

Dell FluidFS NAS Solutions CLI Reference Guide



Notes, Cautions, and Warnings



NOTE: A NOTE indicates important information that helps you make better use of your computer.



CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.



WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

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Command Line Interface

Overview

The NAS cluster solution Command Line Interface (CLI) provides a convenient way to manage the NAS cluster solution. It can be used to configure subsystems, manage administrative users, enable licensed features, and to monitor the system. The CLI contains a set of commands to view, edit, add, delete, enable, disable, and set NAS cluster solution entities, such as exports, shares, volumes, and accounts.

From the CLI, you can enter a specific menu and then execute its commands, as required. The following commands are available throughout the system:


- **help**—lists the currently available menus or commands. At any moment while using the CLI, you can either type `help` or type `?` to see the available options/menus.
- **back**—moves back one level in the menu hierarchy.
- **main**—returns to the main menu.
- **exit**—exits the NAS cluster solution CLI.

Accessing The CLI

To access the CLI from an administrator workstation, use an SSH client, and connect to the NAS Management VIP address you specified during cluster setup.

In a Linux prompt, run the command: `ssh admin@<ipaddress>`.

A **Welcome** window is displayed, listing the installed software version and the available commands in the top level menu.

 **NOTE:** Tab completion is available: type the first few characters of the command or menu name and press the <Tab>. The name is completed to the longest unambiguous sub-string. Press the <Tab> again to see the available commands beginning with the given string.

For example, to access a system that was defined with a NAS Management VIP of 10.10.1.200:

```
# ssh admin@10.10.1.200
The authenticity of host '10.10.1.200 (10.10.1.200)' can't be established.
RSA key fingerprint is:
1b:13:7c:9d:12:e2:74:69:4e:8c:93:75:1a:93:94:b5.
Are you sure you want to continue connecting
(yes/no)? yes
Failed to add the host to the list of known hosts
(/users/john/.ssh/known_hosts).
admin@172.41.2.202's password: Stor@ge!
Last login: Sun Dec 26 03:04:51 from 172.41.200.12
Welcome to "NX3600-sup3" (1.0.326)
Installed on Thu Dec 23 07:38:45 IST 2010
Hello admin, welcome to the NAS Manager command
line interface (version 1.0.366)!
```

Navigating The CLI

You can navigate in the CLI in two ways:

- one menu item at a time
- single line command

One Menu At A Time

To navigate through the CLI one menu at a time:


1. Type the `<main menu name>` and press the `<Enter>` key.
The available menu items and commands under the main menu is displayed.
2. Type the `<sub menu name>` and press the `<Enter>` key.
The available menu items and commands under the sub-menu is displayed.
3. Type the `<command>` and press the `<Enter>` key.
The command is executed.

Single Line Command

To navigate to a sub-menu or execute a command in available in the sub-menu using a single command:

Type the `<main menu name>` `<sub menu name>` `<command>` and press the `<Enter>` key.
The command is executed.

Understanding The CLI Command Syntax

 **NOTE:** Unless mentioned otherwise, all the commands are relevant to both Dell PowerVault NX3500/NX3600/NX3610 NAS Solutions and Dell Compellent FS8600 NAS Solution.

The structure of a single line CLI command as given in this document is:

```
<Cluster name> CLI > mainmenu submenu(s) command arguments [options]
```

Where:

- `<Cluster name>`—is the name of the cluster on which you are logged in.
- `CLI >`—is the command prompt where you type in the command syntax
- `main menu`—is the name of the top level menu.
- `sub menu(s)` —is the name of the sub-menu. Certain menus have multiple levels of sub-menus.
- `command`—is the name of the command that you want to execute.
- **arguments**—are the arguments that you must enter with the command to execute the command successfully. The arguments for a command are always displayed on the CLI in bold font. You may have none or multiple arguments depending on the command that you want to execute. You must enter the arguments for a command in the correct order.
- `[options]`—are the options that you have available for a command. Depending on the command that you want to execute, you may need to enter at least one of the available options for the command to execute successfully. You may have none or multiple options depending on the command that you want to execute.

 **CAUTION:** The menu names and commands are case sensitive. Enter the commands exactly as shown in the guide.

For example:

```
<CN-1> CLI > access quota rules edit volume type [options]
```

- **access**—is the name of the top level menu.
- **quota**—is the name of the sub-menu under **access**.
- **rules**—is the name of the sub-menu under **quota**.
- **edit**—is the name of the command under sub-menu **rules**.
- **volume type**—are the arguments that you must enter with the **edit** command to execute the command successfully.
- **[options]**—are the options that you have available for a command. You need not enter the options for the command to execute successfully. You may have none or multiple arguments depending on the command that you want to execute. Each option for a command must be preceded by a hyphen (-).

To execute the above example successfully the syntax of the command must be:

```
access quota rules edit voll user -name testname -userSoftDef disabled -  
userHardDef unlimited
```

CLI Menu Options

The following menus and menu options are available with the NAS cluster solution.

Menu	Menu or Command Options
data-protection	<p>The data-protection menu lets you set the backup and snapshot configuration to protect your data. It includes the following menus:</p> <ul style="list-style-type: none">• replication• snapshots• antivirus• ndmp
system	<p>The system menu lets you configure various system-wide properties. It includes the following menus:</p> <ul style="list-style-type: none">• general• time-configuration• monitoring-configuration• maintenance• protocols• authentication• networking
access	<p>The access menu lets you define quotas, file system options, and configure NAS volumes. It includes the following menus:</p> <ul style="list-style-type: none">• quota• cifs-shares• cifs-home-share• nfs-exports• nas-volumes

Menu	Menu or Command Options
events	<p>The events menu lets you monitor your Dell Fluid File System by detecting normal and abnormal events. It includes the following commands:</p> <ul style="list-style-type: none"> • export-events-list • less • tail
monitor	<p>The monitor menu lets you monitor your Dell Fluid File System. It includes the following menus:</p> <ul style="list-style-type: none"> • quota • traffic-statistics • replication • connections • export-data • system-validation • hardware-components
diag	<p>The diag menu lets you run the diagnostics on your NAS solution. It includes the following commands:</p> <ul style="list-style-type: none"> • diagtool • check-ping-to-host • list • start
service-pack	<p>The service-pack menu lets you update the NAS solution firmware and check its installation status. It includes the following commands:</p> <ul style="list-style-type: none"> • instructions • status • start

Protecting Data

Data protection is an important and integral part of any storage infrastructure. You can configure various methods for protecting the data in your Dell Fluid File System using the **data-protection** menu in the CLI including:

- Replication—NAS replication is based on Dell Fluid File System snapshot technology. It uses snapshots to identify the changes between two adjacent snapshots, and only copies the modified blocks.
- Snapshots—Snapshots are images of all the data frozen at a specific point-in-time as read-only. Snapshots provide you with instant data backup, enabling easy access and restore capabilities by the end-user. They are your first level of defense when protecting your organization's data.
- Antivirus—The NAS cluster solution contains integration with industry standard ICAP-enabled antivirus software to ensure files written from CIFS clients are virus-free.
- NDMP—The NAS cluster solution supports backup and restore using Network Data Management Protocol (NDMP). An NDMP agent installed on the NAS cluster solution ensures that stored data can be backed up and restored using an industry-standard Data Management Application (DMA) that supports NDMP protocol, without needing to install vendor-specific agents on the NAS appliance.

The data-protection menu lets you set the backup and snapshot configuration to protect your data. The menus under **data-protection** are

- replication
- snapshots
- antivirus
- ndmp

replication

The menus available under `replication` are:

- nas-replication
- partner-systems

nas-replication

The menu under `nas-replication` is `policy`.

The commands available under `nas-replication` are:

- resume
- enable
- add
- view_history
- pause
- remove-from-replication
- view
- cancel

- replicate-now
- disable
- list

policy

The commands available under `policy` are:

- set-weekly-policy
- view
- set-daily-policy
- set-hourly-policy
- set-type

set-weekly-policy

Description

This command sets the policy for weekly snapshot creation for a specified NAS volume. You must define the number of snapshots that must be maintained for the weekly scheduler.

Syntax

```
data-protection snapshots policies set-weekly-policy volume status [options]
```

Where the arguments are:

<code>volume</code>	NAS volume to set
<code>status</code>	Set status for weekly scheduler (on/off)

The options are:

<code>[-weeklyday weeklyday]</code>	Day of the week to snapshot at, days are 0-6 (0 = Monday, 6 = Sunday)
<code>[-weeklystarttimehour weeklystarttimehour]</code>	Offset hour of the day to snapshot at, 0-23
<code>[-weeklystarttimemin weeklystarttimemin]</code>	Offset minute of the hour to snapshot at, 0-59
<code>[-weeklykeep weeklykeep]</code>	Number of snapshots to keep for the weekly scheduler

view

Description

This command displays the type of NAS policy between the source and destination NAS volumes.

Syntax

```
data-protection replication nas-replication policy view source destination
```

where the arguments are:

source	The source NAS volume in following format: (volume name)@(system name)
destination	The destination NAS volume in following format: (volume name)@(system name)

set-daily-policy

Description

This command sets the policy for daily snapshot creation for a specified NAS volume. You must define the number of snapshots that must be maintained for the daily scheduler.

Syntax

```
data-protection snapshots policies set-daily-policy volume status [options]
```

Where the arguments are:

volume	NAS volume to set
status	Set status for daily scheduler (on/off)

the options are:

[-dailyall/-nodailyall]	Enable/disable snapshot on every day
[-dailyat dailyat]	Comma separated list of days to snapshot at, days are 0-6 (0 = Monday, 6 = Sunday)
[-dailystarttimehour dailystarttimehour]	Offset hour of the day to snapshot at, 0-23
[-dailystarttimemin dailystarttimemin]	Offset minute of the hour to snapshot at, 0-59
[-dailykeep dailykeep]	Number of snapshots to keep for the daily scheduler

set-hourly-policy

Description

This command sets the policy for hourly snapshot creation for a specified NAS volume. You must define the number of snapshots that must be maintained for the hourly scheduler.

Syntax

```
data-protection snapshots policies set-hourly-policy volume status [options]
```

Where the arguments are:

volume	NAS volume to set
status	Set status for hourly scheduler (on/off)

The options are:

<code>[-hourlyall/-nohourlyall]</code>	Enable/disable snapshot on every hour
<code>[-hourlyat hourlyat]</code>	Comma separated list of hours to snapshot at, hours are 0-23
<code>[-hourlystartmin hourlystartmin]</code>	Offset minute of hour to snapshot at, 0-59
<code>[-hourlykeep hourlykeep]</code>	Number of snapshots to keep for hourly scheduler

set-type

Description

This command sets the type of schedule for the replication policy between the source and destination NAS volumes.

Syntax

```
data-protection replication nas-replication policy set-type source destination type
```

where the arguments are:

<code>source</code>	The source NAS volume in following format: (volume name)@(system name)
<code>destination</code>	The destination NAS volume in following format: (volume name)@(system name)
<code>type</code>	The schedule of the required policy, optional values are: NotScheduled, Hourly, Daily, Weekly

resume

Description

This command resumes a paused replication operation.

Syntax

```
data-protection replication nas-replication resume source destination
```

where the arguments are:

<code>source</code>	The source NAS volume in the following format: (volume name)@(system name)
<code>destination</code>	The destination NAS volume in the following format: (volume name)@(system name)

enable

Description

This command enables the replication partnership between the source and destination NAS volumes.

Syntax

```
data-protection replication nas-replication enable source destination
```

where the arguments are

source	The source NAS volume in the following format: (volume name)@(system name)
destination	The destination NAS volume in the following format: (volume name)@(system name)

add

Description

This command creates a replication partnership between the source volume on the source cluster and the destination volume on the destination cluster.

Syntax

```
data-protection replication nas-replication add source_volume
destination_system [options]
```

where the arguments are:

source_volume	The source NAS volume on the current system
destination_system	The destination system from the configured replication partnership or "localhost" for current system

where the options are:

[-destination_volume destinationVolume]	The destination NAS volume on the destination cluster
--	---

view_history

Description

This command displays the replication history between a source and destination NAS volumes.

Syntax

```
data-protection replication nas-replication view_history source destination
```

Where the arguments are:

source	The source NAS volume in the following format: (volume name)@(system name)
destination	The destination NAS volume in the following format: (volume name)@(system name)

pause

Description

This command pauses an active replication operation.

Syntax

```
data-protection replication nas-replication pause source destination
```

Where the arguments are:

source	The source NAS volume in the following format: (volume name)@(system name)
destination	The destination NAS volume in the following format: (volume name)@(system name)

replicate-now

Description

This command starts the replication operation between the source and destination NAS volumes.

Syntax

```
data-protection replication nas-replication replicate-now source destination
```

Where the arguments are:

source	The source NAS volume in the following format: (volume name)@(system name)
destination	The destination NAS volume in the following format: (volume name)@(system name)

disable

Description

This command disables file-system health scan throttling.

Syntax

```
system general background-operations health-scans disable
```

list

Description

This command lists the existing defined replications for the NAS appliance.

Syntax

```
data-protection replication nas-replication list
```

partner-systems

The commands available under `partner-systems` are:

- add
- view
- edit
- remove-partnership
- list

add

Description

This command adds a replication partnership between the source system and remote system.

Syntax

```
data-protection replication partner-systems add user_name  
remote_mgmt_console_VIP
```

Where the arguments are:

<code>user_name</code>	The administrator user name of the remote cluster
<code>remote_mgmt_console_VIP</code>	The IP/Name of the remote cluster mgmt console

view

Description

This command displays a list of the replication partners trusted by the selected system.

Syntax

```
data-protection replication partner-systems view system_name
```

Where the argument is:

<code>system_name</code>	- The name of the remote replication partner to view
--------------------------	--

edit

Description

This command allows you to change certain parameters in the replication partnership. You can change the system name, username, or the remote NAS management VIP.

Syntax

```
data-protection replication partner-systems edit system_name user_name [options]
```

here the arguments are:

<code>system_name</code>	The name of the remote replication partner to edit
<code>user_name</code>	The administrator user name of the remote cluster

the option is:

<code>[-remote_mgmt_console_VIP remoteMgmtVIP]</code>	The IP/Name of the remote cluster mgmt console
---	--

remove-partnership

Description

This command removes a system's replication partner from the replication partner list. You can enter multiple system names, each separated by a comma.

Syntax

```
data-protection replication partner-systems remove-partnership system_name (s)
```

Where the argument is :

<code>system_name(s)</code>	The name (or comma separated names list) of the remote replication partner(s) to remove
-----------------------------	---

list

Description

This command lists the currently defined replication partners.

Syntax

```
data-protection replication partner-systems list
```

snapshots

The menus under `snapshots` are:

- actions
- policies

The command available under `snapshots` is `revert`.

revert

Description

This command reverts the data in the selected NAS volume to the contents of the selected snapshot.

Syntax

```
data-protection snapshots revert volumes snap-name
```

Where the arguments are:

<code>volume</code>	NAS volume name to be reverted
<code>snap-name</code>	Snapshot name for reverting

actions

The commands available under `actions` are:

- rename
- create
- view
- delete
- view-delta
- list
- list-vol

rename

Description

This command renames an existing snapshot for a specified NAS volume.

Syntax

```
data-protection snapshots actions rename volume snap_name new_snap_name
```

Where the arguments are:

volume	The NAS volumes name
snap_name	The current snapshot name
new_snap_name	The new snapshot name

create

Description

This command creates a snapshot of the specified NAS volume. You must have unique names for each snapshot.

Syntax

```
data-protection snapshots actions create volume snap_name
```

Where the arguments are:

volume	The NAS volumes name
snap_name	The current snapshot name

view

Description

This command displays the size of the specified snapshot and the date and time when the snapshot was created for the specified NAS volume.

Syntax

```
data-protection snapshots actions view volume snap_name
```

Where the arguments are:

volume	The NAS volumes name
snap_name	The current snapshot name

delete

Description

This command deletes the specified snapshot for the specified NAS volume.

Syntax

```
data-protection snapshots actions delete volume snap_name
```

Where the arguments are:

volume	The NAS volumes name
snap_name	The current snapshot name

view-delta

Description

This command displays the difference in size (in MB) of the snapshot from when it was first created.

Syntax

```
data-protection snapshots actions view-delta volume snap_name
```

Where the arguments are:

volume	The NAS volumes name
snap_name	The current snapshot name

list

Description

This command lists all existing snapshots created for each NAS volume.

Syntax

```
data-protection snapshots actions list
```

list-vol

Description

This command displays the snapshots created for a specified NAS volume.

Syntax

```
data-protection snapshots actions list-vol volume
```

where the argument is:

volume	The NAS volumes name
--------	----------------------

policies

The commands available under `policies` are:

- set-weekly-policy
- set-periodic-policy
- view
- set-daily-policy
- set-snapshot-space-thresholds
- set-hourly-policy

set-weekly-policy

Description

This command sets the policy for weekly snapshot creation for a specified NAS volume. You must define the number of snapshots that must be maintained for the weekly scheduler.

Syntax

```
data-protection snapshots policies set-weekly-policy volume status [options]
```

Where the arguments are:

volume	NAS volume to set
status	Set status for weekly scheduler (on/off)

The options are:

[-weeklyday weeklyday]	Day of the week to snapshot at, days are 0-6 (0 = Monday, 6 = Sunday)
[-weeklystarttimehour weeklystarttimehour]	Offset hour of the day to snapshot at, 0-23
[-weeklystarttimemin weeklystarttimemin]	Offset minute of the hour to snapshot at, 0-59
[-weeklykeep weeklykeep]	Number of snapshots to keep for the weekly scheduler

set-periodic-policy

Description

This command sets the policy for snapshot creation after a set time interval (5, 10, 15, 20 or 30 minutes). You must define the number of snapshots that must be maintained for the weekly scheduler.

Syntax

data-protection snapshots policies set-periodic-policy **volume status** [options]

Where the arguments are:

volume	NAS volume to set
status	- Set status for periodic scheduler (on/off)

the options are:

[-periodicinterval periodicallyinterval]	Interval in minutes between snapshots: 5, 10, 15, 20 or 30
[-periodickeep periodicallykeep]	Number of snapshots to keep for the periodic scheduler

view

Description

This command displays all the snapshots scheduled (weekly, daily, hourly, or periodically), the alert and auto-delete thresholds, and the status of each scheduled snapshot for a specified NAS volume.

Syntax

data-protection snapshots policies view **volume**

Where the argument is :

volume	NAS volume to be viewed
--------	-------------------------

set-daily-policy

Description

This command sets the policy for daily snapshot creation for a specified NAS volume. You must define the number of snapshots that must be maintained for the daily scheduler.

Syntax

```
data-protection snapshots policies set-daily-policy volume status [options]
```

Where the arguments are:

volume	NAS volume to set
status	Set status for daily scheduler (on/off)

the options are:

[-dailyall/-nodailyall]	Enable/disable snapshot on every day
[-dailyat dailyat]	Comma separated list of days to snapshot at, days are 0-6 (0 = Monday, 6 = Sunday)
[-dailystarttimehour dailystarttimehour]	Offset hour of the day to snapshot at, 0-23
[-dailystarttimemin dailystarttimemin]	Offset minute of the hour to snapshot at, 0-59
[-dailykeep dailykeep]	Number of snapshots to keep for the daily scheduler

set-snapshot-space-thresholds

Description

This command sets the space thresholds for generation of alerts and auto deletion of snapshots. The thresholds are a % of the snapshot space.

Syntax

```
data-protection snapshots policies set-snapshot-space-thresholds volume  
[options]
```

Where the argument is:

volume	NAS volume to set
--------	-------------------

The options are:

[-alert alertThreshold]	Alert when the snapshot space is above threshold. Value is the percentage of the snapshot space (0 - 99) or None.
[-autoloaded autodeleteThreshold]	Start autodelete when the snapshot space above threshold. Value is the percentage of the snapshot space (0 - 99) or None.

set-hourly-policy

Description

This command sets the policy for hourly snapshot creation for a specified NAS volume. You must define the number of snapshots that must be maintained for the hourly scheduler.

Syntax

```
data-protection snapshots policies set-hourly-policy volume status [options]
```

Where the arguments are:

volume	NAS volume to set
status	Set status for hourly scheduler (on/off)

The options are:

[-hourlyall/-nohourlyall]	Enable/disable snapshot on every hour
[-hourlyat hourlyat]	Comma separated list of hours to snapshot at, hours are 0-23
[-hourlystartmin hourlystartmin]	Offset minute of hour to snapshot at, 0-59
[-hourlykeep hourlykeep]	Number of snapshots to keep for hourly scheduler

antivirus

The menu under `antivirus` is `hosts`.

hosts

The commands available under `hosts` are:

- view
- set

view

Description

This command displays existing antivirus hosts.

Syntax

```
data-protection antivirus hosts view
```

set

Description

This command sets the host port pairs.

Syntax

```
data-protection antivirus hosts set hosts
```


Where the argument is:

hosts

The comma separated list of host:port pairs. Use **none** to clear the list

ndmp

The menus available under ndmp are:

- active-jobs
- configuration

active-jobs

The commands available under active-jobs are:

- view
- kill
- list

view

Description

This command displays the active backup or restore operations by session ids.

Syntax

```
data-protection ndmp active-jobs view Session-id
```

Where the argument is :

Session-id

The id of the backup or restore job

kill

Description

This command terminates an active backup or restore operation.

Syntax

```
data-protection ndmp active-jobs kill Session-id
```

Where the argument is :

Session-id

The id of the backup or restore job

list

Description

This command lists all the active backup or restore operations.

Syntax

```
data-protection ndmp active-jobs list
```

configuration

The commands available under configuration are:

- view
- set

view

Description

This command displays the NDMP configuration for the current user.

Syntax

```
data-protection ndmp configuration view
```

set

Description

This command allows you to change NDMP configuration for the backup username.

Syntax

```
data-protection ndmp configuration set [options]
```

Where the options are:

<code>[-DMAServers DMAServers]</code>	DMA servers or use none in order to clear the DMA servers list
<code>[-Username Username]</code>	Username
<code>[-Password Password]</code>	Password
<code>[-ClientPort ClientPort]</code>	ClientPort
<code>[-Enabled/-noEnabled]</code>	Enabled/Disabled

Managing The System

You can manage your system wide settings from the **system** menu in the CLI. The management tasks include:

- viewing and setting general system information
- configuring the file system and network parameters
- setting the required protocols
- configuring authentication settings

The **system** menu lets you configure various system-wide properties. The menus under `system` are:

- **general**—You can view the system information, manage user and administrators accounts, and manage the premium feature key licenses using the **general** menu .
- **time-configuration**—You can configure the system's time clock, determine how to automatically update time using an NTP server, and configure the time zone for your system using the **time-configuration** menu. Synchronizing the time clock is critical for the proper functioning of the system.
- **monitoring-configuration**—You can configure e-mail alerts and SNMP on your cluster. FluidFS uses e-mail as the basis for alerting and remote support and allows SNMP-compatible management functions such as device discovery, monitoring, and event generation.
- **maintenance**—You can start and stop your file system, manage the LUNs, setup backups for your file systems, and maintain your controllers and NAS appliance components using the **maintenance** menu.
- **protocols**—You can enable Windows users to connect to the NAS cluster solution system using the CIFS protocol. You can also enable Linux users to access the system using the CIFS protocol, and authenticate them through NIS, LDAP or the NAS cluster solution local users using the **protocols** menu.
- **authentication**—You can configure the authentication authorities, such as Network Information Services (NIS), Active Directory (AD) and Lightweight Directory Access Protocol (LDAP). In addition, you can manage local users and groups and map user names from Windows SIDs to UNIX UIDs using the **authentication** menu.
- **networking**—You can configure your system to best suit your network using the **networking** menu. You can configure your management and client network Virtual IP addresses, manager various subnets on your cluster, configure DNS for your cluster, and so on.

general

The menus under `general` are:

- info
- background-operations
- administrators
- cluster-name
- licensing

info

The commands available under `info` are:

- system-version

- cluster-id

system-version

The command under `system-version` is `view`.

view

Description

This command displays the system version.

Syntax

```
system general info system-version view
```

cluster-id

The command under `cluster-id` is `view`.

view

Description

This command displays the cluster ID.

Syntax

```
system general cluster-id view
```

background-operations

The menu under `background-operations` is `health-scans`.

health-scans

The commands available under `health-scans` are:

- view-throttling-level
- set-throttling-level
- enable
- view
- disable

view-throttling-level

Description

This command displays the current file-system health scan throttling level.

Syntax

```
system general background-operations health-scans view-throttling-level
```

set-throttling-level

Description

This command sets the file-system health scan throttling level.

Syntax

```
system general background-operations health-scans set-throttling-level level
```

Where the argument is:

level Background file-system health scan throttling level. The levels can be low, normal, high, or unlimited.

enable

Description

This command enables file-system health scan throttling.

Syntax

```
system general background-operations health-scans enable
```

view

Description

This command displays the current status for file-system health scan throttling.

Syntax

```
system general background-operations health-scans view
```

disable

Description

This command disables file-system health scan throttling.

Syntax

```
system general background-operations health-scans disable
```

administrators

The commands available under `administrators` are:

- passwd
- usermod
- useradd
- removeLocks
- list-topics
- view
- userdel
- all-users
- list

passwd

Description

This command allows you to change the password of the specified admin account name.

Syntax

```
system general administrators passwd username
```

usermod

Description

This command allows you to modify certain parameters of the specified username. You can modify the user level, e-mail address, and so on.

Syntax

```
system general administrators usermod username [options]
```

Where the argument is:

username Name of the admin account to be edited

the options are:

[-level level] Integer value of user level, can be current user level or lower (1 is the highest level)

[-email address] Comma separated list of e-mail addresses or 'None' to clear all e-mails

[-filter name] Comma separated list topics and their severity (None, All, Major) separated by a dash (eg. antivirus-None, hardware-Major, health-All)

useradd

Description

This command adds additional users.

Syntax

```
system general administrators useradd username [options]
```

Where the argument is:

username Name of the admin account to be added

the options are:

[-u UID] uid that will be assigned to user

[-level level]II Integer value (1-4) of user level, can be current user level or lower (1-dev, 2-fse, 3-admin, 4-view only)

[-email address] Comma separated list of e-mail addresses

[-filter name] Comma separated list topics and their severity (None, All, Major) separated by a dash (eg. antivirus-None, hardware-Major, health-All)

removeLocks

Description

This command allows you to remove the administrator lock. The system locks if an administrator logs on the command line interface and the NAS manager graphical user interface at the same time.

Syntax

```
system general administrators removeLocks
```

Type **Yes** to continue and type **No** to cancel the action.

list-topics

Description

This command displays the filter topics for which e-mail alerts can be sent to various users.

Syntax

```
system general administrators list-topics
```

view

Description

This command displays the user ID, user level, defined e-mail address, and list of filter topics and their severity for which the specified user receives alert e-mails.

Syntax

```
system general administrators view
```

userdel

Description

This command deletes an existing user.

Syntax

```
system general administrators userdel username (s)
```

Where the argument is :

<code>username(s)</code>	Name(s) of the admin account(s) to be deleted
--------------------------	---

all-users

Description

This command displays all the users in your Active directory domain.

Syntax

```
system general administrators all-users
```

list

Description

This command displays all the users defined for the NAS cluster.

Syntax

```
system general administrators list
```

cluster-name

The commands available under `cluster-name` are:

- view
- set

view

Description

This command displays the name of the NAS cluster.

Syntax

```
system general cluster-name view
```

set

Description

This command allows you to change the name of the NAS cluster.

Syntax

```
system general cluster-name set name
```

Where the argument is:

name	New system name
------	-----------------

licensing

The commands available under `licensing` are:

- view
- install
- delete
- install-instructions
- list

view

Description

This command displays the status, expiration date, usage status, and so on of the specified feature.

Syntax

```
system general licensing view feature-id
```

Where the argument is :

feature-id	License feature-id, as it appears in the features list
------------	--

install

Description

This command installs a new license file for a premium feature.

Syntax

```
system general licensing install filename
```

Where the argument is:

filename	License XML file, which contains the license activation signature for relevant features
----------	---

delete

Description

This command deletes an installed license for a premium feature.

Syntax

```
system general licensing delete feature-id
```

Where the argument is :

<code>feature-id</code>	License <code>feature-id</code> , as it appears in the features list.
-------------------------	---

install-instructions

Description

This command displays the instructions to install any newly downloaded license file to activate premium features.

Syntax

```
system general licensing install-instructions
```

list

Description

This command lists the currently installed licenses for premium features.

Syntax

```
system general licensing list
```

time-configuration

The commands available under `time-configuration` are:

- `view`
- `list-timezones`
- `set`

view

Description

This command displays the system date and time, the time zone, on which the NAS cluster is and the IP address of the NTP server (if configured).

Syntax

```
system time-configuration view
```

list-timezones

Description

This command displays all the time zones that you can set the NAS appliance to.

Syntax

```
system time-configuration list-timezones
```

set

Description

This command allows you to set the time on your NAS appliance by the timezone, NTP server IP address, and by directly entering the time in the command.


Syntax

```
system time-configuration set [options]
```

Where the options are:

<code>[-timezone timezone]</code>	Time zone
<code>[-ntpserver server]</code>	Comma separate Name/IP of NTP server. 'none' to delete all
<code>[-updatetime time]</code>	"dd/mm/yyyy HH:MM:SS" (in 24h format with the " before and after)

monitoring-configuration

 **NOTE:** The menus and commands available under `email` are not supported by Dell Compellent FS8600.

The menus under `monitoring-configuration` are:

- `snmp`
- `email`
- `syslog`

snmp

The commands available under `snmp` are:

- `topic-list`
- `export-events-list`
- `view`
- `set`

topic-list

Description

This command displays the filter topics for which alerts can be sent to various users.

Syntax

```
system monitoring-configuration snmp topic-list
```

export-events-list

Description

This command exports the list of events in CSV file format and saves the CSV file on the NAS volume in the directory specified in the command.

Syntax

```
events export-events-list volume path
```

Where the arguments are:

volume	NAS volume that the exported CSV file will be placed on
path	Path of the directory (in the specified NAS volume) that the exported CSV file will be placed

view

Description

This command displays the SNMP configuration details like the system contact, system location, host IP address, and so on.

Syntax

```
system monitoring-configuration snmp
```

set

Description

This command sets the SNMP configuration options. You can set the system location, system contact, host IP address, and so on.


Syntax

```
system monitoring-configuration snmp set [options]
```

Where the options are:

<code>[-syslocation location]</code>	System location
<code>[-syscontact contact]</code>	System contact
<code>[-rocommunity community]</code>	Read only community
<code>[-recipients host(s)/IP(s)]</code>	Type a comma separated list of recipients, no spaces between names or "none" for list reset
<code>[-filter topic-filter]</code>	Set the topics filters, type a topic-filter pair (filters can be: None, All, Major)

email

 **NOTE:** The menus and commands available under `email` are not supported by Dell Compellent FS8600.

The menus available under `email` are:

- SMPT-servers
- advanced

The commands available under `email` is `test-email`.

test-email

Description

This command sends a test e-mail to the specified e-mail address.

Syntax

system monitoring-configuration email test-email **address**

Where the argument is:

address	Address that the test email will be sent to
---------	---

SMTP-servers

The commands available under `SMTP-servers` are:

- set-authentication
- add
- view
- delete
- edit

set-authentication

Description

This command allows you to change the username and password of the specified SMTP server.

Syntax

system monitoring-configuration email SMTP-servers set-authentication **idx** [options]

Where the argument is:

idx	SMTP server ID
-----	----------------

the options are:

[-username user-name]	SMTP server user name
[-passwd password]	SMTP server password

add

Description

This command adds additional SMTP servers to the NAS cluster.

Syntax

system monitoring-configuration email SMTP-servers add **host/IP** [options]

Where the argument is :

host/IP	SMTP server address (host/IP)
---------	-------------------------------

the option is:

[-desc description]	SMTP server description
---------------------	-------------------------

view

Description

This command displays the details of the configured SMTP server.

Syntax

```
system monitoring-configuration email SMTP-servers view
```

delete

Description

This command deletes the specified SMTP server.

Syntax

```
system monitoring-configuration email SMTP-servers delete idx
```

Where the argument is :

<code>idx</code>	Comma separated list of server IDs
------------------	------------------------------------

edit

Description

This command allows you to change the SMTP server configuration details. You can change the index of the SMTP server, the IP address, and the server description.

Syntax

```
system monitoring-configuration email SMTP-servers idx [options]
```

Where the argument is :

<code>idx</code>	Index of SMTP servers
------------------	-----------------------

the options are:

<code>[-server host/IP]</code>	SMTP server address (host/IP)
<code>[-desc description]</code>	SMTP server description

advanced

The commands available under `advanced` are:

- `set-max-mail-size`
- `view-max-mail-size`
- `set-mail-from-address`

set-max-mail-size

Description

This command allows you set the maximum size (in KB) of the e-mail that can be sent from the SMTP server.

Syntax

```
system monitoring-configuration email advanced set-max-mail-size size
```

Where the argument is:

<code>size</code>	New mail size (KB)
-------------------	--------------------

view-max-mail-size

Description

This command displays the maximum mail size in KB.

Syntax

```
system monitoring-configuration email advanced view-max-mail-size
```

set-mail-from-address

Description

This command sets the e-mail address that is displayed in the **From** fields for e-mails.

Syntax

```
system monitoring-configuration email advanced set-mail-from-address address
```

Where the argument is:

address	Address that appears in the From field for emails
---------	---

syslog

The menus available under `syslog` are:

- log-monitor
- server

log-monitor

The menus available under `log-monitor` are:

- time-interval
- max-msg

time-interval

The commands available under `time-interval` are:

- view
- set

view

Description

This command displays the current time interval at which the log monitor picks the configuration information.

Syntax

```
system monitoring-configuration syslog log-monitor time-interval view
```

set

Description

This command allows you to change the time interval at which

Syntax

```
system monitoring-configuration syslog log-monitor time-interval set time-  
interval
```

Where the argument is :

```
time-interval                                seconds
```

max-msg

The commands available under `max-msg` are:

- view
- set

view

Description

This command displays the configured value for the maximum number of identical messages per time interval.

Syntax

```
system monitoring-configuration syslog log-monitor max-msg view
```

set

Description

This command allows you to set the maximum number of identical messages per time interval.

Syntax

```
system monitoring-configuration syslog log-monitor max-msg set amount
```

Where the argument is :

```
amount                                Maximum number of permitted messages  
per time interval
```

server

The commands available under `server` are:

- rotate
- add
- view
- delete

rotate

Description

This command archives the current log and starts a new one.

Syntax

```
system monitoring-configuration syslog server rotate
```

add

Description

This command adds additional Syslog servers to the NAS cluster.

Syntax

```
system monitoring-configuration syslog server add host/IP
```

Where the argument is :

host/IP	name/IP of the Syslog server to be added
---------	--

view

Description

This command displays the host/IP addresses of the Syslog servers.

Syntax

```
system monitoring-configuration syslog server view
```

delete

Description

This command deletes the specified Syslog server from the NAS cluster.

Syntax

```
system monitoring-configuration syslog server delete host/IP
```

Where the argument is :

host/IP	Name/IP of the Syslog server to be added
---------	--

maintenance

The menus available for maintenance are:

- controllers
- luns
- actions
- backup-configuration

controllers

The available menus under controllers are:

- detach
- attach

The commands available under controllers are:

- save-conf
- list

save-conf

Description

This command saves the controller configuration of a specified controller on to a USB device.

attach

The commands available under `attach` are:

- `status`
- `start`

status

Description

This command displays the status of a currently running `attach` controller operation.

Syntax

```
system maintenance controllers attach status
```

start

Description

This command starts the `attach` controller operation.

Syntax

```
system maintenance controllers attach start controller [options]
```

Where the argument is:

<code>controller</code>	The controller id (e.g. 0)
-------------------------	----------------------------

the options are:

<code>[-blocking/-noblocking]</code>	Block prompt until <code>attach</code> is done. Blocking is on by default.
<code>[-clusterization/-noclusterization]</code>	Join detached controller to cluster network and topology, alternatively use USB with xml config files. On by default.

luns

The menus available under `luns` are:

- `add`
- `format`
- `expand`
- `configuration`

The commands available `luns` under :

- `unformat`
- `rescan`
- `list`

unformat

Description

This command unformats the FluidFS LUNs.

Syntax

```
system maintenance luns unformat
```

rescan

Description

This command rescans the NAS cluster to check if any additional luns have been added.

Syntax

```
system maintenance luns rescan
```

list

Description

This command lists all existing luns and new luns identified by the system.

Syntax

```
system maintenance luns list
```

add

The commands available under `add` are:

- `status`
- `start`

status

Description

This command displays the status of a currently running add LUNs operation.

Syntax

```
system maintenance luns add status
```

start

Description

This command starts the add LUNs operation.

Syntax

```
system maintenance luns add start
```

format

The commands available under `format` are:

- `status`
- `start`

status

Description

This command displays the status of a currently running format operation for the file system.

Syntax

```
system maintenance luns format status
```

start

Description

This command starts the format operation for the file system.

Syntax

```
system maintenance luns format start
```

expand

The commands available under `expand` are:

- `status`
- `start`

status

Description

This command displays the status of a currently running attach controller operation.

Syntax

```
system maintenance luns expand status
```

start

Description

This commands starts the expand operation for the LUNs.

Syntax


```
system maintenance luns expand start
```

configuration

The commands available under `configuration` are:

- `Fc-view`
- `iscsi-view`
- `Fc-set`
- `iscsi-set`

Fc-view

 **NOTE:** This command is not applicable to the Dell PowerVault NX3600/NX3610.

Description

This command allows you to view the WWN (world wide name) information for each Fibre Channel controller.

Syntax

```
system maintenance luns configuration Fc-view
```

iscsi-view


Description

This command displays the iSCSI initiators for each controller node.

Syntax

```
system maintenance luns configuration iscsi-view
```

Fc-set

 **NOTE:** This command is not applicable to the Dell PowerVault NX3600/NX3610.

Description

This command auto-updates the current Fibre Channel configuration (i.e. in case the FC card was replaced)

Syntax

```
system maintenance luns configuration Fc-set
```

iscsi-set

Description

This command allows you to change the iSCSI discovery IP address, username, and passwords.

Syntax

```
system maintenance luns configuration iscsi-set [options]
```

where options are:

<code>[-iSCSIDiscoveryIPs</code>	<code>iSCSIDiscoveryIPs]</code>	The IP(s) of iSCSI server(s), separated by commas
<code>UserName</code>		The user name of iSCSI server ("None" if the user is not required)
<code>Password</code>		The password of iSCSI server ("None" if the user is not required)

actions

The menu under `actions` is `progress`.

The commands available under `actions` are:

- `set-journaling`
- `stop`
- `set-mirroring`
- `status`
- `start`

progress

The command under `progress` is `view`.

view

Description

This command displays the progress of system start and system stop sequences.

Syntax

```
system maintenance actions progress view sequence
```

Where the argument is:

<code>sequence</code>	<code>System_stop/system_start</code>
-----------------------	---------------------------------------

set-journaling

Description

This command moves the file system to journaling mode so that maintenance actions can be performed.

Syntax

```
system maintenance actions set-journaling
```

stop

Description

This command stops the file system.

Syntax

```
system maintenance actions stop
```

set-mirroring

Description

This command moves the file system to mirroring mode.

Syntax

```
system maintenance actions set-mirroring
```

status

Description

This command displays the status of the file system.

Syntax

```
system maintenance actions status
```

start

Description

This command starts the file system if the file system is stopped.

Syntax

```
system maintenance actions start
```

backup-configuration

The commands available under `backup-configuration` are:

- `entire-cluster`
- `view-system-options`
- `restore-system`
- `restore-volumes`
- `view-volume-options`

entire-cluster

Description

This command saves the configuration settings for the entire cluster.

Syntax

```
system maintenance backup-configuration entire-cluster
```

view-system-options

Description

This command displays the configuration restore sources and modules for the file system.

Syntax

```
system maintenance backup-configuration view-system-options
```

restore-system

Description

This command restores the configuration for the entire file system from the saved backup configuration.

Syntax

```
system maintenance backup-configuration restore-system source_system [options]
```

where the argument is:

<code>source_system</code>	The name of the system from which the saved configuration was taken
----------------------------	---

The option is:

<code>[-modules modules_list]</code>	A comma-separated list of modules to restore (do not use spaces). If not entered, all the default modules will be restored
--------------------------------------	--

restore-volumes

Description

This command restores the configuration for the specified NAS volume from the saved backup configuration.

Syntax

```
system maintenance backup-configuration restore-volume target_conf  
source_system [options]
```

Where the argument(s) are:

<code>target_conf</code>	The NAS volume which configuration you want to restore
--------------------------	--

<code>source_system</code>	The name of the system from which the saved configuration was taken
----------------------------	---

the option is:

<code>[-modules modules_list]</code>	A comma-separated list of modules to restore (do not use spaces). If not entered, all the default modules will be restored
--------------------------------------	--

view-volume-options

Description

This command displays the configuration restore sources and modules for the specified NAS volume.

Syntax

```
system maintenance backup-configuration view-volume-options target_conf
```

Where the argument is:

<code>target_conf</code>	NAS volume for which configuration options will be shown
--------------------------	--

protocols

The menu available under `protocols` is `cifs`.

cifs

The menu under `cifs` is `configuration`.

restart

Description

This command restarts the CIFS service on the NAS cluster.

Syntax

```
system protocols cifs restart
```

configuration

The commands available under `configuration` are:

- `view`
- `set`

view

Description

This command displays the CIFS configuration for the NAS cluster. The authentication mode, UNIX charset, DOS charset, and status of the CIFS configuration is displayed.

Syntax

```
system protocols cifs configuration view
```

set

Description

This command allows you to change certain parameters of the current CIFS configuration. You can change the status, security mode, and the UNIX and DOS charsets for the CIFS configuration.

Syntax

```
system protocols cifs configuration set [options]
```

Where the options are:

<code>[-enabled/-noenabled]</code>	Enable/Disable the CIFS protocol
<code>[-security mode]</code>	Determines how clients respond to Samba; available options: ActiveDirectory LocalUsers
<code>[-unixcharset charset]</code>	UNIX charset of share
<code>[-doscharset charset]</code>	DOS charset of share

authentication

The menus under authentication are:

- user-mapping
- active-directory
- local-accounts
- full-access-account
- user-database

The commands available under authentication are:

- list-groups
- list-users

list-groups

Description

This command displays a list of all the available groups.

Syntax

```
system authentication list-groups
```

list-users

Description

This command lists all the available users in the Active directory domain.

Syntax

```
system authentication list-users
```

user-mapping

The menu under user-mapping is policy.

policy

The commands available under policy are:

- set-weekly-policy
- view
- set-daily-policy

- set-hourly-policy
- set-type

view

Description

This command displays the current user mapping policy on the NAS cluster.

Syntax

```
system authentication user-mapping policy view
```

set

Description

This command allows you to change the user mapping policy parameters.

Syntax

```
system authentication user-mapping policy set [options]
```

Where options are:

- | | |
|--|--|
| <code>[-acquire_mapping/-noacquire_mapping]</code> | Specifies whether to map users from different types of user repositories |
| <code>[-allow_not_mapped/-noallow_not_mapped]</code> | Specifies how to treat users with no mapping |

active-directory

The commands available under `active-directory` are:

- join-domain
- view
- leave-domain

join-domain

Description

This command joins the specified user to a specified Active directory domain.

Syntax

```
system authentication join-domain domain user_name [options]
```

Where the arguments are:

- | | |
|------------------------|--|
| <code>domain</code> | Active Directory domain to which the system belongs |
| <code>user_name</code> | User name to be used to join the Active Directory domain |

the options are:

<code>[-srvstring serverString]</code>	String that will be shown in browse lists beside the machine name
<code>[-netbios netbios_name]</code>	NetBIOS name that will appear in the network neighborhood. This name is limited to 15 characters. The default is the system name.
<code>[-advanced/--noadvanced]</code>	Advanced configuration.
<code>[-workgroup workgroup]</code>	(Only for advanced mode)
<code>[-domain_controller domain_controller]</code>	Active directory Server. (Only for advanced mode)

view

Description

This command displays the current Active Directory configuration settings.

Syntax

```
system authentication active-directory view
```

leave-domain

Description

This command removes the current user from the current active directory.

Syntax

```
system authentication active-directory leave-domain
```

local-accounts

The menus under `local-accounts` are:

- `groups`
- `users`

groups

The commands under `groups` are:

- `add`
- `view`
- `delete`
- `list`

add

Description

This command adds local groups.

Syntax

```
system authentication local-accounts groups add groupname [options]
```

Where the argument is:

Syntax

```
system authentication local-accounts users add username [options]
```

Where the argument is:

username	Name of the local user account to be added
----------	--

the options are:

[-uid UID]	Uid that will be assigned to user
[-group Group]	Primary group that will be assigned to user
[-additionalGroups additionalGroups]	Comma separated list of additional groups
[-realname name]	Full name of the user
[-remark remarks]	Free text for remarks

view

Description

This command displays the user parameters for the specified user.

Syntax

```
system authentication local-accounts users view username
```

Where the argument is :

username	Name of the local user account to be viewed
----------	---

delete

Description

This command deletes the specified username.

Syntax

```
system authentication local-accounts users delete username
```

Where the argument is :

username	name of the local user account to be viewed
----------	---

change-password

Description

This command allows you to change the password for a specified user.

Syntax

```
system authentication local-accounts users change-password username
```

Where the argument is:

Syntax

```
system authentication full-access-account delete
```

set**Description**

This command allows you to add a full access user account from an existing user in the Active Directory domain.

Syntax

```
system authentication full-access-account set account
```

Where the argument is:

account	Active Directory account of a form: DOMAIN+username
---------	--

user-database

The commands available under user-database are:

- view
- set

view**Description**

This command displays the user database configuration details.

Syntax

```
system authentication user-database view
```

set**Description**

This command allows you to set the user database configuration.

Syntax

```
system authentication user-database set type [options]
```

The argument is:

type	Configuration type: nis, ldap or no_external
------	---

the options are:

[-nis_domain domainName]	External NIS domain name server
[-nis_host host(s)/IP(s)]	External NIS host(s)
[-ldap_base_dn LDAPbaseDN]	External base DN for LDAP user authentication
[-ldap_host host]	External LDAP host

networking

The menus under `networking` are:

- `default-gateway`
- `dns`
- `client-connections`
- `network-configuration`
- `static-routes`
- `subnets`

default-gateway

The commands available under `default-gateway` are:

- `view`
- `set`

view

Description

This command displays the IP address of the default client gateway.

Syntax

```
system networking default-gateway view
```

set

Description

This command allows you to change the current default client gateway IP address.

Syntax

```
system networking default-gateway set IP
```

Where the argument is :

```
IP                               Gateway IP to set
```

dns

The commands available under `dns` are:

- `view`
- `set`

view

Description

This command displays the current DNS configuration settings.

Syntax

```
system networking dns view
```


set

Description

This command allows you to change the DNS configuration settings. You can change the host name or IP address of the DNS server and the DNS suffixes.

Syntax

```
system networking dns set [options]
```

Where the options are:

<code>[-ips host(s)/IP(s)]</code>	Type comma separated list of DNS servers IP addresses, no space between values or "none" for list reset
<code>[-suffixes suffix(es)]</code>	Type comma separated list of DNS suffixes, no space between values or "none" for list reset

client connections

The menu under `client-connections` is `failback-policy`.

The commands available under `client-connections` are:

- `mass-failback`
- `view`
- `assign`
- `mass-rebalance`
- `list`

failback-policy

The commands available under `failback-policy` are:

- `view`
- `set`

view

Description

This command displays the current failback policy for migration of protocols.

Syntax

```
system networking client-connections failback-policy view
```

set

Description

This command allows you to change the failback policy for migrations of protocols.

Syntax

```
system networking client-connections failback-policy set protocol policy
```

Where the arguments are:

protocol	Name of the protocol to be updated: nfs, cifs, ndmp, or other
policy	Policy to set: MANUAL, IMMEDIATE, AUTOMATIC

mass-failback

Description

This command allows you to mass-failback to client connections.

Syntax

```
system networking client-connections mass-failback
```

view

Description

This command displays the client connections for the specified client and system IP addresses.

Syntax

```
system networking client-connections view clientIp systemIp
```

Where the arguments are:

clientIp	- IP of the client or router
systemIp	- The IP used to access the system

assign

Description

This command assigns the client connection to the specified client IP address, system IP address, and so on.

Syntax

```
system networking client-connections assign clientip systemip controller  
[options]
```

Where the arguments are:

clientip	IP of the client or router
systemip	The IP used to access the system
controller	The controller to which the client will be assigned (e.g. controller0) or fill assign controller to return to the assigned controller and interface

the options are:

[-interface mac]	The interface MAC address to which the client will be assigned; omit to allow any interface
[-rebalance/- norebalance]	Allow/disable this client to migrate to other controllers when rebalancing the network load (The default is allow)

mass-rebalance

Description

This command rebalances all the client connections for the specified protocol.

Syntax

```
system networking client-connections mass-rebalance protocol
```

Where the argument is :

protocol	Protocol to be mass rebalanced: nfs, cifs, ndmp, other or all
----------	---

list

Description

This command displays the client/router IP address, the access via virtual IP address, and so on.

Syntax

```
system networking client-connections list
```

network-configuration

The commands available under `network-configuration` are:

- view
- set
- list

view

Description

This command displays the network configuration for a specified network on your NAS cluster.

Syntax

```
system networking network-configuration view network
```

Where the argument is :

network	The network name (possible value: Primary)
---------	--

set

Description

This command allows you to change the network configuration for a specified network. You can change the network name, teaming mode, and MTU for the network.

Syntax

```
system networking network-configuration set network teaming-mode mtu
```

Where the arguments are:

network	The network name (possible value: Primary)
---------	--

teaming-mode	The teaming mode (possible value: ALB or LACP)
--------------	--

mtu

MTU (Maximum Transmission Unit)

list

Description

This command displays all the networks available on the NAS cluster.

Syntax

```
system networking network-configuration list
```

static-routes

The commands available under `static-routes` are:

- add
- delete
- list

add

Description

This command adds static network routes to the NAS cluster.

Syntax

```
system networking static-routes add destination gateway network [options]
```

Where the arguments are:

destination	destination network/host
gateway	route packets via this gateway
network	network to be used: Primary

The options are:

<code>[-netmask netmask]</code>	netmask to be used, default is 255.255.255.255
<code>[-force/-noforce]</code>	force static route add, even if the gateway is not responding

delete

Description

This command deletes the specified static route.

Syntax

```
system networking static-routes delete index(es)
```

Where the argument is:

index(es)	Comma separated list of static routes indexes to be deleted
-----------	---

list

Description

This command lists all the static routes configured on the NAS cluster.

Syntax

```
system networking static-routes list
```

subnets

The commands available under `subnets` are:

- `add`
- `view`
- `delete`
- `edit`
- `list`

add

Description

This command adds an additional subnet on the NAS cluster.

Syntax

```
system networking subnets add subnet interface netmask [options]
```

where arguments are:

<code>subnet</code>	Name of subnet (e.g. Finance)
<code>interface</code>	Virtual interface of the subnet, either Primary, Secondary, Management or Interconnect
<code>netmask</code>	The subnet netmask

the options are:

<code>[-vlan id]</code>	The vlan ID of the subnet
<code>[-privateIPs IPs]</code>	A comma-separated list of private IP addresses (mandatory parameter)
<code>[-managementConsoleVIP vip]</code>	The management console VIP
<code>[-VIPs VIPs]</code>	A comma-separated list of virtual IP addresses the system will have for the subnet

view

Description

This command displays the details of the specified subnet.

Syntax

```
system networking subnets view subnet
```


User Access

You can define and manage Dell Fluid File System from the client perspective in the **access** menu. The menus available under **access** are:

- **quota**—A disk quota is a set of rules that restrict disk space and the number of files used by a user or a group. You can restrict the total space used in a NAS volume or the usage of users and groups within an NAS Volume using the **quotas** menu.
- **cifs-shares**—CIFS shares provide an effective way of sharing files and data across a Windows network. You can manage and configure SIFS shares using the **cifs-shares** menu.
- **cifs-home-share**—A CIFS share with user-based directory structure is a CIFS home share. You must create all directories for each user. Manage the home shares using the **cifs-home-share** menu.
- **nfs-exports**—NFS exports provide an effective way of sharing files and data across UNIX or Linux networks. NFS clients can only mount directories that have been exported. You can manage existing nfs-exports and configure new nfs-exports from the **nfs-exports** menu.
- **nas-volumes**—A NAS volume is a subset of the storage pool, with specific policies controlling its space allocation, data protection, and security style. NAS volumes can be created, configured, and maintained using the **nas-volumes** menu.

quota

The commands available under `quota` are:

- `view`
- `list`

usage

The commands available under `usage` are:

- `view`
- `list`

view

Description

This command displays the quota information for a specified NAS volume.

Syntax

```
access quota volume type name
```

Where the arguments are:

<code>volume</code>	Owner NAS volume.
<code>type</code>	Client type to view: <code>user</code> , <code>group</code> , <code>ug</code> (user in group).

name Name of client to view.

list

Description

This command lists the available quota for all the NAS volumes.

Syntax

```
access quota usage list
```

recompute-quota

The commands available under `recompute-quota` are:

- `recompute`
- `view-status`

recompute

Description

This command recomputes the quota availability for a NAS volume.

Syntax

```
access quota recompute-quota recompute volume
```

Where the argument is :

volume NAS volume to recompute quota for

view-status

Description

This command displays the status of the recomputation of quota for a specifies NAS volume.

Syntax

```
access quota recompute-quota view-status volume
```

Where the argument is:

volume NAS volume to recompute quota for

rules

The commands available under `rules` are:

- `add`
- `view`
- `delete`
- `edit`
- `list`

add

Description

This command adds additional quota rules to the NAS volumes.

Syntax

```
access quota rules add volume type name quotasoft quotahard
```

Where the arguments are:

volume	Owner NAS volume.
type	Client type to configure: defuser, defgroup, user, group, ug (user in group).
name	Name of client to configure. required for non-default user or group.
quotasoft	Soft quota size for configured client: size in mega bytes or 'disabled'.
quotahard	Hard quota size for configured client: size in mega bytes or 'unlimited'.

view

Description

This command displays the quota rules parameters for a specified NAS volume.

Syntax

```
access quota rules view volume type [options]
```

Where the arguments are:

volume	Owner NAS volume.
type	Client type to view: defuser, defgroup, user, group, ug (user in group).

The options are:

```
[-name name] Name of client to view.
```

delete

Description

This command deletes the quota rules from a specified NAS volume.

Syntax

```
access quota rules delete volume type name
```

Where the arguments are:

volume	Owner NAS volume.
type	Client type to delete: user, group, ug (user in group).
name	Name of client to delete.

edit

Description

This command allows you to change certain parameters in existing rules.

Syntax

```
access quota rules edit volume type [options]
```

Where the arguments are:

volume	Owner NAS volume.
type	Client type to configure: defuser, defgroup, user, group, ug (user in group).

the options are:

[-name name]	Name of client to configure. required for non-default user or group.
[-quotasoft userSoftDef]	Soft quota size for configured client: size in mega bytes or 'disabled'.
[-quotahard userHardDef]	Hard quota size for configured client: size in mega bytes or 'unlimited'.

list

Description

This command lists all the quota rules for the NAS volumes.

Syntax

```
access quota rules list
```

cifs-shares

The commands available under `cifs-shares` are:

- add
- view
- delete
- clear-shares
- edit
- list

add

Description

This command adds CIFS shares to the NAS volume.

Syntax

```
access cifs-shares add shareName volume path [options]
```

where the arguments are:

shareName	Name of the share to be added
volume	NAS volume on which share exists
path	Path to exported directory

the options are:

[- create_dir_on_the_fly/- nocreate_dir_on_the_fly]	Create the shared folder if it does not exist
[-description description]	Comment beside share when querying server
[-allowguests/- noallowguests]	Enable access by the guest account
[-vetofiles files/..]	Slash separated list of files and directories that are neither visible nor accessible
[-antivirus/- noantivirus]	Choose whether the files should be checked for viruses before access
[-av_policy policy]	Policy what to do with infected files, optional values are DoNothing, Quarantine and Remove
[-av_extensions extensions]	comma separated list of file extensions which should/ shouldn't be sent to antivirus
[-av_extensions_policy policy]	defines whether to include or exclude the files with av_extensions in antivirus check, optional values are Include or Exclude
[-av_exclude_dirs dirs]	comma separated list of directory paths which should not be checked for viruses

view

Description

This command lists the parameters of the specified CIFS share name.

Syntax

```
access cifs-shares view shareName
```

Where the argument is:

shareName	Name of share to be viewed
-----------	----------------------------

delete

Description

This command deletes the specified CIFS share.

Syntax

access cifs-shares delete **ShareName (s)** [options]

Where the argument is :

shareName (s)	The comma separated list of shares to be deleted.
---------------	---

clear-shares

Description

This command disconnects all users from the NAS appliance and NAS volumes.

Syntax

access cifs-shares clear-shares

edit

Description

This command allows you to change certain parameters of an existing CIFS share.

Syntax

access cifs-shares edit **shareName** [options]

Where the argument is:

shareName	Name of the share to be edited
-----------	--------------------------------

the options are:

[-path path]	Path to the exported directory
[-create_dir_on_the_fly/ - ncreate_dir_on_the_fly]	Create the shared folder if it does not exist
[-description description]	Comment next to the share when querying the server
[-allowguests/ noallowguests]	Enable access by the guest account
[-vetofiles files/..]	Slash separated list of files and directories that are neither visible nor accessible. Use 'None' to delete the list
[-antivirus/ noantivirus]	Choose whether the files should be checked for viruses before access
[-av_policy policy]	Policy what to do with infected files, optional values are DoNothing, Quarantine and Remove

<code>[-av_extensions extensions]</code>	Comma separated list of file extensions which should/ shouldn't be sent to antivirus
<code>[-av_extensions_policy policy]</code>	Defines whether to include or exclude the files with av_extentions in antivirus check, optional values are Include or Exclude
<code>[-av_exclude_dirs dirs]</code>	Comma separated list of directory paths which should not be checked for viruses

list

Description

This command lists all the CIFS shares on the NAS appliance.

Syntax

```
access cifs-shares list
```

cifs-home-share

The commands available under `cifs-home-shares` are:

- add
- view
- delete
- edit

add

Description

This command adds CIFS home shares to the NAS volumes.

Syntax

```
access cifs-home-share add volume [options]
```

Where the argument is :

<code>volume</code>	NAS volume of the share to the home directories
---------------------	---

the options are:

<code>[-template_homedir template_homedir]</code>	Set a homedir for a new users
<code>[-active/-noactive]</code>	Enable/disable share
<code>[-description description]</code>	Comment beside share when querying server
<code>[-allowguests/-noallowguests]</code>	Enable access by the guest account

<code>[-vetofiles files/..]</code>	Slash separated list of files and directories that are neither visible nor accessible
<code>[-antivirus/-noantivirus]</code>	Choose whether the files should be checked for viruses before access
<code>[-av_policy policy]</code>	Policy what to do with infected files, optional values are DoNothing, Quarantine and Remove
<code>[-av_extensions extensions]</code>	Comma separated list of file extensions which should/shouldn't be sent to antivirus
<code>[-av_extensions_policy policy]</code>	Defines whether to include or exclude the files with av_extensions in antivirus check, optional values are Include or Exclude
<code>[-av_exclude_dirs dirs]</code>	Comma separated list of directory paths which should not be checked for viruses

view

Description

This command allows you to view the CIFS home share configuration.

Syntax

```
access cifs-home-share view
```

delete

Description

This command deletes a specified CIFS home share.

Syntax

```
access cifs-home-share delete
```

edit

Description

This command allows you to changes certain parameters of existing CIFS home shares.

Syntax

```
access cifs-home-share edit [options]
```

where the options are:

<code>[-template_homedir template_homedir]</code>	Set a homedir for a new users
<code>[-active/-noactive]</code>	Enable/disable share

<code>[-description description]</code>	Comment beside share when querying server
<code>[-allowguests/- noallowguests]</code>	Enable access by the guest account
<code>[-vetofiles files/..]</code>	Slash separated list of files and directories that are neither visible nor accessible
<code>[-antivirus/- noantivirus]</code>	Choose whether the files should be checked for viruses before access
<code>[-av_policy policy]</code>	Policy what to do with infected files, optional values are DoNothing, Quarantine and Remove
<code>[-av_extensions extensions]</code>	Comma separated list of file extensions which should/shouldn't be sent to antivirus
<code>[- av_extensions_policy policy]</code>	Defines whether to include or exclude the files with av_extensions in antivirus check, optional values are Include or Exclude
<code>[-av_exclude_dirs dirs]</code>	Comma separated list of directory paths which should not be checked for viruses

nfs-exports

The commands available under `nfs-exports` are:

- `refresh-netgroups-cache`
- `add`
- `view`
- `delete`
- `edit`
- `list`

refresh-netgroups-cache

Description

This command refreshes the cache of the netgroups.

Syntax

```
access nfs-exports refresh-netgroups-cache
```

add

Description

This command adds additional NFS exports.

Syntax

```
access nfs-exports add volume path [options]
```

Where the arguments are:

volume NAS volume of exported directory
path Path to exported directory

the options are:

`[-create_dir_on_the_fly/-
nocreate_dir_on_the_fly]` Create the shared folder if it does
not exist

`[-mode hostMode]` Export to: everyone, host, network,
netgroup

`[-host host/IP]` Host that will be granted access to
export (according to host mode option)

`[-netmask mask]` Netmask on host mode network

`[-secure/-nosecure]` Enable/disable use of TCP/UDP port
below 1024

`[-access accessMode]` Access mode: ro, rw

`[-squash squashMode]` Trusted users: root_squash,
no_root_squash, all_squash

`[-spacemax size]` Limit reported file system size in
MB,GB or TB units

`[-comment comment]` Comment

view

Description

This command displays the NFS exports parameters of a specified NAS volume.

Syntax

`access nfs-exports view index`

Where the argument is:

`index` The index for a NAS volume.

delete

Description

This command deletes existing NFS exports.

Syntax

`access nfs-exports delete index (es)`

Where the argument is :

`index(es)` The comma separated list of export index(es) to be
deleted

edit

Description

This command allows you to change certain parameters of the NFS exports. The parameters you can change are the path, host/IP, and so on.

Syntax

```
access nfs-exports edit index [options]
```

Where the argument is :

index	Export index to be edited
-------	---------------------------

the options are:

-path path]	Path to exported directory
[-create_dir_on_the_fly/- nocreate_dir_on_the_fly]	Create the shared folder if it does not exist
[-mode hostMode]	Export to: everyone, host, network, netgroup
[-host host/IP]	Host that will be granted access to export (according to host mode option)
[-netmask mask]	Netmask on host mode network
[-secure/--nosecure]	Enable/disable use of TCP/UDP port below 1024
[-access accessMode]	Access mode: ro, rw
[-squash squashMode]	Trusted users: root_squash, no_root_squash, all_squash
[-spacemax size]	Limit reported file system size in MB,GB or TB units
[-comment comment]	Comment

list

Description

This command lists the NFS exports on all the NAS volumes in the appliance.

Syntax

```
access nfs-exports list
```

nas-volumes

The commands available under `nas-volumes` are:

- total-volumes-status

- add
- view
- delete
- edit
- list

total-volumes-status

Description

This command displays the status of the complete system volume. It displays information like the system capacity, un-allocated space, number of NAS volumes, and so on.

Syntax

```
access nas-volumes total-volumes-status
```

add

Description

This command allows you to add additional NAS volumes.

Syntax

```
access nas-volumes add volume size size_unit [options]
```

Where the arguments are:

volume	The name of the NAS volume to be added
size	The size of NAS volume to be added
size_unit	The size units: TB, GB, MB

the options are:

[-threshold threshold]	Alert when volume reaches this threshold
[-admin administrator_name]	Administrator name to send events to
[-security_style security_style]	Security style for this volume. available styles are: UNIX, NTFS and MIXED.
[-file_permission file_permission]	Define the default UNIX permissions of new files created from Windows clients.
[-dir_permission dir_permission]	Define the default UNIX permissions of new directories created from Windows clients.
[-access_time_granularity granularity]	Granularity of updating file access time. Available values: Disabled, Always, Weekly, Daily, Hourly, EveryFiveMinutes.

view

Description

This command displays the properties of the specified NAS volume.

Syntax

```
access nas-volumes view [volume]
```

Where the argument is:

volume	The name of the NAS volume
--------	----------------------------

delete

Description

This command deletes the specified NAS volume.

Syntax

```
access nas-volumes delete [volume]
```

edit

Description

This command allows you to change certain parameters in the specified NAS volume. You can change the NAS volume name, threshold, security style and so on.

Syntax

```
access nas-volumes edit volume [options]
```

Where the arguments are:

volume	Name of the NAS volume to be edited
--------	-------------------------------------

the options are:

[-new_name newName]	New name for volume
[-size size]	Size of NAS volume to be edited
[-size_unit size_unit]	Size units: TB, GB, MB
[-threshold threshold]	Alert when volume reaches this threshold
[-admin administrator_name]	Administrator name to send events to
[-security_style security_style]	Security style for this volume. available styles are: UNIX, NTFS and MIXED.
[-file_permission file_permission]	Define the default UNIX permissions of new files and directories created from Windows clients.
[-dir_permission dir_permission]	Define the default UNIX permissions of new dirs and directories created from Windows clients.

`[-access_time_granularity granularity]` Granularity of updating file access time. Available values: Disabled, Always, Weekly, Daily, Hourly, EveryFiveMinutes.

list

Description

This command lists all the NAS volumes on the NAS appliance. It displays the allocated space, used space, free space, and snapshot of each NAS volume.

Syntax

```
access nas-volumes list
```

Events

The events menu lets you monitor your Dell Fluid File System by detecting normal and abnormal events. In the **events** menu, you can:

- export the events list to a CSV file and save it on your system.
- view the latest events generated in your file system.
- view the events for a particular duration

The commands available under `events` are:

- `export-events-list`
- `less`
- `tail`

export-events-list

Description

This command exports the list of events in CSV file format and saves the CSV file on the NAS volume in the directory specified in the command.

Syntax

```
events export-events-list volume path
```

Where the arguments are:

<code>volume</code>	NAS volume that the exported CSV file will be placed on
<code>path</code>	Path of the directory (in the specified NAS volume) that the exported CSV file will be placed

less

Description

This command displays the events from a set number of hours before the current time.

Syntax

```
events less from [options]
```

Where the argument is:

<code>from</code>	Get events from X hours backwards or from time in the format <code>yyyy-mm-dd hh:mm:ss</code>
-------------------	---

the option is:

`[-until timeUntil]`

Get events until the time `yyyy-mm-dd`
`hh:mm:ss` until now if not defined

tail

Description

This command displays the last few lines of the events log.

Syntax

`events tail`

Monitoring The System

You can monitor various components of the system, view the overall status of the system, view the quotas usage report, and receive remote replication job status reports using the **monitor** menu.

The menus available under **monitor** are:

- **quota**—You can view and change the quota configuration using the **quota** menu.
- **traffic-statistics**—You can monitor the system rate traffic statistics for the file system using the **traffic-statistics** menu.
- **replication**—You can monitor the active nas-replications using the **replication** menu.
- **connections**—You can monitor and disconnect CIFS connections using the **connections** menu.
- **export-data**—You can export information related to system performance, load balancing, and capacity to CSV files using the **export-data** menu.
- **system-validation**—You can run system validation to validate the system configuration, including hardware and network connectivity using the **system-validation** menu.
- **hardware-components**—You can view information about status, internal hardware, connectivity, and power for each appliance and its controllers using the **hardware-components** menu.

The command available under **monitor** is `system-stats`.

system-stats

Description

This command displays NAS appliance wide statistics. For example, the CPU utilization in %, the write and read rates for NFS, CIFS, and so on.

Syntax

```
monitor system-stats
```

quota

The commands available under **quota** are:

- **view**
- **list**

view

Description

This command displays the quota information for the selected NAS volume, for a user type.

Syntax

```
monitor quota view volume type name
```

Where the arguments are:

volume	Owner NAS volume.
type	The client type to view. the client type may be user, group, or a user in a group
name	The name of client to view

list

Description

This command lists the quotas and usage of all users including users for which no quota has been defined. It includes users that have been removed from the system but still have usage.

Syntax

```
monitor quota list
```

traffic-statistic

The commands available under `traffic-statistic` are:

- view
- list

view

Description

This command displays system rate traffic statics for the NAS appliance.

Syntax

```
monitor traffic-statistic view
```

list

Description

This command lists the traffics statistics for each controller in the NAS appliance.

Syntax

```
monitor traffic-statistic list
```

Replication

The menu under `replication` is `nas-replication`.

nas-replication

The commands available under `nas-replication` are:

- view_history
- list

view_history

Description

This command displays the replication history between a source and destination NAS volumes.

Syntax

```
data-protection replication nas-replication view_history source destination
```

Where the arguments are:

source	The source NAS volume in the following format: (volume name)@(system name)
destination	The destination NAS volume in the following format: (volume name)@(system name)

list

Description

This command lists currently defined replication relationships.

Syntax

```
monitor replication nas-replication list
```

connections

The menu available under `connections` is `cifs`.

cifs

The menu under `cifs` is `configuration`.

view

Description

This command displays the current CIFS connections.

Syntax

```
monitor connections cifs view
```

kill

Description

This command terminates the selected CIFS connections on the selected NAS controller.

Syntax

```
monitor connections cifs kill PID controller
```

Where the arguments are:

PID	The process ID of connection which you want to disconnect.
controller	The controller ID on which the process runs.

export-data

The commands available under `export-data` are:

- `nas-file-system-capacity`
- `loadbalancing`
- `performance`

nas-file-system-capacity

Description

This command exports the capacity details of the NAS file system at a given time to a CSV file and saves it at the location mentioned in the command.

Syntax

```
monitor export-data nas-file-system-capacity nas_volume time_frame csv_path
```

Where the arguments are:

<code>nas_volum</code>	The NAS volume to fetch
<code>time_frame</code>	Either <code>lastDay</code> , <code>lastweek</code> , <code>lastMonth</code> , or <code>lastYear</code>
<code>csv_path</code>	The location of the directory where the exported CSV file is to be saved

loadbalancing

Description

This command exports the load balancing details at a given time to a CSV file and saves it at the location mentioned in the command.

Syntax

```
monitor export-data loadbalancing time_frame csv_path
```

Where the arguments are:

<code>time_frame</code>	Either <code>lastDay</code> , <code>lastweek</code> , <code>lastMonth</code> , or <code>lastYear</code>
<code>csv_path</code>	The location of the directory where the exported CSV file is to be saved

performance

This command exports the performance details at a given time to a CSV file and saves it at the location mentioned in the command.

Syntax

```
monitor export-data performance time_frame csv_path
```

Where the arguments are:

<code>time_frame</code>	Either <code>lastDay</code> , <code>lastweek</code> , <code>lastMonth</code> , or <code>lastYear</code>
<code>csv_path</code>	The location of the directory where the exported CSV file is to be saved

system-validation

The commands available under `system-validation` are:

- `view`
- `start`

view

Description

This command displays the start time and progress status of the last system validation or a system validation that is in progress, for components in each controller in the NAS appliance.

Syntax

```
monitor system-validation view
```

start

Description

This command starts the system validation process for each controller in the NAS appliance.

Syntax

```
monitor system-validation start
```

hardware-components

The menus available under `hardware-components` are:

- `controllers`
- `appliances`

The commands available under `hardware-components` are:

- `status`
- `sample`

status

Description

This command displays the status information of the NAS appliance and all the controllers in the NAS appliance.

Syntax

```
monitor hardware-components status
```

sample

Description

This command displays the status of a sample of hardware components in the NAS appliance

Syntax

```
monitor hardware-components sample
```

controllers

The available menus under `controllers` are:

- detach
- attach

The commands available under `controllers` are:

- save-conf
- list

view

Description

This command displays the status and other important information like the slot ID, service tag of a selected controller.

Syntax

```
monitor hardware-components controllers view controller
```

Where the argument is :

```
controller                                The index of a specific controller to  
                                           be viewed, for example 0 or 1.
```

appliances

The commands available under `appliances` is `view`.

view

Description

This command displays the status and other important information like the slot ID, service tag of a selected controller.

Syntax

```
monitor hardware-components controllers view applianceId
```

Where the argument is:

applianceId

The index of a specific appliance to be viewed, for example 0 or 1.

Running Diagnostics

Diagnostics provides a way for system administrators to troubleshoot potential issues with the system. Diagnostics can be run while the system is still online and serving data. In the **diag** menu you can:

- Run the Dell Support Diagnostic Tool.
- Check the connectivity to the host server.
- View a list of available diagnostics.

The commands available under **diag** are:

- `diagtool`
- `check-ping-to-host`
- `list`
- `start`

diagtool

Description

This command launches the **Dell Support Diagnostic Tool**. By default the **Main Menu** of the support diagnostic tool is displayed.

Syntax

```
diag diagtool
```

check-ping-to-host

Description

This command checks if the communication with the host is up or not.

Syntax

```
diag check-ping-to-host host
```

Where the argument is:

<code>host</code>	The valid IP address or DNS name of the host
-------------------	--

list

Description

This command displays a list of available diagnostics.

Syntax

```
diag list
```

start

Description

This command starts the diagnostic tool that you want to start.

Syntax

```
diag start name [options]
```

where the arguments are:

```
name                - Diagnostic name (refer to list
                    command,
                    in order to view the available
                    diagnostics)

                    the options are:

                    Possible diagnostics with relevant
                    parameters:

                    GeneralSystemDiagnostic

                    FileSystemDiagnostic

                    ProtocolsDiagnostic -action logs
                    (default)

                    ProtocolsDiagnostic -action client -
                    protocol
                    cifs|nfs -client_host xxx.xxx.xxx.xxx

                    ProtocolsDiagnostic -action file -
                    protocol
                    cifs|nfs -client_host xxx.xxx.xxx.xxx

                    -share_name SHARE | -export_name /
                    NAS_VOLUME/DIRECTORY
                    -file_path /PATH/RELATIVE/TO/SHARE/OR/
                    EXPORT

                    NetworkDiagnostic [-client_host
                    xxx.xxx.xxx.xxx]

                    PerformanceDiagnostic -nas_vol_name
                    NAS_VOLUME
```

the options are:

```
[-timeout timeout]    - Diagnostic timeout (seconds)

[-action params]      - Diagnostic parameter

[-protocol params]    - Diagnostic parameter

[-share_name params]  - Diagnostic parameter

[-export_name params] - Diagnostic parameter
```


<code>[-client_host params]</code>	- Diagnostic parameter
<code>[-file_path params]</code>	- Diagnostic parameter
<code>[-nas_vol_name params]</code>	- Diagnostic parameter

Upgrading Firmware

You can upgrade the firmware on your controllers, monitor the status of updates, and view the instructions to upgrade the firmware on your controller using the **service-pack** menu.

The commands available under **service-pack** are:

- instructions
- status
- start

instructions

Description

This command provides the instructions to perform a firmware update.

Syntax

```
service-pack instructions
```

status

Description

This command provides the status of the firmware update.

Syntax

```
service-pack status
```

start

Description

This command starts the firmware update.

Syntax

```
service-pack start servicePackName [options]
```

Where the argument is:


<code>servicePackName</code>	The service pack name
------------------------------	-----------------------

the options are:

<code>[-blocking/-noblocking]</code>	The CLI should stay blocking during service pack installation. by default, it is blocking.
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Getting Help

Contacting Dell

 **NOTE:** If you do not have an active Internet connection, you can find contact information on your purchase invoice, packing slip, bill, or Dell product catalog.

Dell provides several online and telephone-based support and service options. Availability varies by country and product, and some services may not be available in your area. To contact Dell for sales, technical support, or customer service issues:

1. Visit **support.dell.com**.
2. Select your support category.
3. If you are not a U.S. customer, select your country code at the bottom of the **support.dell.com** page, or select **All** to see more choices.
4. Select the appropriate service or support link based on your need.