



Quantum DXi-Series Command Line Interface (CLI) Guide

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Introduction

The Command Line Interface (CLI) for DXi™-Series systems serves as a command line equivalent of the remote management functionality. This guide describes the CLI commands for DXi 2.3 Software, which is available for the following systems:

- DXi V-Series (DXi V1000 virtual appliance)
- DXi4000 Family
- DXi6000 Family
- DXi8500

Not all CLI commands are available for all DXi-Series systems, as noted below in the sections describing the CLI commands.

Note: Before you can login to the CLI User account, you must change the password on the **Security** page of the remote management console. Passwords are limited to 15 characters. Alphanumeric characters and special characters are allowed. For more information, see your DXi system's *User's Guide*.

Note: For more information about concepts and terms used in this guide, see the "System Description" chapter and the glossary of terms in your DXi system's *User's Guide*.

CLI Users

There are two local CLI user accounts to support the command line interface: a CLI admin user and a CLI viewer user. They are defined as **cliadmin** (CLI Administrator Account) and **cliviewer** (CLI Monitor Account), respectively. The passwords are the same as the CLI user names. The CLI users can also be enabled or disabled from the **Security** configuration page. By default, the two CLI user accounts are enabled.

The two CLI users use the SSH capability to log in to the DXi™ system. Both are confined to a restricted shell for security purposes. Only certain commands are allowed to run in the restricted shell. The CLI command (**syscli**) is available for both CLI users. In addition, a limited number of shell commands are available to both CLI users to support scripting such as **cat**, **cp**, **date**, **ftp**, **grep**, **head**, **less**, **ll**, **ls**, **mv**, **rm**, **scp**, **syscli**, **tail**, **vi**, and **wbinfo**. These commands are restricted so that they only work on files in the CLI user's home directory (see [Available Linux Commands](#) on page 2).

The **cliviewer** user has the ability to view or retrieve information and is not allowed to add, change, or delete any information. The **cliadmin** user has the same ability as **cliviewer** and in addition, has the privilege to add, change, or delete information. If the **cliviewer** user attempts to run any intrusive command

(such as **add**, **edit**, or **delete**) that changes any information in the system, an error will be returned.

Additional commands are available to the CLI admin user but not to the CLI viewer user. For example, the **ftp** command is available only to the CLI admin (see [Available Linux Commands](#) on page 2).

CLI Passwords or Authorized Keys

To remotely issue CLI commands via SSH, you must ensure that the **authorized_keys** file contains public keys that allow commands to be executed without requiring a login password. The **authorized_keys** file is located in the **/home/cliadmin/authorized_keys** file.

Available Linux Commands

The following commands are standard Linux commands that are available to the CLI users in their restricted shells. Display the help text to see syntax and usage information for a command. To display the help text, enter the **--help** option after the command name. For example, **cat --help** displays information about the **cat** command.

The following commands available to the CLI admin and CLI viewer users in their restricted shells:

- **cat** - Displays the contents of a file.
- **cp** - Copies a file.
- **grep** - Searches for a pattern in files.
- **ls** - Displays a list of files.
- **ll** - Displays a list of files with attributes.
- **mv** - Renames a file in the restricted shell.
- **rm** - Deletes files.
- **vi** - Opens a file for editing.
- **scp** - Copies files securely.
- **less** - displays text one screen at a time.
- **head** - displays first part of the file
- **tail** - display last part of the file

The following commands are available only to the CLI admin user:

- **ftp** - Transfers a file from the user's home directory to a remote system.
- **wbinfo** - Queries and returns information about Samba related operations on the system.

CLI Syntax Conventions

The CLI program is named **syscli**. It is usually invoked with parameters necessary to carry out a predefined task. The first parameter is usually a verb indicating the action to be performed and hence is called a command. A number of commands specify the command type (known as subcommand) or the object upon which the command will operate. The syntax of each CLI is listed in each section.

The syntax for all **syscli** commands falls into one of the following two formats:

- **syscli --cmd --option1 <value1> --option2 <value2> ...**
- **syscli --cmd subcmd --option1 <value1> --option2 <value2> ...**

where

- **cmd** can be: **list, add, edit, del, deleteall, ...**
- **subcmd** can be: **share, storageserver, lsu, ...**

The following are the syntax conventions for the tokens on the command line.

- All tokens prefixed with double dash "--" are defined as options.
- All tokens that have no double dash are defined as values of the preceding options.
- An option can be by itself or followed by a value.
- The first option is also known as the command. It is usually a verb such as **list, add, del, edit, ...**
- If the first option has a value, this value is also known as the object (or subcommand) upon which the command operates. The object is usually a noun such as **share, storageserver, ...**
- An option value specified within the angle brackets "< >" means it is to be replaced by an appropriate value. Without the angle brackets, the value is literal text and must be entered exactly as is. For example, the command
syscli --del share --name <share_name>
has two options **--del** and **--name**, one literal value, **share**, and one appropriate value, **<share_name>**.
- Options or values specified between square brackets "[]" are optional. If an option and/or value is not specified, the CLI provides a default value for it.
- The pipe character "|" indicates that only one of the possible option names or values must be specified. This is like an OR symbol.
- Options enclosed within parentheses "()" mean one or more instances of them must be specified. For example, the command
syscli --add sanclientgroup ... (--device <device_serial_number> --lun <desired_LUN>)
requires that one or more pairs of devices and luns must be specified.
- If a command requires a **--password** option and you do not specify it on the command line, the **syscli** program will prompt for the password and will not echo the response on screen for security purposes.

- Curly braces “{ }” in the syntax are used to group options and/or values together for readability. These characters should not be used when entering the commands.
- Option values separated by a comma “,” mean that one or more of the values can be specified.
- The option names and/or values may change in the final release version.

Finally, it should be noted that all options and values are defined as single tokens in the command line syntax. Thus if a provided value consists of multiple tokens, it must be quoted to prevent the shell from interpreting it as separate tokens. For example:

```
syscli --add share .... --desc 'This is a test share'
```

In addition, if a provided value contains characters that are special to the shell, these characters must be escaped correctly so that the shell treats them as regular characters. For example,

```
syscli --add share .... --desc Testing\!
```

Note: The shell used in the CLI user accounts is the **bash** shell. The set of special characters are the same characters that **bash** treats as special characters. Refer to the **bash** shell documentation (<http://www.gnu.org/software/bash/manual/bashref.html>) for the set of special characters interpreted by the shell. If you do not want the shell to interpret any special characters, use single quotes (').

Adding the CLI Directory to the Path

The **syscli** commands are located in the **/hurricane** directory. To make it easier to invoke the CLI commands, you should add this path to the user profile.

To do this, add the following line to the user profile:

```
PATH=$PATH:/hurricane; export $PATH
```

CLI Help Commands

The following help commands are available:

- Typing **syscli** alone will display a summary of help commands.
- Typing **syscli help** will show syntax for all **syscli** commands.
- Typing **syscli help NAS | VTL | OST | REPLICATION |...** will show syntax for all Network Attached Storage (NAS), VTL, Open Storage Technology (OST), replication, etc. commands respectively.

- Typing **syscli help --<cmd>** will show syntax for all commands named <cmd>. For example, **syscli help --list** shows all list commands, **syscli help --add** shows all --add commands.
- Typing **syscli help --<cmd> <subcmd>** will show detailed help for this specific command. For example, **syscli help --list nas** shows the complete help for the --list nas command.

CLI Error Codes

If the system encounters an error when you run a command, an error code is returned. To view the error code information associated with an error, use the following command:

```
syscli --get error --value <error_code>
```

The error code information can help you determine what situation led to the error. For example, if the system returns error code E100001, use the following command to see the associated error code information:

```
syscli --get error --value E100001
```

Output data:

```
Error Message = CIFS server is disabled! (E100001)
```

Command completed successfully.

CLI Special Options

Every command can accept these options:

- **--outfile <output_filename>**
- **--errfile [<error_filename>]**
- **--file <options_filename>**
- **--lockwait <seconds>**

The first two options are supported because the shell capability of redirecting the standard output and standard error using the ">" character is forbidden in the restricted shell.

CLI command options:

- **--outfile** specifies that the standard output will be saved to file <output_filename>.
- **--errfile** specifies that the standard error will be saved to file <error_filename>. If <error_filename> is not specified, it will be saved to the same <output_filename>.

The third option is supported to avoid the problem of quoting and/or escaping special characters. The option **--file** tells the program to open the file

<options_filename> to read additional options, where each option (or each **option=value** pair if the option requires a value) is listed on a separate line. Blank lines or lines starting with **"#"** are ignored. For example, the command

syscli --add share --name abc --proto cifs

is functionally equivalent to any of the following commands:

1 syscli --file <myfile>

where **<myfile>** is a file containing the following:

```
--add=share
--name=abc
--proto=cifs
```

2 syscli --add share --file <file1>

where **<file1>** is a file containing the following:

```
--name=abc
--proto=cifs
```

3 syscli --add share --file <file2> --proto cifs

where **<file2>** is a file containing the following:

```
--name=abc
```

Syntax of Options File

The following are the syntax conventions for the options file:

- Command line options are processed from left to right. Thus any option in the file can be overridden by listing it again on the command line after the **--file** option. In example 3 above, the option-value pair **--barcode mybarcode** overrides the one specified in **file2** because it is processed after option **--file**.
- Spaces surrounding the options are insignificant. The following examples are equivalent:
 - **--name=abc**
 - **--name =abc**
- All characters that follow **"="** are significant and are accepted as is, including space, tab, backslash, single or double quotes, or any other symbol. Because no characters are special, don't escape them. This rule is enforced so to support values that contain leading or trailing spaces/quotes such as in passwords. For example:

```
--password=abc
--password= abc
--password=a\!bc
--password="abc"
```

are all different passwords.

- The second password has four characters: space, a, b, and c.

- The third password has five characters: a, \, !, b, and c.
- The fourth password has five characters: ", a, b, c, and ".

CLI Exit Code

If the command runs to completion successfully, it returns an exit code of zero (0) along with the following message:

```
Command completed successfully.
```

If the command fails, it returns an exit code of one (1) along with a one line error message that summarizes the error. This error message is always prefixed with "ERROR: " and appended with an error code in parentheses. For example:

```
syscli --add share --proto cifs --name cifs1 --desc "For  
testing only"
```

```
.....
```

```
ERROR: CIFS server is disabled! (E1000011)
```

It can be seen that the error code is "E1000011" and the error message is "CIFS server is disabled!"

Note: Possible error codes are listed at the end of each major section below.

Web Services Support (Optional)

Note: The Web services options, `--ws`, have been deprecated and are disabled.

By default, each CLI is executed directly on the DXi system it is running. However, it is possible to send the command to another DXi system for execution and display the result on the local DXi system. The `syscli` program in DXi 2.x Software has the capability of running the command remotely using Web Services WSDL protocol version 2.0, provided that the remote DXi system is also running DXi 2.x Software as well.

Starting with DXi 2.0 Software, every DXi system runs a Web Services (WS) server (specifically, `axis2` server), which listens at port 9090 for all Web Services requests from WS clients and then sends the result back to the clients.

Note: It is strongly recommended that all CLI commands not be run in Web Services mode when both the server and the client are on the same system. It is much faster to run the commands directly without using Web Services. Running a CLI command over Web Services protocol is a complex process involving two distinct programs (client-server) and network communication, thus having more points for failure.

Web Services Syntax

To use Web Services for any CLI, one has to specify an additional option as follows:

```
syscli --<cmd> <subcmd> . . . . --ws [<ws_server>[:<port>]]
```

where:

- **ws_server** is the hostname or IP address of the system that runs the WS server. If not specified, it is assumed to be **localhost**.
- **port** is the port number to which the server is listening for client requests. If not specified, it is assumed to be port 9090.

The presence of the **--ws** option makes the **syscli** program work in client-server mode; it will not execute the command on the local DXi system anymore. Rather, it will send the command to the axis2 server on the specified remote system. This server will then invoke the **syscli** program on the system it is running to execute the requested command and then send the result back to the **syscli** client to display.

To get more help on Web Services, type "**syscli help ws**".

Example: The following commands are equivalent:

- `syscli --list share ... --ws`
- `syscli --list share ... --ws localhost:9090`
- `syscli --list share ... --ws localhost`
- `syscli --list share ... --ws :9090`

Web Services Session

For security reasons the WS server cannot allow an arbitrary client to send commands to it for execution. Before a client can execute any command, it has to log in the WS server first in order to begin a WS session. If the login is successful, the server will send back a credential token (an encrypted string). The client has to include this credential token in all subsequent WS commands that it sends to the server for execution. When the client is done with its commands, it can log out the server. If the client is idle for more than 30 minutes, the server automatically terminates the session. This time-out value can be overridden in the login command.

Sample Web Services Session

A Web Services session begins when the user logs in successfully and terminates when the user logs out (releases credential), or when the session is idle for 30 minutes.

During the session:

- Any CLI commands specified with the `--ws` option will be executed on the axis2 server.
- Any CLI commands without the `--ws` option will be executed directly as usual (i.e, not via Web Services).

Logging in to Start a Web Services Session

```
syscli --authenticate --name <username> --password <password> --client  
<client_info> --ws [<host>:[<port>]]
```

Use this CLI command to start a Web Services session. If the password is not specified, the system will prompt for it interactively. In this case, the password is not echoed on screen.

Running CLI Commands

After login, each subsequent command, uses the term `--list share`, which can be used as follows:

```
syscli --list share [--credtoken <credential_token>] --ws [<host>:[<port>]]
```

Note that the syntax of running a CLI command over Web Services is unchanged, except that it must have a mandatory option `--ws` and an optional option `--credtoken`. Here, `credential_token` is the value returned in the output of the `authenticate` command. The `--credtoken` can be specified explicitly or omitted because the `syscli` program is smart enough to cache the credential token in the `authenticate` command for subsequent use.

Logging Out

```
syscli --release credential [--credtoken <credential_token>] --ws  
[<host>:[<port>]]
```

Note again that the credential token can be omitted because the `syscli` program can use the cached value.

Supported Web Services Commands

The DXi 2.x Software release supports about 20 Web Services commands, also known as “operations” in the areas of Replication, NAS, and System Utilities. To see a complete list, one can type the following URL in a browser:

```
http://<hostname_or_ipaddress_of_DXi_system>:9090/axis2/services
```

The output is as follows (with the equivalent `syscli` commands listed in parentheses):

WSReplication Service

Available Operations:

- `disableNASReplication` (`syscli -disablerep nas`)
- `enableNASReplication` (`syscli -enablerep nas`)
- `addReplicationSource` (`syscli -add sourcerep`)

- deleteReplicationTarget (syscli -del targetrep)
- addReplicationTarget (syscli -add targetrep)
- deleteReplicationSource (syscli -del sourcerep)

WSNas Service

Available Operations:

- deleteAllShares (syscli -deleteall share)
- getShare (syscli -get share)
- updateShare (syscli -edit share)
- deleteShare (syscli -del share)
- getShares (syscli -list share)
- getShareNames (syscli -list sharename)
- getShareCount (syscli -getcount share)
- addShare (syscli -add share)

WSSystem Service (System Utility)

Available Operations:

- runCommand (syscli -runcmd)
- getPermissions (syscli -get permission)
- releaseCredential (syscli -release credential)
- authenticate (syscli -authenticate)

How to Run Unsupported Web Services Commands

The vast majority of CLI commands are not supported to run over Web Services in DXi 2.x Software. However, they can be run over WS via the command **syscli --runcmd** because this command is supported for execution over Web Services.

Consider the command **--list healthcheckstatus**, which is not supported in Web Services. To understand how it can be run over Web Services, one needs to understand how the **runcmd** CLI works.

The **runcmd** CLI is very simple. Any CLI command can run directly as is, such as the following command:

```
syscli --list healthcheckstatus
```

However, the command can be run indirectly by specifying it as options to the **runcmd** CLI as follows:

```
syscli --runcmd --list healthcheckstatus
```

The syntax above runs the **runcmd** CLI, which then parses the options specified after the **--runcmd** token. Based on these options, the **runcmd** CLI invokes the appropriate system API to execute. In the end the effect is executing the **--list healthcheckstatus** command.

Because the **runcmd** CLI is supported over Web Services, it can accept the **-ws** option to send the command to a WS server for execution as follows:

```
syscli --runcmd --list healthcheckstatus --ws [<remotehost>[:<port>]]
```

Documentation of Web Services Commands

Because Web Services commands and regular CLI commands differ only in the additional options `--ws` and `--credtoken`, there is no need to document WS commands separately. The option `--credtoken` is optional and can be ignored because `syscli` can use the cached value.

VTL Configuration CLI Commands

The following sections describe the supported VTL CLI commands:

Note: VTL configuration CLI commands are available only on DXi6700, DXi6800, and DXi8500 systems.

- [Listing Existing VTL and Its Attributes](#)
- [Listing Available Library Models](#)
- [Listing of Supported Tape Drive](#)
- [Adding a VTL](#)
- [Editing a VTL](#)
- [Deleting a VTL](#)
- [Listing the Media Types](#)
- [Creating Media](#)
- [Listing the Media and Attributes](#)
- [Media Actions](#)
- [Deleting All Media](#)
- [Turning a VTL Online/Offline](#)
- [Listing Available Hosts](#)
- [Adding a Host](#)
- [Editing a Host](#)
- [Deleting a Host](#)
- [Listing Targets](#)
- [Listing Devices](#)
- [Listing the SAN Client Group](#)
- [Adding a SAN Clients Group](#)
- [Deleting a SAN Client Group](#)
- [Listing VTL Storage Locations and Index](#)
- [Moving Media](#)
- [Unloading Media](#)
- [Resetting the VTL Target Ports](#)

Listing Existing VTL and Its Attributes

syscli --list vtl [--name <VTL_name>]]

This CLI command allows the CLI admin to display a list of all existing VTLs on the system and their attributes when no partition name is specified. If a VTL name is specified, only that VTL is listed with its attributes. The attribute list includes the name of the VTL, mode, library model, drive model type, number of drives, number of media, number of slots, serial number, data deduplication status (enabled/disabled) and backup window status (enabled/disabled). If the backup window status is enabled, the list will also include the start and end time of the backup window.

An example output for a VTL named **myvtl** is shown below:

List of all existing VTL's:

Total count = 1

[vtl = 1]

name = myvtl

mode = offline

model = DXi6700

drivemodel = QUANTUMDLTS4

drives = 2

media = 2

slots = 12

serial = 123456XYZ

dedup = enabled

backupwindow = disabled

Listing Available Library Models

syscli --list library

This CLI command allows the CLI admin to display a list of the available library models. Specific library model or product ID is required when adding or creating a new partition.

An example output of three supported library models is shown below:

List of all available library models:

Total count = 1

[library = 1]

productid = DL1500

description = EMC Disk Library

[library = 2]

productid = Scalar 100

description = ADIC Scalar 100

[library = 3]

```
productid = Scalar i2000  
description = ADIC Scalar i2000
```

Listing of Supported Tape Drive

syscli --list drive

This CLI command allows the CLI admin to display a list of the available virtual tape drive models. A specific virtual tape drive model is required when adding or creating a new partition.

An example output of two tape drive is shown below:

List of all available drive models:

Total count = 2

[drive = 1]

model = QUANTUMDLTS4

description = Quantum DLT S4

[drive = 2]

model = QUANTUMSDLT320

description = Quantum SDLT 320

Adding a VTL

```
syscli --add vtl --name <vtlname> --model <modelname> --slots  
<number_of_slots> --drivemodel <tape_drive_model> --drives  
<number_of_drives> [--dedup]
```

This CLI command allows the CLI admin to add a partition. The following partition settings are required:

- **--name <vtlname>**: The virtual library name, *vtlname*, must be alphanumeric, and it must begin with a letter.
- **--model <modelname>**: The library model name, *modelname*, is the VTL model to create. A list of supported library models can be retrieved using the **--list library** command.
- **--slots <number_of_slots>**: One I/E slot will be created for each storage slot, until maximum of 240 I/E slots exist.
- **--drivemodel <tape_drive_model>**: The drive model to create for this VTL. A list of supported drives can be retrieved using the **--list drive** command.
- **--drives <number_of_drives>**: The number of virtual tape drives attached to the VTL.
- **--dedup**: Enables deduplication. By default, VTL will be created with deduplication disabled.

Optionally, the user can specify whether to enable data deduplication and enable backup window. Once the partition is created, the data deduplication state cannot be changed. The backup window start and end time can be specified if the data deduplication is specified (enable).

The library model can be derived from the 'productid' value returned from the list of available library models.

Caution: Do not use an underscore (_) in the name of the VTL partition.

Editing a VTL

```
--edit vtl --name <vtlname> [--model <modelname>] [--slots  
<number_of_slots>] [--drivemodel <tape_drive_model>] [--drives  
<number_of_drives>]
```

This CLI command allows the CLI admin to edit an existing partition. The VTL name is required to change any VTL setting. The VTL name and the tape drive model cannot be changed. Note: Data deduplication settings cannot be edited once the partition is created.

Caution: Do not use an underscore (_) in the name of the VTL partition.

Deleting a VTL

```
syscli --del vtl --name <VTL_name>
```

This CLI command allows the CLI admin to delete an existing VTL. The VTL name is required to delete an existing VTL. In order to delete a VTL, a VTL needs to be offline first and no media should be present in the VTL. Any replications scheduled will be removed.

Listing the Media Types

```
syscli --list mediatype --drivetype <drive_type>
```

This CLI command allows the CLI admin to display a list of media types supported given a tape drive model. For example, for DLT-S4 drive model, media types SDLT1, SDLT2 and DLTS4 are supported and will be returned from this CLI. The drive type can be derived from the value of the 'model' key name of the list of available tape drives models.

An example output of three media types is shown below for DLT-S4 media types supported.

List of media types:

Total count = 3

[mediatype = 1]

type = SDLT1

capability = RW

[mediatype = 2]

type = SDLT2

capability = RW

[mediatype = 3]

type = DLTS4

capability = RW

Creating Media

```
syscli --add media --name <VTL_name> --type <media_type> --media  
<number_of_media> --barcodestart <starting_barcode> --location slot |  
ieslot [--capacity <media capacity>]
```

This CLI command allows the CLI admin to create a media for a defined VTL. Creating a media is necessary after a VTL is created. The following are required to create a media:

- VTL Name
- Media Type
- Number of media
- Starting barcode
- Initial location

The media type can be derived from the values returned from the **type** field name of the list of media supported for a given tape drive model CLI. Initial location can either be a slot or I/E slot.

The media capacity can optionally be specified. If media capacity is not specified, it defaults to the media type native capacity.

Listing the Media and Attributes

```
syscli --list media { --name <vtlname> } | --all [--barcode <barcode>]
```

This CLI command allows the CLI admin to display a list of barcodes in the system from the specified VTL name. When a barcode of the cartridge is specified, this CLI returns the attributes of the single cartridge specified if it exists. An example output (using the **--all** option) of two media from VTL **MyVTL** is shown below.

Caution: The **used** value is not updated while the media is mounted. Because of this, the displayed **used** value may be different from the real value for mounted media.

List of media:

Total count = 2

[media = 1]

vtl = MyVTL

barcode = SDL101

type = SDLT-S4

access = scratch

pool = application

used = 0.0

capacity = 800.0

```
[media = 2]  
  vtl = MyVTL  
  barcode = SDL101  
  type = SDLT-S4  
  access = scratch  
  pool = application  
  used = 0.0  
  capacity = 800.0
```

Media Actions

```
syscli --del media --barcode <barcode> --name <VTL_name>  
syscli --export media (--barcode <barcode>) | --all --name <VTL_name>  
syscli --recycle media (--barcode <barcode>) | --all --name <VTL_name>  
syscli --writeprot media (--barcode <barcode>) | --all --name <VTL_name>  
[--disable]  
syscli --import media (--barcode <barcode>) | --all --name <VTL_name>
```

This CLI command allows the admin user, given a specified media barcode(s) and its VTL name, to change the state of a tape to deleted, exported, recycled, write-protected or import media using this CLI. Multiple barcodes can be specified on the command that supports it. This is specified in the syntax with “()” which means one or more. Alternatively, if the **--all** option is specified, then all the media in the specified VTL is used for the operation.

To disable the write-protect on a media, the **--disable** option must be specified in the **--writeprot media** command.

Deleting All Media

```
syscli --deleteall media --name <VTL_name> [--sure]
```

This CLI command allows the admin user to delete all media in the specified VTL. If the **--sure** option is specified, no confirmation prompt is displayed. Note that ***UNASSIGNED** must be used for **<VTL_name>**.

Turning a VTL Online/ Offline

```
syscli --online vtl (--name <VTL_name>) | --all
```

This CLI command allows the admin to turn a VTL online.

```
syscli --offline vtl (--name <VTL_name>) | --all
```

This CLI command allows the admin to turn a VTL offline. A VTL needs to be offline before you can edit or delete a partition.

Listing Available Hosts

```
syscli --list host
```

This CLI command allows the CLI admin to display a list of available hosts. The WWPN, its alias (if it was added by the user) and connection status are returned

for each host. If the host alias was not added initially, the output will indicate that no alias was given.

An example output of a host with no alias given is shown below.

List of available hosts:

Total count = 1

[host = 1]

wwpn = 220100e08ba8338d

alias = null

connection status = active

Adding a Host

syscli --add host -wwpn <host_world_wide_port_name> --alias <host_alias>

This CLI command allows the CLI admin to add a host to the available host list. The required parameters are the host's world wide port name (WWPN) and alias. If the host already exists from the list of available hosts, adding the same host will return an error.

Editing a Host

syscli --edit host --wwpn <host_world_wide_port_name> --alias <host_alias>

This CLI command allows the CLI admin to add or change the host alias of a host. The required parameter are the existing host's world wide port name (WWPN) and alias.

Deleting a Host

syscli --del host --wwpn <host_world_wide_port_name>

This CLI command allows the CLI admin to delete an existing host from available host list. The required parameter is the host's WWPN. The host must be inactive to delete it.

Listing Targets

syscli --list target

This CLI command allows the CLI admin to display a list of targets on the system. It lists the node, alias (FC port) and the WWPN. An example output of a target is given below.

List of targets:

Total count = 1

[target = 1]

node = 1

alias = FC3

wwpn = 214108001bc08278

Listing Devices

syscli --list device --name <VTL_name>

This CLI command allows the CLI admin to display a list of devices on the system. The list includes the type of device (VMC or VTD), serial number of the device and the virtual tape library name the device is in. An example output of devices on the system is shown below.

List of devices:

Total count = 3

[device = 1]

vtl name = MyVTL

type = VMC

serial = VL01SV0825BVA04501

[device = 2]

vtl name = MyVTL

type = VTD

serial = VL01SV0825BVA04501

[device = 3]

vtl name = MyVTL

type = VTD

serial = VL01SV0825BVA04501

Listing the SAN Client Group

syscli --list sanclientgroup [--vtlname <VTL_name>]

This CLI command allows the CLI admin to display a list of existing SAN client group(s) on the system. The list returned contains the virtual tape library name, group name, host, target and devices associated with the group. If a virtual library name is specified, this CLI lists only the group associated with the virtual tape library.

An example output of a SAN client group is shown below.

List of SAN client groups:

Total count = 1

[group = 1]

vtl name = MyVTL

group name = Group1

host =

target =

total device count = 2

[device = 1]

type = VMC

```
serial = VL01SV0825BVA04501
lun = 1
[device = 2]
type = VTD
serial = VL01SV0825BVA04501
lun = 2
```

Adding a SAN Clients Group

```
syscli --add sanclientgroup --name <VTL_name> --groupname
<group_name> --wwpn <world_wide_port_name> --target <target>
(--device <device_serial_number> --lun <desired_LUN>) [ --useccl ]
```

This CLI command allows the CLI admin to add a host access group. The following are required to create a host access group.

- Group Name
- VTL Name
- Host Name or WWPN
- Target (FC Port)
- List of device serial numbers (either VMC or VTD) and the desired host LUNs. There should at least be one device and LUN specified.

The WWPN can be derived from the values returned for **wwpn** field name of the list of host CLI. The Target can be derived from the value returned for **wwpn** field name of the list of targets CLI. The List of device serial number can be derived from the 'serial' field name of the list of devices of the VTL specified.

If the **--useccl** option is specified, the Command and Control LUN feature is enabled.

Note: The CCL (Command and Control LUN) is not used in most environments. This option is recommended for host access groups that contain an HP-UX host. It can also be used if hosts that are not assigned to any host access group exist in the SAN. The CCL is accessible to hosts only through LUN 0.

Caution: If you are not sure if you should use CCL, contact Quantum Customer Support before you enable this option.

Deleting a SAN Client Group

```
syscli --del sanclientgroup --name <VTL_name> --groupname
<group_name>
```

This CLI command allows the CLI admin to delete a SAN client group given the required VTL name and the group name.

Listing VTL Storage Locations and Index

```
syscli --list vtlstorage --name <VTL_name> --loc source | dest [--type drive | slot | ieslot]
```

This CLI command allows the CLI admin to list the source and destination storage locations. This is useful to determine the locations to move or unload media command. If the **--type** option is specified, only locations of the specified type is listed.

Below is a sample output of this CLI with a VTL name and destination location specified:

```
syscli --list vtlstorage --name VTL1 --loc dest
```

Output data:

List of VTL storage locations:

Total count = 4

[storage location = 1]

location type = I/E Slot

index = 0

drive serial number = N/A

barcode = N/A

writeprotect = disabled

access = N/A

used = N/A

[storage location = 2]

location type = I/E Slot

index = 1

drive serial number = N/A

barcode = N/A

writeprotect = disabled

access = N/A

used = N/A

[storage location = 3]

location type = I/E Slot

index = 2

drive serial number = N/A

barcode = N/A

writeprotect = disabled

access = N/A

used = N/A

[storage location = 4]

location type = I/E Slot
index = 3
drive serial number = N/A
barcode = N/A
writeprotect = disabled
access = N/A
used = N/A

Moving Media

```
syscli --move media --name <VTL_name> --srctype slot | drive | ieslot  
--desttype slot | drive | ieslot --srcindex <source_index> --destindex  
<destination_index> [--forceunload]
```

This CLI allows the admin user to move media between virtual storage locations. The media is moved from the specified source type and index location to the specified type and index destination location. The location type and index can be determined from the output of the **--list vtlstorage** command. The **--forceunload** optional parameter refers only to virtual drive source location.

Unloading Media

```
syscli --unload media (--barcode <media_barcode>) | { --loctype drive |  
ieslot --index <index_location> } [--forceunload]
```

This CLI allows the admin user to unload media from virtual drive or import/export virtual storage location specified by the barcode or the type and index location. There may be one or more barcode specified to unload multiple media. The option **--forceunload** refers to a virtual drive source location.

Resetting the VTL Target Ports

```
syscli --reset targetport [(--name <portname> )] [--sure]
```

This CLI allows the admin user to reset all or individual VTL target ports.

CLI command options:

- **--reset** - Resets one or more VTL target ports.
- **--name** - Port name. Can be specified repeatedly for additional ports. If no port is specified, all ports will be reset.
- **--sure** - if specified, the command will execute immediately without asking for confirmation.

NAS Configuration CLI Commands

The following sections describe the supported NAS configuration CLI commands:

- [Listing the Existing NAS Share and Attributes](#)

- [Listing of Existing NAS Share Names](#)
- [Getting the Total NAS Share Count](#)
- [Adding a NAS Share](#)
- [Editing a NAS Share](#)
- [Enabling Allowlinks on a NAS Share](#)
- [Deleting a NAS Share](#)
- [Deleting All NAS Shares](#)
- [Joining or Disjoining a Windows Domain](#)
- [Workgroup Users](#)
- [Share Administrators](#)
- [CIFS Share Access Control](#)
- [NFS Share Access Control](#)
- [Getting NFS Share Settings](#)
- [Changing NFS Share Settings](#)
- [Query Status of a NAS Service](#)
- [Querying the CIFS Settings](#)
- [Setting the CIFS Settings](#)
- [Commit NFS Synchronously](#)
- [Commit NFS Asynchronously](#)

Listing the Existing NAS Share and Attributes

```
syscli --list share [--proto cifs|nfs] | [--name <share name>] [--namematch <pattern>]
```

This CLI command provides a list of all existing NAS shares on the system and their attributes. The list can be limited to the type of protocol if **--proto** is specified. If **--name** is specified, only the attributes of that share are listed.

CLI command options:

- **--list**: Lists all NAS shares.
- * **--namematch**: If specified, only shares whose names match the specified pattern are listed. The wild characters **^** and **\$** are supported as follows:
 - **^xxx** – matching pattern xxx at the start of names
 - **xxx\$** – matching pattern xxx at the end of names

Remember to escape **\$** with a backslash because it is special to the shell. For example, to list all shares ending with **test** in the names, type the following:
syscli --list sharename --namematch test\\$

Note: Option marked with (*) means not supported in Web Services.

Listing of Existing NAS Share Names

syscli --list sharename [--proto cifs|nfs] [--namematch <pattern>]

This CLI lists all share names for both CIFS and NFS. If **--proto** is specified, only names of shares associated with the specified protocol will be listed.

CLI command options:

- **--proto**: If specified, limits the listing to the specified protocol.
- **--namematch**: If specified, only shares whose names match the specified pattern are listed.

The wild characters **^** and **\$** are supported as follows:

- **^xxx** — matching pattern xxx at the start of names
- **xxx\$** — matching pattern xxx at the end of names

Remember to escape **\$** with a backslash because it is special to the shell. For example, to list all shares ending with **test** in the names, type the following command: **syscli --list sharename --namematch test\\$**

Alternately, you can list a single share with the following CLI command:

syscli --get share --name <sharename>

Getting the Total NAS Share Count

syscli --getcount share [--proto cifs|nfs] [--namematch <pattern>]

This CLI displays the total count of NAS shares defined in the system.

CLI command options:

- **--proto**: If specified, displays the count for this protocol only.
- **--namematch**: If specified, only shares whose names match the specified pattern are counted.

The wild characters **^** and **\$** are supported as follows:

- **^xxx** – Matching pattern xxx at the start of names
- **xxx\$** – Matching pattern xxx at the end of names

Remember to escape **\$** with a backslash because it is special to the shell. For example, to count all shares ending with **test** in the names, type the following command: **syscli --getcount share --namematch test\\$**

Adding a NAS Share

syscli --add share (--name <sharename> --proto {cifs|nfs} [--desc <description>] [--ro] [--dedup] [--hidden] [--namecase lower|default] [--squash [root]|none] [--anonuid <anonymous_uid>] [--anongid <anonymous_gid>])

This CLI command allows the admin user to add one or more NAS shares. To add more than one share, repeat the same set of options noting that all mandatory options must be re-specified even if they are unchanged.

Note: When files are replicated from a share with `no_root_squash` enabled to a target DXi where `no_root_squash` was not supported, then NFS hosts accessing the target DXi will have root access permissions mapped (squashed) to the anonymous user.

For example, to add three shares:

```
syscli --add share --name share1 --proto cifs \ --name share2 --proto cifs --ro  
--name share3 --proto nfs
```

CLI command options:

- **--add:** Adds one or more NAS shares. Option **--hidden** does not apply to NFS shares.
- **--name:** sharename: must be alphanumeric character.
- **--proto:** Network file sharing protocol (currently CIFS and NFS are supported)
- **--desc:** Optional description for the share.
- **--ro:** if specified, share is read-only. Otherwise, share is read-write.
- **--dedup:** if specified, dedup will be enabled (this attribute cannot be changed after share is created)
- **--hidden:** if specified, share name will not be displayed in the browser (applicable to CIFS shares only)
- **--namecase:** Client file/directory names are to be stored in storage in the specified character case (applicable to CIFS shares only). If this option is not specified or is specified with **default**, client file/directory names are treated as case-insensitive and case-preserved, that is, file/directory names will be saved in the original character case as is, and all search will be performed in a case-insensitive manner. If specified with **lower**, all incoming client file/directory names will be converted to lower case before saving or searching.
- **--squash:** For NFS only. Option to squash (map) NFS client users to nobody user.
 - **root:** map client root to nobody user (enable `root_squash`; this is the default)
 - **none:** preserve all client users (enable `no_root_squash`)

By default, if **--squash** is not specified, `root_squash` is enabled.

- **--anonuid:** Anonymous user id (for NFS only), usually 4294967294 on 32-bit systems or 65534 on 16-bit systems. If not specified, default to 4294967294
- **--anongid:** Anonymous group id (for NFS only), usually 4294967294 on 32-bit systems or 65534 on 16-bit systems. If not specified, default to 4294967294

Editing a NAS Share

```
syscli --edit share --name <sharename> [--desc <description>] [--perms  
rw|ro [--restart]] [--hidden false|true] [--squash root|none] [--anonuid  
<anonymous_uid>] [--anongid <anonymous_gid>] [--namecase default [--  
sure]]
```

This CLI command allows the admin user to modify one or more attributes of a NAS share such as description, permissions, hidden (CIFS only), etc. Although the syntax says all attributes are optional, at least one attribute must be specified.

Note: When files are replicated from a share with `no_root_squash` enabled to a target DXi where `no_root_squash` was not supported, then NFS hosts accessing the target DXi will have root access permissions mapped (squashed) to the anonymous user.

Notes on the `--restart` option:

This option is applicable to CIFS shares only; it is ignored on NFS shares. If a CIFS share's permissions are changed, users who are currently logged on the share will not see the change until they log off and log in again, or CIFS service is restarted.

The admin user can choose to restart CIFS service by specifying the `--restart` option. If CIFS service is restarted, users currently logged on to CIFS shares may experience disconnection and/or I/O disruption or backup jobs connected to all shares may fail I/O.

CLI command options:

- `--edit`: Edits one or more attributes of a NAS share.
- `--name: sharename`: must be alphanumeric character. Must begin with a letter.
- `--perms`: change permissions to read-write or read-only.
- `--restart`: applicable to CIFS share only. If specified, restart CIFS service. This can cause disruption to all users and all backup jobs.
- `--hidden: hidden`: true if share name is not browseable in the browser (for CIFS shares only).
- `--squash`: For NFS only. Option to squash (map) NFS client users to nobody user.
 - `root`: map client root to nobody user (`root_squash` in effect; this is the default)
 - `none`: preserve all client users (`no_root_squash` in effect)
- `--anonuid`: Anonymous user id (for NFS only), usually 4294967294 on 32-bit systems or 65534 on 16-bit systems.
- `--anongid`: Anonymous group id (for NFS only), usually 4294967294 on 32-bit systems or 65534 on 16-bit systems.
- `--namecase`: if specified, client file/directory names are treated as case-insensitive and case-preserved. This option makes a difference only for shares that were previously created with the option `--namecase lower`. Basically, it makes the share behave as if it had been created without the `--namecase` option. This option is useful in the following situation:
 - User creates a share using option `--namecase lower`.
 - Some files/directories with mixed case are somehow copied over to the share without using CIFS.

- User can browse these files in browsers but cannot open, rename, move, copy, or delete.

In this case, to access them via CIFS, their names have to be changed to lower case, but this task is impossible to do over CIFS. One of the solutions is for users to use this edit command to revert name support to the default (case-insensitive and case-preserved).

After the **--namecase** option is executed successfully:

- Old file/directory names in the share remain unchanged.
- New file/directory names will be saved as is (case-preserved).
- File/directory search is performed in a case-insensitive manner.

Note: After the **--namecase** option is used, the share cannot be changed back to support lower case file/directory names.

Enabling Allowlinks on a NAS Share

syscli --enable allowlinks [--share <sharename>] | --all

This CLI allows the admin user to enable the **allowlinks** attribute of a single share or all shares.

By default, all shares are created with **allowlinks** attribute disabled. Once enabled, the **allowlinks** attribute cannot be disabled.

When the **allowlinks** attribute is enabled, the share supports hard links.

Note: If hard link support is enabled (**--enable allowlinks**) for an NFS share, replication cannot be enabled for the share; likewise, if replication is enabled, hard link support is disabled.

CLI command options:

- **--enable:** Enables the allowlinks attribute of a given share or all shares.
- **--share:** if specified, name of the share to enable the allow-links attribute
- **--all:** if specified, enable the allowlinks attribute for all NAS shares.

Deleting a NAS Share

syscli --del share (--name <share_name>)

This CLI command allows the admin user to delete one or more existing NAS shares. The NAS share name is required to delete a share. When a share is deleted, all connections to the share are severed and all data stored on it is removed permanently. Any replications scheduled will be removed.

Deleting All NAS Shares

syscli --deleteall share [--proto {cifs|nfs}] [--namematch <pattern>] [--sure]

This CLI command allows the admin user to delete all NAS shares. If **--proto** is specified, all shares of that protocol are deleted.

CLI command options:

- **--deleteall**: Deletes all existing NAS shares.
- * **--proto**: if specified, delete all shares of this type only.
- * **--namematch**: if specified, only shares whose names match the specified pattern will be deleted. The wild characters ^ and \$ are supported as follows:
 - ^xxx – Matching pattern xxx at the start of names
 - xxx\$ – Matching pattern xxx at the end of names

Remember to escape \$ with a backslash because it is special to the shell. For example, to delete all shares ending with **test** in the names, type the following command: **syscli --deleteall share --namematch test\\$**

- **--sure**: If specified, the command will execute immediately without asking for confirmation.

Note: Option marked with (*) means not supported in Web Services.

Joining or Disjoining a Windows Domain

syscli --join workgroup --name <workgroup name>

syscli --join ads --domain <domain name> [--org <organizational unit>] --admin <domain user authorized to join> [--password <domain user password>] [--pdc <primary domain controller>] [--prewin2kdomain <preWindows 2000 domain name>]

syscli --disjoin workgroup --name <workgroup name>

syscli --disjoin ads [--admin <domain user authorized to join> [--password <domain user password>]]

This CLI command allows the admin user to join the Samba server to a Windows workgroup or a Windows Active Directory domain (ADS). If the server is already in the joined state, the CLI also provides the capability to disjoin the workgroup or the Active Directory domain.

Joining an Active Directory requires the name or IP address of a primary domain controller (PDC). However, if the **--pdc** option is not specified, the CLI will discover it automatically. The **--admin** option specifies the name of the domain user who is authorized to join the active directory domain. This domain user is the user defined in the ADS domain and is not necessarily the admin user. Thus the admin must supply this domain user credential in order to join the domain. The admin can choose not to supply the password on the command line. In this case the CLI prompts the admin for the password and will not echo his response for security purposes.

Note that the **disjoin ads** command no longer requires the user name and password; it always succeeds even if the username and/or password is wrong. The only difference is that the computer account in the AD server will be successfully disabled if both the username and password are correct, and will remain enabled otherwise. The new behavior of this command is needed to disjoin ADS for cases where the AD server is changed or the old admin user account is no longer valid.

CLI command options:

- **--join**: Joins CIFS server to a Windows Active Directory domain.
If **--password** is specified and **<admin_password>** is not, or if **--password** is omitted, it will be prompted interactively and the password is not echoed on screen.
- **--domain**: Active Directory domain name
- **--admin**: username of any account that has the right to join the domain.
- **--password**: if not specified, will be prompted interactively and the password is not echoed on screen.
- **--pdc**: host name or IP address of primary domain controller. If not specified, will search automatically.
- **--prewin2kdomain**: Normally, this option is omitted because the join command will query the ADS server for the pre-Windows 2000 domain name, A.K.A NetBIOS domain name.

This option is specified as a last resort when and only when the command fails because of wrong NetBIOS domain name. If specified, the specified name is used instead of querying the domain server/controller.

Pre-Windows 2000 Domain Name

The pre-Windows 2000 domain name is also known as the NetBIOS domain name, which is 15 characters or less. This name can be specified via the **--prewin2kdomain** option. Normally this option need not be specified because the join command can query the ADS server or domain controller to get the pre-Windows 2000 domain name.

However, the NetBIOS domain name is sometimes wrong (for example, longer than 15 characters), causing the join operation to fail. This can happen in an environment that has multiple domain controllers and some of them may be misconfigured. In this case one can try any of the following methods:

- Specify **--prewin2kdomain** explicitly in the join command.
- If the domain has more than one domain controllers, specify **--pdc** explicitly with the hostname or IP of each domain controller. If the domain controller returns the correct NetBIOS domain name, the join command will succeed. So be patient to try rerunning the command with one domain controller after another until the join command succeeds.

Workgroup Users

There are two types of users who are allowed access to CIFS shares depending on whether the system is joined to a workgroup or an Active Directory domain.

When the server is joined to a workgroup, only workgroup users can access CIFS shares, and the CLI provides the capabilities to manage them. Workgroup users are users who are both in the local Linux database and the Samba password database.

The following Workgroup Users control commands are available:

- [List of Workgroup Users](#)
- [Add a Workgroup User](#)
- [Edit a Workgroup User](#)

- [Delete a Workgroup User](#)
- [Delete All Workgroup Users](#)

List of Workgroup Users

```
syscli --list user [--name <username> |--namematch <pattern>]
```

This CLI command provides a list of workgroup users. If **--name** is specified, only those names that match the specified name are listed. If **--namematch** is specified, list only those names that match the specified pattern.

CLI command options:

- **--list**: Lists all workgroup users.
- **--name**: If specified, get information for the specified user name only.
- **--namematch**: If specified, only workgroup users whose names match the specified pattern will be listed.

Add a Workgroup User

```
syscli --add user --name <user name> [--password <user password [--desc <description>] [--admin]
```

This CLI command allows the admin user to add a workgroup user if the system is joined to a workgroup. A password is required when adding a workgroup user. If it is not passed as a command line option, the CLI will prompt the admin to enter the password and will not echo the response for security purposes. If the **--admin** option is specified, the user will be granted administrative rights.

Edit a Workgroup User

```
syscli --edit user --name <workgroup user name> [--password <user_password>] [--desc <description>] [--admin enabled|disabled]
```

This CLI command allows the admin user to modify the password, the description, or the admin attribute of an existing workgroup user. This works only when the system is joined to a workgroup. Note that at least one property must be specified: **password**, **description**, or **admin**.

Delete a Workgroup User

```
syscli --del user --name <workgroup_user_name>
```

This CLI command allows the admin user to delete an existing workgroup user if the system is joined to a workgroup. The user will no longer exist in the local Linux user database as well as Samba password database.

Delete All Workgroup Users

```
syscli --deleteall user [--sure]
```

This CLI command allows the admin user to delete all existing workgroup users. This command only works if the system is joined to a workgroup. If the **--sure** option is specified, no confirmation prompt will be displayed.

Share Administrators

When the server is joined to a Windows Active Directory domain, domain users are allowed to access CIFS shares but the CLI shall not provide the capabilities to manage them. To manage them the Windows domain admin, not necessarily the CLI admin, has to log in to the Windows server and use the Microsoft Management Console (MMC). The CLI merely provides a limited capability to grant share administrator privileges to certain domain users. A share administrator is a domain user or domain group that is granted the privilege of setting share permissions.

The following Share Administrators control commands are available:

- [List Share Administrators](#)
- [Add a Share Administrator](#)
- [Delete a Share Administrator](#)
- [Delete All Share Administrators](#)

List Share Administrators

syscli --list shareadmin

This CLI command allows the admin user to display a list of share administrators if the system is joined to an Active Directory domain.

An example output of administrators when the system is joined to a Windows domain is shown below.

```
Total count = 1
```

```
username 1 = QUANTUM-SQA\Domain Admins
```

Add a Share Administrator

syscli --add shareadmin --name <domain_user_or_group_name>

This CLI command allows the admin user to grant share admin privilege to an existing domain user/group if the system is joined to a Windows Active Directory domain. The option **--name** must be followed by the name of the domain user or domain group usually in the form:

<domain_name>\<user_or_group_name>

If the command is typed in a shell, the backslash has to be typed twice. For example, if the domain name is **quantum.com** and the user is **joe**, the command to be typed at the shell prompt reads as follows:

```
syscli --add shareadmin --name quantum\joe
```

Delete a Share Administrator

syscli --del shareadmin --name <domain_user_or_group_name>

This CLI command allows the admin user to remove the share admin rights from an existing share administrator. The syntax for the domain user/group name is the same as discussed in the command **--add shareadmin**. This command works only if the system is joined to an ADS domain.

Delete All Share Administrators

syscli --deleteall shareadmin [--sure]

This CLI command allows the admin user to remove the share admin rights from all domain users or groups that have previously been granted this privilege (that is, share administrators) except the built-in **domain admins** group. This command works only if the system is joined to an ADS domain. If the **--sure** option is specified, no confirmation prompt will be displayed.

CIFS Share Access Control

There are two types of users who are allowed access CIFS shares depending on whether the system is joined to a workgroup or a Windows domain.

When the server is joined to a workgroup, only workgroup users can access CIFS shares and the CLI shall provide the capabilities to manage them. Workgroup users are users who are both in the local Linux database and the Samba password database.

When the server is joined to a Windows domain, domain users are allowed to access CIFS shares but the CLI shall not provide the capabilities to manage them. To do this the Windows domain admin, not necessarily the CLI admin, has to log in the Windows server and uses the Microsoft Management Console (MMC). This CLI command merely provides a limited capability to grant share administrator privileges to certain domain users. A share administrator has the privilege of setting share permissions.

This CLI command applies when the system has joined a workgroup or a Windows Domain. Otherwise, this CLI command will return an error.

The following CIFS Access Control commands are available:

- [Listing Share Users](#)
- [Adding a Share User](#)
- [Deleting a Share User](#)
- [Deleting All Share Users](#)

Listing Share Users

syscli --list shareuser --share <share_name>

This CLI command allows the admin user to display a list all workgroup users that have access to the specified CIFS share. If the list is empty, it means all workgroup users are allowed read-write access to the specified share.

This command works only when the server is joined to a workgroup. If the server is joined to an Active Directory domain, please use the Microsoft Management Console (MMC) tool.

An example output of share users when the system is joined to a workgroup is shown below.

```
Total count = 1
[User = 1]
  Username = userone
  Access Rights = rw
```

Adding a Share User

```
syscli --add shareuser --share <CIFS_share_name> --user <username>
[--rw]
```

This CLI command allows the admin user to grant an existing workgroup user the right to access the specified CIFS share. By default the user has read-only access to the share. If the `--rw` option is specified, the user is allowed complete read-write access to the specified share. However, the effective access rights depend on the share access mode. If the share is read-only, all users can have read-only access regardless of their settings.

This command only works when the server is joined to a workgroup. If the server is joined to an Active Directory domain, complete management of user access can be done from the Microsoft Management Console (MMC) tool.

By default, a CIFS share is created with an empty initial share access list if the server is joined to a workgroup. When the share access list is empty, all workgroup users are allowed read-write access to it. This CLI command can be used to add a workgroup user to the share access list of the specified CIFS share. As soon as the share access list contains workgroup user names, only these users have access to the share.

Deleting a Share User

```
syscli --del shareuser --share <share_name> --user <username>
```

This CLI command allows the admin user to remove the right to access the specified CIFS share from a workgroup user. When the last workgroup user is deleted, the share access list of the specified share is empty, which means the share now allows read-write access to all workgroup users (see command `--add shareuser`).

This command works only when the server is joined to a workgroup. If the server is joined to an Active Directory domain, please use the Microsoft Management Console (MMC) tool.

Deleting All Share Users

```
syscli --deleteall shareuser --share <share_name> [--sure]
```

This CLI command allows the admin user to remove the right to access the specified CIFS share from all workgroup users. As a result, the share access list of the specified share is empty, which means the share now allows read-write access to all workgroup users (see command `--add shareuser`).

This command works only when the server is joined to a workgroup. If the server is joined to an Active Directory domain, please use the Microsoft Management Console (MMC) tool. If the `--sure` option is specified, no confirmation prompt will be displayed.

NFS Share Access Control

The following NFS Share Access control commands are available:

- [Listing a Share Host](#)
- [Adding a Share Host](#)
- [Deleting a Share Host](#)
- [Deleting All Share Hosts](#)

Listing a Share Host

```
syscli --list sharehost --share <share_name>
```

This CLI command allows the admin user to display a list all specific NFS hosts that are allowed access to a given NFS share. By default, if this list is empty, all NFS hosts are allowed read-write access to the share.

Adding a Share Host

```
syscli --add sharehost --share <NFS_share_name> --host  
<NFS_host_name> [--rw]
```

This CLI command allows the admin user to grant the right to access the specified NFS share to a given NFS host. By default the specified host has read-only access to the share. If `--rw` is specified, it has full read-write access to the share. However, the effective access right of the host depends on the share access mode. If the share is read-only (see the `--add share` command), all hosts specified in the share access list will effectively have read-only access regardless of their settings.

By default, an NFS share is created with an empty initial share access list. When the share access list is empty, all NFS hosts are allowed read-write access to it. This CLI command can be used to add an NFS host to the share access list of an NFS share. As soon as the share access list contains NFS host names, only these hosts have access to the share.

Deleting a Share Host

```
syscli --del sharehost --share <NFS_share_name> --host <NFS_host_name>
```

This CLI command allows the admin user to remove the right to access the specified NFS share from an NFS host. When the last NFS host is deleted, the share access list of the specified share is empty, which means the share now allows read-write access to all NFS hosts (see command `--add sharehost`).

Deleting All Share Hosts

```
syscli --deleteall sharehost --share <NFS_share_name> [--sure]
```

This CLI command allows the admin user to remove the right to access the specified NFS share from all NFS hosts. As a result, the share access list of the specified share is empty, which means the share now allows read-write access to all NFS hosts (see command `--add sharehost`). If the `--sure` option is specified, no confirmation prompt will be displayed.

Getting NFS Share Settings

```
syscli --get nfssetting --secure
```

This CLI command allows the admin user to display one or more NFS share settings.

CLI command options:

- `--get`: Gets a setting for all NFS shares
- `--secure`: Queries the "secure" setting.

Changing NFS Share Settings

```
syscli --set nfssetting { --secure yes|no }
```

This CLI command changes one or more NFS share settings.

CLI command options:

- `--set`: Changes a setting for all NFS shares
- `--secure`: A `yes` or `no` value means to change all NFS shares to using the secure or insecure option, respectively.

Query Status of a NAS Service

The following Query Status of a NAS Service control commands are available:

- [Query CIFS Service Status](#)
- [Query NFS Service Status](#)

Query CIFS Service Status

```
syscli --getstatus cifs
```

This CLI command allows the admin user to display the status of the CIFS service.

An example output of this command:

```
CIFS status = disabled (unconfigured)
```

Details:

```
NMB daemon not running
```

```
SMB daemon not running
```

Query NFS Service Status

syscli --getstatus nfs

This CLI command allows the admin user to display the status of the NFS service.

An example output of this command:

NFS status = running

Details:

NFS daemon running

MOUNT daemon (rpc.mountd) running

LOCK daemon (locked) running

STATUS daemon (rpc.statd) running

Querying the CIFS Settings

syscli --get smbsetting --oplocks | --dbglevel | --ldapsigning | --maxprocesses | --clientntlmv2auth | --serversigning | --all

CLI command options:

- **--oplocks**: queries various oplocks settings
- **--dbglevel**: queries the debug level setting in CIFS server
- **--ldapsigning**: queries the LDAP client signing setting ("client ldap sasl wrapping")
- **--maxprocesses**: queries the limit on the number of smbd processes ("max smbd processes")
- **--clientntlmv2auth**: queries the setting "client NTLMv2 auth".
- **--serversigning**: queries "server signing" setting.
- **--all**: queries all CIFS settings, both global settings and per-share settings.

Setting the CIFS Settings

syscli --set smbsetting { --oplocks disabled|enabled } | { --dbglevel <n> } | { --ldapsigning disabled|enabled } | { --maxprocesses <max_smbd_processes> } | { --clientntlmv2auth yes|no } | { --serversigning disabled|enabled }

CLI command options:

- **syscli --oplocks disabled|enabled**

This CLI command changes the kernel oplocks setting in CIFS. In a bad network environment the kernel oplocks setting should be disabled.

- **syscli --dbglevel <n>**

This CLI command changes the debug level to n where n is a nonnegative number. The higher the value, the more verbose the log files are. A value of zero gives minimum logging (for errors only).

- **syscli --ldapsigning disabled|enabled**

This CLI command enables or disables LDAP client signing. This setting must be enabled if and only if the LDAP server signing is enabled on the ADS server. Otherwise, it must be disabled. For more information on how to enable LDAP server signing on the ADS server, see Microsoft documentation at: <http://support.microsoft.com/kb/935834>

- **syscli --maxprocesses <max_smbd_processes>**

This CLI command changes the maximum number of smbd processes at any given time. By default, the limit is 100.

- **syscli --clientntlmv2auth yes|no**

This CLI changes "client NTLMv2 auth" setting to yes or no. By default, this setting is set to "yes" and must not be changed unless the domain group policy on the ADS is set to use the older NTLM (v1) exclusively.

- **syscli -- serversigning disabled|enabled**

This CLI Changes "server signing" setting to "disabled" (disabled) or "auto" (enabled).

Commit NFS Synchronously

syscli --nfscommit sync [--share <sharename>] | --all

This CLI command allows the admin user to set up NFS shares so that data are committed synchronously to NFS shares. When using the synchronous setting, all data that is to be written must be committed to physical storage, and all the data must be written to that storage before the system will accept **stable write** or **commit** commands. This ensures that when a backup completes all the data resides on disk. This setting can be altered through the CLI. The user can set up this property for one NFS share at a time or all NFS shares at the same time. By default, NFS shares are created to commit data synchronously.

NFS Commit is an NFSv3 client call to request the NFS server to commit cached data to stable storage. The server has two choices:

- Accelerated mode:** This option allows the NFS server to violate the NFS protocol and reply to commit requests before cached data is committed to stable storage. This mode improves I/O performance but may cause data inconsistencies in case of power failure or severe interruptions.
- Standard mode:** Honor the NFS commit calls truthfully by committing cached data to stable storage before responding to the clients. This mode guarantees data integrity in case of power failures or severe interruptions.

This CLI command sets up NFS server to run in **Standard mode**, with NFS commits synchronously between server and client.

Commit NFS Asynchronously

syscli --nfscommit async [--share <sharename>] | --all

This CLI command allows the admin user to set up NFS shares so that data are committed asynchronously to NFS shares. When using the asynchronous setting, the system will allow receipt of **stable write** or **commit** commands without having the data (and related metadata) fully written to disk. This mode allows backups to be completed faster (from the backup application point of view); however, there is the possibility of having an incomplete backup if the

system fails before all the data gets written to disk. The user can set up this property for one NFS share at a time or all NFS shares at the same time. By default, NFS shares are created to commit data synchronously until changed by this command.

This CLI command sets up NFS server to run in **Accelerated mode**, where NFS commit messages are acknowledged asynchronous after receipt.

Note: Mixed Linux NFS and VTL Traffic: Simultaneous inline deduplication of VTL or OST and Linux NFS traffic represents the mixing of a heavy, intensive IO payload with an out-of-order, *bursty*, and response sensitive protocol. The DXi 2.x shares configuration should change from the default, and run asynchronous shares.

Replication CLI Commands

The following sections describe the supported replication CLI commands:

Note: VTL and cartridge based replication CLI commands are available only on DXi6700, DXi6800, and DXi8500 systems.

- [Initiating a Cartridge Based, File/Directory Based, or Namespace Replication](#)
- [Locking a VTL or NAS Share](#)
- [Unlocking a VTL or NAS Share](#)
- [Getting VTL or NAS Share Lock Status](#)
- [Initiating Source to Target Cartridge or File Synchronization](#)
- [Listing the Allowed Replication Sources for the Target](#)
- [Adding a Source on a Target](#)
- [Deleting a Source on a Target](#)
- [Listing the Replication Targets for the Source](#)
- [Adding a Target on a Source](#)
- [Deleting a Target on the Source](#)
- [Adding a NAS Target](#)
- [Deleting a NAS Target](#)
- [Listing NAS Targets](#)
- [Adding a VTL Target](#)
- [Deleting a VTL Target](#)
- [Listing VTL Targets](#)
- [Enabling VTL Replication Options on the Source](#)
- [Disabling VTL Replication Options on the Source](#)
- [Enabling NAS Share Replication Options on the Source](#)

- [Disabling NAS Share Replication Options on the Source](#)
- [Checking Readiness on Source](#)
- [Aborting Replication of VTL or NAS](#)
- [Aborting Synchronization of VTL or NAS](#)
- [Pausing the Replication Service on the Source](#)
- [Resuming the Replication Service on the Source](#)
- [Enabling All Replication for Both VTL and NAS on the Source](#)
- [Disabling All Replication for Both VTL and NAS on the Source](#)
- [Clearing Replication Statistics](#)
- [Listing Deduplicated VTL on the Source](#)
- [Listing Deduplicated NAS on the Source](#)
- [Listing Replicated VTL on the Target](#)
- [Listing a Replicated NAS Share on the Target](#)
- [Recovering VTL on the Target](#)
- [Recovering a NAS Share on the Target](#)
- [Failback VTL To the Source from the Target System](#)
- [Failback a NAS Share on the Target](#)
- [Deleting a Replicated VTL from the Target](#)
- [Deleting a NAS Share on the Target](#)
- [Listing the Replicated VTL Recovery Jobs on the Target](#)
- [Listing the Replicated NAS Recovery Jobs on Target](#)
- [Deleting the Replicated VTL Recovery Jobs on the Target](#)
- [Deleting the Replicated NAS Recovery Jobs on Target](#)
- [Listing the Replicated VTL Failback Jobs on the Target](#)
- [Listing the Replicated NAS Failback Jobs on the Target](#)
- [Deleting the Replicated VTL Failback Jobs on the Target](#)
- [Deleting the Replicated NAS Failback Job on the Target](#)
- [Aborting the Replicated VTL Failback Jobs on the Target](#)
- [Aborting the Replicated NAS Failback Job on the Target](#)
- [Enabling the VTL Cartridge Based Replication on the Target](#)
- [Enabling NAS File/Directory Based Replication on the Target](#)
- [Disabling VTL Cartridge Based Replication on the Target](#)
- [Disabling NAS File/Directory Based Replication on the Target](#)
- [Generate a Replication Report](#)
- [Downloading a Replication Report](#)
- [Getting the Status of Active Cartridge Base or File/Directory Request](#)

- [Listing Unpack Queue Items](#)
- [Getting the Status of the Active Synchronization Requests](#)
- [Listing the File/Directory-Based Replication Status and Statistics](#)
- [Listing Shares Eligible to Receive Directory/File Based Data](#)
- [Listing the Cartridge Replication Status and Statistics](#)
- [Listing the Partitions Eligible to Receive Cartridge Based Data](#)
- [Mapping an OST IP to a Replication IP](#)
- [Listing All OST Target Mappings](#)
- [Editing OST Target Mappings](#)
- [Deleting an OST Target Mapping](#)
- [Getting an OST Target Mapping](#)
- [Getting Snapshot per Share Partition Stats](#)
- [Setting Snapshot per Share Partition Limits](#)

Initiating a Cartridge Based, File/Directory Based, or Namespace Replication

```
syscli --replicate vtl --name <VTL_name> [--target <host_name_or_ip>] --barcode <barcode> | --namespace [--disableok]
```

This CLI command allows the admin user to initiate a replication for a specified VTL.

CLI command options:

- **--replicate:** Initiates replication for a specified VTL.
- **--name:** Must be a valid VTL name for the system.
- **--target:** Target host name or IP of the replication job. If the system or the share/partition has two targets configured, you must use the **--target** option and you must specify a target IP or hostname. If the system or the share/partition has no target configured, invoking the commands will result in error.
- **--barcode:** Must be a valid barcode. If specified, only the cartridge with specified barcode on the specified VTL will have replication initiated. The VTL must have cartridge base replication enabled in order to replicate a cartridge.
- **--namespace:** Indicates only namespace replication. If not specified, cartridge base replication is performed.
- **--disableok:** if specified, no error will be returned if cartridge based replication is not enabled.

```
syscli --replicate nas --name <NAS_share_name> [--target <host_name_or_ip>] [--path <directory_path_or_filename_to_the_share> | --namespace ] [--disableok]
```

This CLI command allows the admin user to initiate a replication for NAS share or an individual directory or file on the specified NAS share. The share must have the file/directory based replication enabled in order to replicate a directory or a file.

CLI command options:

- **--replicate**: Initiates replication for a specified NAS share.
- **--name**: Must be a valid NAS share name for the system.
- **--target**: Target host name or IP of the replication job. If the system or the share/partition has two targets configured, you must use the **--target** option and you must specify a target IP or hostname. If the system or the share/partition has no target configured, invoking the commands will result in error.
- **--path**: Directory or filename used for directory/file based replication.
- **--namespace**: If specified, namespace replication is initiated on the whole NAS share. If not specified, directory/file base replication is performed.
- **--disableok**: if specified, no error will be returned if directory/file based replication is not enabled.

Locking a VTL or NAS Share

```
syscli --lock vtl --name <VTL_name> [--wait]
```

```
syscli --lock nas --name <NAS_share_name> [--wait]
```

This CLI command allows the admin user to lock or unlock the specified VTL or share on a replication target so that cartridge or file/directory based replication recovery requests are queued. No recovery will occur until the VTL or share is unlocked.

If the **--wait** option is not specified when locking, the CLI will not wait and will return right away if the VTL or share is already locked. If the **--wait** option is specified, this CLI command will wait if there is a lock in place and will return when the lock is obtained.

Unlocking a VTL or NAS Share

```
syscli --unlock vtl --name <VTL_name> [--force]
```

```
syscli --unlock nas --name <NAS_share_name> [--force]
```

This CLI command allows the admin user to unlock the specified VTL or share on a replication target that was locked from the previous lock CLI command.

If the **--force** option is specified, the lock will be forced to be unlocked on the VTL or share.

Getting VTL or NAS Share Lock Status

```
syscli --getstatus vtllock --name <VTL_name>
```

This CLI command allows the CLI admin to retrieve the status of the lock for the specified VTL.

```
syscli --getstatus naslock --name <NAS_share_name>
```

This CLI command allows the user to retrieve the status of the lock for the specified NAS share.

Initiating Source to Target Cartridge or File Synchronization

syscli --sync vtl --name <VTL_name> [--target <host_name_or_ip>]

This CLI command allows the CLI admin to initiate source to target cartridge synchronization for a specified VTL that has cartridge based replication enabled.

CLI command options:

- **--sync:** Requests system to synchronize the specified VTL.
- **--name:** Must be a valid vtl name for the system.
- **--target:** Target host name or IP of the replication sync job. If the system or the share/partition has two targets configured, you must use the **--target** option and you must specify a target IP or hostname. If the system or the share/partition has no target configured, invoking the commands will result in error.

syscli --sync nas --name <NAS_share_name> [--target <host_name_or_ip>]

This CLI command allows the admin user to Initiate source to target file or directory synchronization for specified NAS share that has file/directory based replication enabled.

CLI command options:

- **--sync:** Requests system to synchronize the specified NAS share.
- **--name:** Must be a valid NAS share name for the system.
- **--target:** Target host name or IP of the replication sync job. If the system or the share/partition has two targets configured, you must use the **--target** option and you must specify a target IP or hostname. If the system or the share/partition has no target configured, invoking the commands will result in error.

Listing the Allowed Replication Sources for the Target

syscli --list sourcerep

This CLI command lists the allowed replication source(s) IP or hostname for this system as a target.

Output data:

List of all allowed replication source IP for this system as a target:

```
Total count = 4
[sourcerep = 1]
    IP = 10.40.50.70
[sourcerep = 2]
    IP = 10.40.50.71
[sourcerep = 3]
    IP = 10.40.100.139
[sourcerep = 4]
    IP = 10.40.100.140
```

Adding a Source on a Target

syscli --add sourcerep --hostid <host_id>

This CLI command allows the admin user to add or specify the replication source IP or hostname of a source DXi system for this system as a target.

Deleting a Source on a Target

syscli --del sourcerep --hostid <host_id>

This CLI command allows the admin user to delete the given source IP or hostname as a replication source on this target system.

Listing the Replication Targets for the Source

syscli --list targetrep

This CLI command lists all allowed replication target IP addresses or hostnames for this system as a source. If a replication target host has been configured, the CLI displays any available replication statistics, as well as pause/resume status.

Output data:

List of all allowed replication target IP for this system as a source:

Total count = 2

[targetrep = 1]

TargetHost = 10.40.162.229

Source IP = 0.0.0.0

Encryption = Enabled

Encryption Type = 256-BIT

Program Rep Paused = no

User Rep Paused = no

NAS Rep Supported = yes

VTL Rep Supported = yes

Rep Revision = 6

[targetrep = 2]

TargetHost = 10.40.164.14

Source IP = 0.0.0.0

Encryption = Enabled

Encryption Type = 256-BIT

Program Rep Paused = yes

User Rep Paused = no

NAS Rep Supported = yes

VTL Rep Supported = yes

Rep Revision = 0

Adding a Target on a Source

```
syscli --add targetrep --hostid <host_id> [--encrypt [--encrypttype  
128|256]] --sourceip <source_ip>
```

This CLI command allows the admin user to add or specify the replication target IP or hostname of a DXi system for this system as a source. Optionally, the admin user can specify whether to encrypt the data before replicating and sending to the target. The user must specify the replication target on this system before enabling replication for a NAS share.

Note: The target must be configured to receive replications from this source before you can add a replication target on this source. At least one VTL or share should exist on the target. If this is not the case, the user must log on to the target and run the CLI command `syscli --add sourceip` to add the source system's IP or hostname to the target's list of replication sources.

Note: To add multiple targets, run the `syscli --add targetrep` command for each target.

CLI command options:

- **--add:** Adds a replication target IP or hostname this system will send replicated data to.
- **--hostid:** Must be a valid IP or hostname
- **--encrypt:** if specified, the encryption is enabled.
- **--encrypttype:** if specified, the encryption type will be either 128 bits or 256 bits encryption.
- **--sourceip:** In the Source IP Address field, enter the IP address that is used to uniquely identify the source DXi to the target. This may be different than the actual network IP address of the source DXi. If the target system is at DXi 2.1 Software or higher, this field is not required. If the target system is at DXi 2.0.1.x Software or below, then you must enter the IP address by which the target system recognizes the source system. The default value is 0.0.0.0.

Deleting a Target on the Source

```
syscli --del targetrep --hostid <host_id>
```

This CLI command allows the admin user to delete the given target IP or hostname as a replication target on this source system. If multiple targets are configured, you must delete each target separately.

Adding a NAS Target

```
syscli --add nastarget --name <NAS share name> --target  
<host_name_or_ip>
```

This CLI allows the admin user to add a replication target to the NAS share.

CLI command options:

- **--add:** Add a replication target to the NAS share.

- **--name:** Must be a valid NAS share name for the system. To see a list of available NAS shares on the system, use **syscli --list share**.
- **--target:** The host name or IP address of the replication target.

Deleting a NAS Target

```
syscli --del nastarget --name <NAS share name> --target  
<host_name_or_ip>
```

This CLI command allows the admin user to remove a replication target from the NAS share.

CLI command options:

- **--del:** Remove a replication target from the NAS share.
- **--name:** Must be a valid NAS share name for the system. To see a list of available NAS shares on the system, use **syscli --list share**.
- **--target:** The host name or IP address of the replication target to be removed.

Listing NAS Targets

```
syscli --list nastarget --name <NAS share name>
```

This CLI command allows the admin user to list the replication targets of the NAS share.

CLI command options:

- **--list:** Displays the list of replication targets of the NAS share.
- **--name:** Must be a valid NAS share name for the system. To see a list of available NAS shares on the system, use **syscli --list share**.

Adding a VTL Target

```
syscli --add vtltarget --name <vtl_name> --target <host_name_or_ip>
```

This CLI command allows the admin user to add a replication target to the partition.

CLI command options:

- **--add:** Add a replication target to the partition.
- **--name:** Must be a valid partition name for the system. To see a list of available partitions on the system, use **syscli --list vtl**.
- **--target:** The host name or IP address of the replication target.

Deleting a VTL Target

```
syscli --del vtltarget --name <vtl_name> --target <host_name_or_ip>
```

This CLI command allows the admin user to remove a replication target from the partition

CLI command options:

- **--del:** Remove a replication target from the partition.

- **--name:** Must be a valid partition name for the system. To see a list of available partitions on the system, use **syscli --list vtl**.
- **--target:** The host name or IP address of the replication target to be removed.

Listing VTL Targets

syscli --list vltarget --name <vtl_name>

This CLI command allows the admin user to list the replication targets of the partition.

CLI command options:

- **--list:** Displays the list of replication targets of the partition.
- **--name:** Must be a valid partition name for the system. To see a list of available partitions on the system, use **syscli --list vtl**.

Enabling VTL Replication Options on the Source

syscli --enablerep vtl --name <vtl_name> [--cartbase] [--syncid <sync_id>]

This CLI command allows the admin user to enable replication of the specified VTL on the system as a source. The VTL name must be specified. If the **--syncid** is not specified when **--cartbase** is specified, the default Sync ID is the same as the VTL name (similar to the GUI). If no optional parameter is specified, the replication is enabled without the cartridge base replication option set.

Note: The target system must have the corresponding partition configured with a Sync ID prior to configuring the source system partition.

Note: This command enables replication for all targets configured for the VTL. You cannot enable replication for a single target. Instead, run the following command to allow or disallow replication to a particular target: **syscli --add/del <vltarget> --name <vtl_name> --target <host_name_or_ip>**

Note: Before editing replication settings (using **--enablerep vtl**, **--disablerep vtl**), first disable Cartridge Based replication (using **--disable cartrep**), then add and remove targets (using **--add vltarget** or **--del vltarget**).

Disabling VTL Replication Options on the Source

syscli --disablerep vtl --name <VTL_name> [--nocartbase]

This CLI allows the CLI admin to disable the replication feature and its options on the specified VTL. If the **--cartbase** option is specified, the cartridge base replication option is disabled. If no option is specified, the whole replication is disabled for the specified VTL.

Note: This command disables replication for all targets configured for the VTL. You cannot enable replication for a single target. Instead, run the following command to allow or disallow replication to a particular target: `syscli --add/del <vltarget> --name <vtl_name> --target <host_name_or_ip>`

Note: Before editing replication settings (using `--enablerep vtl`, `--disablerep vtl`), first disable Cartridge Based replication (using `--disable cartrep`), then add and remove targets (using `--add vltarget` or `--del vltarget`).

Enabling NAS Share Replication Options on the Source

`syscli --enablerep nas --name <nas_share> [--filedirbase] [--syncid <sync_id>]`

This CLI command allows the admin user to enable replication of the NAS share on the system as a source. The NAS share name must be specified. If the `--syncid` is not specified when `--filedirbase` is specified, the default Sync ID is the same as the NAS share name (similar to the GUI). If no optional parameter is specified, the replication is enabled without the file/directory base options set.

Note: The target system must have the corresponding NAS share configured with a Sync ID prior to configuring the source system partition. Refer to [Enabling NAS File/Directory Based Replication on the Target](#) on page 55.

Note: This command enables replication for all targets configured for the NAS share. You cannot enable replication for a single target. Instead, run the following command to allow or disallow replication to a particular target: `syscli --add/del <nastarget> --name <nas_name> --target <host_name_or_ip>`

Note: Before editing replication settings (using `--enablerep nas`, `--disablerep nas`), first disable File/Directory Based replication (using `--disable filedirrep`), then add and remove targets (using `--add nastarget` or `--del nastarget`).

Disabling NAS Share Replication Options on the Source

`syscli --disablerep nas --name <nas_share> [--nofiledirbase]`

This CLI command allows the admin user to disable the replication feature and its options on a NAS share. If the `--nofiledirbase` option is specified, the file/directory base replication option is disabled. If no option is specified, the whole replication is disabled for the specified NAS share.

Note: This command disables replication for all targets configured for the NAS share. You cannot enable replication for a single target. Instead, run the following command to allow or disallow replication to a particular target: `syscli --add/del <nastarget> --name <nas_name> --target <host_name_or_ip>`

Note: Before editing replication settings (using `--enablerep nas`, `--disablerep nas`), first disable File/Directory Based replication (using `--disable filedirrep`), then add and remove targets (using `--add nastarget` or `--del nastarget`).

Checking Readiness on Source

DEPRECATED: `syscli --checkrepready nas --name <nas_share>`

This CLI command allows the admin user to check and verify the status of the NAS share prior to replicating. The output will show the status of the NAS.

DEPRECATED: `syscli --checkrepready vtl --name <vtl_name>`

This CLI command allows the admin user to check and verify the status of the VTL prior to replicating. The output will show the status of the VTL.

Aborting Replication of VTL or NAS

`syscli --abortrep vtl --name <VTL_name> [--target <host_name_or_ip>]`

`syscli --abortrep nas --name <NAS_share_name> [--target <host_name_or_ip>]`

The CLI allows the admin user to abort the current replication of the VTL or NAS. For the `--target` option: If the system or the share/partition has two targets configured, you must use the `--target` option and you must specify a target IP or hostname. If the system or the share/partition has no target configured, invoking the commands will result in error.

Aborting Synchronization of VTL or NAS

`syscli --abortsync vtl --name <VTL_name> [--target <host_name_or_ip>]`

`syscli --abortsync nas --name <NAS_share_name> [--target <host_name_or_ip>]`

The CLI allows the admin user to abort the current synchronization of the VTL or NAS. For the `--target` option: If the system or the share/partition has two targets configured, you must use the `--target` option and you must specify a target IP or hostname. If the system or the share/partition has no target configured, invoking the commands will result in error.

Pausing the Replication Service on the Source

`syscli --pause replication [--target <host_name_or_ip>]`

The CLI allows the admin user to pause all or a specified active replication target(s).

CLI command options:

- `--pause`: Pauses all or a specified active replication targets.
- `--target`: If specified, pauses the specified replication target; otherwise, the pause applies to all targets. If the system or the share/partition has two targets configured, you must use the `--target` option and you must specify a target IP or hostname. If the system or the share/partition has no target configured, invoking the commands will result in error.

Resuming the Replication Service on the Source

syscli --resume replication [--target <host_name_or_ip>]

The CLI allows the admin user to resume all or a specified active replication target(s).

CLI command options:

- **--resume**: Resumes all or a specified active replication targets.
- **--target**: If specified, resumes the specified replication target; otherwise, the resume applies to all targets. If the system or the share/partition has two targets configured, you must use the **--target** option and you must specify a target IP or hostname. If the system or the share/partition has no target configured, invoking the commands will result in error.

Enabling All Replication for Both VTL and NAS on the Source

syscli --enablerep all

This CLI command allows the admin user to enable the state of all replication for all deduplicated VTLs and shares

Note: This command enables replication for all targets configured for the VTL or NAS share. You cannot enable replication for a single target. Instead, run the following command to allow or disallow replication to a particular target: **syscli --add/del <nastarget|vlttarget> --name <nas_or_vtl_name> --target <host_name_or_ip>**

Disabling All Replication for Both VTL and NAS on the Source

syscli --disablerep all

This CLI command allows the admin user to disable the state of all shares and partitions configured on this system.

Clearing Replication Statistics

syscli --clear stats [--sent] [--received]

This CLI command allows the admin user to clear replication statistics. If the **--sent** option is specified, the sent replication statistics will be cleared. If the **--received** option is specified, the received replication statistics will be cleared.

Listing Deduplicated VTL on the Source

syscli --list dedupvtl

This CLI command allows the CLI admin to display a list of all the virtual tape libraries (VTLs) that have data deduplication enabled. Replication information is also listed if it applies. The list includes the VTL name, replication options (syncid if any are seen), last replication status (start, completion and status) and or last synchronization status (start, completion and status).

An example output of this is command:

```
Total count = 1
      [dedupvtl = 1]
```

```
VTL name = test1
replication state = Enabled
replication sync id =
last replication start = Thu Mar 5 11:02:03 2009
last replication completion = Thu Mar 5 11:02:07 2009
last replication status = Success
last synchronization start =
last synchronization completion =
last synchronization status =
```

Listing Deduplicated NAS on the Source

syscli --list dedupnas [--name <sharename> [--namematch <pattern>]

This CLI command returns the list of deduped NAS shares on the source.

CLI command options:

- **--list**: Lists all deduped NAS shares on source.
- **--name**: if specified, lists info for this share only.
- **--namematch**: if specified, only shares whose names match the specified pattern are listed. The wild characters **^** and **\$** are supported as follows:
 - **^xxx** – matching pattern xxx at the start of names
 - **xxx\$** – matching pattern xxx at the end of names

Remember to escape **\$** with a backslash because it is special to the shell. For example, to list all shares ending with **test** in the names, type the following command: **syscli --list dedupnas --namematch test\\$**

Listing Replicated VTL on the Target

syscli --list repvtl

This CLI command allows the CLI admin to display a list of all the replicated virtual tape libraries (VTLs) that have been performed on the system as a target. The list includes the virtual tape library name, source hostname IP address, the replication status (i.e. start, completion and status).

An example output of this command:

List of all replicated VTL on the target.

Total count = 1

[replicated vtl = 1]

ID = 1

VTL Name = test1

Source Host = Galaxy3.node-1

Replication Started = Thu Mar 5 13:08:59 2009

```
Replication Finished = Thu Mar 5 13:08:59 2009  
Replication Status = Success
```

Listing a Replicated NAS Share on the Target

`syscli --list repnas`

This CLI command allows the admin user to display a list of all the replicated NAS share(s) that have been performed on the target system. The list includes the NAS share name, source hostname IP address, the replication status (i.e. start, completion and status).

An example output of this command:

List of all replicated NAS share on the target:

Total count = 2

[replicated nas = 1]

ID = 1

NAS Share Name = nas_cifs1

Source Host = galaxy.quantum-est.com

Replication Started = Wed Jun 3 16:38:20 2009

Replication Finished = Wed Jun 3 16:38:30 2009

Replication Status = Success

[replicated nas = 2]

ID = 1

NAS Share Name = nas_nfs1

Source Host = galaxy.quantum-est.com

Replication Started = Wed Jun 3 16:38:03 2009

Replication Finished = Wed Jun 3 16:38:11 2009

Replication Status = Success

Recovering VTL on the Target

```
syscli --recover vtl --repname <replicated VTL_name> --srchost  
<source_hostname_or_IP address> --id <ID_of_the_replicated_VTL>  
[--recname <recovered_VTL_name >] [--submit]
```

This CLI command allows the CLI admin to recover and recreate the cartridges on the target system. The replicated VTL name, source hostname and ID can be retrieved from the list of replicated VTL. If the optional recovered VTL name is specified, it will be the new recovered VTL name on the target. Otherwise, the same replicated VTL name will be used as recovered VTL name on the target. If the **--submit** option is specified, it does not wait for the recover operation to complete.

The user must add tape drives and robot and map the devices before the VTL is accessible. If the partition contains media, the user will only be able to select the highest capacity tape drive for that media type. The original cartridge type is not retained during replication. For example, if the partition contains SDLT600 tape

cartridges, you will only be able to select DLT-S4 tape drives when mapping devices to the recovered partition.

Recovering a NAS Share on the Target

```
syscli --recover nas --repname <replicated_NAS_share_name> --srchost  
<source_hostname_or_IP_address> --id <ID_of_the_replicated_NAS>  
[--rename <recovered_NAS_share_name>] [--owner <owner_user_id>]  
[--submit]
```

This CLI command allows the admin user to recover and recreate the NAS share on the target system. The replicated NAS share name, source hostname and ID can be retrieved from the list of replicated NAS share. If the **--rename** option is specified, it is used as the NAS share name when the share is successfully recovered. Otherwise, the same replicated NAS share name will be used for the recovered share name on the target. The **--owner** option is mandatory if the share being recovered is a CIFS share. If the **--submit** option is specified, it does not wait for the recover operation to complete.

Failback VTL To the Source from the Target System

```
syscli --failback repvtl --repname <vtl_name> --srchost <source_host> --id  
<id> --tgthost <target_host> [--encrypt [--encrypttype 128|256]]
```

This CLI command allows the CLI admin to failback a replicated VTL. The replicated VTL name, source hostname and ID can be retrieved from the list of replicated VTL. The **--tgthost** option specifies the target host where the replicated VTL will be failed back to.

To complete the failback, on the specified target system, run the **--recover vtl** CLI command specifying the replicated VTL from the list of replicated VTL on the failback target host system.

Before a user can failback a VTL to its source, the target role IP address must be configured on the source system first.

If the **--encrypt** option is specified, it encrypts the failback to the failback target.

CLI command options:

- **--failback:** Failback replicated VTL on to a target host.
- **--repname:** Replicated VTL name to failback.
- **--srchost:** Source host of the original VTL. Use **--list repvtl** as reference
- **--id:** ID from list of replicated VTL. For multiple replication of the VTL name, ID identifies the replicated batch.
- **--tgthost:** Target host to failback to. The target host must have this system as as one of the allowed replication source. Use IP address if the hostname cannot be resolved from the system.
- **--encrypt:** Encrypt the failback to the source.
- **--encrypttype:** if specified, the encryption type will be either 128 bits or 256 bits encryption.

Failback a NAS Share on the Target

```
syscli --failback repnas --repname <nas_share_name> --srchost  
<source_host> --id <id> --tgthost <target_host> [--encrypt [--  
encrypttype 128|256]]
```

This CLI command allows the admin user to failback a replicated share to its specified source. The replicated NAS share name, source hostname and ID can be retrieved from the list of replicated NAS share. The **--tgthost** option specifies the target host where the replicated NAS share will be failed back to.

To complete the failback, on the source system, run the **--recover share** CLI command specifying the recovered share from the replicated share list and select Recover.

Before you can failback a share to its source, the target role IP address must be configured on the source system first.

CLI command options:

If the **--encrypt** option is specified, it encrypts the failback to the failback target.

- **--failback**: Failback replicated NAS share on to a target host.
- **--repname**: Replicated NAS share name to failback.
- **--srchost**: Source host of the original NAS share. Use **--list repnas** as reference.
- **--id**: ID from list of replicated NAS share. For multiple replication of the same share, ID identifies the replicated batch.
- **--tgthost**: Target host to failback to. The target host must have this system as one of the allowed replication source. Use IP address if the hostname cannot be resolved from the system.
- **--encrypt**: Encrypt the failback to the source.
- **--encrypttype**: if specified, the encryption type will be either 128 bits or 256 bits encryption.

Deleting a Replicated VTL from the Target

```
syscli --del repvtl --repname <replicated_VTL_name> --srchost  
<source_host> --id <ID>
```

This CLI command allows the CLI admin to delete a replicated VTL from the target system. The replicated VTL name, source hostname and ID can be retrieved from the list of replicated VTL.

Deleting a NAS Share on the Target

```
syscli --del repnas --repname <NAS_name> --srchost  
<source_hostname_or_IP_address> --id <ID_of_the_replicated_NAS>
```

This CLI command allows the admin user to delete a replicated NAS share from the target system. The replicated NAS share name, source hostname and ID can be retrieved from the list of replicated NAS share.

Listing the Replicated VTL Recovery Jobs on the Target

syscli --list vtlrecjob

This CLI command allows the user to list the replicated VTL recovery jobs on the target. The information listed includes the old and the new VTL name, source host name or IP address and recovery job details. The recover job details contains when the job started, finished and its status.

Output data:

List of all replicated VTL recovery jobs:

Total count = 1

[recovery job = 1]

 ID = 1

 Original VTL Name = VTL1

 New VTL Name = VTL1_REC

 Source Host = galaxy.node-1

 Recovery Job Started = Mon Jun 1 11:22:17 2009

 Recovery Job Finished = Mon Jun 1 11:22:43 2009

 Recovery Job Status = Success

Listing the Replicated NAS Recovery Jobs on Target

syscli --list nasrecjob

This CLI command allows the user to list the replicated NAS recovery jobs on the target. The information listed includes the old and the new NAS share name, source host name or IP address and recovery job details. The recover job details contains when the job started, finished and its status.

Deleting the Replicated VTL Recovery Jobs on the Target

syscli --del vtlrecjob -rename <VTL_name> --srchost <source_hostname> --id <ID_of_the_recovery_job>

This CLI command allows the CLI admin to delete a replicated VTL recovery job. The replicated VTL name, source host name and the ID can be retrieved from the list VTL Recovery jobs.

Deleting the Replicated NAS Recovery Jobs on Target

syscli --del nasrecjob --rename <NAS_share_name> --srchost <source_hostname> --id <ID_of_the_recovery_job>

This CLI command allows the admin user to delete a replicated NAS recovery job. The replicated NAS share name, source host name and the ID can be retrieved from the list NAS Recovery jobs.

Listing the Replicated VTL Failback Jobs on the Target

syscli --list vtlfailbackjob

This CLI command allows the user to list the replicated VTL failback jobs on the target. The information listed includes the VTL name, source host name or IP

address and failback job details. The failback job details contains when the job started, finished and its status.

Output data:

List of all replicated VTL failback jobs:

Total count = 1

[failback job = 1]

ID = 1

VTL Name = part4

Target Host = 10.40.164.70

Failback Job Started = Wed Jun 3 16:45:53 2009

Failback Job Finished = Wed Jun 3 16:46:01 2009

Failback Job Status = Success

Listing the Replicated NAS Failback Jobs on the Target

syscli --list nasfailbackjob

This CLI command allows the user to list the replicated NAS share failback jobs on the target.

Deleting the Replicated VTL Failback Jobs on the Target

syscli --del vtlfailbackjob -repname <VTL_name> --tgthost <target_hostname> --id <ID_of_the_failback_job>

This CLI command allows the CLI admin to delete a replicated VTL failback job. The replicated VTL name, target host name and the ID can be retrieved from the list VTL Failback jobs.

Deleting the Replicated NAS Failback Job on the Target

syscli --del nasfailbackjob --repname <NAS_share_name> --tgthost <target_hostname> --id <ID_of_the_failback_job>

This CLI command allows the admin user to delete a replicated NAS share failback job. The replicated NAS share name, target host name and the ID can be retrieved from the list NAS Failback jobs.

Aborting the Replicated VTL Failback Jobs on the Target

syscli --abort vtlfailbackjob -repname <VTL_name> --tgthost <target_hostname> --id <ID_of_the_failback_job>

This CLI command allows the CLI admin to abort a current running replicated VTL failback job. The replicated VTL name, target host name and the ID can be retrieved from the list VTL Failback jobs.

Aborting the Replicated NAS Failback Job on the Target

```
syscli --abort nasfailbackjob --repname <NAS_share_name> --tgthost <target_hostname> --id <ID_of_the_failback_job>
```

This CLI command allows the admin user to abort a current running replicated NAS share failback job. The replicated NAS share name, target host name and the ID can be retrieved from the list NAS Failback jobs.

Enabling the VTL Cartridge Based Replication on the Target

```
syscli --enable cartrep --name <VTL_name> [--syncid <sync_id>] [--locked]
```

This CLI allows the admin user to enable cartridge based replication for the specified VTL on the target. If the sync ID is not specified, the VTL name is used as the default sync ID.

Enabling NAS File/Directory Based Replication on the Target

```
syscli --enable filedirrep --name <NAS_share_name> [--syncid <sync_id>] [--locked]
```

This CLI command allows the admin user to enable file or directory based replication on the target. If the sync ID is not specified, the share name is used as the default sync ID.

Disabling VTL Cartridge Based Replication on the Target

```
syscli --disable cartrep --name <VTL_name>
```

This CLI allows the admin user to disable cartridge based replication for the specified VTL on the target.

Note: Make sure to finish adding and removing targets (using `--add vltarget` or `--del vltarget`) before editing replication settings (using `--enablerep vtl`, `--disablerep vtl`, or `--disable cartrep`).

Disabling NAS File/Directory Based Replication on the Target

```
syscli --disable filedirrep --name <NAS_share_name>
```

This CLI command allows the admin user to disable file or directory based replication for the specified NAS share on the target.

Note: Make sure to finish adding and removing targets (using `--add nastarget` or `--del nastarget`) before editing replication settings (using `--enablerep nas`, `--disablerep nas`, or `--disable filedirrep`).

Generate a Replication Report

```
syscli --genrpt replication [--target <host_name_or_ip>] [--start <start_time> --end <end_time>]
```

This CLI allows the admin user to generate replication report for the system.

CLI command options:

- `--genrpt`: Generates replication report.

- **--target:** Target host name or IP of the replication report. If the system or the share/partition has two targets configured, you must use the **--target** option and you must specify a target IP or hostname. If the system or the share/partition has no target configured, invoking the commands will result in error.
- **--start:** Start time in UTC count for the replication report.
- **--end:** End time in UTC count for the replication report.

Downloading a Replication Report

syscli --downloadrpt replication

This CLI command allows the admin user to download or copy the generated replication report to the home directory. The admin user can then copy the file to another host if desired.

Getting the Status of Active Cartridge Base or File/Directory Request

syscli --getstatus trigger --source | --target

This CLI command allows the user to get the status of active cartridge or file/directory replication on the specified source or target.

Listing Unpack Queue Items

syscli --list unpackqueueitems

This CLI command allows the CLI user to list unpack queue items which are Directory/File based replications for data received from the source system.

The **--list** option lists all unpack queue items.

Getting the Status of the Active Synchronization Requests

syscli --getstatus sync --source | target

This CLI command allows the CLI user to get the status of active synchronization requests on the specified source or target.

Listing the File/Directory-Based Replication Status and Statistics

syscli --list filedirrepstats --name <share name>

This CLI command returns the list of file/directory-based replication status and statistics of the data sent to the target for the specified share on the source system.

Listing Shares Eligible to Receive Directory/File Based Data

syscli --list filedirtarget [--name <share name>]

This CLI command returns the list of shares that have deduplication enabled and are eligible to receive directory/file based data.

When the share name is specified, the status of any directory/file based replication displays.

Note: When the output of the share's state is **Enabled**, the share is eligible to receive directory/file based data.

Listing the Cartridge Replication Status and Statistics

syscli --list cartrepstats --name <VTL name>

Lists the cartridge-based replication status and statistics of the data sent to the target for the specified share on the source system.

Listing the Partitions Eligible to Receive Cartridge Based Data

syscli --list carttarget [--name <VTL name>]

This CLI command returns the list of partitions that have deduplication enabled and are eligible to receive cartridge based data.

When the partition name is specified, the status of any cartridge based replication displays.

Note: When the output of the partition's state is **Enabled**, the partition is eligible to receive cartridge based data.

Mapping an OST IP to a Replication IP

When processing an OST replication request, if the OST replication target translation is configured then use the corresponding Replication IP to process the request.

syscli --add opduptranslate --replicationip <replication_ip> --dataip <data_ip>

This CLI allows the admin user to map an OST target IP address to a replication IP address.

CLI command options:

- **--add:** Allows to map OST target IP address to a replication IP address.
- **--replicationip:** Must be a valid IP
- **--dataip:** Must be a valid IP

Listing All OST Target Mappings

syscli --list opduptranslate

This CLI command allows the user to retrieve the list of all mappings of OST target IP address to a replication ip address on the system.

--list: Lists all mappings of OST target ip address to a replication ip address.

Editing OST Target Mappings

syscli --edit opduptranslate --replicationip <replication_ip> --dataip <data_ip>

This CLI command allows the admin user to edit the existing map of OST target ip address to a replication ip address.

CLI command options:

- **--edit:** Allows to edit the existing map of OST target ip address to a replication ip address.
- **--replicationip:** Must be a valid IP.
- **--dataip:** Must be a valid IP.

Deleting an OST Target Mapping

syscli --del opduptranslate --dataip

<data_ip>

This CLI command deletes the mapping of an OST target IP address for a replication IP address.

CLI command options:

- **--del:** Allows to delete the mapping of OST target IP address for a replication IP address.
- **--dataip:** Must be a valid IP.

Getting an OST Target Mapping

syscli --get opduptranslate --dataip <data_ip>

This CLI command gets the replication IP address for a translated OST target IP address.

CLI command options:

- **--get:** Gets the replication ip address for a translated OST target ip address.
- **--dataip:** Must be a valid IP.

Getting Snapshot per Share Partition Stats

syscli --get snapshotpersharepartition

This CLI command allows the user to retrieve the maximum, minimum, and current number of snapshots per Share/Partition.

Setting Snapshot per Share Partition Limits

syscli --set snapshotpersharepartition --current <value>

This CLI command allows the admin user to set the and current number of snapshots per Share/Partition.

CLI command options:

- **--set:** Set the current number of snapshots per Share/Partition.
- **--current:** The value to be set as the current number of snapshots per Share/Partition.

Scheduler CLI Commands (DEPRECATED)

Note: Configuring scheduled events using the CLI interface will be discontinued in a future release. Please use the **Configuration > Scheduler** page in the GUI instead.

This Scheduler CLI Commands allow the admin users to establish and maintain a schedule for particular event types. The events can be a single occurrence or can be set to recur on a schedule.

The following sections describe the supported scheduler CLI commands:

- [Adding an Event](#)
- [Changing an Event](#)
- [Listing Events](#)
- [Deleting an Event](#)

Adding an Event

DEPRECATED: This CLI allows the admin users to establish a schedule for particular event types. The events can be a single occurrence or can be set to recur on a schedule.

Note: When using the `--add` command only a single event or an event series can be added.

```
syscli --add event [--desc <event name>] [--throttle <bandwidth><K|M>
[--service REP]] | --reclamation | --healthcheck | [--emailreports --type
config|status] | [--replication vtl|nas --name <name> [--target
<host_name_or_ip>]] --start <datetime> [--end <datetime>] [--daily | --
weekly sun,mon,tue,wed,thu,fri,sat | --monthly | --monthday last |
{1|2|3|4}{sun|mon|tue|wed|thu|fri|sat} | --yearly | --yearday
{1|2|3|4}{sun|mon|tue|wed|thu|fri|sat} [--interval <interval>] [--until
<date> | --count <count>]]
```

CLI command options:

- **--add:** Specifies when, how long, and how often a scheduled event will occur.
- **--desc:** Description for the event. Spaces are allowed, but quotes for the `<event name>` are required for this.
- **--throttle:** Indicates this is a scheduled throttle event and to set the threshold at `<bandwidth>`. For example, if 100 KB/s is desired, enter **--throttle 100K**. If 100 MB/s is desired, enter **--throttle 100M**.
- **--service:** Specify which service to throttle.
- **--reclamation:** Indicates this is a scheduled reclamation event.

Note: Reclamation requires a daily or weekly recurrence not to exceed every 7 days or once a week.

- **--healthcheck**: Indicates this is a scheduled healthcheck event.

Note: Healthcheck requires a daily or weekly recurrence not to exceed every 7 days or once a week.

- **--emailreports**: Indicates this is a scheduled email reports event. This will send the **--type** to all recipients in the list obtained from `syscli --get emailhome`.
- **--type**: Specify which report is wanted.
- **--replication**: Indicates this is a scheduled replication event.
- **--name**: Specify a valid VTL or NAS share name.
- **--target**: Target host name or IP of the replication event. If the system or the share/partition has two targets configured, you must use the **--target** option and you must specify a target IP or hostname. If the system or the share/partition has no target configured, invoking the commands will result in error.
- **--start**: Start date and time.

Note: Date and time can be entered in any order, but if spaces are used to separate the time and date, then quotes must be used. This date/time will be used to specify when the event is to occur. In the case of a recurring event, portions of this date/time will be used for recurrence. For instance, a yearly recurrence will recur on the same day and time each year.

- **--end**: End date and time.

Note: Date and time can be entered in any order, but if spaces are used to separate the time and date, then quotes must be used. This date/time will be used to tell when an event will end.

If **--end** is not specified, then an open ended event will be generated.

- **--daily**: Recur daily starting at the time obtained from the **--start** specification.
- **--weekly**: Recur weekly on specified days (comma separated for multiple days) starting at the time obtained from the **--start** specification.
- **--monthly**: Recur monthly on the day and time obtained from the **--start** specification.
- **--monthday**: Recur monthly on a specific weekday within the month starting at the time obtained from the **--start** specification. If last is specified, then the event will occur on the last day of each month.
ex: **2mon** : recur on the second Monday within the month.
- **--yearly**: Recur yearly on the month, day, and time obtained from the **--start** specification.
- **--yearday**: Recur on a specific weekday within the month and starting at the time, both obtained from the **--start** specification.
ex: **2mon** : recur on the second Monday within the month.

- **--interval:** This specifies how often the recurrence is repeated. Recur every `<interval>` amount.

If **--interval** is not specified, the default is 1.
ex: if daily recurrence, `interval=5` : recurs every 5 days.
if monthly recurrence, `interval=5` : recurs every 5 months.
if yearly recurrence, `interval=5` : recurs every 5 years.
- **--until:** Date in the format `yyyy/mm/dd`, or `yyyy-mm-dd`. This specifies when to end recurrence. Recur until date. If neither **--until** or **--count** is specified, recurrence will continue forever.
- **--count:** This specifies when to end recurrence. Recur until `<count>` recurrences.

ex: if daily recurrence, `count=5` : recur for 5 days.
if monthly recurrence, `count=5` : recur for 5 months.
if yearly recurrence, `count=5` : recur for 5 years.

Changing an Event

DEPRECATED: This CLI allows the admin users to change specific properties of an event which can be a single event, an instance of an event series, or all instances of an event series. The ID of the event to change is required.

```
syscli --change event --id <event id> [--desc <event name>] [--throttle  
<bandwidth> <K|M> [--service REP]] | --reclamation | --healthcheck | [--  
emailreports --type config|status] | [--replication vtl|nas --name  
<name>][--target <host_name_or_ip>]] [--start <datetime>] [--end  
<datetime>] [--none | --daily | --weekly sun,mon,tue,wed,thu,fri,sat | --  
monthly | --monthday last | {1|2|3|4}{sun|mon|tue|wed|thu|fri|sat} | --  
yearly | --yearday {1|2|3|4}{sun|mon|tue|wed|thu|fri|sat} [--interval  
<interval>] [--until <date> | --count <count>]] [--all]
```

Note: If changing recurrence information, all necessary fields must be specified regardless of whether they change or not. For instance, if the event was weekly on the 1st thu and it was necessary to change it to the 2nd Fri, then **--interval**, **--until**, and **--count**, have to be specified as well if they are needed.

CLI command options:

- **--change:** Changes specific properties of a scheduled event given the ID.
- **--id:** The ID (found with **--list** events) of the event to change.
- **--desc:** Description for the event. Spaces are allowed, but quotes for the `<event name>` are required for this.
- **--throttle:** Indicates this is a scheduled throttle event and to set the threshold at `<bandwidth>`. For example, if 100 KB/s is desired, enter **--throttle 100K**. If 100 MB/s is desired, enter **--throttle 100M**.
- **--service:** Specify which service to throttle.
- **--reclamation:** Indicates this is a scheduled reclamation event.

Note: Reclamation requires a daily or weekly recurrence not to exceed every 7 days or once a week.

- **--healthcheck**: Indicates this is a scheduled healthcheck event.

Note: Healthcheck requires a daily or weekly recurrence not to exceed every 7 days or once a week.

- **--emailreports**: Indicates this is a scheduled email reports event. This will send the **--type** to all recipients in the list obtained from **syscli --get emailhome**.
- **--type**: Specify which report is wanted.
- **--replication**: Indicates this is a scheduled replication event.
- **--name**: Specify a valid VTL or NAS share name.
- **--target**: Target host name or IP of the replication event. If the system or the share/partition has two targets configured, you must use the **--target** option and you must specify a target IP or hostname. If the system or the share/partition has no target configured, invoking the commands will result in error.
- **--start**: Start date and time.

Note: Date and time can be entered in any order, but if spaces are used to separate the time and date, then quotes must be used. This date/time will be used to specify when the event is to occur. In the case of a recurring event, portions of this date/time will be used for recurrence. For instance, a yearly recurrence will recur on the same day and time each year.

- **--end**: End date and time.

Note: Date and time can be entered in any order, but if spaces are used to separate the time and date, then quotes must be used. This date/time will be used to tell when an event will end.

If **--end** is specified followed by 0, the end declaration will be removed, making this an open ended event. This type of an event is used for an occurrence that will never end or for events like replication or garbage collection where they will end when they have completed their job.

- **--none**: Remove any recurrence information on the specified event forcing it to be a one time event.

Note: Healthcheck and Reclamation events cannot be changed to a one time event.

- **--daily**: Recur daily starting at the time obtained from the **--start** specification.
- **--weekly**: Recur weekly on specified days (comma separated for multiple days) starting at the time obtained from the **--start** specification.
- **--monthly**: Recur monthly on the day and time obtained from the **--start** specification.

- **--monthday**: Recur monthly on a specific weekday within the month starting at the time obtained from the **--start** specification. If last is specified, then the event will occur on the last day of each month.
ex: **2mon** : recur on the second Monday within the month.
- **--yearly**: Recur yearly on the month, day, and time obtained from the **--start** specification.
- **--yearday**: Recur on a specific weekday within the month and starting at the time, both obtained from the **--start** specification.
ex: **2mon** : recur on the second Monday within the month.
- **--interval**: This specifies how often the recurrence is repeated. Recur every **<interval>** amount.
If **--interval** is not specified, the default is 1.
ex: if daily recurrence, **interval=5** : recurs every 5 days.
if monthly recurrence, **interval=5** : recurs every 5 months.
if yearly recurrence, **interval=5** : recurs every 5 years.
- **--until**: Date in the format **yyyy/mm/dd**, or **yyyy-mm-dd**. This specifies when to end recurrence. Recur until date. If neither **--until** or **--count** is specified, recurrence will continue forever.
- **--count**: This specifies when to end recurrence. Recur until **<count>** recurrences.
ex: if daily recurrence, **count=5** : recur for 5 days.
if monthly recurrence, **count=5** : recur for 5 months.
if yearly recurrence, **count=5** : recur for 5 years.
- **--all**: Used to specify that changes are to occur to all instances of an event. Note that this will be ignored on a non-recurring event.

Listing Events

DEPRECATED: This CLI allows the admin users to list the events for a specified time period. It displays an ID for each listed event. The ID can then be used to change or delete an event or event instance.

For additional search capabilities, supply the search criteria for which you have an interest. For the search to be as accurate and flexible as possible, there is minimal validation of the input criteria. Events returned will match all criteria supplied.

Note: When multiple search criteria is used, the AND operator is used to satisfy the query.

```
syscli --list events [--instances | --series] [--type  
[all]|throttle|healthcheck|reclamation|emailreports|vtlrep|nasrep] [--start  
<datetime>] [--end <datetime>] [--desc <event name>] [--bw  
<bandwidth> <K|M>] [--emailtype config|status}] [--repname <name>]  
[--reptarget <host_name_or_ip>] [--recurrence <recurstr>]
```

CLI command options:

- **--list**: Displays all event instances for a particular time period and for a specified event type.

- **--instances:** If specified, all instances matching the specified data will be returned. This is the default option.
- **--series:** If specified, only the series (or parents) events will be returned.
- **--type:** Get specific type of events that are scheduled. If not specified, all types will be displayed.
- **--start:** Start date in the format yyyy/mm/dd, or yyyy-mm-dd. Note that time is not specified so all instances on the date will be shown.
If **--start** is not specified, events starting with today will be displayed.
- **--end:** End date in the format yyyy/mm/dd, or yyyy-mm-dd.
If **--end** is not specified, all events for 30 days will be displayed.
- **--desc:** Locate events that match a description. Can be a string fragment. Spaces are allowed, but quotes for the **<event name>** are required.
- **--bw:** Locate events with a specific bandwidth.
- **--emailtype:** Locate events with a specific email report type.
- **--repname:** Locate events with a specific replication name.
- **--reptarget:** Locate events with a specific replication target.
- **--recurrence:** Locate events with a recurrence pattern. Can be a string fragment.

If **--series** is used, the parent events (or the series) will be returned. Any specification of the start or end will be ignored with **--series**. As part of the output, recurrence information will be displayed. This string can be cryptic to interpret. The following example will help clarify the results:

Example output:

Output data:

```
Total items = 2
[Event number = 1]
  id = 4@22363860
  desc = Description for event
  has exception = no
  type = reclamation
  target = 10.40.164.17
  start = Mon Jul  9 04:00:00 2012
  recurrence = FREQ=WEEKLY;BYDAY=MO,WE,FR
[Event number = 2]
  id = 3@22361460
  name =
  has exception = no
  type = emailreports
  report = config
```

```
start = Sat Jul 7 12:00:00 2012  
recurrence = FREQ=WEEKLY;BYDAY=SU
```

The string can contain any of the following; however, not necessarily at the same time.

FREQ

- DAILY: Event will occur every day.

Example: recurrence = FREQ=DAILY

- WEEKLY: Event will occur once a week.

BYDAY=<day>

Where <day> is one or more of MO, TU, WE, TH, FR, SA, SU. If more than one day of the week is displayed, each day will be separated by a comma.

Example: recurrence = FREQ=WEEKLY;BYDAY=MO,WE,FR

- MONTHLY: Event will occur once a month.

BYMONTHDAY=<day>

Where <day> is 1 to 28, 30, or 31. This specifies which day of the month. i.e. 15 would be to execute on the 15th day of the month.

Example: recurrence = FREQ=MONTHLY;BYMONTHDAY=15

BYDAY=#<day>

Where # is some number 1 to 4 (representing first, second, third, and fourth) and <day> is one of MO, TU, WE, TH, FR, SA, SU. This specifies which day of month to send the event. i.e. 2WE = second Wednesday of the month.

Example: recurrence = FREQ=MONTHLY;BYDAY=2WE

- YEARLY: Event will occur once a year.

BYMONTH=<month>; BYMONTHDAY=<monthday>

Where <month> is 1 to 12 to indicate which month for the event to occur and <monthday> is the day of the month. i.e. if <month> is 2 and <monthday> is 15, then execute the event on the 15th day of the 2nd month.

Example: recurrence = FREQ=YEARLY;BYMONTH=2;BYMONTHDAY=15

BYMONTH=<month>; BYDAY=#<day>

Where <month> is 1 to 12 to indicate which month for the event to occur and # is some number 1 to 4 (representing first, second, third, and fourth) and <day> is one of MO, TU, WE, TH, FR, SA, SU. This specifies which day of month to send the event. i.e. 2WE = second Wednesday of the month.

Example: recurrence = FREQ=YEARLY;BYMONTH=8;BYDAY=2WE

INTERVAL=#

Where # represents how often to execute. For instance, a 2 would indicate to execute every 2 days or every 2 months depending on the FREQ value.

Example: recurrence = FREQ=MONTHLY;INTERVAL=2;BYMONTHDAY=1

COUNT=#

Where # represents how many events to occur before it "deactivates" itself.
Example: recurrence = `FREQ=MONTHLY;COUNT=10;BYMONTHDAY=1`

`UNTIL=<epoch_time>`

Where `<epoch_time>` represents a specific date of when to stop the events or to "deactivate" itself. Note that this is in epoch time which is the number of milliseconds since January 1, 1970.

Example: recurrence =
`FREQ=MONTHLY;UNTIL=1346482740000;BYMONTHDAY=1`

Deleting an Event

DEPRECATED: This CLI allows the admin users to delete an event which can be a single event, an instance of an event series, or all instances of an event series. The ID of the event to delete is required.

Note: When the `--all` command is specified, all instances in the series will be deleted even when changes had been made to any single instance.

`syscli --del event --id <event id> [--all] [--sure]`

CLI command options:

- `--del`: Deletes a scheduled event given the ID.
- `--id`: The ID (found with `--list events`) of the event to delete.
- `--all`: If appropriate, delete all occurrences of event. If `--all` is not supplied, will only delete a single event or instance.
- `--sure`: Force the deletion to occur regardless of outcome.

Statistics Report CLI Commands

The following sections are the supported statistics report CLI commands:

- [Displaying the Disk Usage Statistics](#)
- [Displaying Data Reduction Statistics](#)
- [Displaying the Ingest Throughput Rate](#)

Displaying the Disk Usage Statistics

`syscli --get diskusage`

This CLI command displays the disk usage statistics of the system.

Displaying Data Reduction Statistics

`syscli --get datareductionstat`

This CLI command displays the dedup data reduction statistics of the system.

Displaying the Ingest Throughput Rate

`syscli --get ingestrate`

This CLI command displays the ingest throughput rate of the system.

OST CLI Commands

The following sections are the supported OST CLI commands:

- [Adding a Storage Server](#)
- [Deleting Storage Server](#)
- [Editing a Storage Server](#)
- [Listing a Storage Server](#)
- [Adding an LSU](#)
- [Deleting an LSU](#)
- [Editing an LSU](#)
- [Listing an LSU](#)
- [Setting OST Global Settings](#)
- [Getting OST Global Settings](#)
- [Listing OST Global Settings](#)
- [Installing the TLS Certificate Files](#)
- [Restoring the TLS Default Security Certificates](#)
- [Getting TLS Status](#)
- [Adding AIR Users](#)
- [Deleting an AIR User](#)
- [Editing an AIR User](#)
- [Getting an AIR User](#)
- [Listing AIR Users](#)
- [Adding a Replication Source to a Target LSU for AIR](#)
- [Removing the Target AIR](#)
- [Editing a Replication Source to a Target LSU for AIR](#)

Adding a Storage Server

```
syscli --add storageserver --name <server_name> --maxconnect  
<connect_count> [--target <host_name_or_ip>] [--desc <description>]  
[--concurrentdup disabled|enabled]
```

This CLI command allows the admin user to add a storage server.

CLI command options:

- `--add`: Adds a storage server.

- **--name:** Name of the storage server.
- **--maxconnect: connect_count:** the maximum number of connections allowed. The range is any value between 3 and 65536, inclusive.
- **--target:** Allowed replication target host ids. Multiple targets can be specified, for example: **--target target1 --target target2**. If the system or the share/partition has two targets configured, you must use the **--target** option and you must specify a target IP or hostname. If the system or the share/partition has no target configured, invoking the commands will result in error.
- **--concurrentopdup:** If specified, sets the OST Concurrent Optimized Duplication setting of the given storage server. Default setting is disabled.

Deleting Storage Server

```
syscli --del storageserver --name <server_name>
```

This CLI command allows the admin user to delete an existing storage server.

Editing a Storage Server

```
syscli --edit storageserver --name <server_name> [--maxconnect <connect_count>] [--target <host_name_or_ip>] [--desc <storageserver description>] [--concurrentopdup disabled|enabled]
```

This CLI command allows the admin user to edit one or more attributes of an existing storage server. The attributes that can be changed are the maximum connections and the description. At least one attribute should be specified.

CLI command options:

- **--edit:** Edits a specified storage server.
- **--name:** Name of the storage server to be edited.
- **--maxconnect: connect_count:** Range is any value between 3 and 65536, inclusive.
- **--target:** Allowed replication target host ids. If the system or the share/partition has two targets configured, you must use the **--target** option and you must specify a target IP or hostname. If the system or the share/partition has no target configured, invoking the commands will result in error.
- **--concurrentopdup:** if specified, sets the OST Concurrent Optimized Duplication setting of the given storage server to either enabled or disabled.

Listing a Storage Server

```
syscli --list storageserver [--name <server_name> |--namematch <pattern>]
```

This CLI command provides a list of attributes for all existing storage servers. The list can be limited to a particular server name.

CLI command options:

- **--list:** Lists all storage servers or a particular storage server.
- **--name:** specified if listing is limited to one storage server.

- **--namematch**: if specified, only storage servers whose names match the specified pattern are listed. The wild characters `^` and `$` are supported as follows:
 - `^xxx` – Matching pattern `xxx` at the start of names
 - `xxx$` – Matching pattern `xxx` at the end of names

Remember to escape `$` with a backslash because it is special to the shell. For example, to list all storage servers ending with `test` in the names, type the following command: `syscli --list storageserver --namematch test\$`

Adding an LSU

```
syscli --add lsu {--name <lsu_name> --capacity <lsu_capacity_GB>} | --unlimited --storageserver <server_name> [--desc <lsu description>]
```

This CLI command allows the admin user to add an LSU to a specified storage server. If the **unlimited** option is specified, the new LSU will be added with the name `_PhysicalLSU`.

CLI command options:

- **--add**: Adds LSU to a specified storage server.
- **--name**: Name of LSU (Do not use `_PhysicalLSU` because it is a reserved LSU name)
- **--capacity**: Capacity of LSU in GB
- **--unlimited**: if specified, the capacity will be the available physical capacity on the system.

Deleting an LSU

```
syscli --del lsu --name <lsu_name> --storageserver <server_name> --force
```

This CLI command allows a admin user to delete an LSU from a specified storage server. If the **--force** option is specified, the LSU is deleted even if it is not empty and contains files or backup images.

Editing an LSU

```
syscli --edit lsu --name <lsu_name> --storageserver <server_name> [--desc <lsu description>] [--capacity <lsu_capacity_GB>]
```

This CLI command allows the admin user to edit an LSU attribute of the specified storage server. The LSU description and capacity (in Gigabytes) can be changed. If the LSU name is `_PhysicalLSU`, only the description can be changed.

Listing an LSU

```
syscli --list lsu --storageserver <server_name> [--name <lsu_name>]
```

This CLI command allows the admin user to display LSU attributes. If the LSU name is not specified, all LSUs are listed.

An example output of one LSU is shown below.

```
Total count = 1
```

```
[LSU = 1]
```

```
LSU name = Lsu1  
Server name = Back_Server  
Physical capacity = 20.00 GB  
Backup images = 0  
Description = LSU_One  
OST AIR = enabled  
AIR user = JohnD  
Target Server name = TargSS  
Target LSU name = TargLSU
```

Note: The last 3 items are only displayed if OST AIR = enabled. Otherwise, it will just show: OST AIR = disabled

Setting OST Global Settings

syscli --set ostsetting [--accent on|off] [--accentencryption on|off [--accentencryptiontype aes128|aes256|tlsaes256]]

This CLI allows the admin user to set various OST global settings. At least one of the settings must be specified.

CLI command options:

- **--set:** Sets the specified OST setting.
- **--accent:** If specified, turns the global accent setting on or off.
- **--accentencryption:** If specified, turns the global accent encryption setting on or off.
- **--accentencryptiontype:** if specified, the accent encryption type will be either AES 128 bits or AES 256 bits or TLS 256 bits encryption.

Getting OST Global Settings

syscli --get ostsetting

This CLI allows the user to get OST global settings.

Listing OST Global Settings

syscli --list accentstats [--all]

This CLI provides a report of only Accent statistics obtained from OST. By default, the report will list the aggregate statistics of all media servers. If **--all** is specified, the report consists of the aggregate statistics followed by the statistics of individual media servers.

syscli --list oststats [--all]

This CLI provides a report of Media Server's statistics, both running and finished, obtained from OST.

By default, the report will list the aggregate statistics of all media servers. If `--all` is specified, the report consists of the aggregate statistics followed by the statistics of individual media servers.

CLI command options:

- `--list`: Reports current statistics obtained from OST.
- `--all`: If specified, all media servers will be individually reported in addition to the aggregate statistics.

An example output of `--list oststats` is shown below. (with Accent stats present):

syscli --list oststats

Output data:

OST Statistics:

Total count = 1

[Client = 1]

Client id = AGGREGATE

Media Server count = 1

Time stamp = 1360085335 (Tue Feb 5 09:28:55 2013)

Measure period = 60000 ms

Accent Statistics:

Before Accent (received) = 312606720 bytes

After Accent (received) = 663488 bytes

Before Accent (sent) = 0 bytes

After Accent (sent) = 258912 bytes

Unique data = -1

Receive ratio = 471.16:1

Ethernet bandwidth rate (received) = 11058.13 bytes/s

Ethernet bandwidth rate (sent) = 4315.20 bytes/s

Virtual rate (received) = 5210112.00 bytes/s

Virtual rate (sent) = 0.00 bytes/s

Bandwidth Reduction = 99.79%

Ethernet In = 0.01 MB/s

Inline = 5.21 MB/s

Optimized Duplication Statistics:

Images in-progress = 5

Remaining in rep-queue = 1345000 bytes

```
Processed last 60 seconds = 5000000 bytes
Unique last 60 seconds = 2500000 bytes
Processed to Unique ratio = 2.00:1
Ethernet bandwidth rate = 41666.67 bytes/s
Virtual rate = 83333.34 bytes/s
Bandwidth Reduction = 50.00
Ethernet In = 0.04 MB/s
Inline = 0.08 MB/s
```

Command completed successfully.

An example output of `--list oststats` is shown below. (with Accent stats not present):

syscli --list oststats

Output data:

OST Statistics:

Total count = 1

[Client = 1]

Client id = AGGREGATE

Media Server count = 1

Time stamp = 1360085335 (Tue Feb 5 09:28:55 2013)

Measure period = 60000 ms

Accent Statistics: disabled

Optimized Duplication Statistics:

Images in-progress = 5

Remaining in rep-queue = 1345000 bytes

Processed last 60 seconds = 5000000 bytes

Unique last 60 seconds = 2500000 bytes

Processed to Unique ratio = 2.00:1

Ethernet bandwidth rate = 41666.67 bytes/s

Virtual rate = 83333.34 bytes/s

Bandwidth Reduction = 50.00

Ethernet In = 0.04 MB/s

Inline = 0.08 MB/s

Command completed successfully.

Installing the TLS Certificate Files

```
syscli --install tlscertificate [--certificate <certificate_fullpath>] [--privatekey <key_fullpath>] [--certificateauthority <authority_fullpath>] [--rejectionlist <rejection_fullpath>]
```

This CLI allows the admin user to install the user provided Transport Layer Security (TLS) certificate files.

The certificate files are used for supporting TLS 256 bit encryption.

The user should provide the absolute path of the certificate files.

The certificate and private key files should always be installed together.

CLI Comand Options:

- **--install**: Installs the user provided TLS certificate files.
- **--certificate**: Absolute path of the certificate file.
- **--privatekey**: Absolute path of the private key file.
- **--certificateauthority**: Absolute path of the certificate authority file.
- **--rejectionlist**: Absolute path of the rejection file.

Restoring the TLS Default Security Certificates

```
syscli --restore tlscertificate
```

This CLI allows the admin to restore the Transport Layer Security (TLS) certificates to factory default certificates.

The **--restore** option restores the factory default transport layer security certificates.

Getting TLS Status

```
syscli --getstatus tlscertificate
```

This CLI retrieves the current status for each Transport Layer Security (TLS) certificate file.

The **--getstatus** option returns the current status for each transport layer security certificate files.

Adding AIR Users

```
syscli --add airuser --username <air_user_name> --password <air_user_password> [--desc <description>]
```

This CLI allows the admin user to add Automatic Image Replication (AIR) users: to be used with command **--add ostair**.

CLI command options:

- **--add**: Identifies a user on an AIR server.
- **--username**: Specify the username for the target AIR server.

- **--password:** Password associated with **--username**. If the **<air_user_password>** is not specified, the command will prompt for a password and will not echo it on the screen.
- **--desc:** User description. Enclose in double quotes if string contains spaces or special characters.

Deleting an AIR User

syscli --del airuser --username <air_user_name>

This CLI allows the admin user to delete an Automatic Image Replication (AIR) user.

CLI command options:

- **--del:** Deletes an AIR user.
- **--username:** Specify the AIR username to be removed.

Editing an AIR User

syscli --edit airuser --username <air_user_name> [--password <air_user_password>] [--desc <description>]

This CLI allows the admin user to edit an Automatic Image Replication (AIR) user.

- CLI command options:
- **--edit:** Identifies a user on an AIR server.
- **--username:** Specify the username for the target AIR server.
- **--password:** Password associated with **--username**. If the **<air_user_password>** is not specified, the command will prompt for a password and will not echo it on the screen.
- **--desc:** User description. Enclose in double quotes if string contains spaces or special characters.

Getting an AIR User

syscli --get airuser --username <air_user_name>

This CLI allows the admin user to get an Automatic Image Replication (AIR) user.

CLI command options:

- **--get:** Retrieves an AIR user.
- **--username:** Specify the AIR username to retrieve.

Listing AIR Users

syscli --list airuser

This CLI allows the admin user to list all Automatic Image Replication (AIR) users.

The **--list** option lists all AIR users.

Adding a Replication Source to a Target LSU for AIR

```
syscli --add ostair --sourcess <source_server_name> [--sourcelsu <source_lsu_name>] --targetss <target_server_name> [--target <host_name_or_ip>] [--targetlsu <target_lsu_name>] --airuser <air_username>
```

This CLI allows the admin user to set up the initial relationship that directs a Storage Server/LSU to replicate to a target Storage Server/LSU for Automatic Image Replication (AIR). To accomplish the add function, **--add** requires the following as input: **--sourcess <source_storage_server>**, **--targetss <target_server_name>**, and **--airuser <air_username>**. All other values are optional.

If an LSU name is not specified `_PhysicalLSU` will be used as a default.

CLI command options:

- **--add**: Directs an LSU to a target AIR storage server.
- **--sourcess**: Specify the Storage Server that is to be replicated. Use the command **--list storageserver** to get a listing of storage server names.
- **--sourcelsu**: Specify the LSU on the storage server specified with **--sourcess**. If not specified, `_PhysicalLSU` will be used. Use the command **--list lsu --storageserver <server_name>** to get a listing of LSU names.
- **--targetss**: Specify the Storage Server on the target system to receive the replicated image.
- **--target**: Specify the replication target host id. If the system or the share/partition has two targets configured, you must use the **--target** option and you must specify a target IP or hostname. If the system or the share/partition has no target configured, invoking the commands will result in error.
- **--targetlsu**: Specify the LSU on the storage server specified with **--targetss**. If not specified, `_PhysicalLSU` will be used.
- **--airuser**: Specify the username defined on the AIR server. This user must already be created with **--add airuser**. Use the command **--list airuser** to get a listing of defined users.

Removing the Target AIR

```
syscli --del ostair --sourcess <source_server_name> [--sourcelsu <source_lsu_name>]
```

This CLI allows the admin user to remove the target Automatic Image Replication (AIR) specified on a particular LSU.

If an LSU name is not specified `_PhysicalLSU` will be used as a default.

CLI command options:

- **--del**: Removes a target AIR storage server previously specified on an LSU.
- **--sourcess**: Specify the Storage Server that contains the LSU. Use the command **--list storageserver** to get a listing of storage server names.
- **--sourcelsu**: Specify the LSU on the storage server specified with **--sourcess**. If not specified, `_PhysicalLSU` will be used. Use the command **--list lsu --storageserver <server_name>** to get a listing of LSU names.

Editing a Replication Source to a Target LSU for AIR

```
syscli --edit ostair --sourcess <source_server_name> [--sourcelsu  
<source_lsu_name>] [--disabled | --enabled] [--targetss  
<target_server_name>] [--target <host_name_or_ip>] [--targetlsu  
<target_lsu_name>] [--airuser <air_username>]
```

This CLI allows the admin user to modify the relationship that directs a Storage Server/LSU to replicate to a target Storage Server/LSU for Automatic Image Replication (AIR). To accomplish the edit function, **--edit** requires only **--sourcess <source_server_name>** as input. All other values are optional.

If an LSU name is not specified `_PhysicalLSU` will be used as a default.

Note: If you have used **--edit** to disable OST AIR and decide to enable it, no AIR information is required to complete the **--enable**. No input options are required because OST AIR is not removed by **--disable**.

CLI command options:

- **--edit:** Directs an LSU to a target AIR storage server.
- **--sourcess:** Specify the Storage Server that is to be replicated. Use the command **--list storageserver** to get a listing of storage server names.
- **--sourcelsu:** Specify the LSU on the storage server specified with **--sourcess**. If not specified, `_PhysicalLSU` will be used. Use command **--list lsu --storageserver <server_name>** to get a listing of LSU names.
- **--disabled:** If specified, will disable AIR on **--sourcelsu**.
- **--enabled:** Enable AIR if it has been disabled.
- **--targetss:** Specify the Storage Server on the target system to receive the replicated image.
- **--target:** Specify the replication target host id. If the system or the share/partition has two targets configured, you must use the **--target** option and you must specify a target IP or hostname. If the system or the share/partition has no target configured, invoking the commands will result in error.
- **--targetlsu:** Specify the LSU on the storage server specified with **--targetss**. If not specified, `_PhysicalLSU` will be used.
- **--airuser:** Specify the username defined on the AIR server. This user must already be created with **--add airuser**. Use the command **--list airuser** to get a listing of defined users.

Other System Configuration CLI Commands

The following sections list other system configuration CLI commands:

- [E-Mail Recipient CLI Commands](#)
- [Outgoing E-mail Server CLI Commands](#)
- [Sending a Test E-mail](#)

- [E-mail CLI Commands](#)
- [SNMP Trap Destination CLI Commands](#)

E-Mail Recipient CLI Commands

The following e-mail recipient commands are supported:

- [Listing E-Mail Recipients](#)
- [Adding E-Mail Recipients](#)
- [Editing E-Mail Recipients](#)
- [Deleting E-Mail Recipients](#)
- [Deleting All E-Mail Recipients](#)

Listing E-Mail Recipients

syscli --list emailrecipient [--name <email_recipient>]

This CLI command allows the user to list the e-mail recipients that are configured on the system. An example output of one e-mail recipient is shown below.

List of Recipients

Total count = 1

[Recipient = 1]

 Name = User1

 Email Address = user1@mycomapny.com

 Notification Type = all

 Notification Status = Disabled

Adding E-Mail Recipients

syscli --add emailrecipient --name <recipient_name> --emailaddr <recipient_email_address> [--type { high | highmed | all }] [--disable]

This CLI command allows the admin user to add an e-mail recipient. If the **--disable** option is specified, the recipient's e-mail notification is disabled.

Editing E-Mail Recipients

syscli --edit emailrecipient --name <recipient_name> [--emailaddr <recipient_email_address>] [--type { high | highmed | all }] [--disable]

This CLI command allows the admin user to edit an existing e-mail recipient. Note that at least the e-mail address, type, or the disable optional parameter must be specified.

Deleting E-Mail Recipients

syscli --del emailrecipient --name <recipient_name>

This CLI command allows the admin user to delete the specified e-mail recipient.

Deleting All E-Mail Recipients

syscli --deleteall emailrecipient [--sure]

This CLI command allows the admin user to delete all e-mail recipients. If the **--sure** option is specified, the user will not be prompted for confirmation.

Outgoing E-mail Server CLI Commands

The following e-mail server CLI commands are supported:

- [Displaying the Outgoing E-mail Server](#)
- [Setting the Outgoing E-mail Server](#)
- [Deleting the Outgoing E-mail Server](#)

Displaying the Outgoing E-mail Server

syscli --get emailserver

This CLI command allows the user to display the outgoing e-mail server. An example output of the outgoing e-mail server is shown below.

Outgoing E-mail Server

Host name or IP address = 10.40.164.50

From Email address = DX75@quantum.com

Setting the Outgoing E-mail Server

syscli --set emailserver --hostname <server_name_or_IP> --emailaddr <from_email_address>

This CLI command allows the admin user to add an outgoing e-mail server that will be used to send the e-mail to configured recipients.

Deleting the Outgoing E-mail Server

syscli --del emailserver

This CLI command allows the admin user to delete an outgoing e-mail server.

Sending a Test E-mail

syscli --send testemail --name <recipient_name>

This CLI command allows the admin user to send a test e-mail to verify the e-mail configuration.

E-mail CLI Commands

The following e-mail home commands are supported:

- [Getting the E-mail Information](#)
- [Adding an E-mail Schedule Recipient](#)
- [Deleting an E-mail Schedule Recipient](#)
- [Deleting All E-mail Receipts](#)
- [On Demand E-mail Status](#)
- [On Demand E-mail Configuration](#)

Getting the E-mail Information

syscli --get emailhome

This CLI command allows the user to display the recipient list. An example output of E-mail Home is shown below.

Email home (reports) to the following recipients:

```
Recipient 1 = receiver1@ehome.com
Recipient 2 =
Recipient 3 =
Recipient 4 =
```

Adding an E-mail Schedule Recipient

syscli --add emailhome --emailaddr <recipient_email_addr>

This CLI command allows the admin user to add e-mail recipients that will receive the scheduled e-mail. You can add up to three E-mail Schedule recipients.

Deleting an E-mail Schedule Recipient

syscli --del emailhome --emailaddr <recipient_email_addr>

This CLI command allows the admin user to delete an e-mail recipient from the list of e-mail Schedule recipients.

Deleting All E-mail Receipts

syscli --deleteall emailhome [--sure]

The CLI allows the admin user to delete all e-mail recipients. If the **--sure** option is specified, no confirmation prompt will be displayed.

On Demand E-mail Status

syscli --send statusondemand [--emailaddr <recipient_email_address>]

This CLI command allows the admin user to send the e-mail containing Status information, on demand.

On Demand E-mail Configuration

syscli --send configondemand --emailaddr <recipient_email_address>

This CLI command allows the admin user to send the e-mail containing Status information, on demand.

SNMP Trap Destination CLI Commands

The following SNMP trap destination CLI commands are available:

- [Listing SNMP Trap Destinations](#)
- [Adding SNMP Trap Destinations](#)
- [Editing SNMP Trap Destinations](#)
- [Deleting SNMP Trap Destinations](#)
- [Deleting All SNMP Trap Destinations](#)
- [Listing the SNMP Community](#)
- [Adding an SNMP Community](#)
- [Editing an SNMP Community](#)
- [Deleting an SNMP Community](#)
- [Deleting All SNMP Communities](#)
- [Sending a Test Trap](#)

Listing SNMP Trap Destinations

syscli --list snmptrapdest

This CLI command allows the user to list the configured SNMP trap destinations. An example output of Trap Destination is shown below.

```
Total TrapDestinations = 2
Trap Destination number = 1
IP Address = 10.40.166.87
Name = public
    Selected Traps =
    Failure,Warning,Informational,Available,Unavailable
Trap Destination number = 2
IP Address = 10.40.167.77
Name = public
    Selected Traps =
    Failure,Warning,Informational,Available,Unavailable
```

Adding SNMP Trap Destinations

```
syscli --add snmptrapdest --ipaddress <trap_dest_address> --name  
<trap_dest_name> [ --enable fail, warn, info, avail, unavail ]
```

This CLI command allows the admin user to add SNMP trap destination

Editing SNMP Trap Destinations

```
syscli --edit snmptrapdest --ipaddress <trap_dest_address> [--name  
<trap_dest_name>] [ --enable fail, warn, info, avail, unavail ]
```

This CLI command allows the admin user to edit SNMP trap destination.

Deleting SNMP Trap Destinations

```
syscli --del snmptrapdest --ipaddress <trap_dest_address>
```

This CLI command allows the admin user to delete SNMP trap destination.

Deleting All SNMP Trap Destinations

```
syscli --deleeteall snmptrapdest [--sure]
```

This CLI command allows the admin user to delete all SNMP trap destinations. If the `--sure` option is specified, no confirmation prompt will be displayed.

Listing the SNMP Community

```
syscli --list snmpcom
```

This CLI command allows the admin user to list the SNMP communities configured on the system.

```
Total Communities =  
  Community Number =  
  Name =  
  IP Address =  
  Network Mask =  
  Access Type =  
  Community Status =
```

Adding an SNMP Community

```
syscli --add snmpcom --name <community_name> --ipaddress  
<community_IP_address> --netmask <community_net_mask>  
--accesstype {get | getset} [--disable]
```

This CLI command allows the admin user to add an SNMP community.

Editing an SNMP Community

```
syscli --edit snmpcom --name <community_name> [--ipaddress  
<community_IP_address>] [--netmask <community_net_mask>]  
[--accesstype {get | getset}] [--disable]
```

This CLI command allows the admin user to edit an SNMP community.

Deleting an SNMP Community

```
syscli --del snmpcom --name <community_name>
```

This CLI command allows the admin user to delete an SNMP community.

Deleting All SNMP Communities

```
syscli --deleteall snmpcom [--sure]
```

This CLI command allows the admin user to delete all SNMP communities. If the `--sure` option is specified, no confirmation prompt will be displayed.

Sending a Test Trap

```
syscli --test snmptrap (--trapip <trap_destination>)
```

This CLI command allows the admin user to send test traps to one or more destinations.

Encryption Features

Data-at-Rest Encryption uses Self Encrypting Drive (SED) technology to secure all data stored on the DXi6800 and DXi8500 systems. This includes file data and metadata, configuration files, and the DXi software and operating system. When Data-at-Rest Encryption is enabled, all hard drives in the DXi are paired with the disk controllers using encryption keys. After this, accessing data on the drives requires the same encryption keys and controllers that were used to write the data. This ensures that a drive that is physically removed from the DXi cannot be read using another system or device.

To enable Data-at-Rest Encryption, the feature must be licensed, and all of the drive controllers and hard drives (active and hot spares) in the DXi must support Self Encrypting Drive (SED) technology. A DXi8500 or a DXi6802 configuration with all 3TB SED hard drives meets the requirements for Data-at-Rest Encryption.

Caution: After you enable Data-at-Rest Encryption, you cannot disable it or turn it off. Make sure to back up your passphrase and security files, as they may be required for future capacity expansion or in certain, rare hardware failure scenarios

The following utilities CLI commands are available:

- [Checking for HD Security Capability](#)
- [Getting HD Security Status](#)
- [Enabling HD Security](#)
- [Listing HD Security Storage Array Information](#)
- [Installing PFK to the HD Security Controller](#)
- [Installing Turbo PFK \(6800 only\)](#)
- [E-mailing HD Security Keys File](#)
- [Downloading the HD Security Keys File](#)
- [Listing Premium Storage Information](#)

Checking for HD Security Capability

syscli --getstatus hdsecuritycapable

This CLI command checks to see if the system is capable of hard drive security. Hard drive security is also known as Data-at-Rest Encryption.

--getstatus: Checks if the system is capable of hard drive security, a.k.a. Data-at-Rest Encryption.

Getting HD Security Status

syscli --getstatus hdsecurity

This CLI command queries the status of the system's hard drive security. Hard drive security is also known as Data-at-Rest Encryption.

--getstatus: Gets the status of the system's hard drive security, a.k.a. Data-at-Rest Encryption

Enabling HD Security

syscli --enable hdsecurity --passphrase <passphrase> [--emailaddr <recipient_email_address>] [--zippassword <zippassword>]] [--sure]

This CLI command allows the admin user to enable the system's hard drive security and optionally email the hard drive security keys file to one or more recipients. Hard drive security is also known as Data-at-Rest Encryption.

To email to more than one recipients, repeat the same set of **--emailaddr <recipient_email_address>**.

For example, **--emailaddr a@xxx.com --emailaddr b@yyy.com**

To be enabled, hard drive security must be supported by the system. In other words, the system must meet the following requirements.

- Hardware requirements
 - All controllers in the system must support hard drive security.
 - All physical drives must be of the Self-Encrypting type.
- Software requirements
 - A DXi hard drive security license must be installed.

CLI command options:

--enable: Enables the system's hard drive security, a.k.a Data-at-Rest Encryption.

--passphrase: The passphrase to enable the hard drive security, a.k.a Data-at-Rest Encryption. If **--passphrase** is omitted, it will be prompted interactively.

Password minimum requirements:

- Minimum of 8 characters,
- Not more than 33 characters,
- At least 1 upper case character,
- At least 1 lower case character,
- At least 1 numerical character, and
- At least 1 non-alphanumeric character, but NOT space, tab, single quote, double quote, or dollar sign.

--emailaddr: Recipient's email address.

--zippassword: The password to unzip/zip the hard drive security, a.k.a Data-at-Rest Encryption, keys file.

--sure: if specified, the command will execute immediately without asking for confirmation.

Listing HD Security Storage Array Information

syscli --list hdsecuritystoragearray

This CLI command displays a list the system serial number and for each storage array the name, whether premium feature key is installed, serial number and feature activation code. Hard drive security is also known as Data-at-Rest Encryption.

--list: Lists the system serial number and for each storage array the name, whether premium feature key is installed, serial number and feature activation code.

Installing PFK to the HD Security Controller

syscli --install hdsecuritypfk --pfkfile <pfk_file> --name Qarray1|Qarray2|Qarray3|Qarray4

This CLI command allows the admin user to install PFK (Premium Feature Key) file to the hard drive security controller. Hard drive security is also known as Data-at-Rest Encryption.

CLI command options:

--install: Install PFK file to the hard drive security, a.k.a. Data-at-Rest Encryption, controller.

--pfkfile: Name of the PFK file.

--name: Name of the storage array.

Installing Turbo PFK (6800 only)

```
syscli --install turbopfk --turbopfkfile <turbopfk_file> --name  
Qarray1|Qarray2|Qarray3|Qarray4
```

This CLI allows the admin user to install turbo PFK (Premium Feature Key) file to the system.

E-mailing HD Security Keys File

```
syscli --send hdsecuritykey [--zippassword <password>] (--emailaddr  
<recipient_email_address>)
```

This CLI command allows the admin user to send the hard drive security keys file to one or more recipients. Hard drive security is also known as Data-at-Rest Encryption.

To email to more than one recipients, repeat the same set of **--emailaddr <recipient_email_address>**.

For example, **--emailaddr a@xxx.com --emailer b@yyy.com**

CLI command options:

--send: Sends the hard drive security, a.k.a. Data-at-Rest Encryption, keys zip file to one or more recipients.

--zippassword: The password to unzip/zip the hard drive security keys file.

--emailaddr: Recipient's email address.

Downloading the HD Security Keys File

```
syscli --download hdsecuritykeysfile [--zippassword <password>]
```

This CLI command downloads hard drive security keys file to the current directory. Hard drive security is also known as Data-at-Rest Encryption.

CLI command options:

--download: Downloads hard drive security, a.k.a. Data-at-Rest Encryption, keys file to the current directory

--zippassword: The password to unzip/zip the hard drive security keys file.

Listing Premium Storage Information

```
syscli --list premiumstorageinfo
```

This CLI command lists the system serial number and for each storage array the name, whether turbo and encryption premium feature key is installed, the storage array serial number and feature activation code (ID).

Utility CLI Commands

The following utilities CLI commands are available:

- [Upgrading the System Firmware](#)
- [Listing Upgrades](#)
- [Downloading Upgrades](#)
- [Installing Upgrades](#)
- [Getting the Cluster Status of Local Node](#)
- [Compaction Service](#)
- [Starting Space Reclamation](#)
- [Stopping Space Reclamation](#)
- [Displaying the Current Reclamation Status](#)
- [Node Management](#)
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- [Getting License Status \(DXi V-Series only\)](#)
- [Activate a License \(DXi V-Series only\)](#)
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- [Deleting All Administrative Activity Log Entries](#)
- [Getting Status for a Hostbus Adapter](#)
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- [Starting the Secure File Shredder](#)
- [Cancelling the Secure File Shredder](#)

- [Getting Progress Details about the current Secure File Shred Operation](#)
- [Getting the Status of the Last Secure File Shred Operation](#)
- [Getting the Summary of the Secure File Shred Progress](#)
- [Quantum Repository Package Commands](#)

Upgrading the System Firmware

syscli --upgrade firmware --localfile <filename> [--sure]

This CLI command allows the admin user to upgrade the firmware on the system. The image file should be on the system before this command can be issued successfully. The admin user can first copy the file (via scp) to the home directory and then invoke this CLI command by specifying the name of the local firmware file that was manually copied. If the **--sure** option is specified, then no confirmation prompt is displayed.

Listing Upgrades

syscli --list upgrades

This CLI command displays available upgrade(s) from the repository.

Example output:

```
# syscli --list upgrades
```

Output data:

```
List of available upgrades:
```

```
Total count = 1
```

```
[Upgrade = 1]
```

```
ID = 2.3.0-Release
```

```
Release date = Sat Oct 5 22:44:23 2013
```

```
Version = 2.3.0 (10493-52231 Build65)
```

```
Summary = This software upgrade provides enhancements and  
bug fixes.
```

```
Download completed = false
```

Downloading Upgrades

syscli --download upgrades --name <ID>

This CLI allows the admin user to download the latest upgrade from the repository

CLI command options:

- **--download upgrades:** Downloads the latest upgrade from the repository. To list the latest upgrade version that can be retrieved, use the **--list upgrades** command.
- **--name:** Name. This is **ID** variable from the **--list upgrades** output.

Installing Upgrades

`syscli --install upgrades --name <ID>`

This CLI command allows the admin user to install the downloaded upgrade to the system.

CLI command options:

- **--install upgrades:** Installs the downloaded upgrade. The upgrade can and must be downloaded first using the **--download upgrades**.
- **--name:** Name. This is the **ID** variable (from **--list upgrades**) of the upgrade to be installed.

Getting the Cluster Status of Local Node

`syscli --getstatus node`

This CLI command allows the user to display the cluster status of the node where the system is running on.

Compaction Service

The following compaction service commands are available:

- [Starting Compaction Service](#)
- [Stopping Compaction Service](#)
- [Getting Status for the Compaction Service](#)

Starting Compaction Service

`syscli --start compaction`

This CLI starts the general space compaction service on demand.

Note: An automated service will perform a compaction when needed, so use of this command may not be necessary.

The **--start** option starts the general space compaction service.

Stopping Compaction Service

`syscli --stop compaction`

This CLI stops the general space compaction service on demand.

Note: An automated service will perform a compaction when needed, so use of this command may not be necessary because you might stop compaction that occurs from the automated service.

The **--stop** option stops the general space compaction service.

Getting Status for the Compaction Service

`syscli --getstatus compaction`

This CLI gets the status for space compaction.

The `--getstatus` option returns the following status for space compaction:

Output data:

```
Compaction Status =  
Status Progress = 0 %  
Start Time =  
End Time =  
Compacted = 0.00 MB  
Still to compact = 0.00 MB
```

Space Reclamation

The following space reclamation commands are available:

- [Starting Space Reclamation](#)
- [Stopping Space Reclamation](#)
- [Displaying the Current Reclamation Status](#)

Starting Space Reclamation

syscli --start reclamation

This CLI command allows the admin user to manually start space reclamation on the system.

Stopping Space Reclamation

syscli --stop reclamation

This CLI command allows the admin user to stop any current space reclamation on the system that is running.

Displaying the Current Reclamation Status

syscli --getstatus reclamation

This CLI command allows the user to retrieve the current status for general space reclamation. An example of the output for `--getstatus reclamation` is shown below:

Output data:

```
Reclamation Status =  
Stage Status Progress = 100 %  
Total Progress = 100 %  
Start Time = Tue Nov 6 10:55:33 2012  
End Time = Tue Nov 6 10:55:39 2012  
Data Scanned = 0.00 MB  
Number of Stages = 2
```

Reclaimable Space = 0.00 MB

More information regarding space reclamation can be found in two reports that are produced by Quantum's DXi Advanced Reporting (DAR) application.

- The **Space Reclamation Report** presents space reclamation progress and space reclamation in bytes.
- The **Disk Usage** graph in the **Capacity Report** presents reclaimable space, which is the amount of disk space available for new deduplicated data.

Node Management

`syscli --nodemanage --reboot | --shutdown | --resetdiag [--node {1 | 2 | all}] [--sure]`

This CLI command allows the admin user to reboot, shutdown or reset the diagnostic state on a node. If the `--sure` option is specified, no confirmation prompt is displayed. Note that `--node 2` is an invalid option in release 2.x.

License Management

The following license management commands are available:

- [Displaying Licenses](#)
- [Adding a License](#)
- [Getting License Status \(DXi V-Series only\)](#)
- [Activate a License \(DXi V-Series only\)](#)

Displaying Licenses

`syscli --list license`

This CLI command allows the user to list the available licenses on the system. An example output of available licenses is shown below:

List of Licenses:

Total count = 7

[License = 1]

License Name = NAS

Installed = No

Date Installed = -- Not Installed --

License Description = Expose NAS interface to host

[License = 2]

License Name = Backup Application Specific

Installed = No

Date Installed = -- Not Installed --

License Description = Enables Backup Application Specific

[License = 3]

```
License Name = De-Duplication
Installed = Yes
Date Installed = 2009-06-01 15:32:42
License Description = Enables De-Deduplication
[License = 4]
License Name = Replication
Installed = Yes
Date Installed = 2009-06-03 08:59:17
License Description = Enables Replication
[License = 5]
License Name = Storage Capacity
Installed = Yes
Date Installed = 2009-06-01 15:32:24
License Description = Limit Storage Capacity
[License = 6]
License Name = OST
Installed = No
Date Installed = -- Not Installed --
License Description = Limit Open Storage Server Connections
[License = 7]
License Name = Vision
Installed = No
Date Installed = -- Not Installed --
License Description = Enables Advanced Reporting
```

Adding a License

syscli --add license --key <license_key>

This CLI command allows the admin user to add a license on the system. The user needs to provide a key corresponding to the license.

Note: For DXi4510 and DXi 4520 systems, all available licenses are pre-installed at the factory. There is no need to add licenses to these systems.

Note: After adding a storage capacity license to DXi4601, you must reboot the DXi to complete the storage capacity upgrade. The new storage capacity will not be available until you reboot the DXi.

Getting License Status (DXi V-Series only)

syscli --getstatus license

This CLI command reports the license status, the capacity, the date license installed, the expiration, the license type, and the number of days the license remains.

The **--getstatus** option reports the licensed capacity and the detailed status of the system's license.

Activate a License (DXi V-Series only)

syscli --activate --license <lic_key> [--lickeyfile <lic_key_file> |--reactivate |--productkey <product_key>

This CLI command allows the admin user to activate, reactivate a license, or to activate a product key.

To activate a license, the characters that can be in a license key are alphanumeric, '/', '+', and '='. No license key is needed to reactivate the license. To activate the product key, the product key is 20 alphanumeric characters, optionally divided into 4 groups of 5 and separated by dashes.

CLI command options:

- **--activate**: Activates, reactivates a license, or activates a product key.
- **--license**: Activates a license with a license certificate string which can only be alphanumeric, '/', '+', or '='.
- **--lickeyfile**: Activates a license with the license key file which can be absolute or relative path to the current directory.
- **--reactivate**: Forces an immediate license server check and reactivates the license.
- **--productkey**: Activates the product key which is 20 alphanumeric characters, optionally divided into 4 groups of 5 and separated by dashes.

Diagnostic Logs

Generating a Diagnostic Log

syscli --gen diaglog [--system] | [--array] [--quiet] [--lastgen]

This CLI command allows the admin user to generate diagnostic logs on the system.

CLI command options:

- **--system**: generates the system diagnostic log. This is the default if no diagnostic type is specified.
- **--array**: generates the raid array diagnostic log
- **--quiet**: do not display status while generating log
- **--lastgen**: display the last date the diagnostic log was generated

Downloading a Diagnostic Log

syscli --download diaglog [--system] | [--array]

This CLI command allows users to download the current diagnostic log to the current working directory.

CLI command options:

- **--system**: Downloads the system diagnostic log. This is the default if no diagnostic type is specified.
- **--array**: Downloads the raid array diagnostic log.

Authenticate User (Login Command)

```
syscli --authenticate --name <username> --password <password> --client  
<clientinfo> [--timeout <timeout>] [--terse]
```

This command is intended for use with the additional **--ws** option to log into a Web Services server.

```
syscli --authenticate --name <username> --password <password> --client  
<clientinfo> [--timeout <timeout>] [--terse] --ws  
[<remotehost>[:<portnumber>]]
```

For a description of the **--ws** option, see [Web Services Session](#) on page 8.

This command is to send the user credentials to the Web Services server (named axis2 server) for authentication and starting a Web Services session. The user must have an account on the DXi system that the axis2 server is running.

CLI command options:

- **--password**: if not specified, you will be prompted interactively, and the password is not echoed on screen.
- **--clientinfo**: This is an arbitrary string that contains information to identify the user for logging purposes. It can be the user's real name or the client program, or something that uniquely identifies the session (e.g., myrun1, myrun2, confignas, etc.). The main idea is that the **<clientinfo>** token and the username can be combined together to track the user's activities.
- **--timeout**: This is the number of seconds the session can be idle before the server automatically terminates it. The default value is 1800 seconds (30 minutes).
- **--terse**: If specified, only the credential token value will be displayed in the output. This is handy for use in scripting.

Example 1:

```
bash-3.2$ syscli --authenticate --name cliadmin --password  
**** --client testing
```

Output data:

```
Credential token = 7dd1f06d612631b6ad8a165fcf54914c  
[Component Permission = 1]  
Name = system  
Access = ReadWrite  
[WSDL Support = 1]  
Name = WSDL Specs
```

```
Version = 2.0
[WSDL Support = 2]
Name = Common.xsd
Version = 1.0-2010/11/13
[WSDL Support = 3]
Name = Dxi.wsdl
Version = 1.0-2010/05/18
[WSDL Support = 4]
Name = Nas.wsdl
Version = 1.0-2010/05/18
[WSDL Support = 5]
Name = Nas.xsd
Version = 1.0-2010/11/05
[WSDL Support = 6]
Name = Replication.wsdl
Version = 1.0-2010/07/17
[WSDL Support = 7]
Name = Replication.xsd
Version = 1.0-2010/07/17
[WSDL Support = 8]
Name = System.wsdl
Version = 1.0-2010/09/09
[WSDL Support = 9]
Name = System.xsd
Version = 1.0-2010/09/09
Command completed successfully.
```

Example 2:

```
bash-3.2$ syscli --authenticate --name cliadmin --password
**** --client testing
4eaa94a8c39b707524e9b157eab0eae
```

**Release Credential
(Logout Command)**

syscli --release credential [--credtoken <credential_token>]

This command is used with the additional --ws option to log out of a Web Services server.


```
syscli --release credential [--credtoken <credential_token>] --ws  
[<remotehost>[:<portnumber>]]
```

For a description of the `--ws` option, see [Web Services Session](#) on page 8.

This command allows the user to release the specified credential token to terminate a Web Services session. If `--credtoken` is specified, the user must type in the credential token that was returned from a previous `authenticate` command. If not specified, the `syscli` program uses the cached copy, which is the credential token from the most recent `authenticate` command.

Run Command CLI

```
syscli --runcmd --<cmd> [<subcmd>] [--<option> [<value>]]
```

This CLI command allows users to execute any other CLI commands.

With the availability of this command, there are two methods for executing any command. For example, to list all NAS shares:

- a Run the 'list share' CLI directly:

```
syscli --list share
```

- b Run indirectly via the `runcmd` CLI:

```
syscli --runcmd --list share
```

In general, the syntax for this CLI is as follows:

```
syscli --runcmd {specify all options of the command of interest}
```

Why bother with the `--runcmd` CLI?

To list shares, who would run command (b) instead of (a)? It does not make sense to run (b) because (a) is much simpler.

The answer is that the `runcmd` CLI is most useful when run as a Web Services (WS) client (i.e., when specified with `--ws` option at the end, see [Web Services Support \(Optional\)](#) on page 7. In this case it will submit the command of interest to a Web Services server for execution without requiring the command be supported in Web Services.

For example, suppose one wants to list `shareadmin` on a remote host `10.30.40.50`, which is already joined to an ADS domain. Suppose further that the Web Services server supports the `runcmd` command but NOT the `--list shareadmin` command. In this case, one can simply use the `runcmd` CLI to execute the `--list shareadmin` command remotely via Web Services:

```
syscli --runcmd --list shareadmin --ws 10.30.40.50
```

Therefore, the Web Services server can execute all CLI commands if they are sent to the server via the `runcmd` command.

The WS and non-WS versions of a command may not provide the same support for all options of the command. Usually the WS versions support fewer options. In this case, the only way to run a command with all options over Web Services is to run it via the `runcmd` CLI.

Changing the Password

```
syscli --change password --name admin|monitor|cliadmin|cliviewer --oldpassword <old_password> --newpassword <new_password>
```

This CLI allows the admin user to change the password of the following special users:

admin - Web Administrator

monitor - Web Monitor

cliadmin - CLI Administrator

cliviewer - CLI Monitor

CLI command options:

- **--change** - Changes password of special users (admin, monitor, cliadmin, cliviewer)
- **--name** - Name of special user whose password is to be changed.
- **--oldpassword** - if not specified on command line, the program will prompt for the old password and will not echo it to screen.
- **--newpassword** - if not specified on command line, the program will prompt for the new password and will not echo it to screen.

Resetting the Password

```
syscli --reset password --name cliadmin|cliviewer [--sure]
```

This CLI allows the admin user to reset the password to factory default for the following special users:

- **cliadmin** - CLI Administrator
- **cliviewer** - CLI Monitor

CLI command options:

- **--reset** - Resets password of special users to factory default.
- **--name** - Name of special user whose password is to be changed.
- **--sure** - if specified, the command will execute immediately without asking for confirmation.

Getting the Security Banner

```
syscli --get securitybanner [--terse]
```

This CLI allows the user to get the security banner of the system.

CLI command options:

- **--get**: Gets the security banner of the system.
- **--terse**: if specified, only the security banner will be displayed in the output.

Setting the Security Banner

```
syscli --set securitybanner --txtfile <file-name>
```

This CLI allows the admin user to set the security banner for the system.

Note: For security reasons, all HTML and script tags will be removed from the text before storing it on the system. Only , <i>, and <p> tag are allowed.

CLI command options:

- **--set:** Sets the security banner for the system.
- **--txtfile:** Name of the file containing the security banner's text.

Getting the Number of Failed Login Attempts

syscli --getcount failedlogin --user <user_name> [--terse]

This CLI allows the user to get the number of failed login attempts preceding the current login.

CLI command options:

- **--getcount:** Gets number of failed login attempts.
- **--user:** UserName
- **--terse:** if specified, only the number of failed login attempts will be displayed in the output.

Enabling or Disabling Administrative Activity Log

syscli --set adminlog --enabled | --disabled

This CLI allows the admin user to enable or disable the administrative activity log. If enabled, all user activities changing the system's state will be logged.

--set: Allows the admin user to enable or disable the administrative activity log.

Getting Status for the Administrative Activity Log

syscli --getstatus adminlog

This CLI displays the status of user administrative activity. User administrative activities are logged only if the status is enabled.

--getstatus: Displays the status of user administrative activity.

Listing the Administrative Log Activity

syscli --list adminlog [--start <start_entry>] [--count <num_entries>] [--sort id|username|date|action|category|role|origin|description [--direction asc|desc]]) [--xml <file_name>]

This CLI allows the user to selectively display all user administrative activity within the last 90 days.

CLI command options:

- **--list:** Displays all user administrative activity within the last 90 days.
- **--start:** Starting entry from the table. Value must be > 0
- **--count:** Number of entries to display. Value must be > 0
- **--sort:** Name of the column to be sorted.

--direction: Sorting direction. Default is by ascending id

--xml: If specified, the output will be exported in xml format in file_name in current directory.

Getting the Count of Administrative Activity Log Entries

syscli --getcount adminlog

This CLI allows the user to display the total count of administrative activity log entries with a list of one or more filters. Filters are composed of a column name, an operator, and an expression.

--getcount: Displays the total count of administrative activity log entries.

Deleting Administrative Activity Log Entries

syscli --del adminlogentry [--id <entry_id>]

This CLI allows the admin user to delete one or more administrative activity log entries.

CLI command options:

--del: Allows the admin user to delete one or more administrative activity log entries.

--id: Specify the log entry id(s) to be deleted. To delete more than one entry, repeat the same set of options. For example, to delete 2 entries: **--id id1 --id id2**.

Deleting All Administrative Activity Log Entries

syscli --deleteall adminlogentries [--sure]

This CLI allows the admin user to delete all administrative activity log entries.

CLI command options:

--deleteall: Allows the admin user to delete all administrative activity log entries.

--sure: If specified, the command will execute immediately without asking for confirmation.

Getting Status for a Hostbus Adapter

syscli --getstatus hbadetails --name <hbaname>

This CLI displays the detailed status of the given hostbus Adapter.

The **--getstatus** option lists the detailed status of the specified hostbus Adapter

Getting Status for all Hostbus Adapter

syscli help --getstatus hostbusadapter

This CLI displays the status of all the FC Adapters and SAS HBAs.

The **--getstatus** option lists the status of all the FC Adapters and SAS HBAs.

Starting the Secure File Shredder

syscli --start securefileshred [--sure]

This CLI allows the admin user to start the secure file shred operation.

CLI command options:

--start: Starts the secure file shred operation.

--sure: if specified, the command will execute immediately without asking for confirmation.

Cancelling the Secure File Shredder

syscli --cancel securefileshred [--sure]

This CLI allows the admin user to cancel the secure file shred operation.

CLI command options:

--cancel: Cancels the secure file shred operation.

--sure: if specified, the command will execute immediately without asking for confirmation.

Getting Progress Details about the current Secure File Shred Operation

syscli --getdetail securefileshred

This CLI allows the user to get the details of secure file shred progress.

The **--getdetail** options gets the details of secure file shred progress.

Getting the Status of the Last Secure File Shred Operation

syscli --getlastrunstatus securefileshred

This CLI gets the status for the last secure file shred operation.

The **--getlastrunstatus** option gets the status for the last secure file shred operation.

Getting the Summary of the Secure File Shred Progress

syscli --getsummary securefileshred

This CLI allows the user to get the summary of secure file shred progress.

The **--getsummary** option gets the summary of secure file shred progress.

Quantum Repository Package Commands

The repository package commands allow you to install, update, remove, and list package(s) that are in the Quantum repository.

syscli --system install --package <commas_separated_packages>

This CLI allows the user to install new package(s) to the system.

syscli --system update --package <commas_separated_packages>

This CLI allows the user to updates the system's specified package(s).

syscli --system remove --package <commas_separated_packages>

This CLI allows the user to remove the specified package(s) from the system.

```
syscli --system list --type all|available|updates|installed|obsoletes|recent  
[--package <commas_separated_packages>]
```

This CLI allows the user to displays information of the specified package(s).

Network CLI Commands

The following sections describe the supported Network CLI commands:

- [Adding Network Configurations](#)
- [Deleting Network Configurations](#)
- [Displaying Network Configurations](#)
- [Backing Up the Current Network Configuration](#)
- [Restoring a Network Configuration](#)
- [Displaying System Network Configuration](#)
- [Listing Network Interfaces](#)
- [Adding Throttle on the Source System](#)
- [Deleting Throttle on the Source System](#)
- [Listing Throttle States](#)
- [Setting Host and Domain Names and the DNS Search Path](#)
- [Editing the Network Configuration](#)
- [Adding a Static Route](#)
- [Deleting a Route From the System of Network Device](#)
- [Listing Static Routes](#)
- [Creating a DHCP Ethernet interface \(for V-Series\)](#)
- [Deprecated Network CLI Commands](#)

In general, use the **netcfg** CLI commands for setting individual IP subnet information per physical interface. In addition to configuring independent ports, you can create multiple bonds, although all ports in a bond must be the same type.

Before using **netcfg** CLI commands, please be aware of the following:

- Only for use by administrators with advanced knowledge of networking.
- Not appropriate for sites that rely on host-based security because it does not provide firewalling.
- You should manually back up the current configuration before changing it.

Note: Network configuration changes made with **netcfg** CLI commands are not applied until you reboot the DXi

Caution: Changes made with **netcfg** CLI commands might cause the system to become inoperable or unreachable.

Adding Network Configurations

```
syscli --add netcfg --devname <DEVNAME> [--dhcp] [--ipaddr <IPADDR> -  
-netmask <NETMASK> --gateway <GATEWAY>] [--slaves  
<DEV1>,<DEV2>,<...>] [--mode RR|AB|LACP] [--mtu <1500|9000>] [--  
defaultgw YES] [--segments REP,MGMT,DATA] [--nat <NAT_IPADDR>] [--  
hosts <IP1,IP2,IP3>] [--extHostIp YES] [--sure]
```

This CLI command allows the admin user to add and configure the specified network device with the specified IP, netmask, and optional gateway.

Note: The system does not automatically reboot; therefore, after making any modification to your network configuration, you must manually reboot the system. You can reboot the system using the **syscli --nodemanage --reboot** command.

CLI command options:

- **--add:** Adds and configures network device.
- **--devname:** Device name.

Note: Using the device name of a previously configured device will override the previous network configuration values.

The general format is <label> <devno>[.<vlanid>]:<vifno> where

- **label:** device label, which is an alphabetic string (e.g. bond, eth, ...)
- **devno:** device number, which can range from 1 to possibly 99, depending on actual systems.
- **vlanid:** VLAN ID is an optional field and can range from 2 to 4094.
- **vifno:** virtual interface number, which is optional and is used to distinguish each set of network layer (L3) values, i.e. IP address and netmask values. It can range from 1 to possibly 99, depending on actual systems. Examples of device names would be **eth0:1** or **bond0:2**.

Note: Virtual interface numbers are used to configure multiple IP addresses for an interface.

- **--dhcp:** If specified, use DHCP for network device configuration. **ipaddr**, **netmask**, and **gateway** are automatically assigned by the DHCP server.

Note: If **--dhcp** is entered, the IP info will be added by the DHCP server. Otherwise, you must enter the IP address, netmask and gateway as shown. When DHCP is used, only one IP address is supported; there is no VIF number. Also, VLAN support is not provided when using DHCP

- **--ipaddr:** IP address in decimal dotted notation (e.g. 10.20.30.156).

- **--netmask:** Netmask in decimal dotted notation (e.g. 255.255.255.0)
- **--gateway:** IP address of gateway used to get to a different network (subnet) or repeat the IP address for the devname option above if the desire is to limit packets to this network.

Note: If the port is directly connected to another port, or the port is not connected to a router, then the gateway IP address should be the same IP address as the **--ipaddr** value.

- **--slaves:** If **--slaves** are specified, use commas to separate two or more slave device names.

Note: Slaves must be specified when creating a bond.

- **--mode:** Mode must be specified when creating a bond. Currently LACP (mode 4), Active Backup (mode 1), and Round Robin (mode 0) are supported.
- **--mtu:** Enter 1500 to set MTU size to the standard (STD) frame size of 1500 bytes. Enter 9000 to set MTU size to allow up to the max JUMBO frame size of 9000 bytes. If this line is not entered, 1500 (the STD frame size) will be used.
- **--defaultgw:** Uses the entered gateway value as the default gateway. If this line is not specified, the default is **NO**.
- **--segments:** Only allow the specified traffic types on this interface.

Note: When configuring replication segmentation for an interface (device) in addition to other segments on the same subnet, make sure to add a route to force the replication segment to be used exclusively for replication between a source and a target DXi.

- **--nat:** Specified on the target if the source needs to use this NAT IP address for replication.
- **--hosts:** Only allow communication with these hosts via the specified gateway.
- **--extHostIP:** Uses the entered external host IP value above as the default external host IP. If this line is not specified, the defaults is **No**.
- **--sure:** If specified, the command will execute without asking for confirmation.

Note that this command creates a network configuration and renders the following network commands unusable:

- [Enabling Jumbo Frames](#)
- [Disabling Jumbo Frames](#)
- [Getting Jumbo Frame Status](#)
- [Setting Up a Segmented Network](#)
- [Setting Up an Unsegmented Network](#)

Deleting Network Configurations

`syscli --del netcfg --devname <DEVNAME> [--sure]`

This CLI command allows the admin user to delete the specified network device and its IP address information. Any slaves associated with the network device will also be deleted.

Note: Deleting a device using only the device number, **devno**, will also delete all of its associated IP information that was added when using the virtual interface number, **vifno**, option.

CLI command options:

- **--devname:** Device name. The general format is <label> <devno> [:<vifno>] where
 - **label:** Device label, which is an alphabetic string (e.g. bond, eth, ...)
 - **devno:** Device number, which can range from 0 to possibly 99, depending on actual systems.
 - **vifno:** Virtual interface number, which is optional and can range from 1 to possibly 99, depending on actual systems.
- **--sure:** If specified, the command will execute and restart without asking for confirmation.

Note that this command renders the following network commands unusable:

- [Enabling Jumbo Frames](#)
- [Disabling Jumbo Frames](#)
- [Getting Jumbo Frame Status](#)
- [Setting Up a Segmented Network](#)
- [Setting Up an Unsegmented Network](#)

Displaying Network Configurations

`syscli --show netcfg [--devname <DEVNAME>]`

This CLI command shows the IP address and routing information. If no device is specified, information for all devices will be displayed.

Note: The **show** command displays the network settings that are currently in effect. If you have made changes to the custom network configuration since rebooting the DXi, these changes do not take effect until after the next reboot.

CLI command options:

- **--devname:** If not specified, shows the network configuration for all device names. If specified, shows the information for the specified device only. The general format is <label> <devno> [:<vifno>] where
 - **label:** Device label, which is an alphabetic string (e.g. bond, eth, ...)
 - **devno:** Device number, which can range from 0 to possibly 99, depending on actual systems.

- **vifno**: Virtual interface number, which is optional and can range from 1 to possibly 99, depending on actual systems.

Backing Up the Current Network Configuration

`syscli --backup netcfg`

This CLI command allows the admin user to back up the current custom network configuration.

--backup: Backs up custom network configuration.

Restoring a Network Configuration

`syscli --restore netcfg [--sure]`

This CLI command allows the admin user to restore the previously backed up custom network configuration.

Note: The system does not automatically reboot; therefore, after making any modification to your network configuration, you must manually reboot the system. You can reboot the system using the `syscli --nodemanager --reboot` command.

CLI command options:

- **--restore**: Restores previous custom network configuration.
- **--sure**: if specified, the command will execute and restart without asking for confirmation.

Displaying System Network Configuration

`syscli --get network`

This CLI allows the user to display the system network configuration.

--get: Displays system network configuration.

Note: The `--get network` command renders the `syscli --query network` command unusable.

Example output:

Output data:

```
# syscli --get network
  Hostname = DXi000C2952EE22
  Default Gateway =
  DNS Search Path = quantum-sqa.com
  DNS Primary IP Address = 10.40.167.167
  DNS Secondary IP Address = 10.40.164.157
```

Listing Network Interfaces

`syscli --list interface [--xml [<filename>]] [--type [configured]|runtime]`

This CLI allows the user to list available and configured network interfaces.

CLI command options:

- **--list:** Lists network interfaces.
- **--xml:** List XML output to screen or write XML output to <filename>.
- **--type:** Display interface's configured or runtime values. If this value isn't specified, the configured values are displayed.

An example output for **--list interface** is shown below:

Output data:

List of Interfaces:

Total interface count = 4

...

[Device = 3]

Device Name = eth2

Boot Protocol = dhcp

Type = Port

Maximum Speed = 10GbE

Connection = up

State = up

Configured = true

MTU = STD

IP Properties:

Interface Name = eth2

IP Address = 10.20.190.34

Netmask = 255.255.248.0

Gateway = 10.20.184.1

ExtHost = NO

Routes:

Segments:

Segment = ALL

Note: The `syscli --list interface` command will show the `Boot Protocol` value as `dhcp` if it was specified, otherwise it will show `static` or `none`.

Adding Throttle on the Source System

syscli --add throttle [--service REP] --bw <bandwidth><K|M>

This CLI allows the admin user to add throttling on the source for the specified network services.

CLI command options:

- **--add**: Adds throttling on the source system.
- **--service**: Enables throttling for the specified service.
The default service is REP for the replication service.
- **--bw**: The amount of bandwidth to throttle. For example, if 500 KB/s is desired, enter **--bw 500K**.
If 100 MB/s is desired, enter **--bw 100M**.

Bandwidth must be between 32KB/s and 125MB/s to indicate the amount of bandwidth to throttle.

Deleting Throttle on the Source System

syscli --del throttle [--service REP] [--sure]

This CLI allows the admin user to remove throttling on the source.

CLI command options:

- **--del**: Removes throttling on the source system.
- **--service**: Disables throttling for the specified service.
- **--sure**: If specified, the command will execute without asking for confirmation.

Listing Throttle States

syscli --list throttle

This CLI command shows the throttling state and bandwidth for a service that can be throttled.

Setting Host and Domain Names and the DNS Search Path

syscli --set network [--hostname <HOSTNAME>] [--domain <DOMAINNAME>] [--dns <IPADDR,...>] [--defaultgateway <DEFAULTGATEWAY>] [--sure]

This CLI allows the admin user to set the host name and optionally the domain name and DNS search paths for the specified host.

Note: The system does not automatically reboot; therefore, after making any modification to your network configuration, you must manually reboot the system. You can reboot the system using the `syscli --nodemanage --reboot` command.

CLI command options:

- **--set**: Sets the system network parameters for the specified host.
- **--hostname**: Sets the system's host name.

- **--domain:** Sets the system's domain name.
- **--dns:** Sets the DNS search path. Can specify up to 3 IP addresses. DNS will search each path in the order of the specified IP addresses.
- **--defaultgateway:** Sets the system's default gateway.
- **--sure:** If specified, the command will execute without asking for confirmation.

Editing the Network Configuration

```
syscli --edit netcfg --devname <DEVNAME> [--mtu <1500|9000>] [--mode  
RR|AB|LACP] [--slaves <DEV1>,<DEV2>,<...>] [--nat <NAT_IPADDR>] [--  
extHostIp YES|NO] [--sure]
```

This CLI allows the admin user to update the MTU, bonding mode or slaves for an existing L2 network device.

Note: The system does not automatically reboot; therefore, after making any modification to your network configuration, you must manually reboot the system. You can reboot the system using the syscli **--nodemanage --reboot** command.

CLI command options:

- **--edit:** Updates the MTU, bond mode or slaves for an existing L2 network device.
- **--devname:** Device name. The general format is <label><devno> where
 - **label:** Device label, which is an alphabetic string (e.g. bond, eth, ...)
 - **devno:** Device number, which can range from 0 to possibly 99, depending on actual systems.
- **--mtu:** Enter 1500 to set MTU size to the standard (STD) frame size of 1500 bytes. Enter 9000 to set MTU size to allow up to the max JUMBO frame size of 9000 bytes. If this line is not entered, 1500 (the STD frame size) will be used.
- **--mode:** Mode must be specified when creating a bond. Currently Round Robin (mode 0), Active Backup (mode 1) and LACP (mode 4) are supported.
- **--slaves:** If **--slaves** is specified, specify two or more slave device names separated by commas.
- **--nat:** Specified on the target if the source needs to use this NAT IP address for replication.
- **--extHostIp:** Mode must be specified when creating a netcfg.
- **--sure:** If specified, the command will execute without asking for confirmation.

Adding a Static Route

```
syscli --add route [--devname <DEVNAME>] --network <IPADDR> --  
netmask <NETMASK> --gateway <GATEWAY> [--sure]
```

This CLI allows the admin user to add a static route for the system (and optionally for a network device) using the specified network IP addr, netmask and gateway.

When configuring replication segmentation for an interface (device) in addition to other segments on the same subnet, make sure to add a route to force the replication segment to be used exclusively for replication between a source and a target DXi.

Note: The system does not automatically reboot; therefore, after making any modification to your network configuration, you must manually reboot the system. You can reboot the system using the syscli **--nodemanage --reboot** command.

CLI command options:

- **--add:** Adds a static route.
- **--devname:** Device name. The general format is <label> <devno>[:<vifno>] where
 - **label:** Device label, which is an alphabetic string (e.g. bond, eth, ...)
 - **devno:** Device number, which can range from 0 to possibly 99, depending on actual systems.
 - **vifno:** Virtual interface number, which is optional and can range from 1 to possibly 99, depending on actual systems.
- **--network:** IP address in decimal dotted notation (e.g. 10.20.30.0).
- **--netmask:** Netmask in decimal dotted notation (e.g. 255.255.255.0)
- **--gateway:** IP address of gateway
- **--sure:** If specified, the command will execute without asking for confirmation.

Deleting a Route From the System of Network Device

```
syscli --del route [--devname <DEVNAME>] --network <IPADDR> [--sure]
```

This CLI allows the admin user to delete the route for the system (and optionally for a network device).

Note: The system does not automatically reboot; therefore, after making any modification to your network configuration, you must manually reboot the system. You can reboot the system using the syscli **--nodemanage --reboot** command.

CLI command options:

- **--del:** Deletes route for the system or network device.
- **--devname:** Device name. The general format is <label> <devno>[:<vifno>] where
 - **label:** Device label, which is an alphabetic string (e.g. bond, eth, ...)

- **devno**: Device number, which can range from 0 to possibly 99, depending on actual systems.
- **vifno**: Virtual interface number, which is optional and can range from 1 to possibly 99, depending on actual systems.
- **--network**: IP address in decimal dotted notation (e.g. 10.20.30.0).
- **--sure**: if specified, the command will execute without asking for confirmation.

Listing Static Routes

syscli --list route

This CLI allows the user to display the static routes for the system.

--list: Lists the static routes.

Creating a DHCP Ethernet interface (for V-Series)

syscli --add netcfg --devname <DEVNAME> --dhcp

This CLI allows the user to create a DHCP Ethernet interface.

--devname: Where **<DEVNAME>** is a base port interface name such as **eth0**.

Note: **<DEVNAME>** cannot contain a VIF or a VLAN tag, and static IP configuration parameters, such as **ipaddr**, **netmask**, or **gateway** are not allowed either.

Deprecated Network CLI Commands

The following network CLI commands are deprecated:

- [Enabling Jumbo Frames](#)
- [Disabling Jumbo Frames](#)
- [Getting Jumbo Frame Status](#)
- [Setting Up a Segmented Network](#)
- [Setting Up an Unsegmented Network](#)
- [Querying the Network](#)
- [Undoing a Network Configuration](#)

Enabling Jumbo Frames

syscli --enable jumbo

DEPRECATED. Use the **syscli --add netcfg** command to set jumbo frame status instead.

Disabling Jumbo Frames

syscli --disable jumbo

DEPRECATED. Use the **syscli --add netcfg** command to set jumbo frames instead.

Getting Jumbo Frame Status

syscli --getstatus jumbo

DEPRECATED. Use the **syscli --list interface** command to get jumbo frames instead.

Setting Up a Segmented Network

syscli --setnetwork segmented

DEPRECATED. Use the **syscli --add netcfg** command with the **--segments** option instead.

Setting Up an Unsegmented Network

syscli --setnetwork unsegmented

DEPRECATED. Use the **syscli --add netcfg** command with the **--segments** option instead.

Querying the Network

syscli --query network

DEPRECATED. Use the **syscli --get network** command instead.

Undoing a Network Configuration

syscli --undo netcfg [--sure]

DEPRECATED. No longer applicable in versions 2.1 or greater.

Netcfg Configuration Examples

This section provides examples of advanced netcfg configurations and a brief explanation of the syscli sequences that were used for each of the configurations. These examples, which are intended for customer network administrators, can vary depending on the customer network environment.

The following are some key points to remember:

- Use of the CLI commands require some understanding of network configurations, and they must be used with caution.
- Bonded Ethernet ports must be connected to a switch, with the same link aggregation setup (Round Robin or Link Aggregation Control Protocol).

The following netcfg configuration examples are not possible with the CLI GUI:

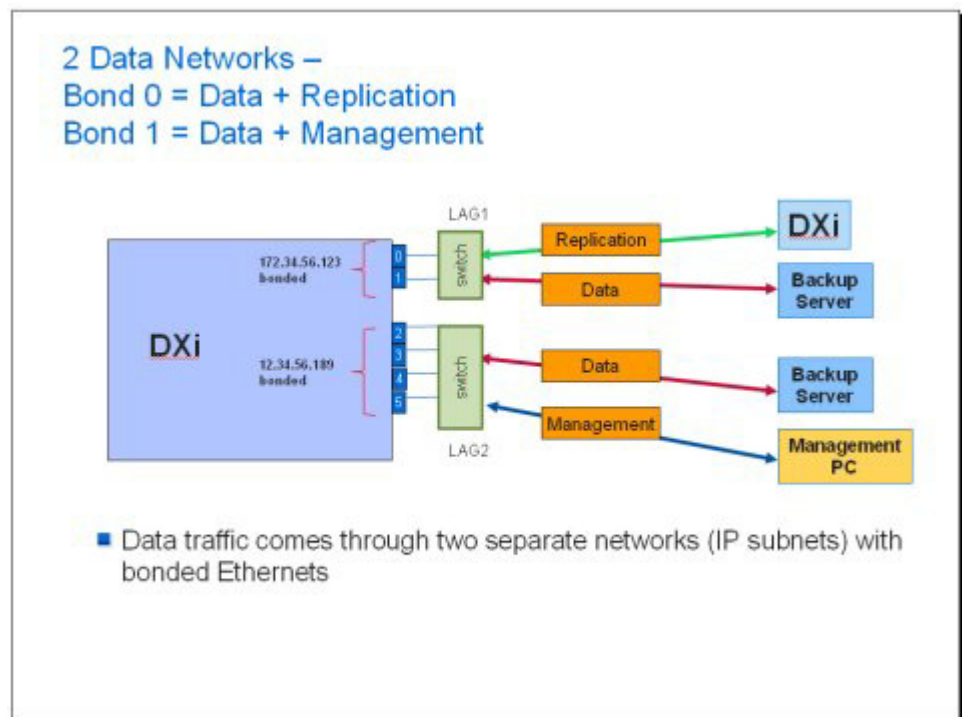
- [DXi 6540 Connected to Two Different Networks Through Two Bonds](#)

- [DXi 6540 With Only Two Independent Ports Being Used](#)
- [DXi 6540 With Three Bonds of Two Ports Each](#)
- [DXi 6540 With One Bond and Two Independent Interfaces](#)
- [DXi 6540/6550 With All Customer Interfaces Used Independently](#)
- [Deleting a Bond and Setting Up Independent Interfaces](#)

DXi 6540 Connected to Two Different Networks Through Two Bonds

The bonded interfaces on the DXi are connected to two different subnets; this may have two different default gateways for the subnet.

Figure 1 Netcfg Example – Two Data Networks



The following syscli sequences can be used to configure a similar setup.

To display the existing configuration:

```
syscli --list interface
```

First, delete the default bond configuration with all customer ports connected together:

```
syscli --del netcfg --devname bond0
```

Then configure bond0 and use this bond IPADDR, if applicable configure the GATEWAY1:

```
syscli --add netcfg --devname bond0:1 --slaves eth0, eth1  
--segments DATA,REP --ipaddr IPADDR1 --netmask NETMASK1  
--gateway GATEWAY1
```

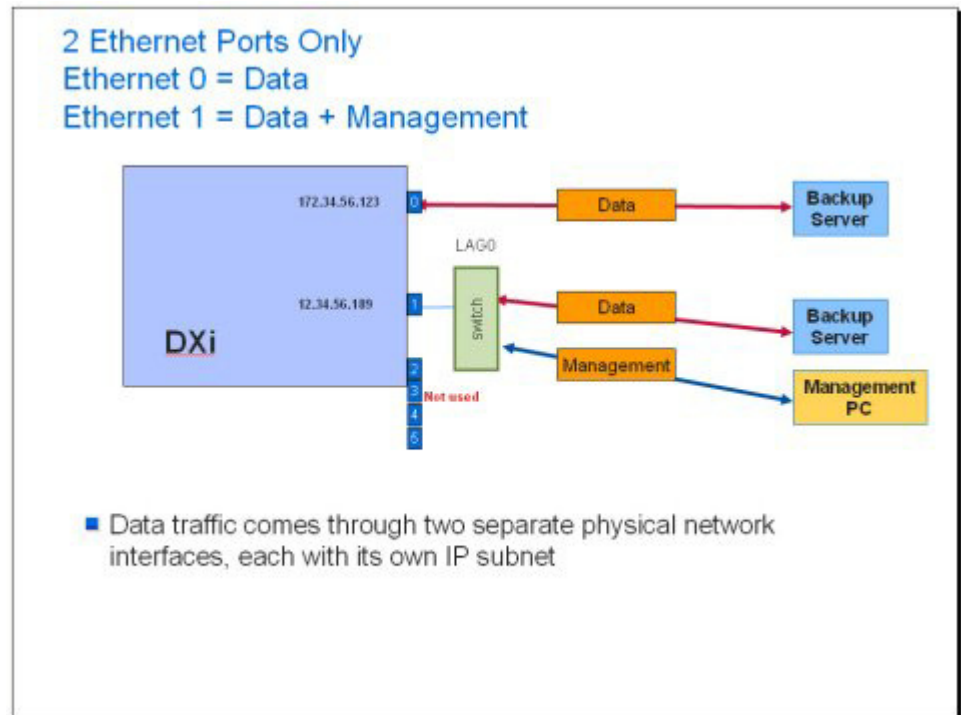
Then, configure bond1 for the other subnet. If applicable, configure the GATEWAY2:

```
syscli --add netcfg --devname bond1:1 --slaves eth2, eth3 --ipaddr IPADDR2  
--netmask NETMASK2 --gateway GATEWAY2 --segments DATA,MGMT
```

DXi 6540 With Only Two Independent Ports Being Used

There are only two independent customer ports that are configured. They have to be connected to two independent non-aggregated ports on the switch. The IP subnet dependent gateways, if applicable, can be configured.

Figure 2 Netcfg Example – Two Ethernet Ports Only



The following syscli sequences can be used to configure a similar setup.

To display the existing configuration:

```
syscli --list interface
```

First, delete the default bond configuration with all customer ports connected together:

```
syscli --del netcfg --devname bond0
```

Then configure Eth0 for IPADDR1 and for the replication source, if applicable, configure GATEWAY1:

```
syscli --add netcfg --devname eth0:1 --segments DATA,REP --ipaddr  
IPADDR1  
--netmask NETMASK1 --gateway GATEWAY1
```

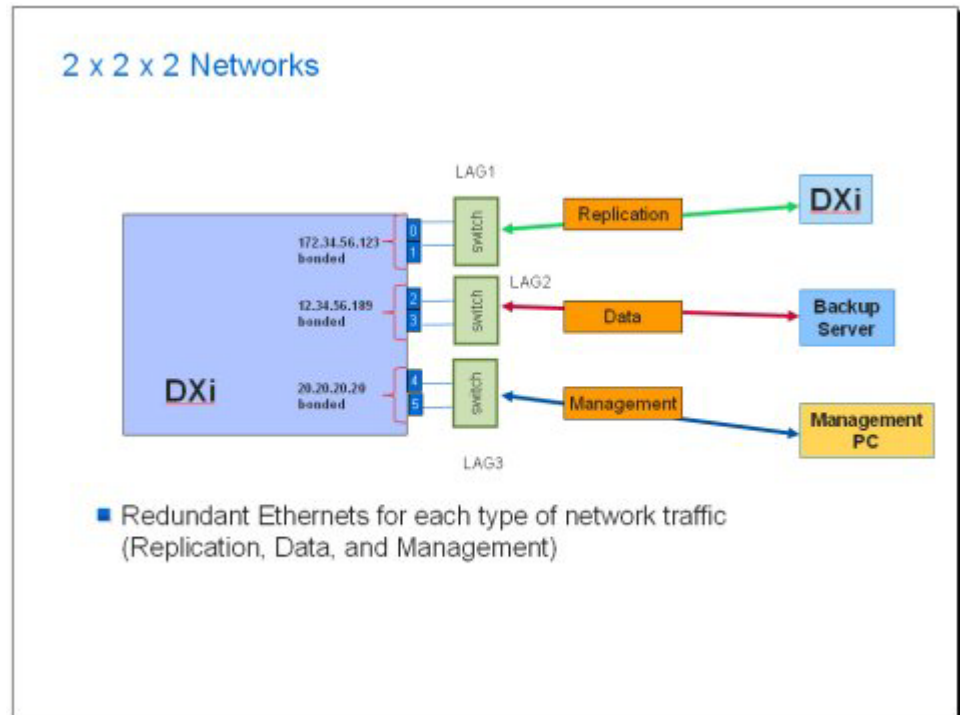
Then configure Eth0 for the other subnet. If applicable, configure GATEWAY2:

```
syscli --add netcfg --devname eth0:2 --ipaddr IPADDR2  
--netmask NETMASK2 --gateway GATEWAY2 --segments DATA,MGMT
```

DXi 6540 With Three Bonds of Two Ports Each

Ensure that the switch ports are appropriately aggregated and the gateways, if applicable, are configured.

Figure 3 Netcfg Example –
2 x 2 x 2 Networks



The following syscli sequences can be used to configure a similar setup.

To display the existing configuration:

```
syscli --list interface
```

First, delete the default bond configuration with all customer ports connected together:

```
syscli --del netcfg --devname bond0
```

Then configure bond0 for IPADDR1 and for the replication source, if applicable, configure GATEWAY1:

```
syscli --add netcfg --devname bond0:1 --slaves eth0, eth1 --segments REP  
--ipaddr IPADDR1 --netmask NETMASK1 --gateway GATEWAY1
```

Then configure bond1 for IPADDR2 and, if applicable, configure GATEWAY2:

```
syscli --add netcfg --devname bond1:1 --slaves eth2, eth3 --ipaddr IPADDR2  
--netmask NETMASK2 --gateway GATEWAY2 --segments DATA
```

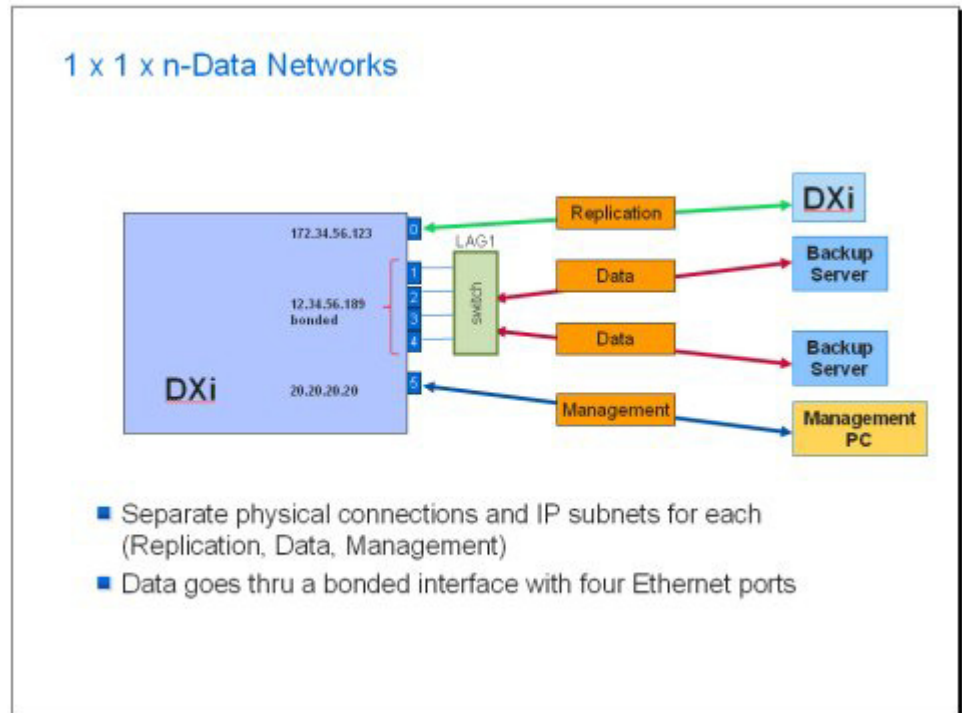
Then configure bond2 for IPADDR3 and, if applicable, configure GATEWAY3:

```
syscli --add netcfg --devname bond2:1 --slaves eth4, eth5 --ipaddr IPADDR3  
--netmask NETMASK3 --gateway GATEWAY3 --segments MGMT
```

DXi 6540 With One Bond and Two Independent Interfaces

The two independent interfaces have to be connected to a non-aggregated port on a switch. The bonded ports are connected to appropriately link aggregated switch ports.

Figure 4 Netcfg Example –
1 x 1 x N Data Networks



The following syscli sequences can be used to configure a similar setup.

To display the existing configuration:

```
syscli --list interface
```

First, delete the default bond configuration with all customer ports connected together:

```
syscli --del netcfg --devname bond0
```

Then configure bond0 for IPADDR1 and for replication source, if applicable, configure GATEWAY1:

```
syscli --add netcfg --devname bond0:1 --slaves eth1, eth2, eth3, eth4  
--ipaddr IPADDR1 --netmask NETMASK1 --gateway GATEWAY1  
--segments REP
```

Then configure eth0 for IPADDR2 and, if applicable, configure the GATEWAY2:

```
syscli --add netcfg --devname eth0:1 --ipaddr IPADDR2 --netmask  
NETMASK2 --gateway GATEWAY2 --segments REP
```

Then configure Eth5 for IPADDR3 and, if applicable, configure GATEWAY3:

```
syscli --add netcfg --devname eth5:1 --ipaddr IPADDR3 --netmask  
NETMASK3 --gateway GATEWAY3 --segments MGMT
```

When configuring replication segmentation for an interface (device) in addition to other segments on the same subnet, make sure to add a route to force the replication segment to be used exclusively for replication between a source and a target DXi.

examples:

```
syscli --add netcfg --devname eth1:1 --ipaddr IPADDR1 --netmask NETMASK1 --  
gateway GATEWAY1 --segments DATA,MGMT
```

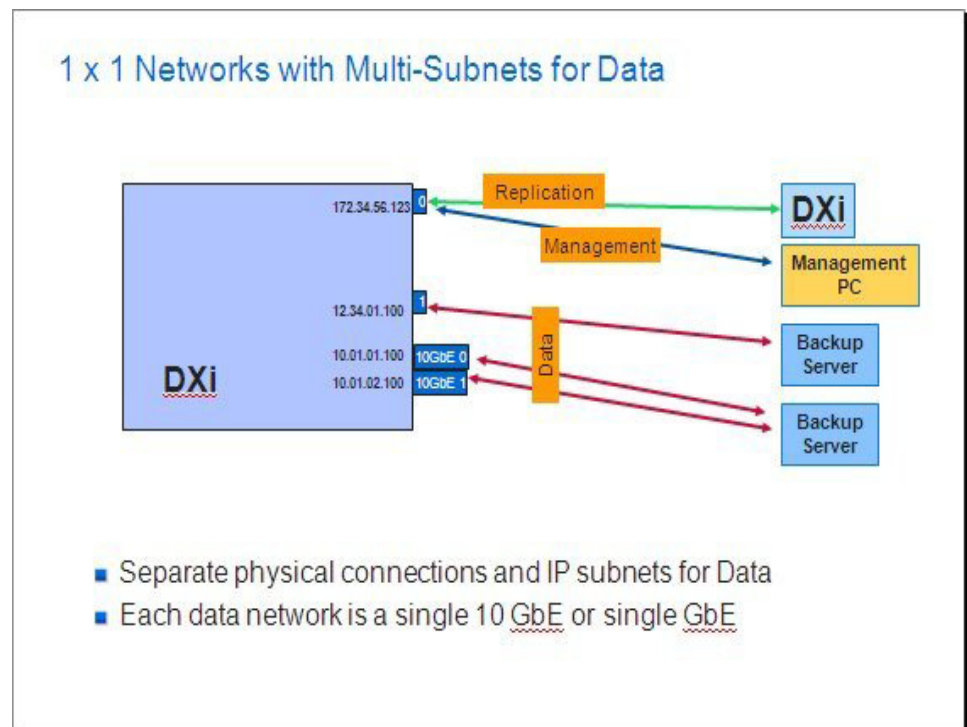
```
syscli --add netcfg --devname eth2:1 --ipaddr IPADDR2 --netmask NETMASK1 --  
gateway GATEWAY1 --segments REP
```

```
syscli --add route --devname eth2:1 --network DEST_IP_ADDRESS --netmask  
255.255.255.255 --gateway IPADDR2
```

DXi 6540/6550 With All Customer Interfaces Used Independently

Data traffic comes from two media servers going thru GbE port #1 and the two 10 GbE ports. Replication and management traffic are routed to GbE port #0.

Figure 5 Netcfg Example –
1 x 1 Networks with Multi-
Subnets for Data



The following syscli sequences can be used to configure a similar setup.

To display the existing configuration:

```
syscli --list interface
```

First, delete the default bond configuration with all customer ports connected together:

```
syscli --del netcfg --devname bond0
```

Then configure Eth0 for IPADDR1 and, if applicable, configure GATEWAY1:

```
syscli --add netcfg --devname eth0:1 --ipaddr IPADDR1 --netmask  
NETMASK1 --gateway GATEWAY1
```

Then configure Eth1 for IPADDR2 and, if applicable, configure GATEWAY2:

```
syscli --add netcfg --devname eth1:1 --ipaddr IPADDR2 --netmask  
NETMASK2 --gateway GATEWAY2
```

Deleting a Bond and Setting Up Independent Interfaces

This section provides an example for using the `netcfg` CLI command to delete a bond that has eth0 and eth1 as slaves and set them up as independent interfaces. The DXi ships with all ports bonded, and you must undo bonding if you want to use the individual Ethernet ports to communicate with other systems on separate subnets.

- 1 Display the output of the current runtime network values using `syscli --show netcfg` to list the current runtime values. (Runtime values are those values that are currently used by the network service. Values must first be configured using the add and delete netcfg commands. In order for these values to become runtime values, the system must be rebooted. This will restart the network service. You can use the `syscli --nodemanage --reboot` command to reboot the system after all network configuration has been done.)

Note: The **WARNING: No Replication IP configured** message at the bottom means that an interface was not configured specifically for replication. An interface can be configured for replication using the `--policy REP` option in the `syscli --add netcfg` command if desired.

```
[root@rok-dxi92 DXi]# syscli --show netcfg  
bond0      Link encap:Ethernet  HWaddr 00:50:56:AB:00:48  
           UP BROADCAST RUNNING MASTER MULTICAST  MTU:1500  Metric:1  
           RX packets:557471 errors:155 dropped:0 overruns:0 frame:0  
           TX packets:48114 errors:0 dropped:0 overruns:0 carrier:0  
           collisions:0 txqueuelen:0  
           RX bytes:48747984 (46.4 MiB)  TX bytes:6195223 (5.9 MiB)  
bond0:2    Link encap:Ethernet  HWaddr 00:50:56:AB:00:48  
           inet addr:10.20.185.92  Bcast:10.20.191.255  
           Mask:255.255.248.0  
           UP BROADCAST RUNNING MASTER MULTICAST  MTU:1500  Metric:1  
eth0       Link encap:Ethernet  HWaddr 00:50:56:AB:00:48  
           UP BROADCAST RUNNING SLAVE MULTICAST  MTU:1500  Metric:1  
           RX packets:278735 errors:5 dropped:0 overruns:0 frame:0  
           TX packets:24057 errors:0 dropped:0 overruns:0 carrier:0
```

```
collisions:0 txqueuelen:1000
RX bytes:24372519 (23.2 MiB) TX bytes:3113468 (2.9 MiB)
Interrupt:51 Base address:0x2080
eth1 Link encap:Ethernet HWaddr 00:50:56:AB:00:48
UP BROADCAST RUNNING SLAVE MULTICAST MTU:1500 Metric:1
RX packets:278736 errors:150 dropped:0 overruns:0 frame:0
TX packets:24057 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:1000
RX bytes:24375465 (23.2 MiB) TX bytes:3081755 (2.9 MiB)
Interrupt:67 Base address:0x20c0
lo Link encap:Local Loopback
inet addr:127.0.0.1 Mask:255.0.0.0
UP LOOPBACK RUNNING MTU:16436 Metric:1
RX packets:5872300 errors:0 dropped:0 overruns:0 frame:0
TX packets:5872300 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:0
RX bytes:564058955 (537.9 MiB) TX bytes:564058955 (537.9
MiB)
10.20.184.0/21 dev bond0 proto kernel scope link src 10.20.185.92
default via 10.20.184.1 dev bond0 src 10.20.185.92
0: from all lookup 255
32766: from all lookup main
32767: from all lookup default
WARNING: No Replication IP configured
Command completed successfully.
```

2 Delete bond0:

```
[root@rok-dxi92 DXi]# syscli --del netcfg --devname bond0
You have specified the following data for command "DelNetcfg":
--devname = bond0
Are you sure you want to proceed? [yes|no] > yes
Command completed successfully.
```

Note: This will not change the output of `syscli --show netcfg` because the add and delete `netcfg` commands only affect the network configuration files and not the runtime values.

3 Add the eth0 and eth1 interfaces:

```
[root@rok-dxi92 DXi]# syscli --add netcfg --devname eth0:1 --ipaddr
10.20.185.92 --netmask 255.255.248.0 --gateway 10.20.184.1
You have specified the following data for command "AddNetcfg":
--devname = eth0
--ipaddr = 10.20.185.92
--netmask = 255.255.248.0
```

```
--gateway = 10.20.184.1
Are you sure you want to proceed? [yes|no] > yes
Command completed successfully.
[root@rok-dxi92 DXi]# syscli --add netcfg --devname eth1:1 --ipaddr
10.20.185.117 --netmask 255.255.248.0 --gateway 10.20.184.1
You have specified the following data for command "AddNetcfg":
--devname = eth1
--ipaddr = 10.20.185.117
--netmask = 255.255.248.0
--gateway = 10.20.184.1
Are you sure you want to proceed? [yes|no] > yes
Command completed successfully.
```

4 Reboot the system using the `syscli --nodemanage --reboot` command:

```
[root@rok-dxi92 DXi]# syscli --nodemanage --reboot
You have specified the following data for command "Nodemanage":
--reboot
Are you sure you want to proceed? [yes|no] > yes
Broadcast message from root (pts/1) (Wed Jun  8 09:51:50 2011):
The system is going down for reboot NOW!
Command completed successfully.
```

5 After the system comes back up, display the runtime network values using `syscli --show netcfg`. They should now reflect the configured network values. The output should now show eth0 and eth1 as independent interfaces.

```
[root@rok-dxi92 DXi]# syscli --show netcfg
eth0      Link encap:Ethernet  HWaddr 00:50:56:AB:00:48
          inet addr:10.20.185.92  Bcast:10.20.191.255
          Mask:255.255.248.0
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:373 errors:0 dropped:0 overruns:0 frame:0
          TX packets:80 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:32420 (31.6 KiB)  TX bytes:9160 (8.9 KiB)
          Interrupt:51 Base address:0x2080
eth1      Link encap:Ethernet  HWaddr 00:50:56:AB:00:56
          inet addr:10.20.185.117  Bcast:10.20.191.255
          Mask:255.255.248.0
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:260 errors:0 dropped:0 overruns:0 frame:0
          TX packets:4 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:21262 (20.7 KiB)  TX bytes:168 (168.0 b)
```



```
Interrupt:67 Base address:0x20c0
lo      Link encap:Local Loopback
        inet addr:127.0.0.1  Mask:255.0.0.0
        UP LOOPBACK RUNNING  MTU:16436  Metric:1
        RX packets:2000 errors:0 dropped:0 overruns:0 frame:0
        TX packets:2000 errors:0 dropped:0 overruns:0 carrier:0
        collisions:0 txqueuelen:0
        RX bytes:177098 (172.9 KiB)  TX bytes:177098 (172.9 KiB)
10.20.184.0/21 dev eth0  proto kernel  scope link  src 10.20.185.92
10.20.184.0/21 dev eth1  proto kernel  scope link  src 10.20.185.117
169.254.0.0/16 dev eth1  scope link
default via 10.20.184.1 dev eth0
0:      from all lookup 255
32764:  from 10.20.185.117 lookup eth1
32765:  from 10.20.185.92 lookup eth0
32766:  from all lookup main
32767:  from all lookup default
WARNING: No Replication IP configured
Command completed successfully.
```

6 To create a bond using eth0 and eth1 as slaves, enter the following:

```
[root@rok-dxi92 DXi]# syscli --add netcfg --devname bond0:1 --ipaddr
10.20.185.92 --netmask 255.255.252.0 --gateway 10.20.184.1 --slaves
eth0,eth1 --mode RR
```

You have specified the following data for command "AddNetcfg":

```
--devname = bond0
--ipaddr = 10.20.185.92
--netmask = 255.255.252.0
--gateway = 10.20.184.1
--slaves = eth0,eth1
--mode = RR
```

Are you sure you want to proceed? [yes|no] > yes

Command completed successfully.

7 If you want to remove custom configuration such that the system is restored with the network configuration values it was shipped with, use the **syscli --undo netcfg** command. Remember to reboot the system for these values to take affect.

Note: **--undo netcfg** DEPRECATED. No longer applicable in versions 2.1 or greater.

```
[root@rok-dxi92 DXi]# syscli --undo netcfg
Are you sure you want to proceed? [yes|no] > yes
Command completed successfully.
```

Path To Tape CLI Commands

The following Path to Tape CLI commands are available:

Note: Path to Tape CLI commands are not available for the DXi V-Series and DXi4000 systems.

- [Listing the Path to Tape Initiator](#)
- [Listing the Path to Tape Ports](#)
- [Adding a Backup User](#)
- [Editing a Backup User](#)
- [Deleting a Backup User](#)
- [Deleting All Backup Users](#)
- [Listing Backup Users](#)
- [Listing Medium Changers](#)
- [Listing Tape Drives](#)
- [Scanning Devices](#)
- [Using Medium Changers](#)
- [Using Tape Drives](#)
- [Listing Fibre Channel Ports](#)
- [Setting the Fiber Channel Port Type](#)

Listing the Path to Tape Initiator

syscli --list pttinitiator

This CLI command provides a list of path to tape initiators that are present on the system.

Listing the Path to Tape Ports

syscli --list port

This CLI command provides a list of initiator and target ports that are present on the system. The output parameters, Row and Column, of this command give the relative node port location in row and column, respectively.

Adding a Backup User

syscli --add backupuser --name <backup_user_name> --password <backup_user_password> [--desc <description>]

This CLI command allows the admin user to add a backup application user.

- **--desc:** user description. Enclosed in double quotes if string contains spaces or special characters.

Editing a Backup User

```
syscli --edit backupuser --name <backup_user_name> --password  
<backup_user_password> [--desc <description>]
```

This CLI command allows the admin user to edit a backup application user.

- **--desc**: user description. Enclosed in double quotes if string contains spaces or special characters.

Deleting a Backup User

```
syscli --del backupuser --name <backup_user_name>
```

This CLI command allows the admin user to delete a backup application user.

Deleting All Backup Users

```
syscli --deleteall backupuser [--sure]
```

This CLI command allows the admin user to delete all existing backup application users.

Listing Backup Users

```
syscli --list backupuser
```

This CLI command provides a list of backup application users.

Listing Medium Changers

```
syscli --list medchanger
```

This CLI command provides a list of medium changers that are present on the system now.

Note: This command only lists PTT (path-to-tape) devices. To see a list of VTL (virtual tape library) devices, use the **--list vtl** command (see [Listing Existing VTL and Its Attributes](#) on page 12).

Listing Tape Drives

```
syscli --list tapedrive --serialnumber <serialnumber>
```

This CLI command provides a list of tape drives that are present on a given physical library.

- **--serialnumber**: Must be a valid physical library serial number. Use **--list medchanger** to get all available medium changer serial numbers.

Scanning Devices

```
syscli --scan device
```

This CLI command allows the admin user to detect any physical tape library attached to the system.

Using Medium Changers

```
syscli --use medchanger --sernum <medium changer serial number> --usetype {backupapplicationspecific | ignore}
```

This CLI command allows the admin user to set the intended use for the specified medium changer.

- **--use:** Set the intended use for the specified medium changer.
- **--sernum:** Must be a valid serial number of the medium changer. Use the **--list medchanger** command to get all the medium changer serial numbers.
- **--usetype:** Type of intended use for the medium changer.

Using Tape Drives

```
syscli --use tapedrive --sernum <tape drive serial number> --usetype {backupapplicationspecific | ignore}
```

This CLI command allows the admin user to set the intended use for the specified tape drive.

- **--use:** Set the intended use for the specified tape drive.
- **--sernum:** Must be a valid serial number of the tape drive. Use the **--list tapedrive** command to get all the tape drive serial numbers.
- **--usetype:** Type of intended use for the tape drive.

Listing Fibre Channel Ports

```
syscli --list fcport
```

This CLI will list only the fibre channel (FC) ports. The results could be empty if the proper licenses or FC board is not present.

Note: If you see `Changeable = yes` in the output of this CLI command, that refers to the fact that the FC port **type** can be changed from **initiator** to **target** or from **target** to **initiator** by the **--set fcport** command.

The **--list** option lists all FC ports present on the system.

Setting the Fiber Channel Port Type

```
syscli --set fcport --alias <port_alias> --type initiator|target [--sure]
```

This CLI sets the specified Fibre Channel port to either **initiator** or **target**.

The port can only be changed on inactive connections. If it is necessary to change a port, make sure that the port is disconnected before executing this command. The **--list fcport** command can be used to determine if a port can change or not (changeable).

Port names can be found by using **--list fcport** command.

CLI command options:

- **--set:** Sets fc port to either initiator or target.
- **--alias:** The alias/name of the port (use **--list fcport** to find alias name).
- **--type:** The port can be set to either an initiator or a target.

- **--sure**: if specified, the command will execute immediately without asking for confirmation.

Date and Time CLI Commands

The following sections describe the supported date and time CLI commands:

- [Getting the Date and Time](#)
- [Setting the Date and Time](#)
- [Displaying the NTP Server](#)
- [Displaying the Time Zone](#)

Getting the Date and Time

syscli --get datetime

This CLI command returns the system date, time, time zone, time format and NTP server information.

Setting the Date and Time

syscli --set datetime [--ntpserver <ntpserver> | { --date <yyyymmdd> --time <time>}] [--timeformat 12|24] [--timezoneid <time zone id>] [--sure]

This CLI command allows the admin user to set the system date and time using NTP or manually. The user can specify either (a) the name or IP address of an NTP server that the system date and time will be synchronized with, or (b) both the new date and time.

CLI command options:

- **--set**: Sets the date and time of the system using NTP or manually.
- **--ntpserver**: NTP server to be used to set date and time.
- **--date**: date specified in 8 digit format: yyyymmdd.
- **--time**: time is specified as HH:MM:SS for 24-hour or HH:MM:SS am/pm for 12-hour
- **--timeformat**: Timeformat to be set, either 12-hour or 24-hour format.
- **--timezoneid**: ID of time zone to be set. For a list of time zone IDs, run command "syscli --list timezone".
- **--sure**: if specified, the command will execute immediately without asking for confirmation.

Displaying the NTP Server

syscli --list ntpserver

This CLI command lists the public NTP server pool.

Displaying the Time Zone

syscli --list timezone [--matching <pattern>]

This CLI command allows the user to list information for all time zones. If matching <pattern> is specified, list only time zones that have their time zone filenames match the specified pattern such as pacific, central, bangkok, etc. The match is case insensitive.

Status CLI Commands

The following sections describe the supported Status CLI commands:

- [Getting VTL Performance](#)
- [Getting Tape Drive Status](#)
- [Getting Storage Slot Status](#)
- [Getting the VTL Logical View Status](#)
- [Getting the Common Component Status](#)
- [Getting Storage Array Status](#)
- [Getting Hardware System Component Status](#)
- [Getting System Board Status](#)
- [Getting Network Port Status](#)
- [Getting Detailed Storage Array Status](#)
- [Getting System Memory Usage Statistics](#)

Getting VTL Performance

syscli --getstatus vtlperf --vtl <VTL_name>

This CLI command returns the VTL's average write speed.

Getting Tape Drive Status

syscli --getstatus tapedrive --vtl <VTL_name> [--drive <drive>]

This CLI command returns the status of the tape drives of the specified VTL. An optional drive can be specified using the serial number of the drive to show the status of a specific drive.

Getting Storage Slot Status

syscli --getstatus storageslot --vtl <VTL_name> [--barcode <barcode>]

This CLI command returns the status of the storage slots of the specified VTL. If the optional barcode is specified, the status of the storage slot of the specified barcode is displayed.

Getting the VTL Logical View Status

syscli --getstatus vtllogical [--vtl <VTL_name>]

This CLI command returns the logical view of the VTL(s). If an optional VTL name is specified, only that VTL's logical view is displayed.

Getting the Common Component Status

syscli --getstatus commoncomponent [--storagearray]

This CLI command returns the status of the common hardware components of the system. If the optional **--storagearray** option is specified...(TBD)

Getting Storage Array Status

syscli --getstatus storagearray

This CLI command displays the status of all the storage arrays.

Getting Hardware System Component Status

syscli --getstatus syscomponent [--systemboard | --networkport]

This CLI command returns the status of the hardware system components.

Getting System Board Status

syscli --getstatus systemboard

This CLI command displays the detailed status of the system board components.

Getting Network Port Status

syscli --getstatus networkport

This CLI command displays the detailed status of the network ports.

Getting Detailed Storage Array Status

syscli --getstatus storagearraydetails --name <storagearrayname>

This CLI command displays the detailed status of the specified storage array.

Getting System Memory Usage Statistics

syscli --getstatus systemmemory

This CLI command displays the memory usage statistics of the system. The output reports Total Memory and Free Memory.

Alert CLI Commands

The following sections describe the supported Alert CLI commands:

- [Deleting an Administration Alert](#)
- [Deleting All Administration Alerts](#)
- [Editing the Service Ticket Analysis](#)
- [Listing the Administration Alerts](#)
- [Listing the Service Tickets](#)
- [Sending the Service Ticket Analysis](#)
- [Showing the Service Ticket Analysis](#)
- [Showing the Service Ticket Details](#)
- [Closing All Service Tickets](#)

Deleting an Administration Alert

syscli --del adminalert (--alert <alert_name>)

This CLI command allows the admin user to delete an administration alert.

Deleting All Administration Alerts

syscli --deleteall adminalert [--sure]

This CLI command allows the admin user to delete all existing administration alerts.

Editing the Service Ticket Analysis

syscli --edit ticketanalysis --ticketnum <ticketnum> [--textline <text> | --textfile <text_file_name>] [--close]

This CLI command allows the admin user to edit the service ticket analysis.

Listing the Administration Alerts

syscli --list adminalert [--alert <alert_item>]

This CLI command allows the user to list the administration alerts.

Listing the Service Tickets

syscli --list serviceticket [--all | --closed | --open] [--ticketnum <ticketnum>]

This CLI command allows the user to list the service tickets.

Sending the Service Ticket Analysis

syscli --send ticketanalysis --ticketnum <ticketnum> --recipient <email_recipient> [--comment <comment>]

This CLI command allows the admin user to send the service ticket analysis.

Showing the Service Ticket Analysis

syscli --show ticketanalysis --ticketnum <ticketnum>

This CLI command allows the admin user to show the service ticket analysis.

Showing the Service Ticket Details

syscli --show ticketdetail --ticketnum <ticketnum>

This CLI command allows the user to show the service ticket details.

Closing All Service Tickets

syscli --closeall ticket [--sure]

This CLI command allows the admin user to close all existing service tickets.

Analyzer CLI Commands

The following sections describe the supported Analyzer CLI commands:

- [Analyzing the Network](#)
- [Enabling or Disabling the NetServer to Perform a Network Analysis](#)
- [Performing a Disk Analysis on the System](#)
- [Displaying the NetServer Status](#)
- [Displaying the Last Run Result of the Disk/Network Analysis](#)

Analyzing the Network

syscli --analyze network --ipaddress <ipaddress>

This CLI command allows the admin user to perform a network analysis of this system with another system. NetServer should be enabled on the other system specified in the 'ipaddress' options using the **--set netserver** command.

Enabling or Disabling the NetServer to Perform a Network Analysis

syscli --set netserver --enable | --disable

This CLI command allows the admin user to enable or disable the NetServer on the system to perform a network analysis.

Performing a Disk Analysis on the System

syscli --analyze disk

This CLI command performs a disk analysis on the system.

Displaying the NetServer Status

syscli --getstatus netserver

This CLI command displays whether NetServer is enabled or disabled on the system.

Displaying the Last Run Result of the Disk/Network Analysis

syscli --show throughput --disk | --network

This CLI command displays the last run result of the disk/network analysis.

Health Check CLI Commands

The following sections describe the supported Health Check CLI commands:

- [Starting a Health Check](#)
- [Stopping a Health Check](#)
- [Listing the Health Check Status](#)
- [Editing the Health Check](#)
- [Getting the General Status of System Health Checks](#)

Starting a Health Check

syscli --start healthcheck

This CLI command allows the admin user to start a healthcheck on the system if it is not running.

Stopping a Health Check

syscli --stop healthcheck

This CLI command allows the admin user to stop a healthcheck on the system if it is running.

Listing the Health Check Status

syscli --list healthcheckstatus

This CLI command lists the healthcheck status of certain components in the system.

Sample output:

```
bash-3.2$ syscli --list healthcheckstatus
```

Output data:

Healthcheck Status

Total count = 2

HealthCheck = 1

```
Healthcheck Name = De-Duplication
State = enabled
Started = Sun Dec 19 05:00:05 2010
Finished = Sun Dec 19 05:00:05 2010
Status = Success
HealthCheck = 2
Healthcheck Name = Integrity
State = enabled
Started = Sun Dec 19 05:00:08 2010
Finished = Sun Dec 19 05:00:08 2010
Status = Success
Command completed successfully.
```

Editing the Health Check

syscli --edit healthcheck --name <healthcheck_name> --enable | --disable
This CLI command allows the admin user to enable or disable the health check on a specified healthcheck name.

Getting the General Status of System Health Checks

syscli --getstatus healthcheck
This CLI command displays the general status of system health checks.
Sample:
bash-3.2\$ syscli --getstatus healthcheck
Output data:
General Healthchecks
Status = Success
Progress = 100 %
Start Time = Sun Dec 19 05:00:04 2010
End Time = Sun Dec 19 05:00:09 2010
Command completed successfully.

