --update --name <name>
--role <source | target>
[--peer <ip address | hostname>]
[--replication_traffic <ip address | hostname>]
[--encryption <none | aes128 | aes256>]
[--username <user name>]

```

Where

```

--name           Name of the replication container to update.
--role           Current replication role of container.
--peer           Peer appliance IP address/name of replication network
interface.

```

```
--replication_traffic  IP address/name of dedicated replication network interface.
--encryption           Type of encryption to use on the wire.
--username             Username on peer system.
```

Result

i **NOTE:** If you attempt to update a container that already has replication enabled, this displays the following message:

```
Replication on backup is enabled and cannot be updated, please stop it first.
```

When replication is enabled on the container, you must first disable it before you can update it. To disable replication on a container, enter the QoreStor CLI **replication --stop** command and define the container name and role:

```
replication --stop --name <name> --role <source | target>
```

i **NOTE:** For more information about disabling replication, see [replication --stop --name <name> --role <source | target>](#).

Disables replication on a container:

```
replication --stop --name backup --role source
Replication configuration updated successfully.
Replication Container      : backup
Replication Role           : Source
Replication Target System  : acme-85
Replication Target System IP : 10.25.192.5
Replication Target Container : acme85-S2
Replication Enabled        : No
Replication Compression Enabled : Yes
Replication Encryption     : AES 128-bit
```

replication --delete

Description

Deletes an existing replication link to a container in a QoreStor.

i **NOTE:** It is recommended that the replication be in an INSYNC state for this operation. If replication is not in an INSYNC state, this operation can potentially take a much longer time to run.

Syntax

```
replication --delete --name <name> --role <source | target> [--force]
```

Where

```
--name      Name of container.
--role      Role of container.
--force      Delete configuration even if peer container is unreachable. Replication must
be stopped first even with force option.
```

If you attempt to delete a container that already has replication enabled, this displays the following message:

```
Replication on acme-59-replica is enabled and cannot be deleted, please stop it first.
```



NOTE: If the replication state of the link is enabled, you must use the replication `--stop` command to disable replication before you can delete the replication link. For more information, see [replication --stop --name <name> --role <source | target>](#).

Deletes the existing replication link to a container.

```
replication --delete --name acme-59-replica --role source
```

Result

Successfully deleted replication entry.



NOTE: The QoreStor CLI `--force` command is optional, and this command allows you to force the deletion of an existing replication link (such as when communications between the source and target are not working). Before using the `--force` option, replication must be stopped with the **replication --stop** command. For more information, see [replication --stop --name <name> --role <source | target>](#)

replication --start

Description

Starts the replication process on an existing replication link to a container in a QoreStor.

Syntax

```
replication --start --name <name> --role <source | target>
```

Where

```
--name    Name of container.  
--role    Role of container.
```

Result

```
Replication configuration updated successfully.  
Replication Container      : container2_replica  
Replication Role           : Source  
Replication Target System  : acme-85  
Replication Target System IP : 10.20.22.20  
Replication Target Container : acme85-S2  
Replication Enabled        : Yes  
Replication Compression Enabled : Yes  
Replication Encryption     : AES 128-bit
```

replication --stop

Description

Stops the replication process on an existing replication link to a container in a QoreStor.

Syntax

```
replication --stop --name <name> --role <source | target>
```

Where

```
--name    Name of container.  
--role    Role of container.
```

Result

```
Replication configuration updated successfully.  
Replication Container      : acme59  
Replication Role          : Source  
Replication Target System  : acme-85  
Replication Target System IP : 10.20.22.20  
Replication Target Container : acme85-S2  
Replication Enabled       : No  
Replication Compression Enabled : Yes  
Replication Encryption    : AES 128-bit
```

replication --limit

Description

Limits the bandwidth used during replication by defining a bandwidth limit using any of the following settings:

- Kilobytes/second (KBps)
- Megabytes/second (MBps)
- Gigabytes/second (GBps)
- Unlimited bandwidth (this is the default setting); minimum allowed bandwidth setting is 192 KBps

i | **IMPORTANT:** Bandwidth rules for all ports will be deleted. New rules will be applied by QoreStor with this command.

Syntax

```
replication --limit --speed <<num><KBps|MBps|GBps> | default> --target <ip address |  
hostname> [--air]
```

Where

```
--speed    Replication speed limit (eg. 10MBps).  
--target    Replication peer IP address.  
--air       Auto Image replication enabled.
```

Result

```
Successfully updated replication limit for acme-60 to 10 GBps.  
Changing traffic control policies ... done.
```

replication --resync

Description

Resynchronizes the replication process between a source and target container in a replication relationship on a QoreStor.

i **IMPORTANT:** This command should only be used in an emergency situation with the help of Quest Support. Do not mistake this command as an ability to start a replication sync outside of the schedule window.
If your intention is to start a replication outside of the window, you can either delete the schedule, or add a temporary replication window to the current schedule and delete it when the systems are in sync.

Syntax

```
replication --resync --name <name> --role <source | target>
```

Where

--name Name of container.

--role Role of container.

Result

Successfully initiated replication resync on container dataStorage3.

replication --troubleshoot

Description

Troubleshoots the replication connections between a source and target container on a QoreStor.

i **NOTE:** This command only reports 9915 and 9916 as succeeding against a replication peer that has Qorestor or DR Series replication configured to another system. If the peer is not currently using any replication ports, 9915 and 9916 will report as connection refused.

Syntax

```
replication --troubleshoot --peer <ip address | hostname>
```

Where

--peer IP address or name of remote machine to troubleshoot.

Result

The following examples shows both successful and unsuccessful replication connection attempts:

```
Testing connection to port 9904... Connected!
Testing connection to port 9911... Connected!
Testing connection to port 9915... Connected!
Testing connection to port 9916... Connected!
Replication troubleshooting completed successfully - Connection to all ports is OK!
```

```
replication --troubleshoot --peer acme-205
Testing connection to port 9904... Connected!
Testing connection to port 9911... Connected!
Testing connection to port 9915...
Unable to connect to socket - Connection refused
Could not connect to acme-205 on port 9915 - (Connection refused)
Testing connection to port 9916...
Unable to connect to socket - Connection refused
Could not connect to acme-205 on port 9916 - (Connection refused)
```

replication --help

Description

Displays the list of all replication-related options that can be used as a reference when using the QoreStor CLI.

Syntax

```
replication --help
```

Result

Usage:

```
replication --show [-air] [--name <name>]
    [--role <source | target>]
    [--verbose]
    [--limits]

replication --add --name <name>
    --role <source | target>
    --peer <ip address | hostname>
    [--peer_name <name>]
    [--peer_group_name <name>]
    [--replication_traffic <ip address | hostname>]
    [--encryption <none | aes128 | aes256>]
    [--username <user name>]
    [-air]

replication --update --name <name>
    --role <source | target>
    [--peer <ip address | hostname>]
    [--replication_traffic <ip address | hostname>]
    [--encryption <none | aes128 | aes256>]
    [--username <user name>]

replication --delete --name <name>
    --role <source | target>
    [--force]
```

```

replication --start --name <name>
    --role <source | target>

replication --stop --name <name>
    --role <source | target>

replication --limit --speed <<num><KBps|MBps|GBps> | default>
    --target <ip address | hostname>
    [-air]

replication --resync --name <name>
    --role <source | target>

replication --troubleshoot --peer <ip address | hostname>

replication --help

replication <command> <command-arguments>
<command> can be one of:
    --show          Displays command specific information.
    --add           Adds a replication link to a container.
    --update        Updates a replication link to a container.
    --delete        Deletes a replication link from a container.
    --start         Starts replication.
    --stop          Stops replication.
    --limit         Delete existing bandwidth rules for all ports and set new throttling
limits.
    --resync        Initiates a replication re-sync.
    --troubleshoot  Troubleshoots replication connection.

For command-specific help, please type replication --help <command>
eg:
    replication --help show

```

Sc_manager command

The **sc_manager** command have the following functions:

- Displays the current status of Secure Connect.
- Enables Secure Connect
- Disables Secure Connect

Sc_manager Command Usage

The following commands are run for **sc_manager**:

- **sc_manager --status**
- **sc_manager --disable**

- **sc_manager --enable**
- **sc_manager --help**

sc_manager status --property <path_to_sc_client.property_file>

i | **NOTE:** The **sc_manager** command must be run using the **root** account.

Description

Displays the Secure Connect status for the machine on which the command is run.

Syntax

If run from the directory containing the `sc_client.property` file:

```
sc_manager status
```

If run from a different directory:

```
/opt/qorestor/bin/sc_manager status --property <path_to_sc_client.property_file>
```

Result

```
SecureConnect.enabled = true
```

sc_manager disable --property <path_to_sc_client.property_file>

i | **NOTE:** The **sc_manager** command must be run using the **root** account.

Description

Disables Secure Connect for the machine on which the command is run.

Syntax

If run from the directory containing the `sc_client.property` file:

```
sc_manager disable
```

If run from a different directory:

```
/opt/qorestor/bin/sc_manager disable--property <path_to_sc_client.property_file>
```

Result

```
SecureConnect.enabled = false
```

sc_manager enable --property <path_to_sc_client.property_file>

Description

Enables Secure Connect for the machine on which the command is run.

Syntax

If run from the directory containing the `sc_client.property` file:

```
sc_manager enable
```

If run from a different directory:

```
/opt/qorestor/bin/sc_manager enable--property <path_to_sc_client.property_file>
```

Result

```
SecureConnect.enabled = true
```

Schedule

A schedule is the means by which you set aside specific daily time periods for performing disk space reclamation or replication operations. Disk reclamation operations recover unused disk space from QoreStor containers in which files were deleted; replication operations are the process by which the key data is saved only once from multiple devices to minimize excessive or redundant storage of the same data.

This set of QoreStor CLI commands allow you to perform the following tasks on a system:

- Display existing scheduled Replication and Cleaner (disk space recovery) operations
- Create new schedules for Replication and Cleaner operations
- Delete existing scheduled Replication and Cleaner operations

Schedule Command Usage

This topic introduces the **schedule** command usage:

- **schedule --show [--cleaner] [--replication] [--name]**
- **schedule --add --day <Day of the week (Sunday|Monday...)> [options]**
- **schedule --delete --day <Day of the week (Sunday|Monday...)> [options]**
- **schedule --help**

i | **NOTE:** If you specify a command without supplying the expected value or option, you will be prompted to provide the correct value or option.

schedule --show

Description

Displays any existing Cleaner schedule.

Syntax

```
schedule --show [--cleaner][--replication][--cloudreplication][--name <name>]
```

Where

<code>--cleaner</code>	Displays the cleaner schedule.
<code>--replication</code>	Displays all configured replication schedule(s).
<code>--cloudreplication</code>	Displays all configured cloud replication schedule(s).
<code>--name</code>	Display replication/cloud replication schedule of a specific container.

Result

Cleaner Schedule:

	Start	Stop
Sunday	05:00	06:00
Monday	05:00	06:00
Tuesday	05:00	06:00
Wednesday	05:00	06:00
Thursday	05:00	06:00
Friday	05:00	06:00
Saturday	05:00	06:00

schedule --add

Description

Creates a new Cleaner or Replication schedule for a QoreStor instance.

i NOTE: Without any Cleaner schedule set, the QoreStor Cleaner process automatically starts within two minutes after it detects that no data ingest operation or other system operation activity is present. So, if your QoreStor runs intermittent or inconsistent ingest or readback, or replication operations, there is no need to set a Cleaner schedule (it will automatically run during periods of low or non-activity). However, if your system runs regular and consistent ingest or readback you should create a Cleaner schedule that runs only during a known period of low or non-activity (for example, on a day or time period sufficient to complete this process). If your system does not meet either of these cases, you can still manually run the Cleaner. For more information, see [maintenance --filesystem \[--reclaim_space\]](#).

Syntax

```
schedule --add --day <Day of the week (Sunday|Monday...)>
  [--cleaner]
  [--replication]
  [--cloudreplication]
  [--start_time <HH:MM>]
```

```
[--stop_time <HH:MM>]
[--name <name>]
```

Where

```
--day                Day of the week to add.
--cleaner             Set up a cleaner schedule.
--replication         Set up a replication schedule.
--cloudreplication    Set up a cloud replication schedule.
--start_time          Schedule start time in HH:MM format, 00:00 - 23:59 are valid
values. To disable or continue from previous day, use -:- for start time.
--stop_time           Schedule stop time in HH:MM format, 00:01 - 24:00 are valid
values. To continue to next day, use -:- for stop time.
--name               Replication source Container Name.
```

i | **NOTE:** Set a corresponding stop time for every start time in each Cleaner (or Replication) schedule you create.

i | **NOTE:** Do not select 00:00 for a start time or stop time endpoint for midnight when setting Cleaner or Replication schedules (instead, use either the 23:55 or 00:05 value).

Result

Successfully updated Cleaner schedule.

i | **NOTE:** To create a Replication schedule (use the QoreStor CLI **--replication** command), and the same process shown here to schedule the start and stop times for a Replication schedule. This lets you schedule start and stop times for each day in the week in which you want the Replication process to run.

schedule --delete

Description

Deletes a day in an existing Cleaner or Replication schedule for a QoreStor instance. The **--name** option is only applicable for replication and not for the cleaner. You can use it to specify a container.

i | **NOTE:** To delete days from either an existing Cleaner or Replication schedule, specify the day in the week and the schedule type.

Syntax

```
schedule --delete --day <Day of the week (Sunday|Monday...)>
  [--cleaner]
  [--name <name>]
  [--replication]
  [--cloudreplication]
```

Where

```
--day                Day of the schedule to delete.
--cleaner             Delete a cleaner schedule.
--name               Replication source Container Name.
--replication         Delete a specific replication source container's schedule.
--cloudreplication    Delete a specific cloud replication source container's schedule.
```


Result

Successfully updated Cleaner schedule.

schedule --help

Description

Displays the list of schedule-related options that can be used as a reference when using the QoreStor CLI.

Syntax

```
schedule --help
```

Result

Usage:

```
schedule --show [--cleaner]
                [--replication]
                [--cloudreplication]
                [--name <name>]
```

```
schedule --add --day <Day of the week (Sunday|Monday...)>
                [--cleaner]
                [--replication]
                [--cloudreplication]
                [--start_time <HH:MM>]
                [--stop_time <HH:MM>]
                [--name <name>]
```

```
schedule --delete --day <Day of the week (Sunday|Monday...)>
                [--cleaner]
                [--name <name>]
                [--replication]
                [--cloudreplication]
```

```
schedule --help
```

```
schedule <command> <command-arguments>
```

<command> can be one of:

--show	Displays command specific information.
--add	Adds a schedule for cleaner (use on source DR).
--delete	Deletes a cleaner schedule (use on source DR).

For command-specific help, please type `schedule --help <command>`

eg:

```
schedule --help show
```

Seed

The QoreStor seed operations allow for exporting data on the source to a portable seed device to then import the seed data to a primary target, and, if required, a secondary target as well. Replication seeding is an alternative to using network bandwidth for the initial re-synchronization of the source and target(s). After the target(s) are seeded, continuous replication can be started, which will keep the target(s) up to date by sending only unique data.

The QoreStor CLI seed commands support the following operations:

- Create a job to perform seeding export or import.
- Delete an existing seeding export or import job.
- Specify containers for seeding export.
- Remove a container which is already added for seeding export.
- Add a device to be used for seeding.
- Remove a device which is already added for seeding.
- Start seeding process (export/import).
- Stop running seeding process (export/import).
- Start cleaner to process seed ZL logs on target.

i NOTE: The seeding device must be a CIFS share: a USB device connected to a Windows or Linux system and shared for import as a CIFS-mounted folder.

i NOTE: The following scenarios are not supported for seeding:

- Import AND export from one share/device cannot occur at the same time.
- Import from one share/device cannot be completed from multiple locations at the same time.
- Export to a mount point can be completed only from one seed job. Multiple seed export jobs cannot send data to a single mount point.

Seed Command Usage

This topic introduces the **seed** command usage:

- **seed --create --op <options> [--enc_type <options>] [--storage_group_name <name>]**
- **seed --delete**
- **seed --add_container --name <container name>**
- **seed --remove_container --name <container name>**
- **seed --add_device --server <server name> --volume <volume> --username <user name> --domain <domain name>**
- **seed --remove_device**
- **seed --start**
- **seed --stop**
- **seed --show**

- **seed --cleanup**
- **seed --help**

seed --create

Description

Creates a seed export job of type import or export on the source QoreStor or DR. The command will prompt for a password, and this password will be requested on the target to import the data. The command allows you to specify the type of encryption that will be used to encrypt the data on the seed device. The default value is aes256. The default value for storage group name is DefaultGroup.

Syntax

```
seed --create --op <import|export> [--enc_type <aes128 | aes256>] [--storage_group_name <name>]
```

Where

```
--op                Seeding operation export/import.
--enc_type          Encryption type. Default value is aes256.
--storage_group_name Storage group name. Default value is DefaultGroup
```

Result

```
Enter password for seed export:
Re-enter password for seed export:
Successfully created seed job details.
```

seed --add_container

Description

Adds the container(s) that you want to seed. A new invocation of seed --add_container command needs to be run for every container that you want to seed.

Syntax

```
seed --add_container --name <container name>
```

Where

```
--name    Seeding export container
```

Result

```
Successfully added seed container.
```

seed --add_device

Description

Adds a target device to the job. This is a USB device, which is CIFS shared from a Windows or Linux system.

i **NOTE:** During seeding import, when a device is added to be used as target device, it can be used only for one job. To use it for another job, you need to delete all the seeding contents from the device. You can create separate folders on this device and can use each folder for a job.

Syntax

```
seed --add_device --server <server name> --volume <volume> --username <user name> [--domain <domain name>]
```

Where

```
--server      CIFS Server to be used for importing / exporting data(IP address or FQDN) .
--volume      Volume in the CIFS share.
--username    Username of cifs server.
--domain      CIFS Server's domain.
```

Result

```
Enter password for administrator@10.250.224.81:
Successfully added seed device.
```

seed --cleanup

Description

Starts the cleaner to remove data not referenced on the target.

i **NOTE:** You should run the seeding cleaner only when the system is idle and no ingests or replications tasks are in progress. When the seeding cleaner is run during replication, for example, there is a chance of missing data during the seeding process. However, this data will eventually be sent during resync.

Syntax

```
seed --cleanup
```

Result

```
Successfully added seed ZL logs to cleaner queue
```

seed --remove_device

Description

Remove the target device. This is an important step without which stats and other information will not be saved on the target device.

Syntax

```
seed --remove_device
```

Result

Successfully deleted device details

seed --show

Description

Used to show the configured seed job.

Syntax

```
seed --show
```

Result

```
Device info
=====
Server                :10.250.224.81
Volume                :seed-device
Username              :administrator
Domain                :testad.acme.local

Job info
=====
Operation             :Export
Status                :Started
Container              :acme-container1
Encryption type       :aes256
```

seed --start

Description

Starts the seeding job. You will be prompted to add additional devices if a single device does not have enough space.

Syntax

```
seed --start
```

Result

Successfully started seed job.

seed --help

Description

Displays the list of all seed command related options that can be used as a reference when using the QoreStor CLI.

Syntax

```
seed --help
```

Result

Usage:

```
seed --create --op <import|export>
    [--enc_type <aes128 | aes256>]
    [--storage_group_name <name>]
```

```
seed --delete
```

```
seed --add_container --name <container name>
```

```
seed --remove_container --name <container name>
```

```
seed --add_device --server <server name>
    --volume <volume>
    --username <user name>
    [--domain <domain name>]
```

```
seed --remove_device
```

```
seed --start
```

```
seed --stop
```

```
seed --show
```

```
seed --cleanup
```

```
seed --help
```

```
seed <command> <command-arguments>
```

command can be one of:

--create	Create a job to perform seeding export or import.
--delete	Delete an existing seeding export or import job.
--add_container	Add a container to be used for seeding export.
--remove_container	Remove a container which is already added for seeding export.
--add_device	Add a device to be used for seeding.
--remove_device	Remove a device which is already added for seeding.
--start	Start seeding process (export/import).
--stop	Stop running seeding process (export/import).
--show	Show registered device, job for seeding.
--cleanup	Start cleaner to process seed ZL logs on target.

For command-specific help, please type `seed --help <command>`

eg:

```
seed --help create
```

Stats

This set of QoreStor CLI commands let you display the current statistics for a QoreStor in the following categories:

- All containers (cumulative): **--system**
- CPU: **--cpu**
- Memory: **--memory**
- NFS: **--nfs**
- CIFS: **--cifs**
- OST media server: **--ost**
- RDS media server **--rds**
- NDMP: **--ndmp**
- Completed NDMP sessions: **--ndmp_completed**
- iSCSI: **--iscsi [--verbose]**
- A specific container: **--container --name**
- Storage group: **--storage_group --name <name>**
- Replication: **--replication**
- Cleaner: **--cleaner**
- Clients: **--clients [--type <NFS|CIFS|OST|RDS|NDMP|ISCSI>]**
- Seeding: **--seed**
- Cloud tiers: **--cloud_tier**
- Performance tier: **--performance_tier**
- Help: **--help**

In addition, this QoreStor CLI command also allows you to reset the following statistic types:

- RDS **--reset --rds**

Stats Command Usage

This topic introduces the **stats** command usage:

- **stats --system**
- **stats --cpu**
- **stats --memory**
- **stats --nfs**

- **stats --cifs**
- **stats --ost**
- **stats --rds**
- **stats --container --name**
- **stats --storage_group --name**
- **stats --replication [options]**
- **stats --cleaner**
- **stats --clients [options]**
- **stats --reset [options]**
- **stats --seed**
- **stats --performance_tier**
- **stats --cloud_tier**
- **stats --object_direct**
- **stats --archive_tier**
- **stats --object_container**
- **stats --help**

i | **NOTE:** If you specify a command without supplying the expected value or option, you will be prompted to provide the correct value or option.

stats --system

Description

Displays the current cumulative system statistics for all of the configured containers on a QoreStor.

Syntax

```
stats --system
```

Result

```
stats --system
Capacity Used           : 0.0 GiB
Capacity Used in GB     : 0.000
Capacity Free           : 690.5 GiB
Capacity Free in GB     : 741.394
Cloud Capacity Used     : 0.0 GiB
Cloud Capacity Used in GB : 0.000
ObjectDirect Capacity Used : 0.0 GiB
ObjectDirect Capacity Used in GB: 0.000
Archive Capacity Used    : 0.0 GiB
Archive Capacity Used in GB : 0.000
Metadata Used           : 256.0 GiB
Metadata Used in GB     : 274.895
```



```

Reserve Space           : 0.0 GiB
Reserve Space in GB     : 0.000
Total Capacity          : 1280.0 GiB
Total Capacity in GB    : 1374.406
Licensed Capacity       : 1280.0 GiB
Licensed Capacity in GB : 1374.406
Read Throughput         : 0.00 MiB/s
Write Throughput        : 0.00 MiB/s
Current Files           : 0
Current Files Stubbed   : 0
Modified Files Uploaded to Cloud: 0
Modified Files Uploaded to Archive: 0
Current Bytes           : 0
Current Stubbed Bytes   : 0
Current Local Bytes     : 0
Post Dedupe Bytes       : 0
Post Compression Bytes  : 0
Post Encryption Bytes   : 0
Post Encryption Bytes in GiB : 0.0 GiB
Cleaner Status          : Done
Compression Status      : Done
Total Inodes            : 0
Bytes decrypted         : 0
Dedupe Savings          : 0.00 %
Compression Savings     : 0.00 %
Total Savings           : 0.00 %
Local Dedupe Savings    : 0.00 %
Local Compression Savings : 0.00 %
Local Total Savings     : 0.00 %

```

stats --cpu

Description

Displays the current cumulative CPU statistics for a QoreStor.

Syntax

```
stats --cpu
```

Result

```

13:00:00 up 9 days, 19:24,  2 users,  load average: 1.12, 1.20, 1.18
Cpu(s):  1.4%us,  2.3%sy,  4.0%ni, 99.3%id,  0.0%wa, 0.0%hi,  0.0%si,  0.0%st

```

stats --memory

Description

Displays the current memory statistics in kilobytes (kB) for a QoreStor.

Syntax

```
stats --memory
```

Result

MemTotal	: 98730140 kB
MemFree	: 423060 kB
MemAvailable	: 69596376 kB
Buffers	: 0 kB
Cached	: 69734184 kB
SwapCached	: 7036 kB
Active	: 618996 kB
Inactive	: 69248208 kB
Active(anon)	: 244028 kB
Inactive(anon)	: 313112 kB
Active(file)	: 374968 kB
Inactive(file)	: 68935096 kB
Unevictable	: 26689192 kB
Mlocked	: 26689192 kB
SwapTotal	: 4194300 kB
SwapFree	: 4105716 kB
Dirty	: 1488 kB
Writeback	: 0 kB
AnonPages	: 26814984 kB
Mapped	: 502072 kB
Shmem	: 303136 kB
Slab	: 680584 kB
SReclaimable	: 424836 kB
SUnreclaim	: 255748 kB
KernelStack	: 42816 kB
PageTables	: 87144 kB
NFS_Unstable	: 0 kB
Bounce	: 0 kB
WritebackTmp	: 0 kB
CommitLimit	: 53559368 kB
Committed_AS	: 37430456 kB
VmallocTotal	: 34359738367 kB
VmallocUsed	: 604172 kB
VmallocChunk	: 34308610044 kB
HardwareCorrupted	: 0 kB
AnonHugePages	: 17606656 kB
CmaTotal	: 0 kB
CmaFree	: 0 kB
HugePages_Total	: 0
HugePages_Free	: 0
HugePages_Rsvd	: 0
HugePages_Surp	: 0
Hugepagesize	: 2048 kB
DirectMap4k	: 374480 kB
DirectMap2M	: 15255552 kB

stats --nfs

Description

Displays the current NFS statistics for a QoreStor.

Syntax

```
stats --nfs
```

Result

NFS Per Op Statistics

Procedure	Calls	Avg (us)	Max (us)	Errors
NULL	94	277	4172	0
GETATTR	52552	19946	19905631	0
SETATTR	1031	629602	166232015	0
LOOKUP	2227	18897	1918992	1673
ACCESS	26221	543	416780	0
READLINK	0	0	0	0
READ	5302595	240217	856398852	1
WRITE	12872	188647	6853027	0
CREATE	1031	917970	23587115	0
MKDIR	0	0	0	0
SYMLINK	0	0	0	0
MKNOD	0	0	0	0
REMOVE	44996	155136	6458023	0
RMDIR	0	0	0	0
RENAME	0	0	0	0
LINK	0	0	0	0
READDIR	0	0	0	0
READDIRPLUS	85566	30674	28308673	0
FSSTAT	30	321247	1133437	0
FSINFO	104	55279	2402344	0
PATHCONF	52	30217	1466732	0
COMMIT	1031	102190	5506293	0
XWRITE	676364	0	0	0

stats --cifs

Description

Displays the current CIFS statistics for a QoreStor.

Syntax

```
stats --cifs
```

Result

CIFS Per Op Statistics

Procedure	Calls	Avg(us)	Max(us)	Errors
CONNECT	240	536311	1545946	0
DISCONNECT	214	1979	13127	0
CREATE	271	147101	1170580	0
OPEN	0	0	0	0
CLOSE	0	0	0	0
PREAD	1223941	6167	856679104	0
IOV_PREAD	0	0	0	0
PWRITE	4629174	26376	529148935	0
IOV_PWRITE	0	0	0	0
FTRUNCATE	0	0	0	0
LSTAT	0	0	0	0
FCNTL	0	0	0	0
CANCEL	0	0	0	0
FSTAT	548246	325	7495992	0
FSTAT_BY_PATH	0	0	0	0
REaddir	5064	106833	13550728	0
OPENDIR	2478	160	3671	0
OPENDIR_BY_PATH	0	0	0	0
CLOSEDIR	2477	22	1434	0
MKDIR	0	0	0	0
MKDIR_BY_PATH	0	0	0	0
REMOVE	0	0	0	0
REMOVE_BY_PATH	18026	90875	4900538	0
RENAME	0	0	0	0
RENAME_BY_PATH	0	0	0	0
RMDIR	0	0	0	0
RMDIR_BY_PATH	0	0	0	0
FCHMOD	0	0	0	0
FCHMOD_BY_PATH	0	0	0	0
FCHOWN	0	0	0	0
FCHOWN_BY_PATH	0	0	0	0
FSYNC	226	16257	561552	0
STATVFS	0	0	0	0
STATVFS_BY_PATH	0	0	0	0
UTIME	0	0	0	0
UTIME_BY_PATH	0	0	0	0
MKFIFO	0	0	0	0
MKNOD	0	0	0	0
READLINK	0	0	0	0
READLINK_BY_PATH	0	0	0	0
LINK	0	0	0	0
LINK_BY_PATH	0	0	0	0
SYMLINK	0	0	0	0
SYMLINK_BY_PATH	0	0	0	0
FLOCK	0	0	0	0
SETXATTR	271	87332	565006	0

SETXATTR_BY_PATH	512	95902	896865	0
GETXATTR	922	21916	687777	0
GETXATTR_BY_PATH	354219	18363	3902905	0
LISTXATTR	676	25103	551572	0
LISTXATTR_BY_PATH	261591	9222	4276854	0
REMOVEXATTR	0	0	0	0
REMOVEXATTR_BY_PATH	0	0	0	0
FD_FROM_PATH	610645	1609	856224591	0
GET_REAL_FILENAME	1358	17105	860143	0
XWRITE	0	0	0	0

CIFS I/O Statistics

Procedure	Avg(bytes)	Max(bytes)	Min(bytes)
-----	-----	-----	-----
READ	52429	61440	61440
WRITE	65536	65536	65536
XWRITE	0	0	0

stats --ost

Description

Displays the current OpenStorage Technology (OST) statistics categories for a QoreStor.

Syntax

```
stats --ost
```

Result

OST Server Statistics

Procedure	Calls	Avg(us)	Max(us)	Errors
-----	-----	-----	-----	-----
GET_AUTH	2	0	0	0
OPEN_SERVER	2	0	0	0
CLOSE_SERVER	1	0	0	0
CREATE_FILE	0	0	0	0
OPEN_FILE	9871	0	28	0
CLOSE_FILE	9871	0	27	0
UNLINK_FILE	0	0	0	0
WRITE_FILE	6	0	0	0
READ_FILE	19676	0	0	0
REPLICATE_FILE	0	0	0	0
LIST_LSU	2	0	0	0
OPENDIR	0	0	0	0
CLOSEDIR	0	0	0	0
REaddir	0	0	0	0
SET_LSU_INFO	0	0	0	0
GET_LSU_INFO	3279	0	22	0
REPL_SVR_SETUP	0	0	0	0

GET_IMAGE_INFO	0	0	0	0
MKDIR	0	0	0	0
RMDIR	0	0	0	0
RENAME	0	0	0	0
ACCESS	9906	0	0	0
TRUNCATE	0	0	0	0
GETSCID	9871	0	0	0
READDIR_PLUS	0	0	0	0

stats --rds

Description

Displays statistics for RDS server.

Syntax

```
stats --rds
```

Result

RDS Server Statistics				
Procedure	Calls	Avg (us)	Max (us)	Errors

GET_AUTH	2	0	0	0
OPEN_SERVER	2	0	0	0
CLOSE_SERVER	1	0	0	0
CREATE_FILE	0	0	0	0
OPEN_FILE	9901	0	28	0
CLOSE_FILE	9901	0	27	0
UNLINK_FILE	0	0	0	0
WRITE_FILE	6	0	0	0
READ_FILE	19736	0	0	0
REPLICATE_FILE	0	0	0	0
LIST_LSU	2	0	0	0
OPENDIR	0	0	0	0
CLOSEDIR	0	0	0	0
READDIR	0	0	0	0
SET_LSU_INFO	0	0	0	0
GET_LSU_INFO	3289	0	22	0
REPL_SVR_SETUP	0	0	0	0
GET_IMAGE_INFO	0	0	0	0
MKDIR	0	0	0	0
RMDIR	0	0	0	0
RENAME	0	0	0	0
ACCESS	9936	0	0	0
TRUNCATE	0	0	0	0
GETSCID	9901	0	0	0
READDIR_PLUS	0	0	0	0

stats --iscsi

Description

This command displays statistics for iSCSI sessions on the current QoreStor system. The **--verbose** option provides detailed session information for the cartridges in the VTL.

Syntax

```
stats --iscsi --verbose
```

Result

```
# stats - iscsi
Bytes Written          Bytes Read
1247953038336         2253404205

# stats -iscsi -verbose
Container: vtl-1
TGT  LUN      Model  SID  Read [ bytes  cmds ] Write[ bytes  cmds ] Errs
  1    1    L700           3           34367      435           0
0
  1    2  ULT3580-TD4      3 125487488328 638396           176      12 177
  1    3  ULT3580-TD4      3           72052      101           44      3
166
  1    4  ULT3580-TD4      3           72032      100           44      3
165
  1    5  ULT3580-TD4      3           72032      100           44      3
165
  1    6  ULT3580-TD4      3           6176       90           0
0 158
  1    7  ULT3580-TD4      3           72032      100           44      3
165
  1    8  ULT3580-TD4      3           72032      100           44      3
165
  1    9  ULT3580-TD4      3           468220     212 601296470516 3058393 158
  1   10  ULT3580-TD4      3 601299559400 3058553           352      24 171
  1   11  ULT3580-TD4      3           72032      100           44      3
165
```

stats --container

Description

Displays the current statistics for a specific container in a QoreStor that you define by name using the QoreStor CLI **--name <name>** command.

Syntax

```
stats --container --name <name>
```

Where

--name Name of container.

Result

```
stats --container --name cifs-dr --verbose
```

Container Name : cifs-dr

Container ID : 6

Total Inodes : 7

Read Throughput : 0.00 MiB/s

Write Throughput : 0.00 MiB/s

Current Files : 5

Current Files Stubbed : 5

Current Bytes : 317348270

Cleaner Status : Done

Cloud Replication stats:

Source container Name : cifs-dr

Cloud container Name : cloud_connector_tgt_6

Total files at source : 5

Cloud replication history:

File : /data/f1.txt, 61.21%, 2109 bytes, 0 KiB/s, replicated at : 2020-09-11 05:22:39

File : /data/f2.txt, 61.52%, 2643 bytes, 0 KiB/s, replicated at : 2020-09-11 05:22:39

File : /data/open_source_licenses.txt, 58.39%, 2776140 bytes, 114 KiB/s, replicated
at : 2020-09-11 05:22:50

File : /data/t1x.txt, 66.54%, 4438 bytes, 0 KiB/s, replicated at : 2020-09-11
05:22:50

File : /data/file3, 0.00%, 314572800 bytes, 12842 KiB/s, replicated at : 2020-09-11
05:22:50

File : /data/t1x.txt, 59.58%, 2066 bytes, 1 KiB/s, replicated at : 2020-09-11
06:10:27

File : /data/open_source_licenses.txt, 99.72%, 2775358 bytes, 1855 KiB/s, replicated
at : 2020-09-11 06:10:27

File : /data/f1.txt, 60.08%, 2172 bytes, 1 KiB/s, replicated at : 2020-09-11 06:11:28

File : /data/file3, 98.55%, 314566031 bytes, 136827 KiB/s, replicated at : 2020-09-11
06:11:28

Total bytes at source : 7226289

Total bytes processed (logical) : 634703757

Total files replicated : 9

Total bytes replicated : 321799089

Total compressed bytes replicated: 320290812

Total cloud bmap bytes read : 0

Total cloud bmap bytes written : 2494464

Total cloud bmap blobs created : 5

Total cloud cloud bytes read : 0

Total cloud cloud bytes written : 3545813169

Total cloud blobs : 651

Modified Files Uploaded to Cloud: 6

Modified Files Uploaded to Archive: 0

Total cloud bytes : 2628833008

stats --storage_group

Description

This command displays statistics for a specific storage group as referenced by the --name <name> command option.

Syntax

```
stats --storage_group --name <name>
```

Where

--name Name of storage_group.

Result

Storage_group ID	: 0
Capacity Used	: 380.4 GiB
Capacity Used in GB	: 408.425
Capacity Free	: 3572.8 GiB
Capacity Free in GB	: 3836.313
Total Inodes	: 810
Read Throughput	: 0.00 MiB/s
Write Throughput	: 0.00 MiB/s
Current Files	: 682
Current Bytes	: 1351703380026
Post Dedupe Bytes	: 408536589100
Post Compression Bytes	: 408424845453
Post Encryption Bytes	: 0
Post Encryption Bytes in GiB	: 0.0 GiB
Bytes decrypted	: 0
Cleaner Status	: Pending
Compression Status	: Done
Encryption Status	: Disabled
Dedupe Savings	: 69.78 %
Compression Savings	: 0.03 %
Total Savings	: 69.78 %

stats --replication

Description

Displays the current replication statistics for all containers in a QoreStor or for a specific container in a QoreStor that you define using the QoreStor CLI --name <name> command.

Syntax

```
stats --replication [--verbose] [--name <name>]
```

Where

--verbose Verbose Option
--name Name of container

Result

```
Container Name           : backup_acme-60_1234567
Replication Target Container : backup
Replication Target System  : 10.25.19.16
Peer Status              : Stopped
Replication State         : INSYNC
Schedule Status          : Outside window (starts in 0 days 10 hours 6 min 0 sec)
Replication Average Throughput : 4154 KiB/s
Replication Maximum Throughput : 15710 KiB/s
Network Average Throughput  : 3759 KiB/s
Network Maximum Throughput  : 14999 KiB/s
Network Bytes Sent         : 154.45 MiB
Network Savings           : 56.60 %
Last INSYNC Time          : 2012-06-20 09:11:42
Estimated Time To Sync     : 0 days 7 hours 3 minutes 19 seconds
```

Data replication history

File : /vargen/source/Office_Docs/Email/Outlook/3244.flate, 44.70%, 88773 bytes, 1305 KB/s, replicated at : 2012-06-19 11:47:03

File : /vargen/source/status/DEV/August11/dev-status.doc, 100.00%, 86200 bytes, 4310 KB/s, replicated at : 2012-06-19 11:47:03

File : /vargen/source/MKT/whitepaper/eng/324.tar.gz, 0.00%, 5182 bytes, 259 KB/s, replicated at : 2012-06-19 11:47:03

File : /vargen/source/acctspay/status/Sept11/3242.tar.gz, 65.23%, 94616 bytes, 1456 KB/s, replicated at : 2012-06-19 11:47:03

File : /vargen/source/revenue/Q311/interna/324.xls, 0.00%, 5152 bytes, 286 KB/s, replicated at : 2012-06-19 11:47:03

File : /vargen/source/projects/Q411/europe/3244.tar.gz, 62.94%, 8828 bytes, 1193 KB/s, replicated at : 2012-06-19 11:47:03

stats --cleaner

The **stats --cleaner** command displays the current running cleaner progress and the amount of time taken to complete its latest full pass. The Cleaner is an asynchronous process in the QoreStor that reclaims disk storage space by reclaiming space that previously contained unreferenced datastore files.

Syntax

```
stats --cleaner
```

Result

```
Last Run:
Last Files Processed      : 0
Last Bytes Processed     : 0
Last Bytes Reclaimed     : 0
Last Start Time          : 11/30/16 01:57:32
Last End Time             : 11/30/16 01:57:37
Time To Completion(s)    : 5.00
```

```
Current Run:
Start Time                : 11/30/16 02:00:37
Files Processed           : 100
Bytes Processed           : 37748736000
Bytes Reclaimed           : 15281899829
Phase 1 Start Time        : 11/30/16 02:00:38
Phase 1 Records Processed : 0
Phase 1 End Time          : 11/30/16 02:00:38
Phase 2 Start Time        : 11/30/16 02:00:38
Phase 2 Records Processed : 1172436
Phase 2 End Time          : 11/30/16 02:00:39
Phase 3 Start Time        : 11/30/16 02:00:39
Phase 3 Records Processed : 1600
Phase 3 End Time          : 11/30/16 02:00:47
Phase 4 Start Time        : 11/30/16 02:00:51
Phase 4 Records Processed : 1637
Phase 4 End Time          : 11/30/16 02:00:51
Phase 5 Start Time        : 11/30/16 02:00:51
Phase 5 Records Processed : 0
Phase 5 End Time          : 11/30/16 02:00:51
```

```
Last Completed Run:
Last Completed Start Time : 11/30/16 01:50:15
Last Completed End Time   : 11/30/16 01:50:30
Last Completion time(s)   : 15.00
```

```
Cleaner Pending Work:
Estimated Logical Bytes Left : 3130982400
```

stats --clients

Description

Displays the current clients that are configured on the QoreStor.

To filter the list of clients to display a specific client type on a QoreStor, use the QoreStor CLI **--type** command option.

i | **NOTE:** For OST clients, the value under **Connections** is **0** (zero) when the connection is configured (but it is not in use), and **1** when the connection is in use.

Syntax

```
stats --clients [--type <NFS|CIFS|OST|RDS|NDMP|ISCSI>]
```

```
--type      Type of clients (OST|RDS only).
```

```
No OST client(s) are connected.
```

stats --reset

Resets the current RDS statistics for a QoreStor. The following example shows `--rds`; to reset another statistic type, just replace that option type in the QoreStor CLI command.

```
stats --reset [--rds] [--datacheck]
```

```
--rds          Reset statistics for RDS connections.
--datacheck    Reset statistics for online data verification
```

RDS Protocol message statistics are reset successfully.

stats --seed

Use to monitor the seeding progress.

```
stats --seed
```

Seeding Source Stats:

```

Seed state:                SEED_STARTED
Seed status:               FINISHED
Seed device mount:         /mnt/.__seed_device
Blockmaps read:            12
Seeding Dictionary updates: 1065
Streams read:              196042
Comp bytes read:           5959925818
Streams committed:         196042
Streams deduped:           141245
DS's committed:           475
Total bytes processed:     10401873920
Total bytes deduped:       4441947702
Total inline bytes:        400
Total orig bytes committed: 5959925818
Total comp bytes committed: 5959925818
Device orig bytes committed: 5959925818
Device comp bytes committed: 5959925818
Logical Avg Throughput:    0.000 KB/s
Logical Max Throughput:    2462955.935 KB/s
Physical Avg Throughput:   0.000 KB/s
Physical Max Throughput:   151010.166 KB/s
Estimated time to sync:    0 days 0 hours 0 minutes 0 seconds

```

```

.....
.....
.....

```

stats --performance_tier

Description

Displays statistics for a performance tier.

Syntax

```
stats --performance_tier
```

Result

stats --cloud_tier

Description

Displays statistics for cloud tier.

Syntax

```
stats --cloud_tier
```

Result

```
Storage_group ID : 9
Total Inodes : 291
Read Throughput : 0.00 MiB/s
Write Throughput : 0.00 MiB/s
Current Files : 259
Current Bytes : 419352544152
Post Dedupe Bytes : 46228717331
Post Compression Bytes : 44581959818
Post Encryption Bytes : 44596937216
Post Encryption Bytes in GiB : 41.5 GiB
Bytes decrypted : 32
Cleaner Status : Done
Compression Status : Done
Encryption Status : Done
Dedupe Savings : 88.98 %
Compression Savings : 3.56 %
Total Savings : 89.37 %
Cloud read Throughput : 0.00 MiB/s
Cloud write Throughput : 0.00 MiB/s
Files in progress to cloud : 0
Total cloud bytes uploaded : 46110464816
Total cloud bytes downloaded : 0
Total cloud files : 10934
Total cloud bytes : 46110464816
Total cloud bytes processed : 0
Total cloud ds bytes reclaimed : 0
Total cloud metadata bytes : 1513527600
Total space (rehydrated) : 420866071752
```

stats --object_direct

Description

Displays cumulative statistics for all object direct storage containers.

Syntax

```
stats --object_direct
```

Result

Capacity Used	: 0.1 GiB
Capacity Used in GB	: 0.120
Capacity Free	: 1023.9 GiB
Capacity Free in GB	: 1099.391
Metadata Used	: 330.0 GiB
Metadata Used in GB	: 354.385
Reserve Space	: 137.5 GiB
Reserve Space in GB	: 147.640
Total Capacity	: 1354.0 GiB

```

Total Capacity in GB          : 1453.897
Licensed Capacity             : 1024.0 GiB
Licensed Capacity in GB      : 1099.512
Read Throughput               : 0.00 MiB/s
Write Throughput              : 0.00 MiB/s
Current Files                  : 115
Current Files Stubbed         : 0
Modified Files Uploaded to Cloud: 0
Modified Files Uploaded to Archive: 0
Current Bytes                  : 101203342
Current Stubbed Bytes         : 0
Current Local Bytes           : 101203342
Post Dedupe Bytes             : 120340056
Post Compression Bytes        : 120209672
Post Encryption Bytes         : 120253568
Post Encryption Bytes in GiB  : 0.1 GiB
Cleaner Status                 : Done
Compression Status            : Done
Total Inodes                   : 215
Bytes decrypted                : 4758745363
Dedupe Savings                 : 0.00 %
Compression Savings            : 0.11 %
Total Savings                  : 0.00 %
Local Dedupe Savings           : 0.00 %
Local Compression Savings      : 0.11 %
Local Total Savings            : 0.00 %
Object Direct read Throughput  : 0.00 MiB/s
Object Direct write Throughput : 0.00 MiB/s
Total Object Direct files      : 24
Total Object Direct bytes      : 202379648
Total Object Direct bytes uploaded: 6063623408
Total Object Direct bytes downloaded: 4594683184
Total Object Direct bytes processed: 7225518094
Total Object Direct ds bytes reclaimed: 6099125293
Total Object Direct metadata bytes: 82126080
Total Object Direct space (rehydrated): 183329422

```

stats --archive_tier

Description

Displays statistics for cloud archive tier.

Syntax

```
stats --archive_tier
```

Result

```

Storage_group ID          : 2
Total Inodes               : 6

```

```

Read Throughput           : 0.00 MiB/s
Write Throughput          : 0.00 MiB/s
Current Files             : 0
Current Bytes             : 3050801389
Post Dedupe Bytes         : 0
Post Compression Bytes    : 0
Post Encryption Bytes     : 0
Post Encryption Bytes in GiB : 0.0 GiB
Bytes decrypted           : 32
Cleaner Status            : Done
Compression Status        : Done
Encryption Status         : Done
Dedupe Savings            : 100.00 %
Compression Savings       : 0.00 %
Total Savings             : 100.00 %
Archive read Throughput   : 0.00 MiB/s
Archive write Throughput  : 0.00 MiB/s
Files in progress to archive : 0
Total archive bytes uploaded : 1561963323
Total archive bytes downloaded : 3735552
Total archive cache bytes read : 0
Total archive read bytes optimized: 0
Total archive files       : 4
Total archive overwritten files : 0
Total archive bytes       : 7831552
Total archive bytes processed : 0
Total archive ds bytes reclaimed: 1538996842
Total archive metadata bytes : 7831552
Total space (rehydrated)   : 3058632941

```

stats --object_container

Description

Displays statistics for Object container.

Syntax

```
stats --object_container
```

Result

```

Storage_group ID         : 3
Capacity Used            : 0.0 GiB
Capacity Used in GB      : 0.000
Capacity Free            : 293.4 GiB
Capacity Free in GB      : 315.088
Total Inodes             : 43
Read Throughput          : 0.00 MiB/s
Write Throughput         : 0.00 MiB/s
Current Files            : 17

```



```

Current Files Stubbed      : 3
Current Bytes              : 1136103273
Post Dedupe Bytes         : 6613
Post Compression Bytes    : 6577
Post Encryption Bytes     : 6640
Post Encryption Bytes in GiB : 0.0 GiB
Bytes decrypted           : 1096056509
Cleaner Status            : Done
Compression Status        : Done
Encryption Status         : Done
Dedupe Savings            : 6.69 %
Compression Savings       : 0.54 %
Total Savings             : 6.31 %

```

stats --help

Description

Displays the list of all stats-related options that can be used as a reference when using the QoreStor CLI.

Syntax

```
stats --help
```

Result

Usage:

```

stats --system
stats --cpu
stats --memory
stats --nfs
stats --cifs
stats --ost
stats --rds
stats --container --name <name> [--verbose]
stats --storage_group --name <name>
stats --replication [--verbose][--name <name>]
stats --cleaner
stats --clients [--type <NFS|CIFS|OST|RDS>]
stats --reset [--rds]
stats --seed
stats --performance_tier
stats --cloud_tier
stats --object_direct
stats --archive_tier
stats --object_container
stats --help

```

```

stats <command> <command-arguments>
<command> can be one of:

```

<code>--system</code>	Displays cumulative statistics for all containers.
<code>--cpu</code>	Displays CPU statistics.
<code>--memory</code>	Displays statistics for memory.
<code>--nfs</code>	Displays statistics for NFS.
<code>--cifs</code>	Displays statistics for CIFS.
<code>--ost</code>	Displays statistics for OST server.
<code>--rds</code>	Displays statistics for RDS server.
<code>--container</code>	Displays statistics for a specific container
<code>--storage_group</code>	Displays statistics for a specific storage_group
<code>--replication</code>	Displays statistics for replication.
<code>--cleaner</code>	Displays statistics for cleaner.
<code>--clients</code>	Displays client information.
<code>--reset</code>	Resets statistics.
<code>--seed</code>	Seeding statistics.
<code>--performance_tier</code>	Displays statistics for performance tier.
<code>--cloud_tier</code>	Displays statistics for cloud tier.
<code>--object_direct</code>	Displays cumulative statistics for all object direct storage
containers	
<code>--archive_tier</code>	Displays statistics for cloud archive tier
<code>--object_container</code>	Displays statistics for Object container

For command-specific help, please type `stats --help <command>`

eg:

`stats --help system`

Storage Group commands

This set of QoreStor CLI commands let you manage the storage groups on a QoreStor, enabling you to perform tasks, such as adding or deleting a storage group, updating a storage group, updating encryption settings, updating compression settings, and setting a passphrase.

Storage Group Command Usage

This topic introduces the **storage_group** command usage:

- **storage_group --show**
- **storage_group --add --name**
- **storage_group --update --name**
- **storage_group --encryption --name**
- **storage_group --delete --name**
- **storage_group --setpassphrase --name**
- **storage_group --help**

i | **NOTE:** If you specify a command without supplying the expected value or option, you will be prompted to provide the correct value or option.

storage_group --show

Description

Displays the current list of storage groups on the QoreStor. If you specify the `--name` option, you can view details of a specific storage group. The `--verbose` option displays more details.

Syntax

```
storage_group --show [--name <name>] [--verbose]
```

Where

```
--name      Display details for a specific Storage group.
--verbose   Display more details
```

Result

```
Storage_group Name           : DefaultGroup
Storage_group Compression Type : Fast
Storage_group Encryption Set  : Off
Storage_group Encryption Mode : Off
Storage_group Rotate Period   : 0
Storage_group Passphrase set   : No
Storage_group Quota limit      : Unlimited
Storage_group Created On       : Thu Nov 17 00:40:14 2016 PST
Storage_group Created Bld      : 62141
DefaultGroup's Containers
-----
backup
vtl-iscsi
```

storage_group --add

Description

Adds a new storage group to the QoreStor with the name specified by the `--name` command option.

i | **NOTE:** When adding a name, valid values for the name are (a-z, A-Z, 0-9, '_', and '_')

i | **NOTE:** Do not change the **chunk_type** parameter from the default setting unless directed to do so by Quest Support.

You can also set the compression mode for the storage group as fast or best, described as follows:

- **Fast** — Results in shorter backup time, but with less space savings.
- **Best** — Provides the highest space savings, but with a longer backup time.

Syntax

```
storage_group --add --name <name> [--compression_mode <fast|best>] [--quota <Quota value in GiB or TiB>]
```

Where

```
--name                Name of the storage group. Valid values are [a-z,A-Z,0-9,'-' and '_'] and maximum of 32 characters.
--compression_mode    Valid values are Fast and Best.
--quota               Quota value in GiB or TiB.
```

Result

Storage Group "StorageGroup_1" created successfully.

storage_group --update

Description

Allows you to modify the settings for the specified storage group.

Syntax

```
storage_group --update --name <name> [--compression_mode <fast|best>] [--quota <Quota value in GiB or TiB>]
```

Where

```
--name                Name of the storage group. Valid values are [a-z,A-Z,0-9,'-' and '_'] and maximum of 32 characters.
--compression_mode    Valid values are Fast and Best
--quota               Quota value in GiB or TiB.
```

Result

Storage Group "StorageGroup_1" updated successfully.

storage_group --encryption

Description

Allows you to set the encryption level for a specified storage group on the QoreStor. You turn encryption on or off by using the --set ON or --set OFF command options. The --mode option sets the mode of key lifecycle management as one of the following:

- static—A global, fixed key is used to encrypt all data.
- internal—Content encryption keys are generated and rotated on a specified period of days.

If you select Internal as the mode of key management, you need to set the --interval option, which specifies the number of days for key rotation when a new key is to be generated.

- i** | **NOTE:** In Internal mode there is a maximum limit of 1023 keys. The key rotation period is set to 30 days by default when the passphrase is set and/or encryption is turned on. You can later change the key rotation period from 7 days to 70 years for internal mode.
- i** | **NOTE:** After encryption is enabled, all of the data that is backed up is encrypted and is kept encrypted until it is expired and cleaned by the system cleaner. Note that encryption is an irreversible process.
- i** | **NOTE:** Due to export regulations, the encryption at rest feature is not available in certain markets, and, therefore, may not be available in your locale.

Syntax

```
storage_group --encryption --name <name> [--set <ON | OFF>] [--mode < static |
internal >] [--interval <7 days to 70 years>]
```

Where

```
--name      Name of the storage group. Valid values are [a-z,A-Z,0-9,'-' and '_'] and
maximum of 32 characters.
--set       Valid values are On and Off.
--mode      Valid values are static and internal.
--interval  Valid values are between 7 days to 70 years (in days)
```

Result

```
Storage Group "StorageGroup_1" updated successfully.
```

storage_group --delete

Description

Deletes the specified storage group from the QoreStor.

- i** | **NOTE:** Before a storage group can be deleted, all of the containers inside the storage group must first be deleted.

Syntax

```
storage_group --delete --name <name>
```

Where

```
--name      Name of storage_group.
```

Result

```
Storage Group "StorageGroup_1" has been deleted.
```

storage_group --setpassphrase

Description

Sets the passphrase for the specified storage group to be used to encrypt content encryption keys. (The passphrase string can take up to 255 characters. And, alphanumeric and special characters can be entered as

part of the passphrase string.) This command will prompt you to enter and confirm a passphrase. This command also requires a filesystem server restart.

i **NOTE:** It is mandatory to define a passphrase to enable encryption for a storage group. If the passphrase is compromised or lost, the administrator should change it immediately so that the content encryption keys do not become vulnerable.

Syntax

```
storage_group --setpassphrase --name <name>
```

Where

--name Storage group name

Result

Storage Group "StorageGroup_1" updated successfully.
Passphrase updated successfully.

storage_group --help

Description

Displays the list of all storage_group-related options that can be used as a reference when using the QoreStor CLI.

Syntax

```
storage_group --help
```

Result

Usage:

```
storage_group --show [--name <name>]
                    [--verbose]
```

```
storage_group --add --name <name>
                    [--compression_mode <fast|best>]
                    [--quota <Quota value in GiB or TiB>]
```

```
storage_group --update --name <name>
                  --compression_mode <fast|best>
                  [--quota <Quota value in GiB or TiB>]
```

```
storage_group --encryption --name <name>
                  [--set <ON | OFF>]
                  [--mode < static | internal >]
                  [--interval <7 days to 70 years>]
```

```
storage_group --delete --name <name>
```

```
storage_group --setpassphrase --name <name>
```

```
storage_group --help
```

```
storage_group <command> <command-arguments>
```

<command> can be one of:

```
--show           Displays the current list of storage_group.
--add            Adds a new storage_group.
--update         updates a storage_group.
--encryption     updates encryption settings of a storage_group.
--delete         Deletes an existing storage_group.
--setpassphrase  sets passphrase to a storage_group.
```

For command-specific help, please type `storage_group --help <command>`

eg:

```
storage_group --help show
```

System

This QoreStor CLI command and its options allow you to perform the a variety of system-related tasks, including the following:

- Displaying the current system configuration
- Displaying and updating your QoreStor license configuration.
- Adding additional storage paths to QoreStor.

System Command Usage

This topic introduces the **system** command usage:

- **system --show [options]**
- **system --license [options]**
- **system --storage [options]**
- **system --help**

i | **NOTE:** If you specify a command without supplying the expected value or option, you will be prompted to provide the correct value or option.

system --show

Description

Displays information about the current QoreStor configuration.

Syntax

```
system --show [--storage] [--license] [--verbose] [--version]
```

Where

```
--storage    Display system storage information.
--license    Shows the installed license.
--verbose    Shows more information.
--version    Display software version of the system.
```

Result

```
Version      : 5.0.0
Build       : 155
```

system --license

Description

QoreStor installs with a 1 TB trial license. If you have purchased a perpetual license, you can install it using the **system --license** command, as described below.

When you have downloaded your license file, you will need to copy it to the QoreStor server before installing the license. In the examples below <path> is used to represent the directory that contains the license file.

Syntax

```
system --license [--show] [--verbose] [--validate] [--file <path>] [--add] [--file <path>]
```

Where

```
--show       Shows the installed license.
--verbose    Shows more information.
--validate    Validates the license file.
--add        Installs the license file.
--file       License file path.
```

Result

License file is valid and can be installed.

To add a validated license for a QoreStor server, use the following QoreStor CLI command:

```
system --license --add --file <path>
License file has successfully installed.
```

system --storage

Description

Adds the volume at the specified path to the QoreStor server and shows the current storage configuration.

Syntax

```
system --storage [--add] [--path <path>] [--show]
```


Where:

```
--add      Add the data storage.
--show     Show the data storage.
--path     Path to the data storage.
```

Result

ENCLs	Path	Total (GiB)	Available (GiB)	Used (GiB)	Status
ENCL_0	/quest/ocaroot	599	307	292	On

Other Examples

To add storage to QoreStor, use the command below. In this example, the path to the storage is **/qs4**.

```
system --storage --add --path /qs4
```

Result

```
Running IOPS tests on /qs4, takes few minutes

Sequential and Random IOPS tests passed on /qs4
WARNING: IO will be stopped during storage addition.
Do you want to continue (yes/no) [n]? yes
Stopping filesystem... Done.
Configuring data storage volume... Done.
Starting filesystem... Done.
```

system --help

Description

Displays the list of all system-related options that can be used as a reference when using the QoreStor CLI.

Syntax

```
system --help
```

Result

```
Usage:
    system --show
        [--storage]
        [--license] [--verbose]
        [--version]

    system --license
        [--show] [--verbose]
        [--validate] [--file <path>]
        [--add] [--file <path>]

    system --storage [--add] [--path <path>]
        [--show]
```

```
system --help
```

```
system <command> <command-arguments>
```

<command> can be one of:

--show	Displays command specific information.
--license	Installs the license on the machine.
--storage	Configure / Display storage properties.

For command-specific help, please type `system --help <command>`

eg:

```
system --help show
```

User

This topic introduces the QoreStor CLI commands that allow you to manage user accounts by enabling or disabling user accounts, adding and updating users, setting passwords, deleting users, and displaying the list of current active user accounts logged in to a QoreStor.

User Command Usage

This topic introduces the **user** command usage:

- **user --show [options]**
- **user --add --name [options]**
- **user --update --name [options]**
- **user --delete --name**
- **user --setpassword --name**
- **user --help**

i | **NOTE:** If you specify a command without supplying the expected value or option, you will be prompted to provide the correct value or option.

user --show

Description

Displays the current status of the service and root user accounts (using the **user --show --users** command), and also displays the login types and login times on a QoreStor (using the **user --show --logins** command).

Syntax

```
user --show [--users]
           [--logins]
```

```

[--verbose]
[--name <user name>]
[--roles <cifs|ost|rda|ndmp|iscsi|monitor|administrator|secure_connect|object>]

```

Where

```

--users      List of users.
--logins     List of logins.
--verbose    verbose
--name       show a specific user.
--roles      List all users who has these roles

```

Result

```

Service Account      : Disabled
Root Account         : Enabled

User Name             : backup_user
User Roles            : OST,RDA

User Name             : admin
User Roles            : administrator

```

Other Examples

Displays the current status of login attempts on a QoreStor.

```

user --show --logins
User Name      Terminal      Login Time
root           pts/1         Oct 24 10:51 (10.15.13.4)
root           pts/2         Oct 23 20:41 (10.18.0.1)
root           pts/3         Oct 23 20:41 (10.15.0.13)
root           pts/5         Oct 24 09:35 (10.20.21.6)
administrator  pts/6         Oct 24 12:32 (acme13.storage.local)
root           pts/7         Oct 24 12:24 (10.18.11.12)

```

user --add

Description

Adds a user account with the specified username.

Syntax

```

user --add --name <user name>
      [--roles <cifs|ost|rda|ndmp|iscsi|monitor|administrator|secure_connect|object>]
      [--full_name <full name>]
      [--phone <phone number>]
      [--email_addr <e-mail address (e.g. name@company.com)>]
      [--description <anything>]

```

Where

```
--name          user name
--roles         user role
--full_name     user's full name
--phone        phone number
--email_addr    email address
--description   description
```

Result

```
Enter new password:
Re-type password:
User "Test_User" created successfully.
```

user --update

Description

Updates a specified user account. You can update the username, add roles to or remove roles from the account, add information such as full name, phone number, email address, or description.

Syntax

```
user --update --name <user name> [--new_name <user name>]
      [--add_roles <cifs|ost|rda|ndmp|iscsi|monitor|administrator|secure_connect|object>]
      [--remove_roles <cifs|ost|rda|ndmp|iscsi|monitor|administrator|secure_
connect|object>]
      [--full_name <full name>]
      [--phone <phone number>]
      [--email_addr <e-mail address (e.g. name@company.com)>]
      [--description <anything>]
```

Where

```
--name          user name
--new_name       new user name
--add_roles      user role
--remove_roles   user role
--full_name      user's full name
--phone          phone number
--email_addr     email address
--description    description
```

Result

```
Successfully updated User Test_User.
```

Other Examples

The example below adds the **secure_connect** role to a user account

Syntax

```
user --update --name test1 --add_roles secure_connect
```

Result

Successfully updated User test1.

user --delete

Description

Deletes the specified user account.

Syntax

```
user --delete --name <user name>
```

Where

```
--name    user name
```

Result

User "Test_User2" has been deleted.

user --setpassword

Description

Sets a password for the specified user account.

Syntax

```
user --setpassword --name <user name>
```

Where

```
--name    user name
```

Result

```
Enter new password:
Re-type password:
Successfully updated User Test_User2.
```

user --help

Description

Displays the list of all user-related options that can be used as a reference when using the QoreStor CLI.

Syntax

```
user --help
```

Result

Usage:

```
user --show [--users]
           [--logins]
           [--verbose]
           [--name <user name>]
           [--roles <cifs|ost|rda|ndmp|iscsi|monitor|administrator|secure_connect|object>]

user --add --name <user name>
           [--roles <cifs|ost|rda|ndmp|iscsi|monitor|administrator|secure_connect|object>]
           [--full_name <full name>]
           [--phone <phone number>]
           [--email_addr <e-mail address (e.g. name@company.com)>]
           [--description <anything>]

user --update --name <user name>
           [--new_name <user name>]
           [--add_roles <cifs|ost|rda|ndmp|iscsi|monitor|administrator|secure_connect|object>]
           [--remove_roles <cifs|ost|rda|ndmp|iscsi|monitor|administrator|secure_
connect|object>]
           [--full_name <full name>]
           [--phone <phone number>]
           [--email_addr <e-mail address (e.g. name@company.com)>]
           [--description <anything>]

user --delete --name <user name>

user --setpassword --name <user name>

user --help
```

user <command> <command-arguments>

<command> can be one of:

--show	Displays command specific information.
--add	adds a user account.
--update	updates a user account.
--delete	delete a user account.
--setpassword	sets password to a user account.

For command-specific help, please type user --help <command>

For example:

```
user --help show
```

VTL

The VTL commands allow you to manage the virtual tape library (VTL) containers you have created for your system, including the ability to create additional tapes for your libraries, set drives to read/write, or activate and

deactivate replica VTLs.

VTL Command Usage

This topic introduces the QoreStor CLI commands that allow you to manage the virtual tape library (VTL) containers you have created for your system, which include:

- **vtl --show [options]**
- **vtl --update_carts [options]**
- **vtl --import_cart [options]**
- **vtl --activate --name [options]**
- **vtl --deactivate --name**
- **vtl --rescan --name [options]**
- **vtl --set_rw [options]**
- **vtl --show_replstate --name**
- **vtl --help**

vtl --show

Description

This command allows you to see the status of a specified virtual tape library (VTL). It displays detailed information about VTL, such as media type, vendor, model, generic device information, serial number, library size, and tape status information. The first example below shows the result information for Container vtl1 of type VTL with an NDMP connection. The second example shows Container iscsi-vtl1 of type VTL with an iSCSI connection.

Syntax

```
vtl --show [--verbose] [--name <name>]
```

Where

--verbose Display more details.

--name Name of a valid VTL container

Result

Type	Vendor	Model	Serial	Info	ID
medi	DELL	DR_L700	81BL3T_00	10 10GB	10
tape	IBM	ULT3580-TD4	81BL3T_01	Not loaded	11
tape	IBM	ULT3580-TD4	81BL3T_02	Not loaded	12
tape	IBM	ULT3580-TD4	81BL3T_03	Not loaded	13
tape	IBM	ULT3580-TD4	81BL3T_04	Not loaded	14
tape	IBM	ULT3580-TD4	81BL3T_05	Not loaded	15

tape	IBM	ULT3580-TD4	81BL3T_06	Not loaded	16
tape	IBM	ULT3580-TD4	81BL3T_07	Not loaded	17
tape	IBM	ULT3580-TD4	81BL3T_08	Not loaded	18
tape	IBM	ULT3580-TD4	81BL3T_09	Not loaded	19
tape	IBM	ULT3580-TD4	81BL3T_10	Not loaded	20

Type	Vendor	Model	Serial	Info	ID
medi	DELL	DR_L700	NQ9VL5_00	110 100GB	30
tape	IBM	ULT3580-TD4	NQ9VL5_01	Not loaded	31
tape	IBM	ULT3580-TD4	NQ9VL5_02	Not loaded	32
tape	IBM	ULT3580-TD4	NQ9VL5_03	Not loaded	33
tape	IBM	ULT3580-TD4	NQ9VL5_04	Not loaded	34
tape	IBM	ULT3580-TD4	NQ9VL5_05	Not loaded	35
tape	IBM	ULT3580-TD4	NQ9VL5_06	Not loaded	36
tape	IBM	ULT3580-TD4	NQ9VL5_07	Not loaded	37
tape	IBM	ULT3580-TD4	NQ9VL5_08	Not loaded	38
tape	IBM	ULT3580-TD4	NQ9VL5_09	Not loaded	39
tape	IBM	ULT3580-TD4	NQ9VL5_10	Not loaded	40

vtl --update_carts

Description

This command allows you to create additional tapes for a library specified in the --name option. Each library is initially created with 10 slots housing 60 tape media. Additional tapes can be added to the library as needed using this command. A library can only contain tapes of the same size. For example, if the library was originally created with 60 tapes of size 10G, additional tapes of size 10G can only be added.

Syntax

```
vtl --update_carts --name <name> --add --no_of_tapes <number>
```

Where

```
--name          Name of a valid VTL container
--add           Add more cartridges to the tape
--no_of_tapes   Number of Tapes to be created
```

Result

```
Created 10 cartridges.
```


vtl --activate

Description

This command activates a replica VTL.

Syntax

```
vtl --activate --name <name> [--force <yes|no>]
```

Where

```
--name      Name of a valid VTL container
--force      Force activation
```

Result

```
Enter reserialization code for replica [ 00 (no op), 01 - 99 ]: 00
VTL processes will be started for container, VTL1_Test ...
```

vtl --deactivate

Description

This command deactivates a replica VTL.

Syntax

```
vtl --deactivate --name <name>
```

Where

```
--name      Name of a valid VTL container
```

Result

```
Are you sure you want to de-activate this VTL? [ Yes, No ] y
VTL VTL1_Test is deactivated !!
```

vtl --rescan

Description

This command rescans a replica VTL.

Syntax

```
vtl --rescan --name <name> [--force <yes|no>]
```

Where

```
--name      Name of a valid VTL container
--force      Force activation
```

Result

Rescan replica VTL after new cartridges have been added at source VTL? [Yes|No] y

Connections to the library VTL1_Test could be disrupted for a brief period.
Make sure no cartridges are loaded in tape drives and/or backups are in progress.
Proceed? [Yes|No] y
vtllibrary will be re-instantiated for container, VTL1_Test!

vtl --restore

Description

Initiate restore of cart(s) data from an archive storage tier to a cloud storage tier

Syntax

```
vtl --restore --name <name> --barcode <barcode>
```

Where

--name Name of a valid VTL container

--barcode Comma separated list of cartridge(s) barcode that need to be restored from the archive storage tier

Result

```
container:"<name>" cart:"<barcode>" current status: ""  
/opt/qorestor/bin/ctrlrpc -p 9911 -t 60 --container_id 8 --scid 1152921504606847078 --scid  
1152921504606847080 --scid 1152921504606847079 --async --xattr_scid 1152921504606847259 --all_or_  
none: result: 0  
Successfully Initiated restore job for <name> with barcode: <barcode>.  
Restore initiation was successful for the following cart(s):"<barcode>"
```

vtl --set_rw

Description

This command allows you to set the drives in a VTL container to read/write. The arguments to this command are as follows:

- **--name** — Specifies the name of a valid VTL container.
- **--id** — Sets the IO mode of a specific drive to RW.

Syntax

```
vtl --set_rw --name <name> [--id <number>]
```

Where

```
--name    Name of a valid VTL container
--id      Set the io mode of a particular drive to rw
```

Result

I/O mode set to readwrite for the drive with id 81 in container ndmp

vtl --show_replstate

Description

This command shows the replication state of a specified VTL replication source container.

Syntax

```
vtl --show_replstate --name <name>
```

Where

```
--name    Name of a valid VTL replication source container
```

Result

Cartridges with data, INSYNC with peer:

```
-----
AFNGC6003 AFNGC6004 AFNGC6005 AFNGC6006 AFNGC6007 AFNGC6008 AFNGC6009 AFNGC600A
AFNGC600B AFNGC600C AFNGC600D AFNGC600E AFNGC600F AFNGC600G AFNGC600H AFNGC600I
AFNGC600J AFNGC600K AFNGC600L AFNGC600M AFNGC600N AFNGC600O AFNGC600Q AFNGC600R
AFNGC600S AFNGC600T AFNGC600V AFNGC600W AFNGC600X AFNGC600Y AFNGC600Z AFNGC6010
AFNGC6011 AFNGC6012 AFNGC6013 AFNGC6014 AFNGC6002 AFNGC6001
Total 38 cartridges synchronized with peer VTL.
```

Cartridges with data, not INSYNC with peer:

```
-----
None.
Total 0 cartridges NOT synchronized with peer VTL.
```

Cartridges that do not have data are not displayed.

vtl --help

Description

Displays the list of vtl-related options that can be used as a reference when using the QoreStor CLI.

Syntax

```
vtl --help
```

Result

Usage:

```
vtl --show [--verbose]
           [--name <name>]

vtl --update_carts --name <name>
    --add
    --no_of_tapes <number>

vtl --import_cart --name <name>
    --barcode <barcode>

vtl --activate --name <name>
    [--force <yes|no>]

vtl --deactivate --name <name>

vtl --rescan --name <name>
    [--force <yes|no>]

vtl --set_rw --name <name>
    [--id <number>]

vtl --show_replstate --name <name>

vtl --help

vtl <command> <command-arguments>
<command> can be one of:
    --show           Displays command specific information.
    --update_carts   Add cartridges
    --import_cart     import cartridges from cloud
    --activate        Activate a replica VTL
    --deactivate      De-activate a replica VTL
    --rescan          Rescan a replica VTL
    --set_rw          Set drives in a vtl container to read write
    --show_replstate Show replication state of a container
For command-specific help, please type vtl --help <command>
eg:
vtl --help show
```

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