

HP StoreOnce Backup System Single-node and Multi-node CLI Reference Guide

Abstract

This document details the set of operations supported by the Common CLI. This command set defines the instructions used to obtain information about a StoreOnce Backup system appliance or to control the appliance's activity. It is intended for system administrators managing a single or multi-node HP StoreOnce Backup System.

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- ❗ **IMPORTANT:** This guide may have more recent updates. Always check <http://www.hp.com/support/manuals> for the most up-to-date documentation for your product.
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1 Using the CLI

Introduction

The Common CLI Command Set provides a method of communication with the StoreOnce appliance which is intuitive, consistent, and easy to use. The command set is broad in scope so that once learned, you can use it with the entire StoreOnce portfolio of products.

The commonality of the CLI command set means that some unsupported commands will be present in the CLI inline help (commands that are not applicable your appliance or are accessible through a different CLI command). Any unsupported commands that are executed will return the failure message: `Command Failed - This command is not supported on this system.`

You control the StoreOnce appliance by entering a command sequence using a specific grammar and syntax. The operation defined by the command sequence is executed, and any output associated with the operation is displayed in text or XML output (depending on the configuration settings). When the operation is complete, the command prompt is displayed and you can enter the next command sequence.

Command sequences are grouped by function. For example, commands related the network configuration are in one group. This makes it easy to determine the correct command sequence for a given operation. See [“Categorical List of Commands” \(page 10\)](#) for details.

Authorization levels are set for each user account to control what commands a user can perform. This enables users to perform appropriate operations but prevents them from executing actions for which they are not qualified; see [“Accessing the CLI” \(page 6\)](#).

Accessing the CLI

The CLI software embedded in the appliance enables you to manage and monitor storage-system operation. For single-node products, you can access the CLI from an SSH terminal using an SSH client application (freely available on the internet). For multinode products, you can access the CLI from an SSH terminal connected to the master node using an SSH client application (freely available on the internet). The CLI is running on the management console:

```
ssh <username>@<appliance IP address>
```

The Common CLI instruction set supports different authorization levels that permit execution of different subsets of commands. Each authorization level has a unique command prompt. The accounts in [Table 1 \(page 6\)](#) are created at the time of the StoreOnce system installation, and the Administrator can create additional users at any time.

Table 1 Login Information

Authorization Level	Can Execute	User Name	Password	Command Prompt
Operator	Commands that provide information about the state and configuration of the StoreOnce appliance but no commands that change the configuration.	Operator	operator	>
Administrator	Commands that provide information about the state and configuration of the StoreOnce appliance plus commands that configure or change the configuration of	Admin	admin	#

Table 1 Login Information *(continued)*

Authorization Level	Can Execute	User Name	Password	Command Prompt
	the StoreOnce appliance.			

Command Entry

Upon log in, the cursor appears after the command prompt. Instruction entry elements are placed after the prompt by entering the appropriate characters and symbols. Pressing the enter key directs the Common CLI to interpret the instruction entry and perform the defined operation. Once the operation is completed, the command prompt is displayed and another instruction may be entered.

Prior to pressing the enter key, the text after the command prompt can be edited using the delete, backspace, right and left arrow keys. In addition, the up and down arrow key are used to scroll through the previously entered command sequences; you can then edit and enter a previous command sequence. This speeds the entry when entering multiple instances of similar command sequences.

Viewing Help

To view brief descriptions of all global commands and commands that are available to the current user level, enter:

```
help
```

You can also include a command or command group after `help` to see help specific to that command or command group.

To assist in using the Common CLI, the following help features exist:

- If you enter a correct command sequence but use incorrect syntax, information on the correct syntax will be displayed.
- If you enter an invalid command sequence, information on valid permutations of the command elements will be displayed.

Transferring Files

Transfer of files to and from the StoreOnce appliance is managed with a repository directory within the appliance. Access to the directory is controlled via the secure FTP.

Scripting

Scripting is performed via Expect, a UNIX automation and testing tool. To aid in parsing, the Common CLI can be configured to return XML formatted output.

2 Command Instruction Syntax

A StoreOnce appliance is controlled by operations. An operation is one or more of the following events:

- Providing configuration information to the appliance
- Requesting an action
- Obtaining information about the appliance

The execution of operations is initiated by instructions. The instruction entry consists of three parts:

- The command sequence — up to four command elements representing groups of related operations, actions, or subjects of the action. A command sequence is unique and there is a defined syntax for every command sequence. The command sequence must be present in all entries to define the instruction.

A typical command sequence consists of a command element defining the group of related operations to which the given sequence belongs. This element is followed by a command element describing the action of the operation. Then, depending on the operation, a third and possibly fourth element may be included to describe the subject of the action. In some cases, the command sequence may consist of only one command element describing the action of the operation.

- Objects — represent an item associated with a StoreOnce appliance. It may be a physical item, such as a network interface, or a virtual item, such as a virtual tape cartridge. Not all instructions contain objects, but up to three is possible.
- Parameters — define additional conditions placed upon the operation. A parameter consists of a word (or a series of words separated by dashes) followed by a colon; the characters after the colon define the value of the parameter. Not all instructions contain parameters.

Table 2 A CLI Instruction

Command Sequence				Objects			Parameters
command (group)	command (action)	command (subject)	command (clarification)	object	object	object	parameter: value

NOTE: Command entry is case insensitive; command words, objects, and parameters may be entered in either upper or lower case.

The beginning elements of your entry are compared with the allowed command sequences. If there is a direct match, this match defines the command syntax. If there is more than one direct match, the match with the most number of elements is used. If a match does not exist, the help function is performed to aid you in determining the correct entry.

Once the command sequence has been established, the entry is verified for correct syntax. If the entry is correct, the operation is performed as defined. If there is a syntax violation, the help function is performed to aid you in determining the correct entry.

The following convention is used when describing command entry syntax:

- The use of square parenthesis such as [Object] or [parameter] indicates the object or parameter entry is optional
- The use of carat parenthesis such as <Object> or <parameter> indicates user entry is required to define the object or parameter
- The use of special parenthesis such as {Object1 | Object2 |} or {value1 | value2 |} indicates a selection of one item is required among the items separated by the | character.

- The use of parenthesis such as (object) indicates a label for the object will be automatically generated by the Common CLI application. No entry is required for this item.
- The use of parenthesis enclosing the phrase default=value such as (default=value) indicate that if no value is provided for this parameter, the value within the parenthesis will be used.

Global Defaults

Global defaults exist to clearly represent groups of objects or specific objects. Unlike the existence of most objects which depend on the StoreOnce appliance or user requirements, global defaults are directly related to the Common CLI and can be used in command entries on any implementation of the Common interface.

Default	Represents
ALL	All objects related to a given command sequence. (Often, the absence of object elements implies all objects. The "all" default is used to ensure intent. For example, the command entry "hardware disable failover" does not include a definition of a node object. Therefore, the operation is performed on all nodes. In contrast, the command entry "support del ticket all" must include the global default all to delete all the support tickets. Because the user can not reverse the results of deleting all the support tickets, the global default all must be included to ensure the users intent).
CLI (multinode default only)	The Common CLI interface. (To support high availability, the instance of the Common CLI can exist on any node, a VIF is used to define the location and by default the Common CLI object. Prior to the VIF assignment, this global default is used to represent the Common CLI.)
CURRENT	The object currently active.
DEFAULT	Default settings as define by HP.
GUI (multinode default only)	The GUI associated with the StoreOnce appliance support by the Common CLI. (To support high availability, the instance of the GUI can exist on any node, a VIF is used to define the location and by default the Common CLI object. Prior to the VIF assignment, this global default is used to represent the GUI.)

3 Categorical List of Commands

Table 3 Commands by Category

Command Group	Commands
accounts	"accounts add" (page 13) "accounts del" (page 15) "accounts modify" (page 16) "accounts show" (page 17)
alerts	"alerts show" (page 18)
config	"config delete" (page 19) "config restore devices" (page 20) "config save devices" (page 22) "config show list" (page 23)
exit	"exit" (page 24)
hardware	"hardware add storage" (page 25) "hardware beacon" (page 26) "hardware delete storage" (page 27) "hardware disable failover" (page 29) "hardware discover storage" (page 30) "hardware enable failover" (page 31) "hardware failback" (page 32) "hardware failover" (page 33) "hardware poweroff" (page 34) "hardware powerup" (page 36) "hardware prepare storage" (page 37) "hardware reboot" (page 38) "hardware set ports" (page 39) "hardware show net status" (page 40) "hardware show node status" (page 42) "hardware show problems" (page 43) "hardware show status" (page 44) "hardware show storage status" (page 47)
help (see "Viewing Help" (page 7))	"help" (page 48)
license	"license add" (page 50) "license load" (page 51) "license show" (page 52)
logs	"logs show events" (page 53)
net	"net activate config" (page 55) "net add subnet" (page 56) "net copy config" (page 58) "net create config" (page 59) "net delete config" (page 61)

Table 3 Commands by Category *(continued)*

Command Group	Commands
	<p>“net delete subnet” (page 62) “net modify config” (page 63) “net modify subnet” (page 65) “net ping” (page 67) “net set config” (page 68) “net set wizard” (page 70) “net show config” (page 73) “net show config” (page 75) “net show config list” (page 77) “net show ports” (page 78) “net show status” (page 79) “net validate config” (page 80)</p>
serviceset	<p>“serviceset show status” (page 81) “serviceset start” (page 82) “serviceset stop” (page 83)</p>
snmp	<p>“snmp add trapsink ” (page 84) “snmp add user” (page 87) “snmp del trapsink ” (page 89) “snmp del user” (page 90) “snmp disable” (page 91) “snmp enable” (page 92) “snmp modify trapsink” (page 93) “snmp modify user” (page 95) “snmp reset ro-community” (page 97) “snmp set contact” (page 98) “snmp set location” (page 99) “snmp set ro-community” (page 100) “snmp show config” (page 101) “snmp show user” (page 103)</p>
support	<p>“support create ticket” (page 104) “support del ticket” (page 105) “support show ticket” (page 106)</p>
system	<p>“system clear packages” (page 107) “system clear repository” (page 108) “system disable failover” (page 109) “system enable failover” (page 110) “system load packages” (page 111) “system reboot” (page 112) “system set clioutput” (page 113) “system set description” (page 121) “system set pagecontrol” (page 122) “system show config” (page 123) “system show packages” (page 124)</p>

Table 3 Commands by Category *(continued)*

Command Group	Commands
	<p>"system show repository" (page 125) "system show status" (page 126) "system shutdown" (page 128) "system update packages" (page 129)</p>
time	<p>"time add ntpserver" (page 130) "time del ntpserver" (page 132) "time reset timezone" (page 133) "time set timezone" (page 134) "time set UTC" (page 136) "time show config" (page 137)</p>
vtl	<p>"vtl create cartridge" (page 138) "vtl create library" (page 140) "vtl delete cartridge" (page 144) "vtl delete library" (page 146) "vtl modify cartridge" (page 148) "vtl modify drive" (page 150) "vtl modify library" (page 152) "vtl move cartridge" (page 156) "vtl show capacity" (page 158) "vtl show cartridges" (page 160) "vtl show drive info" (page 162) "vtl show drive list" (page 164) "vtl show library info" (page 166) "vtl show library iscsi authentication" (page 169) "vtl show library list" (page 170) "vtl show ports" (page 171)</p>

4 Alphabetical List of Commands and Details

accounts add

Description of Command Function

Creates an account that interfaces with the StoreOnce appliance using the CLI or GUI.

NOTE: The standard factory or restore image already contains the account Admin with the administrator authority level and the password: admin. You cannot create that account, but you can modify or delete it.

Command Syntax

```
accounts add <ACCOUNT> password <current user password> level  
{admin|user} newpassword <password> <password>
```

Command Authority

Administrator

Command Object Requirements

ACCOUNT – This required object is a string uniquely labeling the added account. It can contain uppercase and lowercase letters, numbers, a hyphen (-), and an underscore (_) for a maximum of 16 characters.

Command Parameter Requirements

- *level* – This required parameter defines the account authorization level and will be one of the following:
 - admin (administrator)
 - user
- *password* – This required parameter string defines a password for the account. Include the text `password` followed by the password, white space, and the same password. The string can contain uppercase and lowercase letters, numbers, and the symbols ! @ # \$ % ^ & * for a maximum of 24 characters and is case sensitive.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- The object value must be valid; see the object description for details.
- All parameter values must be valid; see the parameter descriptions for details.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
account ACCOUNT added, where ACCOUNT is the string label of the new account.
```

Command Operation during Abnormal Conditions

- If the command does not conform to the required syntax, the following is displayed:
Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.
- If the password does not meet the defined requirements, the following is displayed:
Command Failed - The password must be 1 character in length minimum and 24 characters in length maximum and can only contain upper,

lower case letters, numbers and the following symbols ! @ # \$ % ^
& *

- If the account description is too long, the following is displayed:
Command Failed - The account description can only be 32 characters max
- If the label is the same as an existing account, the following is displayed:
Command Failed - account ACCOUNT already exists, where ACCOUNT is the string label of the account.

Example

```
# accounts add Joe_Operator password B@seB@ll level user newpassword  
F00tB*ll F00tB*ll  
account Joe_Operator added
```

accounts del

Description of Command Function

Deletes an existing account.

NOTE: Accounts can only be deleted if the user is logged in with an account with at least the same level of command authority/permission as the account being deleted.

Command Syntax

```
accounts del <ACCOUNT> password <current user password>
```

Command Authority

Administrator

Command Object Requirements

ACCOUNT – This required object is a string matching the label of an existing account. This cannot be the only account with the Administrator authorization level.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- The object value must be valid; see the object description for details.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
account ACCOUNT deleted, where ACCOUNT is the string label of the deleted account.
```

Command Operation during Abnormal Conditions

- Command Failed - the command does not conform to the required syntax, *SYNTAX*, where *SYNTAX* is the command syntax as described under Command Syntax in this section.
- If the account object in the command entry is the only account with “administrator” authorization level, the following is displayed:

```
Command Failed - At least one account must have administrator authorization
```
- If the account label included in the command does not match an existing account, the following is displayed:

```
Command Failed - account ACCOUNT does not exist, where ACCOUNT is the account label included in the command.
```

Example

```
# accounts del Joe_Operator password B@seB@ll
account Joe_Operator deleted
```

accounts modify

Description of Command Function

Modifies the password of an existing account.

Command Syntax

```
accounts modify [ACCOUNT] password <current user password> newpassword  
<password> <password>
```

Command Authority

Administrator

Command Object Requirements

ACCOUNT – This required object is a string of an existing account.

Command Parameter Requirements

password – This parameter may be modified for the account defined within this command by entering a new value.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- The account object in the command entry must be an existing account.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
account ACCOUNT modified, where ACCOUNT is the string labeling the account to be  
modified.
```

Command Operation during Abnormal Conditions

- If the command does not conform to the required syntax the following is displayed:
Command Failed - the command does not conform to the required syntax,
SYNTAX where SYNTAX is the command syntax as described under Command Syntax in this
section.
- If the password does not meet the defined requirements, the following is displayed:
Command Failed - The password must be 1 character in length minimum
and 24 characters in length maximum characters max and can only
contain upper, lower case letters, numbers and the following symbols
1! @ # \$ % ^ & *.
- If the account label included in the command does not match an existing account, the following
is displayed:
No such D2D User: ACCOUNT
Command Failed -, where ACCOUNT is the account label included in the command.

Example

```
# accounts modify Joe_Operator password B@seB@ll newpassword F00tB*ll  
F00tB*ll
```

```
account Joe_Operator modified
```

To modify the password of the currently active account:

```
# accounts modify password B@seB@ll newpassword F00tB*ll F00tB*ll  
account (current account name) modified
```


accounts show

Description of Command Function

Lists all the user accounts and their authority level defined for the StoreOnce appliance.

Command Syntax

```
accounts show [current]
```

Command Authority

Administrator

Command Object Requirements

current – As an option, the global default “current” may be included in the command entry. If included, “current” must follow `accounts show` in the command entry. The “current” account object indicates the command applies to the account which has been used to log into the currently displayed CLI.

Command Parameter Requirements

Not applicable – no parameter values exist within this command.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- If the “current” object is included in the command entry, only information for the current account is shown.

Successful Command Output

Upon successful completion of the command, the following is displayed for each account:

ACCOUNT AUTHORITY-LEVEL, where ACCOUNT is the string which labels a given account and AUTHORITY-LEVEL is one of the following authorization levels:

- operator
- administrator

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax the following is displayed:

Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.

Example

```
# accounts show
Username  Authority-Level
-----  -
Admin    administrator
Operator operator
```

alerts show

Description of Command Function

Lists all events with a severity of “critical” or “error.”

NOTE: The command `logs show events` can also be used to show all events or filtered events, not just critical or error events. See “logs show events” (page 53).

Command Syntax

```
alerts show [verbose] [numofevents <number>]
```

Command Authority

Operator, Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

- *verbose* – When this parameter is included in the command entry a detailed output is provided.
- *numofevents* – When this parameter is use a integer must follow the “numofevents” text. This is the maximum number of events which will be listed in the output, starting with the most recent events.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, a list of the most recent events up to 20 events is displayed starting with the most recent event. The output includes the event time, level, and description.

If the “verbose” parameter is included, a detailed list of information for each event is output. If the “numofevents” parameter is included, the maximum number of events displayed is defined by the interger provided with this parameter. The list of events starts with the most recent event.

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this
section.
```

Examples

```
> alerts show
```

```
EVENT ID  TIMESTAMP          LEVEL  TEXT
-----
580      Jul 21 16:22:50  ALERT  HBA link 50.06.05.b0.02.56.45.00 on host d2dd48564785fd8_node_1 status is
stale
```

```
> alerts show verbose
```

```
EVENT ID  TIMESTAMP          LEVEL  TEXT          USER NAME  OPERATION  SEGMENT NUMBER  PV NUMBER  NIC  HBA
FILESYSTEM HOST
RELATED EVENT
-----
580      Jul 21 16:22:50  ALERT  HBA link 50.06.05.b0.02.56.45.00 on host d2dd48564785fd8_node_1 status is
stale      d2dd48564785fd8_node_1
50.06.05.b0.02.56.45.00      0
```

NOTE: The example output is in a small font to fit on this specification page. As a CLI output, the character string will simply wrap at the end of a terminal line.

config delete

Description of Command Function

Deletes a configuration file that exists in the configuration jail directory.

Command Syntax

```
config delete <ConfigFile>
```

Command Authority

Administrator

Command Object Requirements

ConfigFile – This required object is the configuration file which is deleted from the configuration jail directory. This file must exist in the configuration jail directory. The `config show list` command lists all valid configuration files in the config directory.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- The object value must be valid; see the object description for details.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
Command Successful
```

Command Operation during Abnormal Conditions

If any of the command execution requirements fail, command execution terminates. The configuration file is not deleted and one of these error messages is displayed:

- Command Failed - the command does not conform to the required syntax, "config delete <ConfigFile>"
- Command Failed - The configuration file does not exist in the configuration directory

Example

```
# config delete  
devconfig_hpd4856476a1fc_Thur_Jul_19_10:33:24_UTC_2012.zip  
Command Successful
```

config restore devices

Description of Command Function

Restores the StoreOnce system devices to the condition detailed in the defined device's configuration file.

NOTE: For more information about the configuration save and restore process, see the *HP StoreOnce Backup System User Guide* (single-node or multi-node, depending on your product). See also "config save devices" (page 22).

Command Syntax

```
config restore devices SETX[,X] ConfigFile force
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

- *ConfigFile* – This required object defines the device configuration file detailing the configuration to which the devices in the system are restored.
- *SETX* – This required object defines the service set to which the drive will be added. X is the numeric index of the service set. You can include more than one service sets.

Command Parameter Requirements

force – This optional parameter overrides any digital signatures or sumchecks.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All object values must be valid; see the object descriptions for details.
- The parameter value must be valid; see the parameter description for details.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
Command Successful
```

Command Operation during Abnormal Conditions

- If any of the command execution requirements fail, command execution terminates. The configurations are not restored and one of these error messages is displayed:
 - Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.
 - Command Failed - The configuration file does not exist
 - Command Failed - The configuration file is not a device configuration file
 - Command Failed - Duplicate service sets
 - Command Failed - The service set(s) are invalid
 - The software version of the configuration file [configuration software version] does not match system software version [system software version]
 - Command Failed - The system hardware does not match the configuration file (difference in number of nodes)

- Command Failed - The system hardware does not match the configuration file (service set does not exist)
- Command Failed - Configuration file has been modified (use of the force parameter will override this check)
- If the force parameter is set, the following message is displayed before executing the command:
The validity of the configuration file is not being checked. After command execution, verify devices have been configured on system as expected
- Errors generated by the `d2d serviceset restore` process are prefixed with "Command Failed" and displayed as CLI error messages.

Example

```
# config restore devices saved-devices-config  
Command Successful
```

config save devices

Description of Command Function

Saves the device configuration to the configuration jail directory using the standard naming convention of `devconfig_<cluster ID and serial number> <date and time stamp>.zip`.

NOTE: For more information about the configuration save and restore process, see the *HP StoreOnce Backup System User Guide* (single-node or multi-node, depending on your product). See also “[config restore devices](#)” (page 20).

Command Syntax

```
config save devices
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
Configuration Save Started
```

Enter the `config show list` command to see the saved configuration files.

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax the following is displayed:

- Command Failed - the command does not conform to the required syntax, `SYNTAX`, where `SYNTAX` is the command syntax as described under Command Syntax in this section.
- Errors generated by the `d2d serviceset save` process are prefixed with “Command Failed” and displayed as CLI error messages.

Example

```
# config save devices
```

```
Command Successful
```

config show list

Description of Command Function

Displays a list of saved configuration files. A saved configuration file is any file located in the `config jail` directory with the `.zip` extension. (A configuration file listed by this may not be a valid configuration file. The user must manage the transfer of valid configuration files into the `config` directory.)

Command Syntax

```
config show list
```

Command Authority

Operator and Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, the configuration information is displayed:

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Example

```
# config show list  
Location: /config  
Configuration  
-----  
devconfig_hpd4856476a1fc_Thur_Jul_19_10:33:24_UTC_2012.zip  
devconfig_hpd4856476a1fc_Fri_Jul_13_16:54:24_UTC_2012.zip  
  
Command Successful
```

exit

Description of Command Function

Terminates a CLI session.

Command Syntax

```
exit
```

Command Authority

Operator and Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Not applicable – after command execution, the terminal is closed.

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Example

```
> exit
```

The CLI session is terminated.

hardware add storage

Description of Command Function

This command adds storage which has been discovered using the `hardware discover storage` command (see “[hardware discover storage](#)” (page 30)). Before this command can be executed, newly discovered storage must exist as presented in the `system show status` command (see “[system show status](#)” (page 126)). At least one storage set must exist with a status of “discovered (XXTB)” where XX cannot be equal to zero. The discovery process must be complete; no storage set can have the status of “discovering.” Once the storage addition process has been successfully started, the `system show status` command is used to determine the status and completion of the process.

Command Syntax

```
hardware add storage
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- Storage discover must be complete.
- Each storage enclosure must contain 12 drives all of the same capacity.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
storage addition successfully started
```

Command Operation during Abnormal Conditions

- If the command does not conform to the required syntax, the following is displayed:
Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.
- If newly discovered storage does not exist, the following is displayed:
Command Failed - New storage does not exist. Add physical storage to D2D system and execute the “hardware discover storage” command
- If the storage discovery process is currently being executed, the following message is displayed:
Command Failed - Storage discover already in process

Example

```
# hardware add storage  
storage addition successfully started
```

NOTE: This command applies to single-node products only.

Description of Command Function

Turns on or off the beacon for a hardware component. (The hardware component must support the beacon feature.)

Command Syntax

```
hardware beacon <dev-id> {on|off}
```

Command Authority

Operator and Administrator

Command Object Requirements

dev-id – This required object defines the hardware component whose beacon is to be turned on or off. The value is a string of the device identifier as listed in the `hardware show status` command.

Command Parameter Requirements

on/off – This required parameter defines the state of the beacon on the hardware component. “On” illuminates the beacon, and “off” places the beacon in a non-illuminated state.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All object values must be valid; see the object descriptions for details.
- All parameter values must be valid; see the parameter descriptions for details.

Successful Command Output

After command execution, the beacon on the selected hardware component is turned on or off and the following is displayed:

```
Command Successful
```

Command Operation during Abnormal Conditions

If any of the command execution requirements fail, command execution terminates. The beacon status is unchanged and one of these error messages is displayed:

- Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.
- Command Failed - The hardware component does not exist
- Command Failed - The hardware component does not support the beacon function
- Command Failed - The hardware component cannot support the beacon feature at this time

Examples

```
# hardware beacon enclosure-1-1 on
Command Successful
# hardware beacon hard_disk-1-1-1 off
Command Successful
```

hardware delete storage

NOTE: This command applies to single-node products only.

Description of Command Function

Deletes storage segments associated with the StoreOnce system “backend” file system. This command does not apply to the storage on which each nodes operating system is located.

Command Syntax

```
Hardware delete storage {ALL|dev-id}
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

- *ALL* – When this global parameter is defined in the command sequence, all couplet file systems, logical segments, logical volumes, and physical volume are removed. The system is left in a state in which no storage is configured. The command requires this parameter or a dev-id value.
- *dev-id* – This parameter defines a specific volume to be deleted. A specific volume is defined as a storage component with a specific SCSI LUN. The device ID for the storage component to be deleted can be determined using the `hardware show status` command. The command requires this parameter or the global *ALL*.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All parameter values must be valid; see the parameter descriptions for details.

Successful Command Output

Prior to executing the command the following message is displayed:

```
Warning - Data may be destroyed. Are you sure you want to delete storage?  
y / n
```

You must enter a *y* response for command execution to continue. Upon successful completion of the command, the following is displayed:

```
Command Successful
```

Command Operation during Abnormal Conditions

- If any of the command execution requirements fail, command execution terminates. The beacon status is unchanged and one of these error messages is displayed:
 - `Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.`
 - `Command Failed - The global parameter ALL or a device ID must be defined`
 - `Command Failed - The device ID is not a storage volume`
 - `Command Failed - The device does not exist`

- Command Failed - The storage volume is assigned to the D2D dedupe data file system
- Command Failed - The storage volume is not part of D2D dedupe data storage
- If you do not respond to the warning message with `y`, the command is terminated and the CLI returns to the user prompt.

Example

```
# hardware delete storage ALL  
Command Successful
```

hardware disable failover

NOTE: This command applies to multi-node products only.

Description of Command Function

Disables the failover feature between nodes which is automatically configured during the initial automatic configuration of the StoreOnce appliance. HP recommends disabling failover before rebooting the StoreOnce appliance.

Command Syntax

```
hardware disable failover [NODEX]
```

Command Authority

Administrator

Command Object Requirements

NODEX – As an option, this can be used to define an individual file server node. X is a unique numeric index. **NODEX** is a label uniquely defining the hardware component. It was assigned during the initial automatic hardware initialization and configuration and its value resides in the “node_config” file. A complete list of the **NODEX** labels can be obtained using the `hardware show node status` command (see “[hardware show node status](#)” (page 42)). If a file server node is defined, failover is only disabled for this node.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- Failover must not already be disabled.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
failover disabled
```

Command Operation during Abnormal Conditions

- If the command does not conform to the required syntax, the following is displayed:
Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.
- If failover is already disabled, the following is displayed:
Command Failed - failover is already disabled

Example

```
# hardware disable failover node1  
failover disabled
```

hardware discover storage

Description of Command Function

Discovers storage which has been connected to the StoreOnce appliance. Before this command can be executed, any previous discovery process must be complete. No storage set can have the status of “discovering.” The status of storage sets can be obtain by using the `system show status` command (see “[system show status](#)” (page 126)). Once the discover storage process has been successfully started, the `system show status` command is used to determine the status and completion of the process.

Command Syntax

```
hardware discover storage
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- Storage must be connected correctly.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
storage discovery successfully completed
```

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Example

```
# hardware discover storage
```

This command takes several minutes to complete execution.

hardware enable failover

NOTE: This command applies to multi-node products only.

Description of Command Function

Enables the failover feature between nodes which had been disabled using the `hardware disable failover` (see “[hardware disable failover](#)” (page 29)) command.

Command Syntax

```
hardware enable failover [NODEX]
```

Command Authority

Administrator

Command Object Requirements

NODEX – As an option, this can be used to define an individual file server node. X is a unique numeric index. **NODEX** is a label uniquely defining the hardware component. It was assigned during the initial automatic hardware initialization and configuration and its value resides in the “`node_config`” file. A complete list of the **NODEX** labels can be obtained using the `hardware show node status` command (see “[hardware show node status](#)” (page 42)). If a file server node is defined, failover is only enabled for this node.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- Failover must already be disabled.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
failover enabled
```

Command Operation during Abnormal Conditions

- If the command does not conform to the required syntax the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```
- If failover is already enabled, the following is displayed:

```
Command Failed - failover is already enabled.
```

Example

```
# hardware enable failover node1  
failover enabled
```

hardware failback

NOTE: This command applies to multi-node products only.

Description of Command Function

Returns the file server node defined in the command entry back from the failover condition. The node is placed in the failover condition as a result of automatic failover or by using the `hardware failover` command (see “[hardware failover](#)” (page 33)).

Command Syntax

```
hardware failback NODEX
```

Command Authority

Administrator

Command Object Requirements

NODEX – this object must appear in the command entry after `hardware failover NODEX` is used to define an individual file server node. X is a unique numeric index. **NODEX** is a label uniquely defining the hardware component; it was assigned during the initial automatic hardware initialization and configuration and its value resides in the “`node_config`” file. A complete list of the **NODEX** labels can be obtained using the `hardware show node status` command (see “[hardware show node status](#)” (page 42)).

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- The node defined in the command must be powered up and not in a failed state.
- The node defined in the command entry must be in a failed over state.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
NODEX has successfully failed back, where NODEX is the file server node defined in the command entry.
```

Command Operation during Abnormal Conditions

- If the command does not conform to the required syntax the following is displayed:

```
Command Failed - the command does not conform to the required syntax, SYNTAX where SYNTAX is the command syntax as described under Command Syntax in this section.
```
- If the node is not in a failover state, the following is displayed:

```
Command Failed - NODEX is not failed over, where NODEX is the file server node defined in the command entry.
```

Example

```
# hardware failback node1  
NODE1 has successfully failed back
```


hardware failover

NOTE: This command applies to multi-node products only.

Description of Command Function

Forces the implementation of the high availability feature for the file server node defined within the command. When this command is executed, the backup node within the couplet takes over the service set functions originally residing on the defined node.

Command Syntax

```
hardware failover NODEX
```

Command Authority

Administrator

Command Object Requirements

NODEX – this object must appear in the command entry after `hardware failover`. **NODEX** is used to define an individual file server node. X is a unique numeric index. **NODEX** is a label uniquely defining the hardware component; it was assigned during the initial automatic hardware initialization and configuration and its value resides in the “node_config” file. A complete list of the **NODEX** labels can be obtained using the `hardware show node status` command (see “[hardware show node status](#)” (page 42)).

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- The node to which failover will occur must be in a good state.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
NODEX has successfully failed over, where NODEX is the file server node defined in the command entry.
```

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax the following is displayed:

```
Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.
```

Example

```
# hardware failover node1
NODE1 has successfully failed over
```

hardware poweroff

NOTE: This command applies to multi-node products only.

Description of Command Function

Powers down the StoreOnce appliance. If a file server node is defined in the command entry, only this node is powered down.

NOTE: This command will only work if failover is enabled. See the `system enable failover` command, “[system enable failover](#)” (page 110)

Command Syntax

```
hardware poweroff [NODEX]
```

Command Authority

Administrator

Command Object Requirements

NODEX – As an option, this can be used to define an individual file server node. X is a unique numeric index. **NODEX** is a label uniquely defining the hardware component; it was assigned during the initial automatic hardware initialization and configuration and its value resides in the “node_config” file. A complete list of the **NODEX** labels can be obtained using the `hardware show node status` command (see “[hardware show node status](#)” (page 42)). If a file server node is defined, only this node is powered down.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- At least one system with an active CLI must exist.
- If a file serving node is defined in the command entry, the defined node must be powered up.
- This command will only work if failover is enabled.

Successful Command Output

Upon successfully sending the power off request, the following is displayed:

```
poweroff request successfully sent
```

NOTE: This message only indicates the success for the shutdown request. The `hardware show node status` command (see “[hardware show node status](#)” (page 42)) must be entered to verify the server nodes shutdown correctly. Also, if the shutdown applies to the node currently supporting the CLI interface, the session will be terminated following this command.

Command Operation during Abnormal Conditions

- If the command does not conform to the required syntax, the following is displayed:
Command Failed - the command does not conform to the required syntax, SYNTAX where SYNTAX is the command syntax as described under Command Syntax in this section.
- If the node is already powered down, the following is displayed:
Command Failed - NODEX already shutdown, where **NODEX** is the file server node object defined in the command entry.

Example

```
# hardware poweroff node1
```

poweroff request successfully sent

NOTE: This command applies to multi-node products only.

Description of Command Function

Powers up the StoreOnce appliance. If a file server node is defined in the command entry, only this node is powered up.

Command Syntax

```
hardware powerup [NODEX]
```

Command Authority

Administrator

Command Object Requirements

NODEX – As an option, this can be used to define an individual file server node. X is a unique numeric index. **NODEX** is a label uniquely defining the hardware component; it was assigned during the initial automatic hardware initialization and configuration and its value resides in the “node_config” file. A complete list of the **NODEX** labels can be obtained using the `hardware show node status` command (see “[hardware show node status](#)” (page 42)). If a file server node is defined, only this node is powered up.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- At least one system with an active CLI must exist.
- If a file serving node is defined in the command entry, the defined node must be powered up.

Successful Command Output

Upon successfully sending the power up request, the following is displayed:

```
power up request successfully sent
```

NOTE: This message only indicates the success for the power up request. The `hardware show node status` command (see “[hardware show node status](#)” (page 42)) must be entered to verify that the server nodes powered up correctly.

Command Operation during Abnormal Conditions

- If the command does not conform to the required syntax, the following is displayed:
Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.
- If the entire StoreOnce appliance or the specified node is already powered up, the following is displayed:
Command Failed - device already powered up

Example

```
# hardware powerup node1  
power up request successfully sent
```

hardware prepare storage

Description of Command Function

An alias for the `hardware discover storage` command. See [“hardware discover storage” \(page 30\)](#) for details.

Command Syntax

```
hardware prepare storage
```

hardware reboot

NOTE: This command applies to multi-node products only.

Description of Command Function

Reboots the StoreOnce appliance nodes. If a file server node is defined in the command entry, only this node is rebooted.

Command Syntax

```
hardware reboot [NODEX]
```

Command Authority

Administrator

Command Object Requirements

NODEX – As an option, this can be used to define an individual file server node. X is a unique numeric index. NODEX is a label uniquely defining the hardware component. It was assigned during the initial automatic hardware initialization and configuration. A complete list of the NODEX labels can be obtained using the `hardware show node status` command (see “[hardware show node status](#)” (page 42)). If a file server node is defined, only this node is rebooted. If no nodes are defined, all the nodes in the appliance are rebooted.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- At least one system with an active CLI must exist.
- If a file serving node is defined in the command entry, the defined node must be powered on.

Successful Command Output

Upon successfully sending the reboot request, the following is displayed:

```
reboot request successfully sent
```

NOTE: This message only indicates the success for the reboot request. The `hardware show node status` command (see “[hardware show node status](#)” (page 42)) must be entered to verify that the server nodes rebooted correctly. Also, if the reboot applies to the node currently supporting the CLI interface, the session will terminate following this command.

Command Operation during Abnormal Conditions

- If the command does not conform to the required syntax, the following is displayed:
Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.
- If the defined node is not powered up, the following is displayed:
Command Failed - NODEX is not rebooted, where NODEX is the file server node defined for reboot in the command entry.

Example

```
# hardware reboot  
reboot request successfully sent
```

hardware set ports

NOTE: This command applies to single-node products only.

Description of Command Function

Sets the node's physical port parameters.

Command Syntax

```
hardware set ports [NODEX] PORTX [speed {auto|2Gbs|4Gbs|8Gbs}]
[{{Connection Loop|Fabric|pnt-to-pnt}}]
```

Command Authority

Administrator

Command Object Requirements

- *NODEX* – This object defines the node containing the port whose parameters are to be set. X is a numeric index for the node.
- *PORTX* – This object defines the port whose parameters are to be set. X is a numeric index for the port.

Command Parameter Requirements

- *Speed* – This parameter defines the speed of the port. The possible values are defined in the Command Syntax section.
- *Connection* – This parameter defines the connection type. The possible values are defined in the Command Syntax section.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All object values must be valid; see the object descriptions for details.
- All parameter values must be valid; see the parameter descriptions for details.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
Command Successful
```

Command Operation during Abnormal Conditions

If any of the command execution requirements fail, command execution terminates. The node's ports are unchanged and one of these error messages is displayed:

- Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.
- Command Failed - The port is invalid
- Command Failed - The node is invalid
- Command Failed - Cannot change port settings on a node while in failover

Example

```
# hardware set ports port1 speed 8Gbs
Command Successful
```

hardware show net status

NOTE: This command applies to multi-node products only.

Description of Command Function

Provides status on the StoreOnce file server node's network interfaces.

Command Syntax

```
hardware show net status
```

Command Authority

Operator and Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, the status of the hardware network interfaces is displayed. The displayed status can be one of the following:

- Up
- LinkUp
- Inactive
- Standby
- LinkDown
- BondsDegraded
- NicsStatusStale

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.

Example

```
> hardware show net status
```

HOST	BACKUP_HOST	BACKUP_IF	ROUTE	IFNAME	TYPE	STATE	IP_ADDRESS	MAC_ADDRESS
			LINKMON					
d2d78e7d1e6928e_node_1				bond1:3	User	Inactive, Standby		78:e7:d1:e6:92:8e
d2d78e7d1e6928e_node_1				No				
d2d78e7d1e6928e_node_2				bond1:1	User	Up, LinkUp	10.10.10.10	78:e7:d1:e6:92:8e
d2d78e7d1e6928e_node_1		bond1:3		No				
d2d78e7d1e6928e_node_1				bond0	Cluster	Up, LinkUp	10.10.4.1	3c:4a:92:3d:90:a8
d2d78e7d1e6928e_node_2				No				
d2d78e7d1e6928e_node_2				bond1:1	User	Up, LinkUp	10.10.10.11	1c:c1:de:23:d4:5e
d2d78e7d1e6928e_node_1		bond1:3		No				
d2d78e7d1e6928e_node_2				bond1:3	User	Inactive, Standby		
d2d78e7d1e6928e_node_2				No				
d2d78e7d1e6928e_node_2				bond0	Cluster	Up, LinkUp	10.10.4.2	d4:85:64:23:22:40
d2d78e7d1e6928e_node_1				No				
d2d78e7d1e6928e_node_1	[Active FM Nonedit]			bond0:1	Cluster	Up, LinkUp	10.10.1.1	
d2d78e7d1e6928e_node_1	[Active FM Nonedit]			No				
d2d78e7d1e6928e_node_1	[Active FM Nonedit]			bond1:2	User	Up, LinkUp	10.10.10.5	
				No				

NOTE: The example output is in a small font to fit on this specification page. As a CLI output, the character string will simply wrap at the end of a terminal line.

hardware show node status

Description of Command Function

Provides status on the StoreOnce file server nodes. If a node object is included in the command entry. The port and component status is only provided for that node.

Command Syntax

```
hardware show node status [NODEX]
```

Command Authority

Operator and Administrator

Command Object Requirements

NODEX – As an option, this can be used to define an individual file server node. X is a unique numeric index. *NODEX* is a label uniquely defining the hardware component. It was assigned during the initial automatic hardware initialization and configuration.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, the status of the hardware network interfaces is displayed. The displayed status can be one of the following:

- Up
- Down
- Initializing/PoweringUp
- NicslinkDown
- NicsStatusStale
- FailedOver
- InFailback
- PartialFailover
- BondsDegraded

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.

Example

```
> hardware show node status
```

```
SERVER_NAME          BACKUP          STATE          HA          ID          GROUP
-----
d2d78e7d1e6928e_node_1  d2d78e7d1e6928e_node_2  Up          off  68fa0df3-ceed-41f6-9b93-ce86cdf552a3  servers
d2d78e7d1e6928e_node_2  d2d78e7d1e6928e_node_1  Up, HBAsDown  off  0f1488ca-9478-46b0-9aff-7e39b2a59017  servers

Clients
=====
CLIENT_NAME  IPADDRESS  ID  GROUP
-----

```

NOTE: The example output is in a small font to fit on this specification page. As a CLI output, the character string will simply wrap at the end of a terminal line.

hardware show problems

Description of Command Function

Displays a list of the failed hardware components in the StoreOnce system.

Command Syntax

```
hardware show problems
```

Command Authority

Operator and Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, the failed hardware components are listed.

Command Operation during Abnormal Conditions

- If the command does not conform to the required syntax, the following is displayed:
Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.
- If any of the command elements (hardware, show, problem, report) are misspelled, the following is displayed:
element: command not found

Example

```
> hardware show problems
```

uuid of failed hw	status text	hardware type	hardware path
msa1	warn	STORAGE_ARRAY	Couplet_1 > msa1
enclosure-1-1	down	DISK_ENCLOSURE	Couplet_1 > msa1 > enclosure-1-1
hard_disk-1-1-10	down	PHYSICAL_DISK	Couplet_1 > msa1 > enclosure-1-1 > hard_disk-1-1-10
raidset-1-2	warn	RAID_SET	Couplet_1 > msa1 > raidset-1-2
msa2	warn	STORAGE_ARRAY	Couplet_1 > msa2
controller-2-1	warn	DISK_CONTROLLER	Couplet_1 > msa2 > controller-2-1
sas_channel-2-1-1	down	SAS_CHANNEL	Couplet_1 > msa2 > controller-2-1 > sas_channel-2-1-1
controller-2-2	warn	DISK_CONTROLLER	Couplet_1 > msa2 > controller-2-2
sas_channel-2-2-1	down	SAS_CHANNEL	Couplet_1 > msa2 > controller-2-2 > sas_channel-2-2-1
switch1_powersupply_2	failure	POWER_SUPPLY	switch1 > switch1_powersupply_2
switch2_powersupply_2	failure	POWER_SUPPLY	switch2 > switch2_powersupply_2

Command Successful

NOTE: The example output is in a small font to fit on this specification page. As a CLI output, the character string will simply wrap at the end of a terminal line.

hardware show status

Description of Command Function

Provides status on all the hardware components of the StoreOnce system.

Command Syntax

```
hardware show status [detail] [dev-id]
```

Command Authority

Operator and Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

- *detail* – This optional parameter provides a detailed output for the hardware components selected. If not defined, only the device ID and its status are provided.
- *dev-id* – This optional parameter selects a particular device and its immediate children to have their statuses shown. If not defined, the top level status and device IDs of couplets (with their nodes and storage arrays) and internal network switches are shown. The device ID of any component can be found using the `hardware show status` command and then using that device ID with the same command to view the device IDs of its subcomponents.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All parameter values must be valid; see the parameter descriptions for details.

Successful Command Output

Upon successful completion of the command, the status of the selected devices is shown.

NOTE: If CLI paging is enabled, the output of this command is displayed with paging.

Command Operation during Abnormal Conditions

If any of the command execution requirements fail, command execution terminates. The hardware status is not displayed and one of these error messages is displayed:

- Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.
- Command Failed - Component for the device ID does not exist in system

Examples

```
> hardware show status
dev-id           StatusText
-----
Couplet_1       down
- msal          warn
- msa2          warn
- hp85647867b2-2 up
- hp85647867b2-1 up
switch1         up
switch2         up
Command Successful

> hardware show status msal
dev-id           StatusText
-----
msal            warn
- controller-1-1 up
```

```

- controller-1-2 up
- enclosure-1-1 down
- enclosure-1-2 up
- raidset-1-1 up
- raidset-1-2 warn
- raidset-1-3 up
- raidset-1-4 up

```

Command Successful

```
> hardware show status Couplet_1 detail
```

```
dev-id
```

```

-----
Couplet_1
  Name = Couplet_1
  SerialNumber = Couplet_1
  Status = 3
  Id = Couplet_1
  FirmwareVersion =
  Type = COUPLET
  Vendor = HP
  SystemName = HP B6200 StoreOnce Backup System
  RolledUpStatus = down
  diagMessages =
  AdditionalProperties = groupId=null, displayIp=
- msa1
  Name = MSA
  SerialNumber =
  Status = 4
  Id = msa1
  FirmwareVersion =
  Type = STORAGE_ARRAY
  Vendor = HP
  SystemName = HP B6200 StoreOnce Backup System
  RolledUpStatus = unknown
  diagMessages =
  AdditionalProperties = State=NEEDS ATTENTION
- msa2
  Name = MSA
  SerialNumber =
  Status = 4
  Id = msa2
  FirmwareVersion =
  Type = STORAGE_ARRAY
  Vendor = HP
  SystemName = HP B6200 StoreOnce Backup System
  RolledUpStatus = unknown
  diagMessages =
  AdditionalProperties = State=NEEDS ATTENTION
- hp85647867b2-2
  Name = ProLiant DL380 G7
  SerialNumber = USE048N4JX
  Status = 2
  Id = hp85647867b2-2
  FirmwareVersion = P67 05/05/2011
  Type = SERVER
  Vendor = HP
  SystemName = HP B6200 StoreOnce Backup System
  RolledUpStatus = unknown
  diagMessages = Good
  AdditionalProperties = UIDBeacon=On, ReleaseVersion=3.3.0-1222.16
- hp85647867b2-1
  Name = ProLiant DL380 G7
  SerialNumber = USE048N4JT
  Status = 2
  Id = hp85647867b2-1

```

```
FirmwareVersion      = P67 05/05/2011
Type                 = SERVER
Vendor               = HP
SystemName           = HP B6200 StoreOnce Backup System
RolledUpStatus       = unknown
diagMessages         = Good
AdditionalProperties  = UIDBeacon=On, ReleaseVersion=3.3.0-1222.16
```

Command Successful

NOTE: The example output is in a small font to fit on this specification page. As a CLI output, the character string will simply wrap at the end of a terminal line.

hardware show storage status

Description of Command Function

An alias for the `system show status` command. See “[system show status](#)” (page 126) for details.

Command Syntax

```
hardware show storage status
```

Description of Command Function

Provides information to assist in the use of the CLI.

Command Syntax

```
help [command]
```

Command Authority

Operator and Administrator

Command Object Requirements

Not applicable – no objects exist within this command entry.

Command Parameter Requirements

- *Command Group* – A command group word may be included in the command entry. If this parameter is included, it appears after “help” in the command entry.
- *Command* – a command word may be included in the command entry. If this parameters is included, it appear after “help” in the command entry.

Requirements for Command Execution

- The command entry must conform to the command syntax
- The parameters included in the command entry must be valid command groups or command words.

Successful Command Output

Provides information on command sequences in the CLI.

Command Operation during Abnormal Conditions

Not applicable.

Example

```
# help
Global commands
```

-
- help – List commands or get help for a specific command.
 - home – Go to the root level.
 - exit – Log out.
 - up – Go up one level.

Paths currently available

-
- accounts – manage user accounts.
 - alerts – commands related to display and settings of alerts and events.
 - filesys – provides information on the Backup System file system.
 - hardware – manage Backup System hardware.
 - license – manage Backup System licenses.
 - logs – commands related to the logs generated by the Backup System.
 - net – commands related to the Backup System network configuration.
 - snmp – ommands related to management of appliance via the network

- support – create, delete or show support tickets.
- system – commands related to configuration and system setup.
- time – manage time related functions.

Commands currently available

hpsupport – provides access to the HP support account with the HP support authority level.

shell – creates a shell with root access on the server node.

license add

Description of Command Function

Provides for the installation of a StoreOnce appliance license. The license is entered as a 168 character string.

Command Syntax

```
license add <license>
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command entry.

Command Parameter Requirements

license – a license string must appear in the command entry after `license add`. The license string is 168 characters in length. White space within the license is ignored. The license is purchased by the customer and provided by HP.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
license added
```

Command Operation during Abnormal Conditions

- If the command does not conform to the required syntax, the following is displayed:
Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.
- If the license is invalid, the following is displayed:
Invalid License

Example

```
# license add QACA A99A H9PY KHUY UVA5 HW6F Y9JL KMPL B89H MZVU DXAU  
2CSM GHTG L762 M7R6 EWJ9 KJVT D5KM EFVW TSNJ N6CJ 6KGC Q9R9 LB2K 5ART  
QNMV 4ZCQ 5YEM Q3ZN FB79 N45F BAUG BKTG 6VAB 3KMW R42A WW64 2N5Q 2R9F  
2LME EMJC LBYF  
license added
```

license load

Description of Command Function

Provides for the installation of a StoreOnce appliance license. The license is entered as a file image which exists in the StoreOnce appliances repository directory. The means by which the license file is placed in the repository directory is outside the scope of the CLI.

Command Syntax

```
license load <file-image>
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command entry.

Command Parameter Requirements

file-image – The name of the license file in the StoreOnce directory must appear in the command entry after `license load`. The license is purchased by the customer and provided by HP. The means by which the license file is placed in the StoreOnce appliance repository directory is beyond the scope of the CLI.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
license loaded successfully
```

Command Operation during Abnormal Conditions

- If the command does not conform to the required syntax, the following is displayed:
Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section
- If the license is invalid, the following is displayed:
Command Failed - license invalid

Example

```
# license load HP_D2D_543467  
license loaded successfully
```

license show

Description of Command Function

Displays the licenses which are available for this StoreOnce appliance.

Command Syntax

```
license show
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command entry.

Command Parameter Requirements

Not applicable – no parameters exist within this command entry.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion, the command displays the serial number and available licenses for the StoreOnce appliance.

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Example

```
# license show  
D2D Appliance  
Model Number: 652428-B21  
Product Serial Number: XXXXXXXX  
  
Replication    lic# 1245656 Qty: 1  
Additional 24 TB Storage lic# 3409723 Qty: 2
```

logs show events

Description of Command Function

Lists all the items in the event log. If a severity parameter is included in the command entry, only events at or greater than the defined severity are displayed.

Command Syntax

```
logs show events [severity {alert|warn|info}] [numofevents <number>]
(default = 20)
```

Command Authority

Operator, Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

severity – This is an optional parameter which filters which events are displayed. The parameter appears after “logs show” in the command entry. It consists of the text “severity” followed by one of these values:

- alerts
- warn
- info

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, the output is displayed as in the example below.

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this
section.
```

Example

```
> logs show events
```

```
EVENT ID  TIMESTAMP          LEVEL  TEXT
-----
SEGMENT NUMBER  PV NUMBER  NIC      HBA      FILESYSTEM  HOST      USER NAME  OPERATION
-----
-----
-----
644  Aug 3 19:00:41  INFO  Nic bond1:3 on host d2d78e7d1e6928e_node_1 inactive
                                         d2d78e7d1e6928e_node_1
                                         0
643  Aug 3 18:59:55  INFO  Nic bond1:1 on host d2d78e7d1e6928e_node_2 up
                                         d2d78e7d1e6928e_node_2
                                         0
642  Aug 3 18:59:46  INFO  Server d2d78e7d1e6928e_node_2 failed back
                                         d2d78e7d1e6928e_node_2
                                         0
640  Aug 3 18:59:40  WARN  Server d2d78e7d1e6928e_node_2 in failback
                                         d2d78e7d1e6928e_node_2
                                         0
639  Aug 3 18:59:40  INFO  Command from Local Host, user root: Failover for server d2d78e7d1e6928e_node_2.
                                         d2d78e7d1e6928e_node_2
                                         0
638  Aug 3 18:58:54  INFO  Nic bond1:1 on host d2d78e7d1e6928e_node_2 inactive
                                         d2d78e7d1e6928e_node_2
```

```
637 Aug 3 18:58:41      bond1:1                                0
INFO    Nic bond1:3 on host d2d78e7d1e6928e_node_1 up
                                                d2d78e7d1e6928e_node_1
636 Aug 3 18:58:19      bond1:3                                0
WARN    Server d2d78e7d1e6928e_node_2 failed over
                                                d2d78e7d1e6928e_node_2
635 Aug 3 18:58:13      ALERT  Server d2d78e7d1e6928e_node_2 in failover
                                                0
                                                d2d78e7d1e6928e_node_2
634 Aug 3 18:58:13      INFO    Command from Local Host, user root: Failover for server d2d78e7d1e6928e_node_2.
                                                0
                                                d2d78e7d1e6928e_node_2
```

NOTE: The example output is in a small font to fit on this specification page. As a CLI output, the character string will simply wrap at the end of a terminal line.

net activate config

NOTE: This command applies to single-node products only.

Description of Command Function

Configures the external network.

- ⓘ **IMPORTANT:** If the network you are using for the CLI session is modified from this command, your session may be terminated.
-

Command Syntax

```
net activate config <netlabel>
```

Command Authority

Administrator

Command Object Requirements

netlabel – This required object identifies the network configuration whose data structure will be used to configure the external network for the cluster.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The following list shows some examples but is not a complete list of checks.

- Verify the configuration structure according to the rules below:
 - A default subnet must exist.
 - Only one default subnet can exist.
 - A gateway is required for the default subnet.
 - The ports defined in a subnet must be valid options.
 - If more than one port is defined in a subnet, all the ports must be the same type.
 - The same port cannot be in two different subnets or defined twice in same subnet.
- If DHCP is defined in any subnet, verify that the DHCP server exists.
- Configure the external network as defined by the configuration data structure.
- If defined, verify that the gateway exists.

Successful Command Output

Upon successful completion of the command, information on the external network configuration is displayed.

Command Operation during Abnormal Conditions

If the command fails, the system will attempt to configure the external network using the original, current configuration.

Example

```
# net activate config management
```

net add subnet

NOTE: This command applies to single-node products only.

Description of Command Function

Adds a subnet data structure to the network configuration.

Command Syntax

```
net add subnet <netlabel> subnet <label> [default {yes|no}] [domain  
{<string>|DHCP}] IPAddr {DHCP|IP address} [netmask <mask>] [gateway  
<gateway>|DHCP] [bonding <mode>] ports <list>
```

Command Authority

Administrator

Command Object Requirements

- *netlabel* – This required object identifies the network configuration to which the subnet will be added. This is not case sensitive.
- *subnet* – This optional object is a label that identifies the subnet configuration object that will be created by execution of this command and will then be added to the network configuration defined in this command sequence. The object is a data structure which defines a subnet configuration. This must uniquely identify the subnet and may not be “ALL” or begin with the letters “grp.” If the subnet label is “ALL,” begins with “grp,” or is already being used to identify a subnet object within the network configuration, an error message is generated and the execution of the command will fail. If this is not defined, the label is “default”. This label is not case sensitive.

Command Parameter Requirements

- *default* – This optional parameter defines if the subnet configuration is the default; the default subnet defines the default gateway for the system. The values can be either Yes or No. If not defined, the default value is No, unless the subnet label is “default” in which case the value is Yes.
- *domain* – This optional parameter defines the domain name for the subnet configuration.
- *IPAddr* – This parameter defines an IP address. The value DHCP can be used to indicate that the IP address will be defined by a DHCP server.
- *netmask* – This parameter defines the netmask. If the IPAddr value is DHCP, a value is not required for netmask.
- *gateway* – This required parameter defines the gateway for the subnet configuration. The text “DHCP” indicates the gateway is defined by the DHCP server.

- *bonding* – This parameter defines network bonding modes. <mode> is 1, 4, or 6. See the *HP StoreOnce Backup System Installation and Configuration guide* for more detailed information on supported bonding modes and related templates.

Bonding mode	Description	Default Bonding Mode for:
Mode 1 (Active/Backup)	Simple bonding mode that allows network traffic via one active port only. If the active network fails then traffic moves to the backup port.	Templates 1, 3, 4, and 5
Mode 4 (IEEE 802.3ad Dynamic Link Aggregation)	LACP bonding mode that requires a special external switch configuration. Provides a link aggregation solution which increases the bond physical bandwidth.	none
Mode 6 (Active Load Balancing)	Load balance solution that can be used in a 2-switch configuration. The switch must allow ARP negotiation (but no specific external switch configuration is required).	Template 2

- *ports* – This parameter defines the ports which will be attached to the subnet for each node associated with the network configuration containing the subnet. (See the “[net activate config](#)” (page 55) command for details on how the nodes are associated with network configurations.) The values consist of a list of integers separated by commas; the integers define the physical ports on the nodes. Execute the “[net show ports](#)” (page 78) command to obtain information on which integers may be used to define ports for the subnet configuration. The list may consist of one integer value or multiple values. The maximum number of values depends on your system; use the [Command Authority](#) (page 56) command for information on which ports are available.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All object values must be valid; see the object descriptions for details.
- All parameter values must be valid; see the parameter descriptions for details.

Successful Command Output

Upon successful completion of the command, information on the external network configuration is displayed.

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this
section.
```

Examples

```
# net add subnet save1 subnet new ipaddr 1.2.3.4 gateway 5.6.7.8 netmask
255.255.0.0 domain gbr.hp.com default yes bonding 5 port eth0,eth2
```

net copy config

NOTE: This command applies to single-node products only.

Description of Command Function

Copies a network configuration.

Command Syntax

```
net copy config from <netlabel> to <newnetlabel>
```

Command Authority

Administrator

Command Object Requirements

- *netlabel* – The data structure in this network configuration is copied to the new network configuration object created by this command.
- *newnetlabel* – This network configuration object is created by this command.

Command Parameter Requirements

- *from* – This parameter identifies the label of the network configuration whose data structure will be copied and assigned to a new network configuration with a different label.
- *to* – This parameter identifies the label of the network configuration created by this command. The label must uniquely identify the network configuration and may not be “ALL” or begin with the letters “grp.” If the label is “ALL,” begins with “grp,” or is already being used to identify a network configuration, an error message will be generated and the execution of the command will fail.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All object values must be valid; see the object descriptions for details.
- All parameter values must be valid; see the parameter descriptions for details.

Successful Command Output

Upon successful completion of the command, information on the external network configuration is displayed.

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Example

```
# net copy config from default to management
```

NOTE: This command applies to single-node products only.

Description of Command Function

Creates a data structure that defines a network configuration. (A default data structure exists as part of the initial installation.)

Command Syntax

```
net create config <netlabel> [description <string>] [WriteProtect  
{Yes|No}] [DNS {IPAddr|DHCP} [subnet <label>] [default {yes|no}] [domain  
{<string> | DHCP}] IPAddr {DHCP|IP address} [netmask <mask>] [gateway  
<gateway>] port <list>
```

Command Authority

Administrator

Command Object Requirements

netlabel – This value is the label which identifies the network configuration that will be created by execution of this command. The identified object is a data structure which defines a network configuration. The label must uniquely identify the network configuration. It cannot be “ALL,” “undelete,” or cannot begin with the letters “grp.” If the network label is “ALL,” “undelete,” begins with “grp,” or is already being used to identify a network configuration, an error message will be generated and the execution of the command will fail. This label is case insensitive.

- *current* – This is the network configuration with is currently being used to configure the entire cluster or a group of nodes. If the cluster consists of groups of nodes, a current network configuration can exist for each group.
- *Factory_Default_Configuration* – This is a network configuration object that is pre-defined at the initial installation. This default configuration will be different depending on the StoreOnce system.

Command Parameter Requirements

- *description* – This optional parameter describes the network configuration and is contained in quotes (“”). There is no limit to the number of characters.
- *WriteProtect* – This optional parameter determines if the network configuration can be modified. The values for this parameter can be Yes or No. Yes means the network configuration cannot be modified (with one exception – the WriteProtect parameter can be modified). If this parameter is not defined in the command sequence, the default value is No. (The DEFAULT configuration cannot be modified. The WriteProtect parameter of the DEFAULT configuration is always Yes. The WriteProtect parameter of the DEFAULT configuration cannot be modified.)
- *DNS* – This optional parameter defines the DNS servers used in the network configuration. The value can be an up to three IP address or the text DHCP. The value DHCP indicates the DNS servers will be defined by the DHCP server. If more than one value is defined, the values are separated by commas.
- *default* – This optional parameter must follow a subnet object within the command sequence. This parameter defines if the preceding subnet configuration is the default subnet. The values for this parameter can be either Yes or No. If a subnet label is defined and this parameter is not defined following the subnet label, the default value for the subnet is No.
- *domain* – This optional parameter defines the domain name for the preceding subnet configuration.
- *IPAddr* – This parameter defines an IP address. The value DHCP can be used to indicate that the IP address will be defined by a DHCP server.

- *netmask* – This optional parameter defines the netmask. If the IPAddr value is DHCP, a value is not required for netmask.
- *gateway* – This optional parameter defines the gateway for the subnet configuration.
- *ports* – This parameter defines the ports which will be attached to the subnet for each node associated with the network configuration containing the subnet. (See the “[net activate config](#)” (page 55) command for details on how the nodes are associated with network configurations.) The values consist of a list of integers separated by commas; the integers define the physical ports on the nodes. Execute the “[net show ports](#)” (page 78) command to obtain information on which integers may be used to define ports for the subnet configuration. The maximum number of values depends on your system; use the [Command Authority](#) (page 56) command for information on which ports are available.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All object values must be valid; see the object descriptions for details.
- All parameter values must be valid; see the parameter descriptions for details.

Successful Command Output

Upon successful completion of the command, information on the external network configuration is displayed.

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.

Example

```
# net create config management dns dhcp
```

net delete config

NOTE: This applies to single-node products only.

Description of Command Function

Deletes a network configuration.

Command Syntax

```
net delete config <netlabel>
```

Command Authority

Administrator

Command Object Requirements

netlabel – This label identifies the network configuration to be deleted. This label is case insensitive.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- The object value must be valid; see the object description for details.

Successful Command Output

Upon successful completion of the command, information on the external network configuration is displayed.

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Example

```
# net delete config management
```

net delete subnet

NOTE: This command applies to single-node products only.

Description of Command Function

Deletes a subnet configuration.

Command Syntax

```
net delete subnet <netlabel> <sublabel>
```

Command Authority

Administrator

Command Object Requirements

- *netlabel* – This label identifies the network configuration to which the subnet will be added. This label is case insensitive.
- *sublabel* – This label identifies the subnet configuration within the define network configuration that will be deleted. This label is case insensitive.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All object values must be valid; see the object descriptions for details.

Successful Command Output

Upon successful completion of the command, information on the external network configuration is displayed.

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Example

```
# net delete subnet management 10GbE
```

NOTE: This command applies to single-node products only.

Description of Command Function

Modifies the parameters in an existing network configuration.

Command Syntax

```
net modify config <netlabel> [description <string>] [WriteProtect {Yes|No}] [DNS {IPAddr|DHCP} [subnet <label>] [default {yes|no}] [domain {<string> | DHCP}] IPAddr {DHCP|IP address} [netmask <mask>] [gateway <gateway>] port <list>
```

Command Authority

Administrator

Command Object Requirements

netlabel – This value is the label which identifies the network configuration that will be modified. This label is case insensitive.

- *current* – The execution of the command on the “current” configuration involves more activity than simply modifying parameters as when executed on other configurations. The following is a list of activity which occurs when the “current” config is modified:
 1. The current configuration is copied to a temporary data structure.
 2. The modifications defined in the command sequences are made to this temporary structure.
 3. The temporary structure is activated.
 - If the activation is successful, the changes made to the temporary structure are made to the current network configuration and the temporary structure discarded.
 - The description is updated with the following string `Configuration modified on DATE by USER`, where `date` is the system date and time when modification was made and `user` is the account user from which the modification was made.
 - If the activation fails, the command sequence fails. The temporary structure is discarded and the original current configuration is activated.
- *Factory_Default_Configuration* – This configuration cannot be modified.

Command Parameter Requirements

- *description* – This optional parameter describes the network configuration and is contained in quotes (“”). There is no limit to the number of characters.
- *WriteProtect* – This optional parameter determines if the network configuration can be modified. The values for this parameter can be Yes or No. Yes means the network configuration cannot be modified (with one exception – the WriteProtect parameter can be modified). If this parameter is not defined in the command sequence, the default value is No. (The DEFAULT configuration cannot be modified. The WriteProtect parameter of the DEFAULT configuration is always Yes. The WriteProtect parameter of the DEFAULT configuration cannot be modified.)
- *DNS* – This optional parameter defines the DNS servers used in the network configuration. The value can be an up to three IP address or the text DHCP. The value DHCP indicates the DNS servers will be defined by the DHCP server. If more than one value is defined, the values are separated by commas.
- *default* – This optional parameter must follow a subnet object within the command sequence. This parameter defines if the preceding subnet configuration is the default subnet. The values for this parameter can be either Yes or No. If a subnet label is defined and this parameter is not defined following the subnet label, the default value for the subnet is No.

- *domain* – This optional parameter defines the domain name for the preceding subnet configuration.
- *IPAddr* – This parameter defines an IP address. The value DHCP can be used to indicate that the IP address will be defined by a DHCP server.
- *netmask* – This optional parameter defines the netmask. If the IPAddr value is DHCP, a value is not required for netmask.
- *gateway* – This optional parameter defines the gateway for the subnet configuration.
- *ports* – This parameter defines the ports which will be attached to the subnet for each node associated with the network configuration containing the subnet. (See the “[net activate config](#)” (page 55) command for details on how the nodes are associated with network configurations.) The values consist of a list of integers separated by commas; the integers define the physical ports on the nodes. Execute the “[net show ports](#)” (page 78) command to obtain information on which integers may be used to define ports for the subnet configuration. The maximum number of values depends on your system; use the [Command Authority](#) (page 56) command for information on which ports are available.

ⓘ **IMPORTANT:** If a parameter is undefined in the modify command sequence, the current parameter value remains unchanged.

If a parameter is given the value “undefined,” a value is no longer declared for the parameter.

Requirements for Command Execution

- The writeprotect parameter must be set to NO for this command to execute. (The writeprotect parameter can be modified independent of the current state of the writeprotect parameter.)
- The command entry must conform to the command syntax.
- All object values must be valid; see the object descriptions for details.
- All parameter values must be valid; see the parameter descriptions for details.

Successful Command Output

Upon successful completion of the command, information on the external network configuration is displayed.

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.

Example

```
# net modify config management dns 13.13.100.8
```


net modify subnet

NOTE: This command applies to single-node products only.

Description of Command Function

Modifies an existing named subnet configuration. Modifies parameters in the current configuration and validates and activates settings.

NOTE: It is not possible to modify the default configuration.

Command Syntax

```
net modify subnet <netlabel> <sublabel> [default {yes|no}] [domain {<string>|DHCP}] [IPAddr {DHCP|address}] [netmask <mask>] [gateway <gateway>] [ports <list>] [bonding <mode>]
```

Command Authority

Administrator

Command Object Requirements

- *netlabel* – This label identifies the network configuration containing the subnet configuration to be modified. This label is case insensitive.
- *sublabel* – This label identifies the subnet configuration that will be modified. This label is case insensitive.

Command Parameter Requirements

- *default* – This optional parameter defines if the preceding subnet configuration is the default subnet. The values for this parameter can be either Yes or No.
- *domain* – This optional parameter defines the domain name for the subnet configuration.
- *IPAddr* – This parameter defines an IP address. The value DHCP can be used to indicate that the IP address will be defined by a DHCP server.
- *netmask* – This optional parameter defines the netmask. If the IPAddr value is DHCP, a value is not required for netmask.
- *gateway* – This optional parameter defines the gateway for the subnet configuration.
- *ports* – This parameter defines the ports which will be attached to the subnet for each node associated with the network configuration containing the subnet. (See the “[net activate config](#)” (page 55) command for details on how the nodes are associated with network configurations.) The values consist of a list of integers separated by commas; the integers define the physical ports on the nodes. Execute the “[net show ports](#)” (page 78) command to obtain information on which integers may be used to define ports for the subnet configuration. The maximum number of values depends on your system; use the [Command Authority](#) (page 56) command for information on which ports are available.
- *bonding* – This parameter defines how the multiple ports are bonded. The supported bonding modes and the default bonding modes for specific templates are shown in the table below. Note that if only one port is defined, the bonding value should be undefined. See the *HP*

StoreOnce B6200 Backup System Installation Planning and Preparation Guide and Checklists for more detailed information about supported bonding modes.

Bonding mode	Description	Default Bonding Mode for:
Mode 1 (Active/Backup)	Simple bonding mode that allows network traffic via one active port only. If the active network fails then traffic moves to the backup port.	Templates 1, 3, 4, and 5
Mode 4 (IEEE 802.3ad Dynamic Link Aggregation)	LACP bonding mode that requires a special external switch configuration. Provides a link aggregation solution which increases the bond physical bandwidth.	none
Mode 6 (Active Load Balancing)	Load balance solution that can be used in a 2-switch configuration. The switch must allow ARP negotiation (but no specific external switch configuration is required).	Template 2

•

❗ **IMPORTANT:** If a parameter is undefined in the modify command sequence, the current parameter value remains unchanged.

If a parameter is given the value “undefined,” a value is no longer declared for the parameter.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All object values must be valid; see the object descriptions for details.
- All parameter values must be valid; see the parameter descriptions for details.

Successful Command Output

Upon successful completion of the command, information on the external network configuration is displayed.

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.

Examples

Example 1 modifies an existing named network configuration:

```
net modify subnet save1 Subnet2 ipaddr 1.2.3.4 gateway 5.6.7.8 netmask
255.255.0.0 domain gbr.hp.com default yes bonding 5 port eth0,eth2
netmask 255.255.255.0
```

Additional examples:

```
# net add subnet management subnet 10GbE ipaddr dhcp ports 4,5
#net modify subnet management 10GbE gateway 13.25.25.1
```

net ping

Description of Command Function

Verifies communication by pinging a defined location.

Command Syntax

```
net ping [{NODEX|CLI|GUI}] [IPAddr <IPAddr>] | [FQN <name>]
```

Command Authority

Operator and Administrator

Command Object Requirements

- *NODEX* – This object defines which node should transmit the “ping” packet. X is the index which uniquely defines each node in the cluster.
- *GUI* – This optional global object determines that the node supporting the GUI processes will transmit the “ping” packet.
- *CLI* – This optional global object determines that the node supporting the CLI processes will transmit the “ping” packet.

Command Parameter Requirements

IPAddr – This required parameter defines the location to which the “ping” packet will be transmitted. The value is either an IP address or a fully qualified name (FQN).

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All object values must be valid; see the object descriptions for details.
- The parameter value must be valid; see the parameter description for details.

Successful Command Output

Upon successful completion of the command, information on the external network configuration is displayed.

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Example

Example for multi-node:

```
net ping node1 ipaddr 10.12.13.12
```

Example for single-node:

```
net ping ipaddr 10.12.13.12
```

net set config

NOTE: This command applies to multi-node products only.

Description of Command Function

Configures the external network to one of the five pre-defined configurations.

NOTE: See the *HP StoreOnce B6200 Backup System Installation Planning and Preparation Guide and Checklists* for more detailed information about supported network configurations.

Command Syntax

```
net set config TEMPLATEX
```

Command Authority

Administrator

Command Object Requirements

TEMPLATEX – One of five predefined configurations.

Template	Standard Configuration	Description	Default Bonding Mode
Template 1	1GbE management network and 10GbE data network	Supports use of separate sub-nets for data and management.	Mode 1
Template 2	Combined 1GbE management and data network	Supports use of one 1GbE network only for both data and management.	Mode 6
Template 3	Combined 10GbE management and data network	Supports use of one 10 GbE network only for both data and management.	Mode 1
Template 4	1GbE management network and 1GbE data network	Supports use of two 1 GbE networks, one used for data, one used for management.	Mode 1
Template 5	Two 1 GbE combined management and data networks	Supports use of two 1 GbE network connections, both used for combined data and management.	Mode 1

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Will implement a prompt response driven configuration process as defined in the example below.

Example

```
Net set config template1
```

Upon execution of the command, a prompt and response method will be used to obtain the required values for the network template defined in the command entry. You will need to enter the following values (for the example, for template 1):

- Virtual Management Console IP Address (must be IPv4 X.X.X.X)
- 1GbE management network start IP address (must be IPv4 X.X.X.X)
- 1GbE management end IP address
- 1GbE management subnet mask
- 10GbE data network start IP address (must be IPv4 X.X.X.X)
- 10GbE data network end IP address

- 10GbE management subnet mask
- 10GbE management subnet mask
- DNS server IP addresses (enter up to three, separated with commas)

The information you just entered is displayed for confirmation. After you enter Y, the following displays:

```
Starting network configuration
```

```
This session may terminate
```

```
Log in to Virtual Management Console IP Address: XXX:XXX:XXX:XXX
```

```
And enter command "net show config"
```

```
To verify network configuration
```

NOTE: This command applies to single-node products only.

Description of Command Function

Runs a step-based wizard to guide you through the creation of a complete network configuration.

Command Syntax

```
net set wizard
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, you will be guided through a set of steps to configure the network configuration. Upon completion, the command will return:

```
You have successfully configured the network settings on your StoreOnce Appliance.
```

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.
```

Example

```
# net set wizard

StoreOnce Network Configuration Wizard
-----

This Wizard will guide you through the configuration of
network settings on your StoreOnce Backup System
If you wish to make additions or modifications to an existing
network configuration without having to reconfigure all settings
then use the 'net modify' or 'net add' CLI commands instead

The wizard consists of the following steps:
Step 1.) Set system wide DNS server addresses
Step 2.) Configure network settings for available network adapters
Step 3.) Save and apply all network settings

Press ESC+ENTER at any time to exit wizard

Step 1.)
Enter a list (max 3) of DNS servers separated by commas : (eg 192.168.1.100,192.168.3.100)

192.168.1.100,192.168.3.100

Step Complete. Do you want to :
1.) Go to next step: Step 2.) (default)
2.) Go back to start of present step: Step 1.)
3.) Quit wizard and lose all settings

1

Step 2.)
Select the type of configuration for this subnet :
1.) Single port (default)
2.) Bonded ports (note ports must be the same speed to bond

2
```

```

Select bond configuration :
1.) eth0 and eth1 (1 Gig) (default)
2.) eth3 and eth4 (10 Gig)

1

Select Static or DHCP addressing :
1.) DHCP (default)
2.) Static

2

Enter static IP address :

192.168.1.27

Enter subnet mask :

255.255.255.0

Do you want to configure a static default gateway for this subnet or get gateway from DHCP?
1.) Gateway obtained from DHCP server (default)
2.) Set gateway manually

2

Enter gateway IP address :

192.168.1.1

Do you want to configure the network domain name or get domain name from DHCP?
1.) Domain name obtained from DHCP server (default)
2.) Set domain name manually (e.g. mydomain.local)

2

Enter domain name :

mydomain.local

-----
Network: Subnet_1
-----
IP Address: 192.168.1.27
Net Mask: 255.255.255.0
Domain Name: mydomain.local
Gateway: 192.168.1.1
Interfaces:eth0 eth1
Is this configuration correct?
1.) Yes (default)
2.) No

1

Do you want to configure another subnet?
1.) No (default)
2.) Yes

1

Select a default network (The default network shall be used as the default gateway subnet)
1.) Subnet_1 (default)

1

Step Complete. Do you want to :
1.) Go to next step: Step 3.) (default)
2.) Go back to previous step: Step 1.)
3.) Go back to start of present step: Step 2.)
4.) Quit wizard and lose all settings

1

Step 3.)
-----
Network Name: Network_Config_by_Wizard
Network Description: Network configuration created by network config wizard on: 14:17:9 3 October 2012
Write Protected: no
DNS Servers:1.1.1.1
-----
Number of Networks:1
-----
Network: Subnet_1 (default)
-----
IP Address: 2.2.2.2
Net Mask: 255.0.0.0
Domain Name: kev.net
Gateway: 3.3.3.3
Interfaces:eth0 eth2
Press any key to continue

```

Step Complete. Do you want to :

- 1.) Finish wizard and apply settings (default)
- 2.) Go back to previous step: Step 2.)
- 3.) Go back to start of present step: Step 3.)
- 4.) Quit wizard and lose all settings

1

You have successfully configured the network settings on your StoreOnce Appliance.

NOTE: This command applies to multinode products only.

Description of Command Function

Shows the network configuration.

Command Syntax

```
net show config
```

Command Authority

Operator and Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, information on the external network configuration is displayed.

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this
section.
```

Example

```
# net show config

External Network Configuration
-----
Template 2
Management/Data/Replication on (4) 1Gb ports (bonded)

Virtual Management Console IP Address: 16.24.164.21

1GbE Network Bonding
Mode 6 - Active Load Balance Bonding

Node Specific Parameters
-----
Node 1:
1GbE Network Physical IP (HP Service Only): 16.24.164.22
1GbE Network Virtual Data IP: 16.24.164.23

Node 2:
1GbE Network Physical IP (HP Service Only): 16.24.164.24
1GbE Network Virtual Data IP: null

Appliance Wide Parameters
-----
1GbE subnet mask: 255.255.240.0

Data/Management network gateway: 16.24.160.1 (default)
```

Domain Name:

DNS server IP address(es): 16.110.135.51, 16.110.135.52

IP Address Ranges Allocated for this B6200 system

1GbE Data/Management network start IP address: 16.24.164.22

1GbE Data/Management network End IP range: 16.24.164.33

NOTE: This command applies to single-node products only.

Description of Command Function

Shows the network configuration.

Command Syntax

```
net show config <netlabel> [all]
```

Command Authority

Operator and Administrator

Command Object Requirements

netlabel— This object defines the name of the specific network configuration to be shown. If the object is not included in the command sequence, the parameter “all” must be included in the command sequence.

Command Parameter Requirements

all— This parameter is optional. If included in the command sequence, all templates in the existing network configuration are described. If this command is not included, a network template object must be included in the command sequence.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, information on the external network configuration is displayed.

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this
section.
```

Example

```
# net show config current
-----
Network Name: current
Network Description: default
Write Protected: no
DNS Servers:
-----
Number of Networks:1
-----
Network: subnet_one
-----
IP Address: dhcp
Net Mask: dhcp
Domain Name: dhcp
Gateway: dhcp
Bonding Mode: 6 (High Availability)
Default Network: yes
Interfaces:eth0
Command Successful
# net show config all
-----
Network Name: Factory_Default_Configuration
Network Description: default
```

```
Write Protected: no
DNS Servers:
-----
Number of Networks:1
-----
Network: subnet_one
-----
IP Address: dhcp
Net Mask: dhcp
Domain Name: dhcp
Gateway: dhcp
Bonding Mode: 6 (High Availability)
Default Network: yes
Interfaces:eth0
```

```
-----
Network Name: current
Network Description: default
Write Protected: no
DNS Servers:
-----
Number of Networks:1
-----
Network: subnet_one
-----
IP Address: dhcp
Net Mask: dhcp
Domain Name: dhcp
Gateway: dhcp
Bonding Mode: 6 (High Availability)
Default Network: yes
Interfaces:eth0
```

net show config list

NOTE: This command applies to single-node products only.

Description of Command Function

Lists all the labels of all the existing network configurations.

Command Syntax

```
net show config list
```

Command Authority

Operator and Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

list – Though *list* is presented as a command word, it is in fact a parameter. In other words, this command is the `net show config` command with the `list` parameter included. No value is defined for this parameter.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, information on the external network configuration is displayed.

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Example

```
# net show config list
```

net show ports

NOTE: This command applies to single-node products only.

Description of Command Function

Lists the ports that are available to use in subnet configurations.

Command Syntax

```
net show ports [NODEX]
```

Command Authority

Operator and Administrator

Command Object Requirements

NODEX – This object determines that port information will be provided for individual nodes verses the entire cluster.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All object values must be valid; see the object descriptions for details.

Successful Command Output

Upon successful completion of the command, information on the external network configuration is displayed.

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Example

```
# net show ports
```

net show status

NOTE: This command applies to single-node products only.

Description of Command Function

Displays information on the network status.

Command Syntax

```
net show status [subnet <name>] [port <name|all>] [all]
```

Command Authority

Operator and Administrator

Command Object Requirements

Not applicable – no parameters exist within this command.

Command Parameter Requirements

- *subnet* – This parameter shows subnetwork status.
- *port*— This parameter shows port status. Use `all` to show status for all ports.
- *all*— This parameter is optional. If included in the command sequence, shows the status of all subnets or ports, respectively.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All object values must be valid; see the object descriptions for details.

Successful Command Output

Upon successful completion of the command, information on the external network configuration is displayed.

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Example

```
Show general network status:# net show status
```

```
Show subnetwork status: # net show status subnet subnet1
```

```
Show port status: # net show status port eth0
```

```
Show all port status: # net show status port all
```

```
Show top level status of all subnets: net show status all
```

net validate config

NOTE: This command applies to single-node products only.

Description of Command Function

Validates a configuration. The command checks the data structure according to the rules listed in the `net activate config` command. However, unlike the `activate` command, the external network is not configured as defined by the data structure. This command exists to allow a newly created configuration to be tested before configuration is actually activated. For example, if the activation is scheduled to take place at a given time when the backup traffic is low, the command provides confidence the `net activate config` command will execute successfully.

Command Syntax

```
net validate config <netlabel>
```

Command Authority

Administrator

Command Object Requirements

netlabel – This label identifies the network configuration object whose data structure will be used to configure the external network for the cluster.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The following list shows some examples but is not a complete list of checks. The system will verify the configuration structure according to the rules below:

- A default subnet must exist.
- Only one default subnet can exist.
- A gateway is required for the default subnet.
- The ports defined in a subnet must be valid options.
- If more than one port is defined in a subnet, all the ports must be the same type.
- The same port cannot be in two different subnets or defined twice in same subnet.
- If IP addresses are defined, the netmask and gateway must be valid.
- If IP addresses are defined, the range for each subnet must be unique.
- If an IP address list exists, it must be large enough for all nodes in the cluster.
- If Data VIFs are defined, they must all be valid in the IP address structure.
- If Data VIFs are defined, the range for each subnet must be unique.
- If a Cluster VIF is defined, it can only be defined on one subnet.

Successful Command Output

Upon successful completion of the command, information on the external network configuration is displayed.

Command Operation during Abnormal Conditions

If the command fails, the system will attempt to configure the external network using the original, current configuration.

Example

```
# net validate config management
```


serviceset show status

Description of Command Function

This command displays information on the selected or all service sets.

Command Syntax

```
serviceset show status [SETX] [all]
```

Command Authority

Operator and Administrator

Command Object Requirements

SETX — This optional object defines an individual service set. **X** is a unique numeric index. If the object is not included in the command sequence, the parameter must be included in the command sequence.

Command Parameter Requirements

all — This parameter is optional. If included in the command sequence, all the service sets in the cluster are restarted. If this command is not included, a service set object must be included in the command sequence.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, the status of the serviceset is shown.

Command Operation During Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

Command Failed - The command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.

Example

```
> serviceset show status
Service Set 1          Status
-----
Overall                : Fault
StoreOnce Subsystem   : Running
Virtual Tape          : Running
NAS                   : Running
StoreOnce Catalyst    : Running
Replication           : Fault
Housekeeping          : Running
```

serviceset start

Description of Command Function

This command starts the service sets. The command will either start the service set defined in the command sequence or if parameter “all” is included in the command sequence, all the service sets in the cluster will be started.

Command Syntax

```
serviceset start [SETX] [all]
```

Command Authority

Administrator

Command Object Requirements

SETX — This optional object defines an individual service set. **X** is a unique numeric index. If the object is not included in the command sequence, the parameter must be included in the command sequence.

Command Parameter Requirements

all — This parameter is optional. If included in the command sequence, all the service sets in the cluster are restarted. If this command is not included, a service set object must be included in the command sequence.

Requirements for Command Execution

- The command entry must conform to the command syntax
- If a service set is defined in the command sequence, it must exist.
- The service set defined in the command sequence must be stopped.
- If the “all” parameter is defined in the command sequence, all the service sets must be stopped.

Successful Command Output

Upon successful completion of the command, the service sets defined in the command sequence are started and the following is displayed:

```
Command Successful
```

Command Operation During Abnormal Conditions

If any of the above requirements fail, command execution terminates. No service sets are restarted and the appropriate error message listed below is displayed:

- If the command does not conform to the required syntax, the following message is displayed:
Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.
- If the command defines a service set that does not exist, the following message is displayed:
Command Failed – the service set <SETX> does not exist
- If the chosen service set is not stopped, the following message is displayed:
Command Failed – The service set <SETX> is not stopped
- If the “all” parameter has been defined in the command sequence and all service sets are not stopped, the following message is displayed:
Command Failed - Some or all of the service sets are not stopped.

Example

```
# serviceset start set1  
Command Successful
```

serviceset stop

Description of Command Function

This command stops the service sets. The command will either stop the service set defined in the command sequence or if parameter “all” is included in the command sequence, all the service sets in the cluster will be stopped.

-
- ❗ **IMPORTANT:** This command will stop the service set independent of the existing state of the service set.
-

Command Syntax

```
serviceset stop [SETX] [all]
```

Command Authority

Administrator

Command Object Requirements

SETX — This optional object defines an individual service set. **X** is a unique numeric index. If the object is not included in the command sequence, the parameter “all” must be included in the command sequence.

Command Parameter Requirements

all — This parameter is optional. If included in the command sequence, all the service sets in the cluster are stopped. If this command is not included, a service set object must be included in the command sequence.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- If a service set is defined in the command sequence, it must exist.

Successful Command Output

Upon successful completion of the command, the service sets defined in the command sequence are stopped and the following is displayed:

```
Command Successful
```

Command Operation During Abnormal Conditions

- If the command does not conform to the required syntax, the following message is displayed:
Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.
- If the chosen service set is not stopped, the following message is displayed:
Command Failed – The service set <SETX> does not exist

Example

```
# serviceset stop set 1  
Command Successful
```

snmp add trapsink

Description of Command Function

Defines a host to which the SNMP agent sends traps. Parameters for SNMP versions 1 and 2 differ from those for SNMP version 3 (v3).

Command Syntax

SNMP versions 1 and 2:

```
snmp add trapsink <FQDN|IP> [version {1|2}] [port <Number>]
[trap-community <"string">] [events {alert|warn|info}]
```

SNMP version 3:

```
snmp add trapsink <FQDN | IP> version 3 user <"username"> [port <Number>]
[events {alert|warn|info}] [authentication-algo {MD5|SHA}]
["authentication-pwd" <authentication-password>] [privacy-algo
{DES|AES}] [privacy-pwd <"privacy-password">] [contextname
<"contextname">]
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

- *FQDN or IP* – This is a required parameter. The value is either the fully qualified name or IP address of the host to receive the SNMP traps (also known as the trap sink).
- *user(v3 only)* – This required parameter is an existing authorized SNMP user name.
- *port* – This is an optional parameter it consists of the text “port” followed by the port number of the host. If this parameter is not included, a default port value of 162 is used. Note: only one port can be defined per trap host.
- *trap-community* – This optional parameter defines the community name (i.e., password string) for the trap host. The parameter consists of the text “trap-community” followed by the password string. The string is in quotation marks. If this parameter is not used, a default of “public” is used.
- *events* – This optional parameter filters what traps are transmitted to the defined trap host. The parameter consists text “events” followed by a filter level of alert or warning or info. The SNMP agent will transmit to the trap host all events which are at or higher in severity than the defined event level. If this parameter is not included in the command sequence a default value of “info” is used (all events are transmitted).
- *authorization-algo(v3 only)* – This optional parameter specifies the user authentication algorithm used to authorize messages sent or received on behalf of this user (default is MD5).
- *authentication-password(v3 only)* – This optional parameter specifies the user authentication password (default is no password set). Passwords must contain at least eight characters.
- *privacy-algo(v3 only)* – This optional parameter identifies the SNMP version 3 privacy algorithm used to encrypt messages or received on behalf of this user (default is DES).
- *privacy-password(v3 only)* – This optional parameter specifies the privacy password for SNMP version 3 and decryption (default is no password set). Passwords must contain at least eight characters.
- *contextname(v3 only)* – This optional parameter specifies the managed objects that can be accessed by the agent. It is required if the trap receiver has defined subsets of managed objects.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful entry of the command sequence, the trap host is added to the StoreOnce appliance's SNMP agent and the following is displayed:

SNMP versions 1 and 2:

Command Successful, host trap FQDN | IP added, where FQDN | IP is the fully qualified domain name or IP address of the trap host.

SNMP version 3:

Command Successful, host trap FQDN | IP added for "username", where FQDN | IP is the fully qualified domain name or IP address of the trap host and username is the authorized SNMP user provided in the command entry.

Command Operation during Abnormal Conditions

- If any of the command elements (snmp, add, trapsink) are misspelled, the following is displayed:

```
element: command not found
```

- If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,
```

```
To add trapsink for SNMP version 1 or 2
```

```
snmp add trapsink <FQN | IP>
    [version {1 | 2}]
    [port <Number>]
    [trap-community <"string">]
    [events {alert | warning | information}]
```

```
To add trapsink for SNMP version 3
```

```
snmp add trapsink <FQN | IP>
    version 3
    user <username>
    [port <Number>]
    [events {alert | warning | information}]
    [authentication-algo {MD5 | SHA}]
    [authentication-pwd <authentication-password>]
    [privacy-algo {DES | AES}]
    [privacy-pwd <privacy-password>]
    [contextname <contextname>]
```

Description:

This command defines a sink to which the snmp agent sends the traps.

<FQN IP>	- trapsink host name or ip.
[version]	- trapsink snmp version (default - 1).
[port]	- trapsink port (default - 162).
[trap-community]	- trapsink community (default - "public").
[events]	- trapsink events.
[user]	- authorized user name.
[authentication-algo]	- authorization algorithm (default - MD5).
[authentication-pwd]	- authorization password (default none).
[privacy-algo]	- privacy algorithm (default - DES).
[privacy-pwd]	- privacy password (default none).
[contextname]	- context name (default none).

Examples:

```
snmp add trapsink 16.34.123.44 events alert
- adds trapsink 16.34.123.44 for SNMP version 1.
```

```
snmp add trapsink 14.34.123.44
    version 3
    user username
```

```
port 182
events information
authentication-algo SHA
authhentication-pwd authpass
privacy-algo AES
privacy-pwd privpass
contextname cname
- adds trapsink 14.34.123.44 for SNMP version 3.
```

- If the SNMP USERNAME provided does not exist, the following is displayed:
Failed - snmp user USERNAME does not exist, where USERNAME is the user name provided in the command entry.

Examples

SNMP version 2:

```
# snmp add trapsink 16.34.123.44 version 2 event alerts
Command Successful, trapsink 16.34.123.44 added
```

SNMP version 3:

```
# snmp add trapsink 16.34.123.44 version 3 user john-snmp event alerts
authentication-algo SHA authentication-pwd T3stPwd privacy-algo AES
privacy-pwd Pr!vPwd contextname D2D-SNMP
Command Successful, trapsink 16.34.123.44 added for john-snmp
```

snmp add user

Description of Command Function

Creates a new SNMP user.

Command Syntax

```
snmp add user USERNAME security-level {noAuthNoPriv|authNoPriv|authPriv}  
[authorization-algo {MD5|SHA}] [authorization-pwd  
<authorization-password>] [privacy-algo {DES|AES}] [privacy-pwd  
<privacy-password>]
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

- *USERNAME* – This parameter defines the user name to create (in any string format).
- *security-level* – This parameter defines the SNMP version 3 security level assigned to this group:
 - *noAuthNoPriv*: no user authorization or privacy encryption performed (default)
 - *authNoPriv*: user authorization performed but no privacy encryption
 - *authPriv*: user authorization and privacy encryption performed
- *authorization-algo* – This optional parameter specifies the user authentication algorithm used to authorize messages sent or received on behalf of this user (default is MD5).
- *authentication-password* – This optional parameter specifies the user authentication password (default is no password set). Passwords must contain at least eight characters.
- *privacy-algo* – This optional parameter identifies the SNMP version 3 privacy algorithm used to encrypt messages or received on behalf of this user (default is DES).
- *privacy-password* – This optional parameter specifies the privacy password for SNMP version 3 and decryption (default is no password set). Passwords must contain at least eight characters.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful command entry, the SNMP user “username” is created and added to a group per the security level set for the SNMP agent and the following is displayed:

```
Command Successful, snmp user 'username' added
```

Command Operation during Abnormal Conditions

- If any of the command elements (*snmp*, *add*, *user*) are misspelled, the following is displayed:
element: command not found
- If the command does not conform to the required syntax, the following is displayed:
Command Failed - the command does not conform to the required syntax,
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.

Example

```
# snmp add user john-snmp security-level noAuthNoPriv authorization-algo  
SHA authorization-pwd auth798wd privacy-algo AES privacy-pwd priv945wd
```

Command Successful, snmp user john-snmp added

snmp del trapsink

Description of Command Function

Removes a trap host which has already been created using the `snmp add trapsink` command (see “[snmp add trapsink](#)” (page 84)).

Command Syntax

```
snmp del trapsink <FQDN|IP>
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

FQDN or IP – This is a required parameter. The value is either the fully qualified domain name or IP address of the host (also known as the trap sink) to be removed.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful command entry, the trap host is removed and the following is displayed:

```
Command Successful, trap host <FQDN | IP> has been removed, where <FQDN  
| IP> is the fully qualified domain name or IP address of the trap host to be removed.
```

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Example

```
# snmp del trapsink 10.10.10.10
```

```
Command Successful, trap host 10.10.10.10 has been removed.
```

snmp del user

Description of Command Function

Deletes an existing SNMP user.

Command Syntax

```
snmp del user USERNAME
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful command entry, the SNMP user “username” is deleted and the following is displayed:

```
Command Successful, snmp user 'username' deleted
```

Command Operation during Abnormal Conditions

- If any of the command elements (`snmp`, `del`, `user`) are misspelled, the following is displayed:
`element: command not found`
- If the command does not conform to the required syntax, the following is displayed:
`Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.`
- If the SNMP USERNAME provided does not exist, the following is displayed:
`Failed - snmp user USERNAME does not exist, where USERNAME is the user name provided in the command entry.`

Example

```
# snmp del user john-snmp
```

```
Command Successful, snmp user john-snmp deleted
```

snmp disable

Description of Command Function

Disables the SNMP functionality.

Command Syntax

```
snmp disable
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful entry of the command, the SNMP function is disabled and the following is displayed:

```
Command Successful, snmp disabled
```

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Example

```
# snmp disabled  
Command Successful, snmp disabled
```

snmp enable

Description of Command Function

Enables the SNMP functionality.

Command Syntax

```
snmp enable [version {1|2|3}] [engine-id <engine-id>] [allownonv3request <yes|no>]
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

- *version* – This is a mandatory parameter which implies which SNMP version the user wants to set. The parameter consists of the text *version* followed by a value of 1, 2, or 3.
- *engine-id* – This optional parameter can be provided during version 3 configuration.
- *allownonv3request* – This optional parameter can be provided during version 3 configuration. If the value is “yes,” versions 1 and 2 will be supported along with version 3. If the value is “no,” only version 3 will be supported. If this parameter is not included in the command entry, only version 3 will be supported.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful entry of the command, the SNMP function is enabled and the following is displayed:
Command Successful, snmp enabled for version X, where X is the version number defined in the command entry.

Command Operation during Abnormal Conditions

- If any of the command elements (*snmp*, *enable*) are misspelled, the following is displayed:
element: command not found
- If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,
```

```
snmp enable [version {1 | 2 | 3}]  
            [allownonv3request {yes | no}]  
            [engine-id <engine_id_name>]
```

Description:

This command enables the snmp functionality.

```
[version]           - agent snmp version (default version 1).  
[allownonv3request] - allow agent to process non-v3 get requests (default no).  
[engine-id]        - engine id of agent.
```

Examples:

```
snmp enable  
- enables snmp version 1.  
snmp enable version 3 allownonv3request yes  
- enables snmp version 3
```

Example

```
# snmp enabled version 2  
Command Successful, snmp enabled for version 2
```

snmp modify trapsink

Description of Command Function

Modifies the host to which the SNMP agent sends traps.

Command Syntax

SNMP versions 1 and 2:

```
snmp modify trapsink <FQDN|IP> [version {1|2}] [port <Number>]
[trap-community <"string">] [events {alert|warn|info}]
```

SNMP version 3:

```
snmp modify trapsink <FQDN | IP> version 3 [user <"username">] [port
<Number>] [events {alert|warn|info}] [authentication-algo {MD5|SHA}]
["authhentication-pwd" <authentication-password>] [privacy-algo
{DES|AES}] [privacy-pwd <"privacy-password">] [contextname
<"contextname">]
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

- *FQDN or IP* – This is a required parameter. The value is either the fully qualified domain name or IP address of the host to receive the SNMP traps (also known as the trap sinks).
- *user(v3 only)* – This required parameter is an existing authorized SNMP user name.
- *port* – This is an optional parameter. It consists of the text “port” followed by the port number of the host.
- *trap-community* – This optional parameter defines the community name (password string) for the trap host. The parameter consists of the text “trap-community” followed by the password string. The string is in quotation marks.
- *events* – This optional parameter filters what traps are transmitted to the defined trap host. The parameter consists text “events” followed by a filter level of alert or warning or info. The SNMP agent will transmit to the trap host all events which are at or higher in severity than the defined event level. If this parameter is not included in the command sequence a default value of info is used (all events are transmitted).
- *authorization-algo(v3 only)* – This optional parameter specifies the user authentication algorithm used to authorize messages sent or received on behalf of this user (default is MD5).
- *authentication-password(v3 only)* – This optional parameter specifies the user authentication password (default is no password set). Passwords must contain at least eight characters.
- *privacy-algo(v3 only)* – This optional parameter identifies the SNMP version 3 privacy algorithm used to encrypt messages or received on behalf of this user (default is DES).
- *privacy-password(v3 only)* – This optional parameter specifies the privacy password for SNMP version 3 and decryption (default is no password set). Passwords must contain at least eight characters.
- *contextname(v3 only)* – This optional parameter specifies the managed objects that can be accessed by the agent. It is required if the trap receiver has defined subsets of managed objects.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful entry of the command sequence the trap host values are modified and the following is displayed:

SNMP versions 1 and 2:

Command Successful, host trap FQDN | IP modified, where FQDN | IP is the fully qualified domain name or IP address of the trap host.

SNMP version 3:

Command Successful, host trap FQDN | IP added for "username", where FQDN | IP is the fully qualified domain name or IP address of the trap host and username is the authorized SNMP user provided in the command entry.

Command Operation during Abnormal Conditions

- If any of the command elements (snmp, modify, trapsink) are misspelled, the following is displayed:
element: command not found
- If the command does not conform to the required syntax, the following is displayed:
Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.
- If the SNMP USERNAME provided does not exist, the following is displayed:
Failed - snmp user USERNAME does not exist, where USERNAME is the user name provided in the command entry.

Examples

SNMP version 2:

```
# snmp modify trapsink 16.34.123.44 version 2 port 133 trap-community "passwordstring"
```

```
Command Successful, hostsink 16.34.123.44 modified
```

SNMP version 3:

```
# snmp modify trapsink 16.34.123.44 version 3 user john-snmp event alerts authentication-algo MD5 authentication-pwd T3stPwD privacy-algo DES privacy-pwd Pr!vPwD contextname D2D-SNMP
```

```
Command Successful, trapsink 16.34.123.44 modified for john-snmp
```

snmp modify user

Description of Command Function

Modifies an existing SNMP user.

Command Syntax

```
snmp modify user USERNAME security-level  
{noAuthNoPriv|authNoPriv|authPriv} [authorization-algo {MD5|SHA}]  
[authorization-pwd <authorization-password>] [privacy-algo {DES|AES}]  
[privacy-pwd <privacy-password>]
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

- *USERNAME* – This parameter defines the user name to modify (in any string format).
- *security-level* – This parameter defines the SNMP version 3 security level assigned to this group:
 - *noAuthNoPriv*: no user authorization or privacy encryption performed (default)
 - *authNoPriv*: user authorization performed but no privacy encryption
 - *authPriv*: user authorization and privacy encryption performed
- *authorization-algo* – This optional parameter specifies the user authentication algorithm used to authorize messages sent or received on behalf of this user (default is MD5).
- *authentication-password* – This optional parameter specifies the user authentication password (default is no password set). Passwords must contain at least eight characters.
- *privacy-algo* – This optional parameter identifies the SNMP version 3 privacy algorithm used to encrypt messages or received on behalf of this user (default is DES).
- *privacy-password* – This optional parameter specifies the privacy password for SNMP version 3 and decryption (default is no password set). Passwords must contain at least eight characters.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful command entry, the SNMP user “username” is modified as instructed in the parameters and the following is displayed:

```
Command Successful, snmp user 'username' modified
```

Command Operation during Abnormal Conditions

- If any of the command elements (*snmp*, *modify*, *user*) are misspelled, the following is displayed:

```
element: command not found
```
- If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```
- If the SNMP *USERNAME* provided does not exist, the following is displayed:

```
Failed - snmp user USERNAME does not exist, where USERNAME is the user  
name provided in the command entry.
```

Example

```
# snmp modify user john-snmp security-level noAuthNoPriv
authorization-algo MD5 authorization-pwd auth798wd privacy-algo AES
privacy-pwd priv945wd
Command Successful, snmp user john-snmp modified
```


snmp reset ro-community

Description of Command Function

Resets the ro-community string (the password to access the StoreOnce Management Information Base) to the default string of "public."

Command Syntax

```
snmp reset ro-community
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful entry of the command sequence, the ro community is set to the default string of public and the following is displayed:

```
Command Successful, ro community string reset
```

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Example

```
# snmp reset ro-community
```

```
Command Successful, ro community string reset
```

snmp set contact

Description of Command Function

Defines a text string indicating the contact person for SNMP agent management of this StoreOnce appliance.

Command Syntax

```
snmp set contact <"contact">
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

contact – This is a required parameter. It consists of a character text string enclosed in quotations. The text string provides information on the contact responsible for the management of the StoreOnce appliance's SNMP agent.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful entry of the command sequence, the SNMP contact is defined and the following is displayed:

```
Command Successful, contact set
```

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Example

```
# snmp set contact "JAdmin"  
Command Successful, contact set
```

snmp set location

Description of Command Function

Defines a text string indicating the location of the StoreOnce appliance containing the SNMP agent.

Command Syntax

```
snmp set location <"location">
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

location – This is a required parameter. It consists of a character text string enclosed in quotations. The text string provides information on the location for the StoreOnce appliance containing the SNMP agent.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful entry of the command sequence, the SNMP contact is defined and the following is displayed:

```
Command Successful, location set
```

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.
```

Example

```
# snmp set location "paradise"  
Command Successful, location set
```

snmp set ro-community

Description of Command Function

Defines the ro-community string. In other words, it defines the passphrase for read-only access to the SNMP agent on the StoreOnce appliance.

Command Syntax

```
snmp set ro-community <"ro-community">
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

ro-community – This is a required parameter. It consists of a character text string enclosed in quotations. The text string defines the ro-community string.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful entry of the command sequence, the SNMP contact is defined and the following is displayed:

```
Command Successful, ro-community string set
```

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Example

```
# snmp set ro-community "password"  
Command Successful, ro-community string set
```

snmp show config

Description of Command Function

Displays information on the StoreOnce appliance's SNMP configuration.

Command Syntax

```
snmp show config
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, the following is displayed:

- A list of trap hosts consisting of:
 - their fully qualified domain name or IP address
 - their port
 - their trap community string
- The StoreOnce appliance's SNMP agent contact string (or blank if not defined).
- The StoreOnce appliance's SNMP agent location string (or blank if not defined).
- The StoreOnce appliance's SNMP agent ro community string.

Command Operation during Abnormal Conditions

- If any of the command elements (`snmp`, `show`, `config`) are misspelled, the following is displayed:
element: command not found
- If the command does not conform to the required syntax (for example, if any arguments are passed in the command entry), the following is displayed:

```
Command Failed - the command does not conform to the required syntax,
```

```
snmp show config
```

```
Description:
```

```
This command displays information on the backup system's  
snmp configuration.
```

```
Example:
```

```
snmp show config - displays snmp configuration
```

Examples

```
# snmp show config
```

```
SNMP V1/V2 Trapsinks
```

```
=====
```

```
Trapsink Address Version Port Community State
```

```
-----  
16.78.5.182 1 162 public on  
16.78.5.181 1 162 public on
```

```

SNMP V3 Trapsinks
=====
Trapsink Address      Version   Port   User Name   Auth Algorithm   Auth Password   Priv Algorithm   Priv
Password             Context   State
-----
16.78.5.170          3        162   d2dUser     MD5              authpasswd      DES              privpasswd
                    on

```

```

Snmpp agent parameters
=====
Version                : 2
Port                   : 161
SysContact             : JAdmin
SysLocation            : Paradise
SysDescr               : HP StorageWorks D2D Backup System [D2D Serial Number] [D2D hostname] [D2D
SKU]
SysObjectID            : SEMI-MIB::hp.10.3.1.3.27
Encrypt passwords and communities : no
Allow non-V3 read requests : yes
Allow non-V3 set requests  : no
Read community         : public
State                  : on

```

NOTE: The example output is in a small font to fit on this specification page. As a CLI output, the character string will simply wrap at the end of a terminal line.

snmp show user

Description of Command Function

Lists the SNMP user settings of all SNMP users unless a specific user name is included.

Command Syntax

```
snmp show user [username]
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

USERNAME – If this optional parameter is included, the SNMP settings for only that user are displayed.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- The username in the command entry, if present, must be an existing account.

Successful Command Output

Upon successful command entry, the SNMP settings for all users are displayed. If the command entry includes a specific user, only settings for that user are displayed.

Command Operation during Abnormal Conditions

- If any of the command elements (*snmp*, *show*, *user*) are misspelled, the following is displayed:
element: command not found
- If the command does not conform to the required syntax, the following is displayed:
Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.
- If the SNMP USERNAME provided does not exist, the following is displayed:
Failed - snmp user USERNAME does not exist, where USERNAME is the user name provided in the command entry.

Examples

```
# snmp show user
```

```
User Name  Security Level  Auth Algorithm  Auth Password  Privacy Algorithm  Privacy Password
-----
user1 noAuthNoPriv MD5
user2  authPriv      SHA            Us3r@123      AES              Us3r@456
```

```
# snmp show user user1
```

```
User Name  Security Level  Auth Algorithm  Auth Password  Privacy Algorithm  Privacy Password
-----
user1 noAuthNoPriv MD5
                                DES
```

support create ticket

Description of Command Function

Creates a support ticket for the StoreOnce appliance.

Command Syntax

```
support create ticket
```

Command Authority

Operator and Administrator

Command Object Requirements

No object is required in the command entry, but upon command execution a support ticket object with a date label is created.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
Creation of Ticket `TICKET" is in progress, where TICKET is the object label of the newly created support ticket
```

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.
```

Example

```
# support create ticket  
Creation of Ticket `tkt_110803_205514" is in progress
```


support del ticket

Description of Command Function

Deletes support tickets which exist for the StoreOnce appliance.

Command Syntax

```
support del ticket {TICKET|ALL}
```

Command Authority

Administrator

Command Object Requirements

- *TICKET* – This object is a support ticket which has already been create and exists for the StoreOnce appliance.
- *ALL* – This is a global default which represents all of the support ticket objects which exist within the StoreOnce appliance.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- The support ticket defined in the command entry must exist.

Successful Command Output

Upon successful completion of the command when a support ticket is defined, the following is displayed:

```
support ticket TICKET deleted, where TICKET is the support ticket label defined in the command entry.
```

Command Operation during Abnormal Conditions

- If the command does not conform to the required syntax, the following is displayed:
Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.
- If the support ticket defined in the command entry does not exist, the following is displayed:
Command Failed - support ticket does not exist

Example

```
support del ticket tkt_110803_205514  
support ticket tkt_110803_205514 deleted
```

support show ticket

Description of Command Function

Lists the support tickets that exist for the StoreOnce appliance.

Command Syntax

```
support show ticket
```

Command Authority

Administrator

Command Object Requirements

Not applicable – objects exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, all the support tickets which exist within the StoreOnce appliance are listed with their description and time created.

Command Operation during Abnormal Conditions

- If the command does not conform to the required syntax, the following is displayed:
Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.
- If no support tickets exist, the following is displayed:
no support tickets exist

Example

```
# support show ticket
```

Name Size	Description	State	Date	Initiator
-----	-----	-----	-----	-----

tkt_110803_212227 209693 KB	tkt_110803_212227 collected at 2011-08-03-21-22-29	Collected	2011-08-03-21-22-29	Manual
tkt_110803_205514 207011 KB	tkt_110803_205514 collected at 2011-08-03-20-55-16	Collected	2011-08-03-20-55-16	Manual

NOTE: The example output is in a small font to fit on this specification page. As a CLI output, the character string will simply wrap at the end of a terminal line.

system clear packages

Description of Command Function

Clears all packages from the queue which have been loaded for update.

Command Syntax

```
system clear packages
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no parameters exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successfully sending the command, the following is displayed:

```
command succeeded
```

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Example

```
# system clear packages  
command succeeded
```

system clear repository

Description of Command Function

Deletes all the files in the StoreOnce appliance repository directory.

Command Syntax

```
system clear repository
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no parameters exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successfully sending the command, the following is displayed:

```
repository directory clear of all files
```

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Example

```
# system clear repository  
repository directory clear of all files
```

system disable failover

NOTE: This command applies to multi-node products only.

Description of Command Function

Disables the failover feature on the StoreOnce appliance. It is a direct map to the command sequence `hardware disable failover` (see “[hardware disable failover](#)” (page 29)). For the initial release, this command will only disable failover for the entire appliance. In following releases, the command will be updated to disable failover for given service sets.

Command Syntax

```
system disable failover
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- Failover must not already be disabled.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
failover disabled
```

Command Operation during Abnormal Conditions

- If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```
- If failover is already disabled for all nodes, the following is displayed:

```
Command Failed - failover is already disabled
```

Example

```
# system disable failover  
failover disabled
```

system enable failover

NOTE: This command applies to multi-node products only.

Description of Command Function

Enables the failover feature on the StoreOnce appliance. It is a direct map to the command sequence `hardware enable failover` (see “[hardware enable failover](#)” (page 31)). For the initial release, this command will only enable failover for the entire appliance. In following releases, the command will be updated to enable failover for give service sets.

Command Syntax

```
system enable failover
```

Command Authority

Administrator

Command Object Requirements

Not applicable – objects exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- Failover must already be disabled.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
failover enabled
```

Command Operation during Abnormal Conditions

- If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```
- If failover is already enabled, the following is displayed:

```
Command Failed - failover is already enabled
```

Example

```
# system enable failover  
failover enabled
```

system load packages

Description of Command Function

Loads the queue with the packages for which the StoreOnce appliance will be updated. The update package is a file image which must exist in the StoreOnce appliance repository. The placement of the files in the repository is outside the scope of this document. This command moves the file image from the StoreOnce appliance and into the package update queue. The next time the `system update packages` command is executed the StoreOnce appliance will be updated with the packages in the queue.

Command Syntax

```
system load packages <file-image>
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

file-image – This parameter is the file names of the packages to be installed. This parameter appears after “system load package” in the command entry. The package exists in the StoreOnce appliance repository. The means by which the file is placed into the StoreOnce appliance directory is outside the scope of the CLI. This parameter can consist of more than one file image name. If so, the names are separated by white space.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- The package file defined in the command entry must exist in the repository directory.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
Package FILE-IMAGE successfully added to update queue use "systems  
update packages" command to install software, where FILE-IMAGE is the package  
file defined in the command entry.
```

Command Operation during Abnormal Conditions

- If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```
- If the defined file image does not exist in the repository directory, the following is displayed:

```
Command Failed - package file does not exist in the D2D appliance  
repository directory
```

Example

```
# system load packages D2D-example.scexe  
package D2D-common-5.3.3-1 successful added to update queue  
use "systems update packages" command to install software
```

system reboot

Description of Command Function

Gracefully shuts down and reboots the entire StoreOnce appliance.

Command Syntax

```
system reboot
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no parameters exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successfully sending the reboot request, the following is displayed:

```
reboot request successfully sent
```

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Example

```
# system reboot  
reboot request successfully sent
```


system set clioutput

Description of Command Function

Defines the format of the command output. The format can be either ASCII text or xml; the default is text. Every time a new terminal session is started the default output will be set.

Command Syntax

```
system set clioutput {text|xml}
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

text or *xml* – the word “text” or “xml” must be included in the command entry after “config set clioutput.”

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command which included “text,” the following is displayed:

```
Command Complete - CLI output is in text format
```

Upon successful completion of the command which included “xml,” the following string is displayed:

```
Command Complete - CLI output is in xml format
```

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Example

```
# system set clioutput text
```

```
# system set clioutput text
```

system set config

Description of Command Function

Runs a step-based wizard to guide you through a complete series of system configuration steps:

- Configure network
- Configure time
- Configure licenses
- Verify hardware health
- Configure failover
- Finish configuration and reboot
- Finish configuration

Command Syntax

```
system set config
```

Command Authority

Administrator

Command Object Requirements

Not applicable—no objects exist within this command

Command Parameter Requirements

Not applicable—no parameters exist within this command. (Any parameters are entered within the wizard rather than appended to the command.)

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, system configuration set up is complete.

Command Operation During Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this
section.
```

Example

```
> system set config
Please ensure all nodes have joined the cluster prior to running this command.
Found 2 nodes. Some components are in a failed state!
Failed components:
  Couplet_1 > hpb3cce3861a-1 > node1_hba_host6
  Couplet_1 > hpb3cce3861a-1 > node1_hba_host7

Continue with configuration (y/N)?

failover disabled.

MENU Item 1

The following configuration steps will be performed:
-> Configure Network
    Configure Time
    Configure Licenses
    Verify Hardware health
    Configure Failover
    Finish Configuration and reboot
    Finish Configuration
Actions:
  execute) Perform the current step (Default)
  skip) Skip to the next step
  back) Go back to a previous step
  quit) Exit the configuration immediately
```

```

Configure Network [execute]?
Please choose a template to apply:
  1) Management on (2) 1Gb ports (bonded), Data/Replication on (2) 10Gb ports
    (bonded) - Template 1
  2) Management/Data/Replication on (4) 1Gb ports (bonded) - Template 2
  3) Management/Data/Replication on (2) 10 Gb ports (bonded) - Template 3
  4) Management on (2) 1Gb ports (bonded), Data/Replication on (2) 1Gb ports
    (bonded) - Template 4
  5) Management/Data/Replication on (2) 1Gb ports (bonded) - Template 5
quit) quit without configuring the network
Please select a template (1-5) or "quit":

=====

Template #1 - Management on (2) 1Gb ports (bonded), Data/Replication on (2) 10Gb ports (bonded)
Do you want to configure a 1GbE management and 10GbE data network? [Y/(N)]:

Enter Virtual Management Console IP Address
(must be IPv4 X.X.X.X):

-----
Select bonding mode for 1GbE management bond

enter 1 (Active/Backup),
      4 (IEEE 802.3ad Dynamic Link Aggregation),
      or 6 (Active Load Balancing),
(default = 1):

Enter 1GbE management network start IP address
(must be IPv4 X.X.X.X):

An incorrect entry..
Error: The IP Address provided should not lie between the existing
      range of network IP addresses. Please enter the value again

Enter 1GbE management network end IP address
(must be IPv4 X.X.X.X):

Enter 1GbE management subnet mask
(must be IPv4 X.X.X.X):

-----
Select bonding mode for 10GbE data bond

enter 1 (Active/Backup),
      4 (IEEE 802.3ad Dynamic Link Aggregation),
      or 6 (Active Load Balancing),
(default = 1): 1

Enter 10GbE data network start IP address
(must be IPv4 X.X.X.X):

Enter 10GbE data network end IP address
(must be IPv4 X.X.X.X):

Enter 10GbE data subnet mask
(must be IPv4 X.X.X.X):

Error: Incorrect number of IP address blocks entered.
      Please enter the values again

-----

Select bonding mode for 1GbE management bond

enter 1 (Active/Backup),
      4 (IEEE 802.3ad Dynamic Link Aggregation),
      or 6 (Active Load Balancing),
(default = 1): 4

Bonding mode 4 (dynamic link aggregation) requires the ports on your network switch(es) to be configured for
LACP. This change must be made immediately after applying the changes in the network configuration on this
system.

This is to maintain reliable network connectivity to this system.

Continue with network setup? [Y/N]:

Enter 1GbE management network start IP address
(must be IPv4 X.X.X.X):

Enter 1GbE management network end IP address
(must be IPv4 X.X.X.X):

Enter 1GbE management subnet mask

```

(must be IPv4 X.X.X.X):

Select bonding mode for 10GbE data bond

enter 1 (Active/Backup),
4 (IEEE 802.3ad Dynamic Link Aggregation),
or 6 (Active Load Balancing),
(default = 1):

=====

Template #2 - Management/Data/Replication on (4) 1Gb ports (bonded)

Do you want to configure a combined 1GbE management and data network? [Y/(N)]:

Select bonding mode for 1GbE management and data bond

enter 1 (Active/Backup),
4 (IEEE 802.3ad Dynamic Link Aggregation),
or 6 (Active Load Balancing),
(default = 6): 1

Enter 1GbE management and data network start IP address
(must be IPv4 X.X.X.X):

Enter 1GbE management and data network end IP address
(must be IPv4 X.X.X.X):

Enter 1GbE management and data subnet mask
(must be IPv4 X.X.X.X):

=====

Template #3 - Management/Data/Replication on (2) 10 Gb ports (bonded)

Do you want to configure a combined 10GbE management and data network? [Y/(N)]: y

Enter Virtual Management Console IP Address
(must be IPv4 X.X.X.X): 16.24.164.147

Select bonding mode for 10GbE management and data bond

enter 1 (Active/Backup),
4 (IEEE 802.3ad Dynamic Link Aggregation),
or 6 (Active Load Balancing),
(default = 1): 1

Enter 10GbE management and data network start IP address
(must be IPv4 X.X.X.X): 100.100.100.1

Enter 10GbE management and data network end IP address
(must be IPv4 X.X.X.X): 100.100.100.100

Enter 10GbE management and data subnet mask
(must be IPv4 X.X.X.X): 255.255.255.0

=====

Template #4 - Management on (2) 1Gb ports (bonded), Data/Replication on (2) 1Gb ports (bonded)

Network Configuration [Management]

=====

VIF Address	:	16.24.164.147
IP Address Start	:	16.24.164.148
IP Address End	:	16.24.164.155
Subnet	:	255.255.240.0
Gateway	:	16.24.160.1 (default)

Network Configuration [Data/Replication]

=====

VIF Address	:	16.24.164.147
IP Address Start	:	15.15.15.1
IP Address End	:	15.15.15.16
Subnet	:	255.255.255.128
Gateway	:	15.15.15.77

DNS Configuration

=====

Domain Name	:	gbr.hp.com
Primary DNS	:	
Secondary DNS	:	
Tertiary DNS	:	

Do you want to configure a 1GbE management and 1GbE data network? [Y/(N)]:

Enter Virtual Management Console IP Address
(must be IPv4 X.X.X.X): 16.24.164.147

Select bonding mode for 1GbE management bond

enter 1 (Active/Backup),

```

    4 (IEEE 802.3ad Dynamic Link Aggregation),
    or 6 (Active Load Balancing),
(default = 1): 1

Enter 1GbE management network start IP address
(must be IPv4 X.X.X.X):

Enter 1GbE management network end IP address
(must be IPv4 X.X.X.X):

Enter 1GbE management subnet mask
(must be IPv4 X.X.X.X):

Select bonding mode for 1GbE data bond

enter 1 (Active/Backup),
    4 (IEEE 802.3ad Dynamic Link Aggregation),
    or 6 (Active Load Balancing),
(default = 1): 1

Enter 1GbE data network start IP address
(must be IPv4 X.X.X.X):

Enter 1GbE data network end IP address
(must be IPv4 X.X.X.X):

Enter 1GbE data subnet mask
(must be IPv4 X.X.X.X):

=====
Template #5 - Management/Data/Replication on (2) 1Gb ports (bonded)

Do you want to configure a combined 1GbE management and data network? [Y/(N)]: y

Enter Virtual Management Console IP Address
(must be IPv4 X.X.X.X):

Select bonding mode for 1GbE management and data bond

enter 1 (Active/Backup),
    4 (IEEE 802.3ad Dynamic Link Aggregation),
    or 6 (Active Load Balancing),
(default = 1): 1

Enter 1GbE management and data network start IP address
(must be IPv4 X.X.X.X):

Enter 1GbE management and data network end IP address
(must be IPv4 X.X.X.X):

Enter 1GbE management and data subnet mask
(must be IPv4 X.X.X.X):

MENU Item 2

The following configuration steps will be performed:
  Configure Network
-> Configure Time
  Configure Licenses
  Verify Hardware health
  Configure Failover
  Finish Configuration and reboot
  Finish Configuration
Actions:
  execute) Perform the current step (Default)
  skip) Skip to the next step
  back) Go back to a previous step
  quit) Exit the configuration immediately

Configure Time [execute]?
Choose how to set time:
  1) Set time explicitly
  2) Set time using NTP server
  skip) Skip setting time

Enter Selection: 1
Enter UTC time for the system (mm/dd/yyyy hh:mm:ss): 05/01/2013 09:39:00

Command Successful. The Backup System UTC has been set to 05/01/2013 09:39:00.

N.B. If set time is before current system time this warning will appear.

Current UTC   : 05/01/2013 09:35:23
New UTC      : 05/01/2013 09:35:05

Warning: System time will move backwards as a result of this command. The system will need to be rebooted via
the 'system reboot' command.

Enter 'y' to continue or 'n' to skip [default='n']:
```

```
Enter Selection: 2
Enter up to 2 ntp server names or ip addresses (space separated): 12.10.191.251
Cannot get time for NTP server 12.10.191.251
```

Both selections lead onto this...

```
Do you want to set your timezone [y/N]? y
Please identify a location so that time zone rules can be set correctly.
Please select a continent or ocean.
1) Africa          4) Arctic Ocean    7) Australia      10) Pacific Ocean
2) Americas       5) Asia           8) Europe         11) Exit
3) Antarctica     6) Atlantic Ocean 9) Indian Ocean
```

```
##? 8
Please select a country.
1) Aaland Islands  18) Greece         35) Norway
2) Albania         19) Guernsey       36) Poland
3) Andorra        20) Hungary        37) Portugal
4) Austria        21) Ireland        38) Romania
5) Belarus        22) Isle of Man    39) Russia
6) Belgium        23) Italy           40) San Marino
7) Bosnia & Herzegovina 24) Jersey         41) Serbia
8) Britain (UK)   25) Latvia         42) Slovakia
9) Bulgaria       26) Liechtenstein 43) Slovenia
10) Croatia       27) Lithuania      44) Spain
11) Czech Republic 28) Luxembourg     45) Sweden
12) Denmark       29) Macedonia     46) Switzerland
13) Estonia       30) Malta           47) Turkey
14) Finland       31) Moldova        48) Ukraine
15) France        32) Monaco         49) Vatican City
16) Germany       33) Montenegro
17) Gibraltar     34) Netherlands
```

```
##? 8
```

The following information has been given:

Britain (UK)

```
Therefore TZ='Europe/London' will be used.
Local time is now:      Wed May 1 10:37:06 BST 2013.
Universal Time is now: Wed May 1 09:37:06 UTC 2013.
Is the above information OK?
1) Yes
2) No
##?
```

MENU Item 3

The following configuration steps will be performed:

```
Configure Network
Configure Time
-> Configure Licenses
Verify Hardware health
Configure Failover
Finish Configuration and reboot
Finish Configuration
```

Actions:

```
execute) Perform the current step (Default)
skip) Skip to the next step
back) Go back to a previous step
quit) Exit the configuration immediately
```

Configure Licenses [execute]?

Enter/Show Applicable licenses:

```
1) Enter license key at the terminal
2) Load license file from repository directory
3) Show licenses
skip) Stop entering licenses
```

```
Enter option: 1
Enter license key:
```

```
Enter option: 2
Load license files in the /repository directory using sftp.
Choose license files from the /repository directory:
```

No files found

```
skip) Stop entering licenses
rescan) Rescan the repository
```

```
Enter option: 3
```

License(s):

No licenses installed

MENU Item 4

The following configuration steps will be performed:

- Configure Network
- Configure Time
- Configure Licenses
- > Verify Hardware health
- Configure Failover
- Finish Configuration and reboot
- Finish Configuration

Actions:

- execute) Perform the current step (Default)
- skip) Skip to the next step
- back) Go back to a previous step
- quit) Exit the configuration immediately

Verify Hardware health [execute]?

```
#####  
# SYSTEM HEALTH SUMMARY #  
#####
```

```
Report Date: Wed May 01 08:52:52 UTC 2013  
Product ID: HP B6200 StoreOnce Backup System  
Cluster S/N: hpa0b3cce3861a  
Version: 3.6.0-1315.1  
Overall Status: FAILED (Hardware)
```

```
### HARDWARE COMPONENT STATUS #####
```

The following hardware is in a 'down' or 'failed' state:

Device ID	Status	Hardware Type	Hardware Path
node1_hba_host6	failure	HBA	Couplet_1 > hpb3cce3861a-1 > node1_hba_host6
node1_hba_host7	failure	HBA	Couplet_1 > hpb3cce3861a-1 > node1_hba_host7

```
### NODE STATUS #####
```

```
hpb3cce3861a-1: Up  
hpb3cce3861a-2: Up
```

MENU Item 5

The following configuration steps will be performed:

- Configure Network
- Configure Time
- Configure Licenses
- Verify Hardware health
- > Configure Failover
- Finish Configuration and reboot
- Finish Configuration

Actions:

- execute) Perform the current step (Default)
- skip) Skip to the next step
- back) Go back to a previous step
- quit) Exit the configuration immediately

Configure Failover [execute]?

Failover is currently: disabled

Enable failover on the system:

- 1) Enable failover
- 2) Disabled failover
- skip) Leave failover in its current state.

Enter option:

Enter option: 1
failover enabled.

Enter option: 2
failover disabled.

MENU Item 6

The following configuration steps will be performed:

- Configure Network
- Configure Time
- Configure Licenses

```
Verify Hardware health
Configure Failover
-> Finish Configuration and reboot
Finish Configuration
Actions:
execute) Perform the current step (Default)
skip) Skip to the next step
back) Go back to a previous step
quit) Exit the configuration immediately
```

Finish Configuration and reboot [execute]?

MENU Item 7

The following configuration steps will be performed:

```
Configure Network
Configure Time
Configure Licenses
Verify Hardware health
Configure Failover
Finish Configuration and reboot
-> Finish Configuration
Actions:
execute) Perform the current step (Default)
skip) Skip to the next step
back) Go back to a previous step
quit) Exit the configuration immediately
```

Finish Configuration [execute]?

system set description

Description of Command Function

Defines the string used to label and identify the StoreOnce appliance. This label is part of the replication process when the source or target appliance needs to be identified.

Command Syntax

```
system set description <appliance-name>
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

appliance-name – a character string must appear after `config set description` in the command entry. This string may contain the upper case letters, lower case letters, numbers, the dash “-” and the underscore “_”. The string must be a maximum of 32 characters.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, the following is displayed:

The StoreOnce appliance description is `APPLIANCE-NAME`, where `APPLIANCE-NAME` is the string labeling the StoreOnce appliance.

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

Command Failed - the command does not conform to the required syntax, `SYNTAX`, where `SYNTAX` is the command syntax as described under Command Syntax in this section.

Example

```
# system set description Primary-D2D
```

The D2D appliance description is `Primary-D2D`

system set pagecontrol

Description of Command Function

Enables or disable the page control feature.

Command Syntax

```
system set pagecontrol {on|off}
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

on/off – This required parameter defines the state of page control. “On” means the page control feature is enabled, and “off” means the page control feature is disabled.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- The parameter value must be valid; see the parameter description for details.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
Paging of CLI output is set to [on or off] as defined  
Command Successful
```

Command Operation during Abnormal Conditions

- If any of the command elements (*system*, *set*, *pagecontrol*, *)* are misspelled, the following is displayed:

```
element: command not found
```
- If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Example

```
# system set pagecontrol on  
Paging of CLI output is set to off  
Command Successful
```

system show config

Description of Command Function

Displays information on the StoreOnce appliance system configuration.

Command Syntax

```
system show config
```

Command Authority

Operator and Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
D2D appliance name: APPLIANCE-NAME
```

```
Product Serial Number: XXXXXXXXX
```

```
CLI output: OUTPUT
```

where APPLIANCE-NAME is the parameter defined using the command `system set description` (see “[system set description](#)” (page 121)) and where OUTPUT is the text format defined using the command `system set clioutput` (see “[system set clioutput](#)” (page 113)).

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Example

```
> system show config
```

```
CLUSTER ID: d2d485647867b2
```

```
Description: NameOfD2D
```

```
CLI OUTPUT: text
```

system show packages

Description of Command Function

Displays information on the software packages currently installed on the StoreOnce appliance and packages that have been added to the queue for installation.

Command Syntax

```
system show packages
```

Command Authority

Operator and Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, information on the installed packages is displayed.

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Example

```
# system show packages  
D2D APPLIANCE:  
    Packages consistent across all nodes  
D2D_3.0  
D2D_Patch_199  
  
    The following packages are queued for update:  
D2D_Patch_200  
  
NODE1:  
D2D_3.0  
D2D_Patch_199  
  
NODE2:  
D2D_3.0  
D2D_Patch_199
```

system show repository

Description of Command Function

Displays the packages which have been transferred into the repository.

Command Syntax

```
system show repository
```

Command Authority

Operator and Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

The command displays a list of packages in the repository directory.

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Example

```
# system show repository  
  
File  
----  
D2D_Master-3.2.0-1219.42.x86_64.rpm  
D2D_Master-3.5.0-1302.1.x86_64.rpm  
D2D_Master-3.6.0-1315.1.x86_64.rpm
```

system show status

Description of Command Function

Provides status on the StoreOnce appliance system.

Command Syntax

```
system show status
```

Command Authority

Operator and Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, the status of the storage assigned to each storage set is displayed. The Storage status can be one of the following:

- Discovered XX GB
 - Adding XX GB
 - Needs Finalization (...)
 - Finalizing (mounting)
 - Formatted XX GB
 - Miscellaneous errors that can be reported
- where XX represents the number of GB of data discovered or formatted.

The Service Set Status can be one of the following:

- Running
- Not Started
- Initializing
- Starting
- Terminating
- Fault
- FailedToInitialize

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Examples

```
# system show status  
Status  
-----  
Formatted 3,659.88GB  
  
Service Sets Status  Notes
```

```

-----
Set 1          Running
# system show status
Storage Set      Status
-----
Service Sets 3, 4 No volumes found on the arrays in Couplet 2, may need to run discovery
Service Sets 7, 8 Formatted 30,543.25GB
Service Sets 1, 2 Needs Finalization (mounting)
Service Sets 5, 6 Formatted 30,543.25GB

Service Sets Status      Notes
-----
Set 1          Not Started
Set 2          Not Started
Set 3          Not Started
Set 4          Not Started
Set 5          Running
Set 6          Running
Set 7          Running
Set 8          Running

```

system shutdown

Description of Command Function

Gracefully shuts down the entire StoreOnce appliance.

Command Syntax

```
system shutdown
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successfully sending the reboot request, the following is displayed:

```
shutdown request successfully sent
```

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Example

```
# system shutdown  
shutdown request successfully sent
```


system update packages

Description of Command Function

Updates the system with the packages existing in the update queue or optionally defined in the command entry. Parameters in this command will force the update process to be performed for packages the system already believes exist.

Command Syntax

```
system update packages [force]
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no parameters exist within this command.

Command Parameter Requirements

force – This optional parameter will force the packages to be install on the StoreOnce appliance even if the StoreOnce appliance believes the packages are already installed.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- The package file defined in the command entry must exist in the update queue.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
Package FILE-IMAGE successfully installed, where FILE-IMAGE is the package file defined in the command entry.
```

Command Operation during Abnormal Conditions

- If the command does not conform to the required syntax, the following is displayed:
Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.
- If the defined file image does not exist in the repository directory, the following is displayed:
Command Failed - package file does not exist in the D2D appliance repository directory
- If the package fails to install, the following is displayed:
Command Failed - the package did not install
- If no packages are in the update queue, the following is displayed:
Command Failed - no packages exist in the update queue

Example

```
# system update packages D2D-common-5.3.3-1.el5.x86_64.rpm  
package D2D-common-5.3.3-1 successful installed
```

time add ntpserver

Description of Command Function

Adds a network time protocol server to use if ntp is enabled. Up to two ntp servers may be defined for the StoreOnce appliance.

Command Syntax

```
time add ntpserver {<FQDN>|<IPv4>} [{<FQDN>|<IPv4>}]
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

ntp server ID – At least one ntp server ID must appear in the command entry. This parameter appears after `time add ntpserver` and consists of either a fully qualified domain name (FQDN) or an IPv4 address in the `xx.xx.xx.xx` format. Depending on the number of ntp server objects which currently exist for the StoreOnce appliance, up to two ntp server ID parameters may exist within the command entry. (No more than two ntp server objects can exist for a given StoreOnce appliance.)

Requirements for Command Execution

- The command entry must conform to the command syntax.
- The ntp server ID must be for a valid ntp server on the StoreOnce management network.
- The number of existing ntp server objects within the StoreOnce appliance and ntp server ID parameters defined within the command entry must be three or less.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
ntp server(s) added successfully
```

Command Operation during Abnormal Conditions

- If the command does not conform to the required syntax, the following is displayed:
Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.
- If an ntp server ID does not exist on the network, the following is displayed:
Command Failed - NTPSERVER-ID does not exist, where NTPSERVER-ID is the invalid ntp server ID parameter defined within the command entry.
- If the number of existing ntp server objects with the StoreOnce appliance and the time server parameters defined within the command entry exceeds two, the following is displayed:
Command Failed - a maximum of three ntp servers may be assigned to the D2D appliance

Example

```
# time add ntpserver ntp.hp.net
ntp server(s) added successfully
# time add ntpserver 10.10.10.10
ntp server(s) added successfully
# time add ntpserver 10.10.10.10 10.10.10.11
```

ntp server(s) added successfully

time del ntpserver

Description of Command Function

Removes an ntp server which exists for the StoreOnce appliance.

Command Syntax

```
time del ntpserver {<FQDN>|<IPv4>}
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

ntp server ID – At least one ntp server ID must appear in the command entry. This parameter appears after `time del ntpserver` and consists of either a fully qualified name (FQDN) or an IPv4 address in the `xx.xx.xx.xx` format. Depending on the number of ntp server objects which currently exist for the StoreOnce appliance, up to two ntp server ID parameters may exist within the command entry. (No more than two ntp server objects can exist for a given StoreOnce appliance.)

Requirements for Command Execution

- The command entry must conform to the command syntax.
- The NTP server object defined within the command entry must exist.
- If NTP is enabled, execution of the command cannot remove all the timeserver objects.

Successful Command Output

Upon successful completion of the command, the following is displayed:

`NTP deleted`, where NTP is the time server object defined in the command entry.

Command Operation during Abnormal Conditions

- If the command does not conform to the required syntax, the following is displayed:
`Command Failed - the command does not conform to the required syntax, SYNTAX`, where SYNTAX is the command syntax as described under Command Syntax in this section.
- If the ntp server object defined in the command entry does not exist, the following is displayed:
`Command Failed - NTP does not exist`, where NTP is the time server object defined in the command entry.

Example

```
# time del ntpserver 10.10.10.10  
10.10.10.10 deleted
```

time reset timezone

Description of Command Function

Resets the time zone for the StoreOnce appliance to the default of UTC. Local time is the same as UTC.

Command Syntax

```
time reset timezone
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
Timezone reset to default of UTC
```

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,  
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this  
section.
```

Example

```
# time reset timezone  
Timezone reset to default of UTC
```

time set timezone

Description of Command Function

Sets the time zone for the StoreOnce appliance.

Command Syntax

```
time set timezone <timezonelabel>
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

timezone – A parameter defining the time zone for the StoreOnce appliance must appear in the command entry after `time set timezone`. The parameter is a string label matching one of the timezone labels defined in the linux directory, `usr/share/zoneinfo`.

If the timezone parameter is not include in the command entry, the command will execute a menu driven list allowing the user to select a timezone.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
timezone set to TIMEZONE, where TIMEZONE is the label for the time zone defined within the command entry.
```

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

Command Failed - the command does not conform to the required syntax, SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this section.

Example

```
# time set timezone

Please identify a location so that time zone rules can be set correctly.
Please select a continent or ocean.
1) Africa                4) Arctic Ocean        7) Australia            10) Pacific Ocean
2) Americas              5) Asia                8) Europe               11) Exit
3) Antarctica            6) Atlantic Ocean     9) Indian Ocean
#? 8
Please select a country.
1) Aaland Islands       18) Greece             35) Norway
2) Albania              19) Guernsey           36) Poland
3) Andorra              20) Hungary            37) Portugal
4) Austria              21) Ireland            38) Romania
5) Belarus              22) Isle of Man        39) Russia
6) Belgium              23) Italy               40) San Marino
7) Bosnia & Herzegovina 24) Jersey             41) Serbia
8) Britain (UK)        25) Latvia             42) Slovakia
9) Bulgaria             26) Liechtenstein     43) Slovenia
10) Croatia             27) Lithuania          44) Spain
11) Czech Republic     28) Luxembourg         45) Sweden
12) Denmark            29) Macedonia         46) Switzerland
13) Estonia            30) Malta               47) Turkey
14) Finland            31) Moldova            48) Ukraine
15) France              32) Monaco             49) Vatican City
16) Germany            33) Montenegro
17) Gibraltar          34) Netherlands
#? 8
```

The following information has been given:

Britain (UK)

Therefore TZ='Europe/London' will be used.

Local time is now: Thu May 9 12:12:58 BST 2013.

Universal Time is now: Thu May 9 11:12:58 UTC 2013.

Is the above information OK?

1) Yes

2) No

#? 1

timezone set to :Europe/London

time set UTC

Description of Command Function

Sets the value of the system clock on the node with active fusion manager to the value defined within the command entry. NTP must be disabled for this command to execute.

Command Syntax

```
time set UTC <mm/dd/yyyy hh:mm:ss>
```

Command Authority

Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

date time – This parameter must appear in the command entry after `time set UTC`. The parameter is entered in the 24 hour format, `MM/DD/YYYY hh:mm:ss`, where MM represents the numeric value of the month, DD represents the day, YYYY represents the year, hh represents the UTC hours, mm represents the UTC minutes and ss represents the UTC seconds.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, the following is displayed:

The D2D appliance UTC has been set to `MM/DD/YYYY hh:mm:ss`, where `MM/DD/YYYY hh:mm:ss` is the UTC value defined in the command entry.

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

Command Failed - the command does not conform to the required syntax, `SYNTAX`, where `SYNTAX` is the command syntax as described under Command Syntax in this section.

Example

```
# time set UTC 12/12/2010 20:00:15
```

The D2D appliance UTC has been set to `12/12/2010 20:00:15`

time show config

Description of Command Function

Displays the time configuration and the StoreOnce appliances UTC and local times.

Command Syntax

```
time show config
```

Command Authority

Operator and Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, information on the NTP time server setting, the current UTC, and the current local time is displayed.

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - the command does not conform to the required syntax,
SYNTAX, where SYNTAX is the command syntax as described under Command Syntax in this
section.
```

Example

```
# time show config
NTP Server(s)
-----
10.10.10.10
ntp.hp.net

TimeZONE: MDT

UTC   : 8/22/2011 21:12:39
LocalTime : 8/22/11 15:12:39

# time show config

NTP Server(s)
-----
No NTP Servers - NTP is disabled

TimeZone: MDT

UTC   : 8/22/2011 21:15:14
LocalTime : 8/22/11 15:15:14
```

vtl create cartridge

Description of Command Function

Adds a cartridge to an existing virtual tape library.

Command Syntax

```
vtl create cartridge [SETX ] LIBX {ALL|slot <number>|mail <number>}  
[WriteProtect {yes|no}] [barcode <string>] [CartSize  
{10|25|50|100|200|400|800|1000|1200|1400|1600|3200}]
```

Command Authority

Administrator

Command Object Requirements

- *SETX* – This object defines the service set containing the virtual tape library into which the cartridge will be added. X is the numeric index of the service set.
- *LIBX* – This required object is the virtual tape library into which the drive will be added. X is the numeric index of the library.
- *CARTX* – This object is not used within the command sequence. It represents the virtual cartridge created by the command. X is a numeric index.

Command Parameter Requirements

- *ALL* – This global default is optional. If used, a cartridge is created in every empty slot within the virtual tape library. Either this global default, the slot parameter, or the mail parameter must exist in the command sequence.
- *slot* – This parameter defines the slot into which the cartridge will be added after creation. The value for this parameter consists of an integer corresponding to an empty slot location in the virtual tape library defined by this command. The slot value assigned to parameter must exist within the library to which the cartridge is being added. Either this global default, the slot parameter, or the mail parameter must exist in the command sequence.
- *mail* – This parameter defines the mail slot into which the cartridge will be added after creation. The value is an integer corresponding to an empty mail slot location in the virtual tape library defined by this command. Either this global default, the slot parameter, or the mail parameter must exist in the command sequence.
- *WriteProtect* – This optional parameter defines if data can only be read from cartridge. The value is either *yes* or *no*. If not included, a default value of *no* is used.
 - *Yes* – data cannot be written to the cartridge
 - *No* – data can be written to the cartridge.
- *barcode* – This optional parameter consists of a string of characters defining the barcode on the cartridges created by this command. The string of characters must conform to the barcode parameters defined for the library into which the cartridge is being added and must not match any existing barcode in the library. If not included, a unique barcode string is created automatically according to the virtual library barcode template. The parameter cannot be used when the global default *ALL* is used to create cartridges in the empty slots.
- *CartSize* – This optional parameter defines the size in GB of the cartridges to be created in the virtual library by this command. The values are defined in the Command Syntax. If not included, the default value is that defined by the library “emulation” parameter value.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All object values must be valid; see the object descriptions for details.
- All parameter values must be valid; see the parameter descriptions for details.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
Command Successful
```

Command Operation during Abnormal Conditions

If any of the command execution requirements fail, command execution terminates. The cartridge is not added to the library and one of these error messages is displayed:

- Command Failed - the command does not conform to the correct command syntax `"vtl create cartridge [SETX] LIBX { ALL | slot <number> | mail <number> } [WriteProtect { yes | no}] [barcode <string>] [CartSize {10 | 25 | 50 | 100 | 200 | 400 | 800 | 1000 | 1200 | 1400 | 1600 | 3200}]"`
- Command Failed - The service set <SETX> is invalid
- Command Failed - The service set <SETX> does not exist
- Command Failed - The library <LIBX> is invalid
- Command Failed - The library <LIBX> does not exist
- Command Failed - "ALL" slot or a mail must be defined
- Command Failed - The slot <slot> does not exist in library
- Command Failed - The mail slot <mail> does not exist in library
- Command Failed - The slot <slot> is not empty
- Command Failed - The mail slot <mail> is not empty
- Command Failed - The barcode string does not conform to the library barcode parameters
- Command Failed - The barcode string must consist of 8 alphanumeric characters
- Command Failed - The cartridge size must be 10, 25, 50, 100, 200, 400, 800, 1000, 1200, 1400, 1600 or 3200

Examples

```
# vtl create cartridge SET1 LIB1 ALL
```

```
Command Successful
```

```
# vtl create cartridge LIB1 slot 2
```

```
Command Successful
```

vtl create library

Description of Command Function

Creates a virtual tape library. In addition, a virtual tape cartridge is created in every slot in the virtual library.

Command Syntax

```
vtl create library [SETX] [name <string>] [interface {iSCSI|FC}] [
LibEmulation {Generic|MSL2X24|MSL4X48|MSL8X96|EML|ESL}] [DriveEmulation
{LTO2|LTO3|LTO4|LTO5|UltriumVT}] [NoOfSlots <number>] [CartSize
{10|25|50|100|200|400|800|1000|1200|1400|1600|3200}] [NoOfDrives
<number>] [Port <number> [,<num>]] [iSCSIname <string>]
[iAuthenticationEnable {yes|no}] [iUsername <string>] [iSecret <string>]
[tAuthenticationEnable {yes|no}] [tUsername <string>] [tSecret <string>]
[BarcodeLength {6|8}]
```

Command Authority

Administrator

Command Object Requirements

- **SETX** – This object defines the service set into which virtual tape library will be added. X is the numeric index of the service set.
- **LIBX** – This object is not used within the command sequence; it is created by the command. The object represents the virtual tape library created by the command. X is a numeric index.

Command Parameter Requirements

- **name** – This optional parameter is used to create a human readable label for the virtual tape library created by this command. The value is a text string of up to 30 characters. If the value contains spaces, the value must be enclosed within quotations. If not included in the command, the label is defined by the text “Library” followed by the numeric index X defined for the LIBX object created by this command.
- **Interface** – This optional parameter defines the physical interface to be used by the virtual library created by this command. The value is either FC or iSCSI. For single-node products, if the parameter is not defined, the default below is used:

StoreOnce System Type	Default Interface
multi-node	FC
single-node	iSCSI

- **LibEmulation** – This optional parameter defines the type of physical library to be emulated by the virtual tape library created by this command. The values are defined in the Command Syntax. If the parameter is not defined, the default Generic is used. The characteristics for the different emulation types are described:

Emulation Type	Drive Emulation	No. of Drives	No. of Slots	No. of Mail Slots	Size of Cartridge
Generic	LTO4	1	8	1	800 GB
MSL2X24	LTO4	2	24	1	800 GB
MSL4X48	LTO4	4	48	1	800 GB
MSL8X96	LTO4	8	96	1	800 GB
EML	LTO4	1	96	1	800 GB
ESL	LTO4	1	96	1	800 GB

- *DriveEmulation* – This optional parameter defines the type of physical drive the virtual tape drive will emulate. The values are defined in the Command Syntax. If the parameter is not defined, the default value corresponds to the default drive type defined by the library's emulation type.
- *NoOfSlots* – This optional parameter defines the number of cartridge slots in the virtual library created by this command. The number of slots must conform to the library emulation type. The value has a maximum of 16384 characters. If not included, the default value is defined by the library emulation type.
- *CartSize* – This optional parameter defines the size in GB of the cartridges to be created in the virtual library by this command. The values are defined in the Command Syntax. If not included, the default value is that defined by the library "emulation" parameter value.
- *NoOfDrives* – This optional parameter defines the number of drives in the virtual library created by this command. The number of drives must conform to the library emulation type. The value has a maximum of 192 characters. If not included, the default value is defined by the library emulation type.
- *Port* – This optional parameter defines the physical Fibre Channel ports which will be assigned to the library's robotic arm and virtual drives and is only valid if the library interface is Fibre Channel. The value is defined by a number or a set of numbers (separated by commas) corresponding to the ports as defined by the `vtl show ports` command. All the ports listed are assigned to the robotic arm. If only one port value is assigned to this parameter, the port is assigned to all the virtual drives in the library. If more than one part number is defined, the ports are alternatively assigned to the drive in the library in a round robin fashion. If not defined, the value is the set of all Fibre Channel ports available to the service set (all the ports listed by the `vtl show ports` command). A value of zero indicates that no port should be assigned to the Fibre Channel interface.
- *iSCSIName* – This parameter defines the iSCSI initiator name and is required if the interface is iSCSI. If the VTL's interface is not iSCSI, defining this will generate an error. The value is a text string with a maximum of 224 characters. If not defined, the default is a null string.
- *iAuthenticationEnable* – This optional parameter defines if the CHAP (challenge handshake authentication protocol) initiator log on is enabled. The value for this parameter is either `yes` or `no`. If not defined, the default value is `no`.
- *iUserName* – This optional parameter defines the initiator user name for the CHAP (challenge handshake authentication protocol) and is only valid if the interface is iSCSI and the initiator log on is enabled. If the initiator log on is enabled and this is not defined, an error is generated. The value is a text string with a maximum of 224 characters.
- *iSecret* – This parameter defines the initiator secret for the CHAP (challenge handshake authentication protocol) and is only valid if the interface is iSCSI and the initiator log on is enabled. If the initiator log on is enabled and this parameter is not defined, an error is generated. The value is a text string with a maximum of XX characters.
- *tAuthenticationEnable* – This optional parameter defines if the CHAP (challenge handshake authentication protocol) target log on is enabled. The value for this parameter is either `yes` or `no`. If not defined, the default value is `no`.
- *tUserName* – This optional parameter defines the target user name for the CHAP (challenge handshake authentication protocol) and is only valid if the interface is iSCSI and the initiator log on is enabled. If the initiator log on is enabled and this is not defined, an error is generated. The value is a text string with a maximum of 224 characters.
- *tSecret* – This parameter defines the target secret for the CHAP (challenge handshake authentication protocol) and is only valid if the interface is iSCSI and the initiator log on is enabled. If the initiator log on is enabled and this parameter is not defined, an error is generated. The value is a text string with a maximum of XX characters.

- *BarcodeLength* – This optional parameter defines the total number of characters in the barcode used by the cartridges in the virtual tape library created by this command. The value is either 6 or 8. If not included, a default value of 8 is used.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All object values must be valid; see the object descriptions for details.
- All parameter values must be valid; see the parameter descriptions for details.

Successful Command Output

Upon successful completion of the command, the following is displayed:

Command Successful

Command Operation during Abnormal Conditions

- If any of the command execution requirements fail, command execution terminates. The cartridge is not added to the library and one of these error messages is displayed:
 - Command Failed - Did not conform to the correct command syntax

```
"vtl create library [SETX] [name <string>] [interface { iSCSI | FC }] [ LibEmulation { Generic | MSL2X24 | MSL4X48 | MSL8X96 | EML | ESL } ] [ DriveEmulation { LTO2 | LTO3 | LTO4 | LTO5 | UltriumVT } ] [ NoOfSlots <number> ] [ CartSize {10 | 25 | 50 | 100 | 200 | 400 | 800 | 1000 | 1200 | 1400 | 1600 | 3200 } ] [ NoOfDrives <number> ] [ Port <number> [,<num>]] [iSCSIname <string> ] [iAuthenticationEnable {yes | no}] [ iUsername <string> ] [ iSecret <string> ] [tAuthenticationEnable {yes | no}] [ tUsername <string> ] [ tSecret <string> ] [ BarcodeLength { 6 | 8 } ]"
```
 - Command Failed - The entry does not conform to command syntax. The number of double quotes (") is odd.
 - Command Failed - The service set <SETX> is invalid
 - Command Failed - The service set <SETX> does not exist
 - Command Failed - Invalid Parameter: <parameter> value: <value>
 - Command Failed - The name must be equal to or less than 30 characters
 - Command Failed - The interface <interface> is invalid
 - Command Failed - The library port <LibPort> is invalid
 - Command Failed - The library emulation <LibEmulation> is invalid
 - Command Failed - The drive emulation <DriveEmulation> is invalid
 - Command Failed - The drive port <DrivePort> is invalid
 - Command Failed - The number of slots must conform to library emulation type
 - Command Failed - The number of slots must be between 0 and 16384
 - Command Failed - The size of the cartridges must be 10, 25, 50, 100, 200, 400, 800, 1000, 1200, 1400, 1600 or 3200

- Command Failed - The number of drives must be between 0 and 192
- Command Failed - Drive fibre channel port defined for <interface> interface
- Command Failed - Library fibre channel port defined for <interface> interface
- Command Failed - iSCSI parameters defined for <interface> interface
- Command Failed - Initiator log on enabled, CHAPS parameters required
- Command Failed - Target log on enabled, CHAPS parameters required
- Command Failed - Worldwide port names defined for <interface> interface
- Command Failed - Worldwide node name defined for <interface> interface
- Command Failed - The number of library worldwide port names do not equal number of library ports.
- Command Failed - Worldwide port name(s) are invalid
- Command Failed - World wide port names must consist of 16 hexadecimal characters
- Command Failed - The world wide port names list contains and unsupported value: <value>
- Command Failed - Worldwide node names(s) are invalid
- Command Failed - The number of slots is greater than the library emulation
- Command Failed - The number of drives is greater than the library emulation
- Command Failed - tAuthentication must be "yes" when iAuthentication is "yes"
- If execution of the command will add more than 48 libraries to a service set, the command execution terminates and the following error message is displayed:
Command Failed - Only 48 libraries may be added to a service set

Example

```
# vtl create library
Command Successful

# vtl create library set1 name MyLib1 interface FC libemulation Generic
driveemulation LTO4 noofslots 40 cartsizesize 800 noofdrives 4 port 1,2
Command Successful

# vtl create library set2 name MyLib2 interface iSCSI libemulation ESL
driveemulation LTO5 noofslots 96 noofdrives 2 port 1 iscsiname
iqn.1991-05.co.microsoft:myserver.mydomain.local
Command Successful
```

vtl delete cartridge

Description of Command Function

Deletes a single cartridge or all cartridges from a virtual tape library.

Command Syntax

```
vtl delete cartridge [SETX] LIBX [{CARTX|ALL}] [barcode <string>] [mail  
<number>] [slot <number>]
```

Command Authority

Administrator

Command Object Requirements

- *SETX* – This object defines the service set containing the virtual tape library from which the cartridge will be deleted. X is the numeric index of the service set.
- *LIBX* – This required object is the virtual tape library from which the cartridge will be deleted. X is the numeric index of the library.

NOTE: This is the library object name, not the user-defined name of the library. You can find the *LIBX* object name for a library using the “[vtl show library list](#)” (page 170) command.

- *CARTX* – This object is the virtual cartridge to be deleted. X is a numeric index which uniquely defines the cartridge. You can use the global default “ALL” to delete all the cartridges in the defined virtual library. If not defined, use another parameter to define the cartridge to delete.

Command Parameter Requirements

- *barcode* – This optional parameter defines the barcode label of the cartridge to be deleted. The value is a character string which matches a barcode label of a cartridge in the virtual library. If this parameter is not defined, another parameter must be used to define the cartridge to be deleted from the virtual library.
- *mail* – This optional parameter defines the mail slot location of the cartridge to be deleted. The value is a number which matches a mail slot location which contains a cartridge in the virtual library. If this parameter is not defined, another parameter must be used to define the cartridge to be deleted from the virtual library.
- *slot* – This optional parameter defines the slot location of the cartridge to be deleted. The value is a number which matches a slot location which contains a cartridge in the virtual library. If this parameter is not defined, another parameter must be used to define the cartridge to be deleted from the virtual library.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All object values must be valid; see the object descriptions for details.
- All parameter values must be valid; see the parameter descriptions for details.

Successful Command Output

Prior to executing the command the following message is displayed:

```
Warning - The cartridge(s) to be deleted may contain data, continue? y  
/ n
```

You must enter a *y* response for command execution to continue. Upon successful completion of the command, the following is displayed:

```
Command Successful
```


Command Operation during Abnormal Conditions

- If any of the command execution requirements fail, command execution terminates. The cartridge is not deleted from the library and one of these error messages is displayed:
 - Command Failed - Did not conform to the correct command syntax
"vtl delete cartridge [SETX] LIBX [{CARTX | ALL}] [barcode <string>] [mail <number>] [slot <number>]"
 - Command Failed - The service set <SETX> is invalid
 - Command Failed - The service set <SETX> does not exist
 - Command Failed - The library <LIBX> is invalid
 - Command Failed - The library <LIBX> does not exist
 - Command Failed - The cartridge(s) to be deleted was not defined
 - Command Failed - The cartridge <CARTX> does not exist
 - Command Failed - The mail slot <mail> does not exist in the library
 - Command Failed - The slot <slot> does not exist in the library
 - Command Failed - The mail slot <mail> does not contain a cartridge
 - Command Failed - The slot <slot> does not contain a cartridge
 - Command Failed - The barcode is invalid
 - Command Failed - The barcode string must consist of 8 alphanumeric characters
 - Command Failed - A cartridge with barcode <barcode> does not exist in the library
- If you do not respond to the warning message with *y*, the command is terminated and the CLI returns to the user prompt.

Example

```
# vtl delete cartridge LIB1 slot 3  
Command Successful
```

vtl delete library

Description of Command Function

Deletes a virtual tape library.

Command Syntax

```
vtl delete library SETX LIBX
```

Command Authority

Administrator

Command Object Requirements

- *SETX* – This required object defines the service set containing the virtual tape library that will be deleted. X is the numeric index of the service set.
- *LIBX* – This required object is the virtual tape library that will be deleted. X is the numeric index of the library.

NOTE: This is the library object name, not the user-defined name of the library. You can find the *LIBX* object name for a library using the “[vtl show library list](#)” (page 170) command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All object values must be valid; see the object descriptions for details.

Successful Command Output

Prior to executing the command the following message is displayed:

```
Warning - The cartridge(s) to be deleted may contain data, continue? y  
/ n
```

You must enter a *y* response for command execution to continue. Upon successful completion of the command, the following is displayed:

```
Command Successful
```

Command Operation during Abnormal Conditions

- If any of the command execution requirements fail, command execution terminates. The library is not deleted and one of these error messages is displayed:
 - Command Failed - Did not conform to the correct command syntax
“vtl delete library SETX LIBX”
 - Command Failed - The service set <SETX> is invalid
 - Command Failed - The service set <SETX> does not exist
 - Command Failed - The library <LIBX> is invalid
 - Command Failed - The library <LIBX> does not exist
 - Command Failed - the service set must be specified
- If you do not respond to the warning message with *y*, the command is terminated and the CLI returns to the user prompt.

Example

```
# vtl delete library LIB4
```

Command Successful

vtl modify cartridge

Description of Command Function

Modifies the parameters of an existing cartridge.

Command Syntax

```
vtl modify cartridge [SETX] LIBX [{CARTX|ALL}] [slot <num>] [WriteProtect  
{yes|no}] [barcode <string>] [CartSize  
{10|25|50|100|200|400|800|1000|1200|1400|1600|3200}]
```

Command Authority

Administrator

Command Object Requirements

- *SETX* – This required object defines the service set containing the virtual tape library that contains the cartridge to be modified. X is the numeric index of the service set.
- *LIBX* – This required object is the virtual tape library that contains the cartridge to be modified. X is the numeric index of the library.

NOTE: This is the library object name, not the user-defined name of the library. You can find the *LIBX* object name for a library using the “[vtl show library list](#)” (page 170) command.

- *CARTX* – This optional object is the cartridge to be modified. X is a numeric index which uniquely defines the cartridge. If not defined, the cartridge to be modified must be defined by the *slot* parameter.

Command Parameter Requirements

- *slot* – This optional parameter defines the slot in which the cartridge to be modified is located. The value for this parameter consists of an integer corresponding to the slot location in the virtual tape library. If not defined, the cartridge to be modified must be defined by the *CARTX* object or the global default ALL.
- *WriteProtect* – This optional parameter determines if the data can only be read from the cartridge. The value is either *yes* or *no*. *Yes* indicates that data cannot be written to the cartridge, and *no* indicates that data can be written to the cartridge. If not included, the current value remains unchanged.
- *barcode* – This optional parameter consists of a string of characters defining the new barcode to replace the existing barcode on the cartridge. The barcode string must conform to the barcode parameter of the virtual tape library containing the cartridge. If not included, the current value remains unchanged. The parameter cannot be used when the global default ALL is used to define all the cartridges in the library.
- *CartSize* – This optional parameter defines the size in GB to which the cartridges will be modified. The values are defined in the Command Syntax. If not included, the current value remains unchanged. If the cartridges to be modified contain more user data than the defined cartridge size, an error will be generated.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All object values must be valid; see the object descriptions for details.
- All parameter values must be valid; see the parameter descriptions for details.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
Command Successful
```

Command Operation during Abnormal Conditions

If any of the command execution requirements fail, command execution terminates. The cartridge is not modified and one of these error messages is displayed:

- Command Failed - Did not conform to the correct command syntax "vtl modify cartridge [SETX] LIBX [{CARTX | ALL}] [slot <num>] [WriteProtect { yes | no }] [barcode <string>] [CartSize {10 | 25 | 50 | 100 | 200 | 400 | 800 | 1000 | 1200 | 1400 | 1600 | 3200}]"
- Command Failed - The service set <SETX> is invalid
- Command Failed - The service set <STX> does not exist
- Command Failed - The library <LIBX> is invalid
- Command Failed - The library <LIBX> does not exist
- Command Failed - "ALL", CARTX or a slot must be defined
- Command Failed - The slot <slot> does not exist in library
- Command Failed - The slot <slot> does not contain a cartridge
- Command Failed - The barcode string does not conform to the library barcode parameters
- Command Failed - The barcode string must consist of 8 alphanumeric characters
- Command Failed - The barcode string is not unique in the library
- Command Failed - The cartridge size must be 10, 25, 50, 100, 200, 400, 800, 1000, 1200, 1400, 1600 or 3200
- Command Failed - The data on the cartridge(s) is greater than the cartridge size.

Example

```
# vtl modify cartridge LIB1 CART5 barcode ABC123  
Command Successful
```

vtl modify drive

Description of Command Function

Modifies a drive which already exists within a library.

Command Syntax

```
vtl modify drive SETX LIBX DRVX [Drive Emulation  
{LTO2|LTO3|LTO4|LTO5|UltriumVT}] [DrivePort <number>] [iSCSIname  
<string>] [iUsername <string>] [wwpn <wwpn>] [wwnn <wwnn>]
```

Command Authority

Administrator

Command Object Requirements

- *SETX* – This required object defines the service set containing the virtual tape library that contains the drive to be modified. X is the numeric index of the service set.
- *LIBX* – This required object is the virtual tape library that contains the drive to be modified. X is the numeric index of the library.

NOTE: This is the library object name, not the user-defined name of the library. You can find the *LIBX* object name for a library using the “[vtl show library list](#)” (page 170) command.

- *DRVX* – This required object is the drive to be modified. X is a numeric index which uniquely defines the cartridge.

Command Parameter Requirements

- *DriveEmulation* – This optional parameter defines the type of physical drive the virtual tape drive will emulate. The values are defined in the Command Syntax. If not defined, the current value remains unchanged.
- *DrivePort* – This optional parameter defines which physical port on the node will be used by the virtual drive and is only valid if the library interface is Fibre Channel. If the virtual drive interface is not Fibre Channel, defining this will generate an error. The value is a number corresponding to the ports as defined by the `vtl show ports` command. If not defined, the current value remains unchanged.
- *iSCSIName* – This optional parameter defines the iSCSI initiator name and is only valid if the interface is iSCSI. If the VTL's interface is not iSCSI, defining this will generate an error. The value is a text string with a maximum of 224 characters. If not defined, the current value remains unchanged.
- *WWPN* – This optional parameter defines the worldwide port name if the virtual drive uses Fibre Channel ports. If the virtual drive interface is not Fibre Channel, defining this will generate an error. The value must be a worldwide port name. If not defined, the current value remains unchanged.
- *WWNN* – This optional parameter defines the worldwide node name of the drive if the virtual drive uses Fibre Channel ports. If the virtual drive does not use Fibre Channel, defining this will generate an error. The value must be a valid worldwide name. If not defined, the current value remains unchanged.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All object values must be valid; see the object descriptions for details.
- All parameter values must be valid; see the parameter descriptions for details.

Successful Command Output

Upon successful completion of the command, the following is displayed:

Command Successful

Command Operation during Abnormal Conditions

If any of the command execution requirements fail, command execution terminates. The cartridge is not deleted from the library and one of these error messages is displayed:

- Command Failed - Did not conform to the correct command syntax "vtl modify drive SETX LIBX DRVX [Drive Emulation { LTO2 | LTO3 | LTO4 | LTO5 | UltriumVT}] [DrivePort <number>] [iSCSIname <string>] [iUsername <string>] [wwpn <wwpn>] [wwnn <wwnn>]"
- Command Failed - The service set <SETX> is invalid
- Command Failed - The service set <SETX> does not exist
- Command Failed - The library <LIBX> is invalid
- Command Failed - The library <LIBX> does not exist
- Command Failed - The drive emulation <DriveEmulation> is invalid
- Command Failed - The drive port <DrivePort> is invalid
- Command Failed - Drive fibre channel port defined for <interface> interface
- Command Failed - iSCSI parameters defined for <interface> interface
- Command Failed - Worldwide port names cannot be defined for <interface> interface
- Command Failed - Worldwide node name cannot be defined for <interface> interface
- Command Failed - The number of library worldwide port names does not equal number of library ports.
- Command Failed - iSCSI name must equal to or less than 224 characters
- Command Failed - Worldwide port name(s) are invalid
- Command Failed - World wide port names must consist of 16 hexadecimal characters
- Command Failed - The world wide port names list contains and unsupported value: <value>
- Command Failed - Worldwide node names(s) are invalid

Example

```
# vtl modify drive LIB2 DRV3 DrivePort 1
```

Command Successful

vtl modify library

Description of Command Function

Modifies an existing library.

Command Syntax (multi-node products)

```
vtl modify library SETX LIBX [name <string>] [interface {iSCSI|FC}]  
[LibPort <num> [,<num>]] [LibEmulation  
{Generic|MSL2X24|MSL4X48|MSL8X96|EML|ESL}] [DriveEmulation  
{LTO2|LTO3|LTO4|LTO5|UltriumVT}] [DrivePort <number>[,<number>]]  
[NoOfSlots <number>] [NoOfDrives <number>] [Port <number> [,<number>]]
```

Command Syntax (single-node products)

```
vtl modify library SETX LIBX [name <string>] [interface {iSCSI|FC}]  
[LibPort <num> [,<num>]] [LibEmulation  
{Generic|MSL2X24|MSL4X48|MSL8X96|EML|ESL}] [DriveEmulation  
{LTO2|LTO3|LTO4|LTO5|UltriumVT}] [DrivePort <number>[,<number>]]  
[NoOfSlots <number>] [NoOfDrives <number>] [Port <number> [,<number>]]  
[iSCSIname <string>] [iAuthenticationEnable {yes|no}] [iUsername  
<string>] [isecret <string>] [tAuthenticationEnable {yes|no}] [tUsername  
<string>] [tsecret <string>] [wwpn <wwpn>] [wwnn <wwnn>]
```

Command Authority

Administrator

Command Object Requirements

- *SETX* – This required object defines the service set containing the virtual tape library to be modified. X is the numeric index of the service set.
- *LIBX* – This required object is the virtual tape library to be modified. X is the numeric index of the library.

NOTE: This is the library object name, not the user-defined name of the library. You can find the *LIBX* object name for a library using the “[vtl show library list](#)” (page 170) command.

Command Parameter Requirements

- *name* – This optional parameter is used to modify the human readable name for the virtual tape library. The value is a text string with a maximum of 30 characters. If not defined, the current value remains unchanged.
- *Interface* – This optional parameter defines the physical interface to be used by the virtual library. The value is either FC or iSCSI. If the parameter is not defined, the current value remains unchanged. If the interface is changed, all drives and the library port are modified to this new interface and any parameter values associated with the old interface become undefined.
- *LibPort* – This optional parameter allows different port ranges to be assigned to the robotic arm and virtual drives and is only valid if the library interface is Fibre Channel. It defines the physical Fibre Channel ports via which robotic arm commands to the virtual library will be transmitted. The value is a number, or a set of numbers separated by commas, that correspond to the ports as defined by the `vtl show ports` command. If not defined, the current value remains unchanged unless the interface has been changed to Fibre Channel in this command, in which case the value is the set of all Fibre Channel ports defined by the `vtl show ports` command. A value of zero indicates that no port should be assigned to the Fibre Channel interface.
- *LibEmulation* – This optional parameter defines the type of physical library to be emulated by the virtual tape library. The values are defined in the Command Syntax. If not defined, the

current value remains unchanged. If this parameter is changed, the number of slots and number of drives currently defined must be less than that defined by the library emulation. If this is not the case, an error message is generated.

- *DriveEmulation* – This optional parameter defines the type of physical drive the virtual tape drive will emulate. The values are defined in the Command Syntax. If not defined, the current value remains unchanged. If this parameter is changed, the emulation type only applies to new drives which are added to the library; the emulation types of the current virtual drives in the library remain unchanged.
- *DrivePort* – This optional parameter allows different port ranges to be assigned to the robotic arm and virtual drives and is only valid if the interface has been defined as Fiber Channel. It defines the physical Fibre Channel ports via which commands to the virtual drives will be transmitted. The value is a number, or a set of numbers separated by commas, that correspond to the ports as defined by the `vtl show ports` command. If more than one port number is defined, the ports are alternatively assigned to the drives in the library in a round robin fashion. If not defined, the current value remains unchanged. A value of zero indicates no port should be assigned to the Fibre Channel interface.
- *NoOfSlots* – This optional parameter defines the number of cartridge slots in the virtual library. The number of slots must conform to the library emulation type. The value has a maximum of 16384 characters. If not defined, the current value remains unchanged. If the value of the number of slots is greater than the maximum allowed by the Library emulation, an error is generated.
- *NoOfDrives* – This optional parameter defines the number of drives in the virtual library. The number of drives must conform to the library emulation type. The value has a maximum of 192 characters. If not defined, the current value remains unchanged. If the value of the number of drives is greater than the maximum allowed by the Library emulation, an error is generated.
- *Port* – This optional parameter defines the physical Fibre Channel ports which will be assigned to the library's robotic arm and virtual drives and is only valid if the library interface is Fibre Channel. The value is defined by a number or a set of numbers (separated with commas) corresponding to the ports as defined by the `vtl show ports` command. All the ports listed are assigned to the robotic arm. If only one port value is assigned to this parameter, the port is assigned to all the virtual drives in the library. If more than one port number is defined, the ports are alternatively assigned to the drive in the library in a round robin fashion. A value of zero indicates that no port should be assigned to the Fibre Channel interface. If not defined, the current value remains unchanged.
- *iSCSIName* – single-node only. This parameter defines the iSCSI initiator name and is required if the interface is iSCSI. If the VTL's interface is not iSCSI, defining this will generate an error. The value is a text string with a maximum of 224 characters. If not defined, the current value remains unchanged.
- *iAuthenticationEnable* – single-node only. This optional parameter determines if the CHAP (challenge handshake authentication protocol) initiator log on is enabled. The value for this parameter is either `yes` or `no`. If not defined, the current value remains unchanged.
- *iUserName* – single-node only. This optional parameter defines the initiator user name for the CHAP (challenge handshake authentication protocol) and is only valid if the interface is iSCSI. The value is a text string with a maximum of 224 characters. If not defined, the current value remains unchanged.
- *iSecret* – single-node only. This parameter defines the initiator secret for the CHAP (challenge handshake authentication protocol) and is only valid if the interface is iSCSI. The value is a text string with a maximum of [TBD] characters. If not defined, the current value remains unchanged.

- *tAuthenticationEnable* – single-node only. This optional parameter determines if the CHAP (challenge handshake authentication protocol) target log on is enabled. The value for this parameter is either *yes* or *no*. If not defined, the current value remains unchanged.
- *tUserName* – single-node only. This optional parameter defines the target user name for the CHAP (challenge handshake authentication protocol) and is only valid if the interface is iSCSI. The value is a text string with a maximum of 224 characters. If not defined, the current value remains unchanged.
- *tSecret* – single-node only. This parameter defines the target secret for the CHAP (challenge handshake authentication protocol) and is only valid if the interface is iSCSI. If the value of this parameter is *yes* and the value for the *iAuthenticationEnable* is *no*, an error is generated. If not defined, the current value remains unchanged.
- *WWPN* – single-node only. This optional parameter defines the worldwide port name if the virtual drive uses Fibre Channel ports. If the virtual drive interface is not Fibre Channel, defining this will generate an error. The value must be a worldwide port name. If more than one library port exists, the parameter consists of a list of worldwide port names separated by commas, The worldwide port names are assigned to the library ports starting with the first worldwide port name in the list being assigned to the lowest valued library port number. The next worldwide port name being assigned to the next lowest valued library port number and continuing for all worldwide port names in the list. If not defined, the current value remains unchanged.
- *WWNN* – single-node only. This optional parameter defines the worldwide node name of the drive if the virtual drive uses Fibre Channel ports. If the virtual drive does not use Fibre Channel, defining this will generate an error. The value must be a valid worldwide name. If not defined, the current value remains unchanged.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All object values must be valid; see the object descriptions for details.
- All parameter values must be valid; see the parameter descriptions for details.

Successful Command Output

Upon successful completion of the command, the following is displayed:

Command Successful

Command Operation during Abnormal Conditions

If any of the command execution requirements fail, command execution terminates. The library is not modified and one of these error messages is displayed:

- Command Failed - Did not conform to the correct command syntax `"vtl modify library SETX LIBX [name <string>] [interface { iSCSI | FC }] [LibPort <num> [,<num>]] [LibEmulation { Generic | MSL2X24 | MSL4X48 | MSL8X96 | EML | ESL }] [DriveEmulation { LTO2 | LTO3 | LTO4 | LTO5 | UltriumVT }] [DrivePort <number>[,<number>]] [NoOfSlots <number>] [NoOfDrives <number>] [Port <number> [,<number>]] [iSCSIname <string>] [iAuthenticationEnable {yes | no}] [iUsername <string>] [iSecret <string>] [tAuthenticationEnable {yes | no}] [tUsername <string>] [tSecret <string>] [wwpn <wwpn>] [wwnn <wwnn>] [BarcodeLength { 6 | 8 }] [nonstop {yes | no}]"`
- Command Failed - The entry does not conform to command syntax. The number of double quotes (") is odd.
- Command Failed - The service set <SETX> is invalid
- Command Failed - The service set <SETX> does not exist

- Command Failed - The library <LIBX> does not exist
- Command Failed - Invalid Parameter: <parameter> value: <value>
- Command Failed - The name must be equal to or less than 30 characters
- Command Failed - The interface <interface> is invalid
- Command Failed - The library port <LibPort> is invalid
- Command Failed - The library emulation <LibEmulation> is invalid
- Command Failed - The drive emulation <DriveEmulation> is invalid
- Command Failed - The drive port <DrivePort> is invalid
- Command Failed - The number of slots must be between 0 and 16834
- Command Failed - The number of drives must be between 0 and 192
- Command Failed - Drive fibre channel port defined for <interface> interface
- Command Failed - Library fibre channel port defined for <interface> interface
- Command Failed - iSCSI parameters defined for <interface> interface
- Command Failed - iSCSI name must equal to or less than 224 characters
- Command Failed - Worldwide port names defined for <interface> interface
- Command Failed - Worldwide node name defined for <interface> interface
- Command Failed - The number of library worldwide port names do not equal number of library ports.
- Command Failed - Worldwide port name(s) are invalid
- Command Failed - World wide port names must consist of 16 hexadecimal characters
- Command Failed - The world wide port names list contains and unsupported value: <value>
- Command Failed - Worldwide node names(s) are invalid
- Command Failed - The number of slots is greater than the library emulation
- Command Failed - The number of drives is greater than the library emulation
- Command Failed - The barcode length must be either 6 or 8
- Command Failed - The barcode parameters cannot be modified when cartridges exist in the library.
- Command Failed - tAuthentication must be "yes" when iAuthentication is "yes"

Example

```
# vtl modify library LIB2 name newlib Libport 2
Command Successful
```

vtl move cartridge

Description of Command Function

Moves a cartridge within a virtual tape library.

Command Syntax

```
vtl move cartridge SETX LIBX [CARTX] [from {drive <number>|mail
<number>|slot <number>}] [barcode <string>] to [libX] {drive
<number>|mail <number>|slot <number>}
```

Command Authority

Operator and Administrator

Command Object Requirements

- **SETX** – This required object defines the service set containing the virtual tape library into which the cartridge will be moved. X is the numeric index of the service set.
- **LIBX** – This required object is the virtual tape library into which the cartridge will be moved. X is the numeric index of the library.
- **CARTX** – This optional object is the cartridge to be moved. X is a numeric index which uniquely defines the cartridge. If not defined, the location of the cartridge to be moved must be defined in the `from` or `barcode` parameter.

Command Parameter Requirements

- *barcode* – This optional parameter identifies the cartridge to be moved by its barcode. If not defined, the cartridge to be moved must be defined with the `cartridge` object or the `from` parameter.
- *from* – This parameter defines the location from which the cartridge is moved. The value for this parameter is text defining a slot, drive, or mail slot location. The location must exist within the defined library. If the `cartridge` object (`CARTX`) and `barcode` parameter are not defined, this is required. If defined, this parameter must appear before the `to` parameter. (If this parameter is defined but the text `from` is missing from the command sequence, there will not be a command syntax violation.)
- *to* – This required parameter defines the location to which the cartridge is moved. The value is a slot type followed by an integer defining a slot location, drive location, or mail slot. It must be a location within the given library at which a cartridge does not already exist.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All object values must be valid; see the object descriptions for details.
- All parameter values must be valid; see the parameter descriptions for details.

Successful Command Output

Upon successful completion of the command, the following is displayed:

```
Command Successful
```

Command Operation during Abnormal Conditions

- If any of the command execution requirements fail, command execution terminates. The cartridge is not moved and one of these error messages is displayed:
 - Command Failed – Did not conform to the correct command syntax
"vtl move cartridge SETX LIBX [CARTX] [from {drive <number> | mail <number> | slot <number>}] [barcode <string>] to [libX] {drive <number> | mail <number> | slot <number>}"
 - Command Failed – The service set <SETX> is invalid

- Command Failed - The service set <SETX> does not exist
- Command Failed - The library <LIBX> is invalid
- Command Failed - The library <LIBX> does not exist
- Command Failed - The mail slot <mail> does not exist in the library
- Command Failed - The slot <slot> does not exist in the library
- Command Failed - The drive <drive> does not exist in the library
- Command Failed - The mail slot <mail> does not contain a cartridge
- Command Failed - The slot <slot> does not contain a cartridge
- Command Failed - The drive <drive> does not contain a cartridge
- Command Failed - The mail slot <mail> must be empty
- Command Failed - The slot <slot> must be empty
- Command Failed - The drive <drive> must be empty
- Command Failed - A cartridge with barcode <barcode> does not exist
- If the cartridge to be moved exists in a drive and the drive is in active use, the command execution terminates. The virtual cartridge is not moved and the following is displayed:
Command Failed - The cartridge in drive <drive> is in use.

Example

```
# vtl move cartridge SET2 LIB1 from slot 3 to slot 112
Command Successful
```

vtl show capacity

Description of Command Function

Displays details on the library storage used and available at the cluster, service set, or library level. The level of information displayed depends on the objects defined within the command sequence.

Command Syntax

```
vtl show capacity [SETX] [LIBX]
```

Command Authority

Operator and Administrator

Command Object Requirements

- *SETX* – This object defines the service set to be described. X is the numeric index of the service set. If not defined, the capacity information is provided at the cluster level.
- *LIBX* – This optional object is the virtual tape library to be described. X is the numeric index of the library. If defined, capacity information for the library is displayed.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All object values must be valid; see the object descriptions for details.
- All parameter values must be valid; see the parameter descriptions for details.

Successful Command Output

Upon successful completion of the command, the capacity information is displayed.

Command Operation during Abnormal Conditions

If any of the command execution requirements fail, command execution terminates. The capacity information is not displayed and one of these error messages is displayed:

- Command Failed – Did not conform to the correct command syntax "vtl show capacity [SETX] [LIBX]"
- Command Failed – The service set <SETX> is invalid
- Command Failed – The library <LIBX> is invalid
- Command Failed – If a library is defined, a service set must be defined

Examples

```
# vtl show capacity
```

Object	Space Used	User Data	Dedupe Ratio
SET1			
LIB1	4 TB	20 TB	5:1
LIB2	5 TB	75 TB	15:1
Lib3	1 TB	5 TB	5:1
SET2			
LIB1	10 TB	20 TB	2:1
LIB2	5 TB	75 TB	15:1
Lib3	1 TB	100 TB	100:1

Command Successful

```
# vtl show capacity SET1
```

Object	Space Used	User Data	Dedupe Ratio
--------	------------	-----------	--------------

```
SET1
  LIB1          4 TB          20 TB          5:1
  LIB2          5 TB          75 TB          15:1
  Lib3          1 TB          5 TB           5:1
```

Command Successful

```
# vtl show capacity SET1 LIB1
```

Object	Space Used	User Data	Dedupe Ratio
LIB1	4 TB	20 TB	5:1

Command Successful

vtl show cartridges

Description of Command Function

Displays information about the cartridges in a given library.

Command Syntax

```
vtl show cartridges SETX LIBX
```

Command Authority

Operator and Administrator

Command Object Requirements

- *SETX* – This required object defines the service set containing the virtual library to be described. X is the numeric index of the service set. If not defined, the capacity information is provided at the cluster level.
- *LIBX* – This required object is the virtual tape library that contains the cartridge to be described. X is the numeric index of the library.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All object values must be valid; see the object descriptions for details.

Successful Command Output

Upon successful completion of the command, the cartridge information is displayed.

Command Operation during Abnormal Conditions

If any of the command execution requirements fail, command execution terminates. The cartridge information is not displayed and one of these error messages is displayed:

- Command Failed – Did not conform to the correct command syntax "vtl show cartridges SETX LIBX"
- Command Failed – The service set <SETX> is invalid
- Command Failed – The service set <SETX> does not exist
- Command Failed – The library <LIBX> is invalid
- Command Failed – The library <LIBX> does not exist

Examples

```
# vtl show cartridges SET1 LIB1
```

```
Library : LIB1
```

```
Name: Gregslib
```

Object	Location	Slot	Barcode	Max Size	User Data	Protected	Mapped
CART1		1	ABC001YZ	800 GB	745 GB	yes	no
CART2		2	ABC002YZ	800 GB	712 GB	yes	no
CART3	Drive2	3	ABC003YZ	800 GB	799 GB	yes	no
CART4		4	ABC004YZ	800 GB	785 GB	yes	no
CART5		5	ABC005YZ	800 GB	455 GB	yes	no
CART6		6	ABC006YZ	800 GB	601 GB	yes	no
CART7		9	ABC007YZ	800 GB	100 GB	yes	no
CART8		8	ABC008YZ	800 GB	767 GB	yes	no
CART9		7	ABC009YZ	800 GB	35 GB	yes	no

```
Command Successful
```

```
# vtl show cartridges SET1 LIB1
```


Library : LIB1

Name: Gregslib

Object	Location	Slot	Barcode	Max Size	User Data	Protected	Mapped
CART1		1	ABC001	800 GB	745 GB	yes	no
CART2		2	ABC002	800 GB	712 GB	yes	no
CART3	Drive2	3	ABC003	800 GB	799 GB	yes	no
CART4		4	ABC004	800 GB	785 GB	yes	no

Command Successful

vtl show drive info

Description of Command Function

Displays information about a given virtual drive or all the virtual drives in a given library.

Command Syntax

```
vtl show drive info SETX LIBX [DRVX]
```

Command Authority

Operator and Administrator

Command Object Requirements

- *SETX* – This required object defines the service set containing the virtual library drives to be described. X is the numeric index of the service set. If not defined, the capacity information is provided at the cluster level.
- *LIBX* – This required object is the virtual tape library that contains the drive to be described. X is the numeric index of the library.
- *DRVX* – This optional object is the drive to be described. X is the numeric index of the library. If not defined, information about all drives in the library is displayed.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All object values must be valid; see the object descriptions for details.

Successful Command Output

Upon successful completion of the command, the drive information is displayed.

Command Operation during Abnormal Conditions

If any of the command execution requirements fail, command execution terminates. The drive information is not displayed and one of these error messages is displayed:

- Command Failed – Did not conform to the correct command syntax "vtl show drive info SETX LIBX [DRVX]"
- Command Failed – The service set <SETX> is invalid
- Command Failed – The service set <SETX> does not exist
- Command Failed – The library <LIBX> is invalid
- Command Failed – The library <LIBX> does not exist
- Command Failed – The drive <DRVX> is invalid
- Command Failed – The drive <DRVX> does not exist

Examples

```
# vtl show drive info SET1 LIB1 DRV1
Drive Object      : DRV1
Library           : LIB1
Library Name      : Gregslib
Emulation Type    : LTO4
Protocol          : Fibre Channel
  Serial Number   : H123D45E00
  WWNN           : 5001438017871D33
  Port           : 1
  FC Address     : 0x9F1723
  WWPN          : 5001438017871D34
```

Command Successful

```
# vtl show drive info SET1 LIB2 DRV1
```

```
Drive Object      : DRV1
Library           : LIB1
Library Name      : GregsNextlib
Emulation Type    : LTO4
Protocol          : iSCSI
Serial Number     : CR2058t021
WWNN              : 500143874B5B68A0
iSCSI Target Name : ign-1986-03.com.hp.storage.d2dbs.cr206f12e.500143874b5b68a0.library2.drive1
iSCSI Target Alias : D2DBS.CR206F1F2E.library2.Drive
```

Command Successful

```
# vtl show drive info SET1 LIB1
```

```
Drive Object      : DRV1
Library           : LIB1
Library Name      : Gregslib
Emulation Type    : LTO4
Protocol          : Fibre Channel
Serial Number     : H123D45E00
WWNN              : 5001438017871D33
Port              : 1
FC Address        : 0x9F1723
WWPN              : 5001438017871D34
```

```
Drive Object      : DRV2
Library           : LIB1
Library Name      : Gregslib
Emulation Type    : LTO4
Protocol          : Fibre Channel
Serial Number     : H123D45E01
WWNN              : 5001438017871D36
Port              : 2
FC Address        : 0x9F1623
WWPN              : 5001438017871D38
```

Command Successful

vtl show drive list

Description of Command Function

Lists the drives in a library.

Command Syntax

```
vtl show drive [SETX] [LIBX]
```

Command Authority

Operator and Administrator

Command Object Requirements

- *SETX* – This optional object defines the service set containing the drives to be listed. X is the numeric index of the service set. If used on a single-node system, the object must be defined as SET1. If not defined, all drives are listed.
- *LIBX* – This optional object is the virtual tape library that contains the drives to be listed. X is the numeric index of the library. If defined, a service set must be defined and only drives within this library are listed.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All object values must be valid; see the object descriptions for details.

Successful Command Output

Upon successful completion of the command, a list of drives is displayed.

Command Operation during Abnormal Conditions

If any of the command execution requirements fail, command execution terminates. The drives are not listed and one of these error messages is displayed:

- Command Failed - Did not conform to the correct command syntax "vtl show drive [SETX] [LIBX]"
- Command Failed - The service set <SETX> is invalid
- Command Failed - The service set <SETX> does not exist
- Command Failed - The library <LIBX> is invalid
- Command Failed - The library <LIBX> does not exist
- Command Failed - If a library is defined, a service set must be defined

Examples

```
# vtl show drive list
```

Object	Type	Service Set	Library	Name
-----	-----	-----	-----	-----
DRV1	LTO4	SET1	LIB1	Gregslib
DRV2	LTO4	SET1	LIB1	Gregslib
DRV1	LTO4	SET1	LIB2	GregsNextlib
DRV2	LTO4	SET1	LIB2	GregsNextlib
DRV1	LTO4	SET2	LIB1	Robslib
DRV2	LTO4	SET2	LIB1	Robslib
DRV1	LTO4	SET2	LIB2	RobNextlib
DRV2	LTO4	SET2	LIB2	RobNextlib

```
Command Successful
```

```
# vtl show drive list SET1
```

Object	Type	Service Set	Library	Name
-----	----	-----	-----	----
DRV1	LTO4	SET1	LIB1	Gregslib
DRV2	LTO4	SET1	LIB1	Gregslib
DRV1	LTO4	SET1	LIB2	GregsNextlib
DRV2	LTO4	SET1	LIB2	GregsNextlib

```
Command Successful
```

```
# vtl show drive list SET1 LIB1
```

Object	Type	Service Set	Library	Name
-----	----	-----	-----	----
DRV1	LTO4	SET1	LIB1	Gregslib
DRV2	LTO4	SET1	LIB1	Gregslib

```
Command Successful
```

vtl show library info

Description of Command Function

Displays library configuration information. The number of library configurations displayed depends on if a service set and specific library object is defined in the command sequence.

Command Syntax

```
vtl show library info [SETX] [LIBX]
```

Command Authority

Operator and Administrator

Command Object Requirements

- *SETX* – This optional object defines the service set containing the libraries to be described. X is the numeric index of the service set. If used on a single-node system, the object must be defined as SET1. If not defined, all libraries are described.
- *LIBX* – This optional object is the virtual tape library to be described. X is the numeric index of the library. If defined, a service set must be defined and only this library is described.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All object values must be valid; see the object descriptions for details.

Successful Command Output

Upon successful completion of the command, the library configuration information is displayed.

Command Operation during Abnormal Conditions

If any of the command execution requirements fail, command execution terminates. The library information is not displayed and one of these error messages is displayed:

- Command Failed – Did not conform to the correct command syntax "vtl show library info [SETX] [LIBX]"
- Command Failed – The service set <SETX> is invalid
- Command Failed – The service set <SETX> does not exist
- Command Failed – The library <LIBX> is invalid
- Command Failed – The library <LIBX> does not exist
- Command Failed – A service set must be defined

Examples

```
# vtl show library info lib1
```

```
Object           : LIB1
Name              : bobslib
Creation Time     : 20:19 2012/05/06
Replication Role  : Non Replicating
Deduplication     : Enabled
NonStop           : Yes
Emulation Type    : MSL G3 Series (2x24)
Default Drive Emulation : LTO4
Protocol          : Fibre Channel

Media Changer
Serial Number     : H1B600B50J
WWNN              : 5001438011A18944
Port              : 1
```

```
FC Address          : 0x971623
WWPN                : 5001438011A18945
Port                : 2
FC Address          : 0x971623
WWPN                : 5001438011A18946

No. of Drives      : 1

No. of Slots       : 24
Default Cartridge Size : 800GB
Barcode Generation  : Default
Length             : 8
```

Command Successful

```
# vtl show library info set2 lib2
```

```
Object              : LIB2
Name                : Gregslib
Creation Time       : 20:19 2012/05/06
Replication Role    : Non Replicating
Deduplication       : Enabled
NonStop             : No
Emulation Type      : MSL G3 Series (2x24)
Default Drive Emulation : LTO4
Protocol            : iSCSI

Media Changer
Serial Number       : H1B600B50J
iSCSI WWNN          : 5001438011A18947
iSCSI Name          : ign.1986-03.com.hp:storage.d2dbs.nre0a6b83d.5001438011a18947.library2.robotics
iSCSI Alias         : D2DBS.nre0a6b83d.0.Library2.Robotics

Initiator
iSCSI Name          : my.iscsi.initiator
Authenticate Initiator : Yes
User Name           : iusername
Authenticate Target  : Yes
User Name           : tusername

No. of Drives      : 1

No. of Slots       : 24
Default Cartridge Size : 800GB
Barcode Generation  : Custom
Length             : 8
Prefix             : ABC
Suffix             : <
Seed               : 000
```

Command Successful

```
# vtl show library info set2
```

```
Object              : LIB1
Name                : Gregslib
>>>>Additonal Information<<<<

Object              : LIB2
Name                : GregsNextlib
>>>>Additonal Information<<<<
```

Command Successful

```
#vtl show library
```

Service Set 1:

```
Object              : LIB1
Name                : Gregslib
>>>>Additonal Information<<<<

Object              : LIB2
Name                : GregsNextlib
>>>>Additonal Information<<<<
```

Service Set 2:

```
Object          : LIB1
Name            : Robslib
>>>Additonal Information<<<<
```

```
Object          : LIB2
Name            : RobsNextlib
>>>Additonal Information<<<<
```

```
Command Successful
```


vtl show library iscsi authentication

NOTE: This command applies to single-node products only.

Description of Command Function

Displays information on a library's CHAP (challenge handshake authentication protocol) configuration.

Command Syntax

```
vtl show library iscsi authentication SETX LIBX
```

Command Authority

Administrator

Command Object Requirements

- *SETX* – This required object defines the service set containing the library whose CHAP information will be displayed. X is the numeric index of the service set.
- *LIBX* – This required object is the virtual tape library whose CHAP information will be displayed. X is the numeric index of the library.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- All object values must be valid; see the object descriptions for details.

Successful Command Output

Upon successful completion of the command, the CHAP configuration information is displayed.

Command Operation during Abnormal Conditions

If any of the command execution requirements fail, command execution terminates. The library's CHAPS information is not displayed and one of these error messages is displayed:

- Command Failed – Did not conform to the correct command syntax "vtl show library iscsi authentication SETX LIBX"
- Command Failed – The service set <SETX> is invalid
- Command Failed – The service set <SETX> does not exist
- Command Failed – The library <LIBX> is invalid
- Command Failed – The library <LIBX> does not exist
- Command Failed – The library interface is not iSCSI

Example

```
# vtl show library authentication LIB1
Library : LIB1

iSCSI Name           : my.iscsi.initiator
Authenticate Initiator : Yes
  CHAP User Name      : iusername
  CHAP Secret         : mypassword
Authenticate Target   : Yes
  CHAP User Name      : tusername
  CHAP Secret         : mypassword

Command Successful
```

vtl show library list

Description of Command Function

Lists the libraries in a cluster.

Command Syntax

```
vtl show library list [SETX]
```

Command Authority

Operator and Administrator

Command Object Requirements

SETX – This optional object defines the service set containing the libraries to be listed. X is the numeric index of the service set. If used on a single-node system, the object must be defined as SET1.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

- The command entry must conform to the command syntax.
- The object value must be valid; see the object description for details.

Successful Command Output

Upon successful completion of the command, the library list is displayed:

Command Operation during Abnormal Conditions

If any of the command execution requirements fail, command execution terminates. The libraries are not listed and one of these error messages is displayed:

- Command Failed – Did not conform to the correct command syntax "vtl show library list [SETX]"
- Command Failed – The service set <SETX> is invalid
- Command Failed – The service set <SETX> does not exist

Examples

```
# vtl show library list
```

Object	Service Set	Name	Status
LIB1	SET1	Gregslib	Online
LIB2	SET1	GregsNextlib	Online
LIB1	SET2	Robslib	Online
LIB2	SET2	Robslib	Online
LIB2	SET2	MaximumLengthOfNameForALibrary	Online

Command Successful

```
# vtl show library list SET1
```

Object	Service Set	Name	Status
LIB1	SET1	Gregslib	Online
LIB2	SET1	GregsNextlib	Online

Command Successful

vtl show ports

Description of Command Function

Provides information on the Fibre Channel ports which can be used during the creation of a virtual tape library. This is identical to the `hardware show ports` command but is included to allow the user to obtain this information (required when configuring libraries) without leaving the `vtl` command group.

Command Syntax

```
vtl show ports
```

Command Authority

Operator and Administrator

Command Object Requirements

Not applicable – no objects exist within this command.

Command Parameter Requirements

Not applicable – no parameters exist within this command.

Requirements for Command Execution

The command entry must conform to the command syntax.

Successful Command Output

Upon successful completion of the command, information on the physical Fibre Channel ports is displayed. Because this information depends on the physical hardware, the output will differ from system to system. See the examples for the different outputs.

Configuration values can be:

- Speed – Auto, 2 Gbs, 4 Gbs, or 8 Gbs
- Connection – Loop, Fabric, or pnt-to-pnt

Command Operation during Abnormal Conditions

If the command does not conform to the required syntax, the following is displayed:

```
Command Failed - Did not conform to the correct command syntax "vtl
show ports"
```

Examples

Output for B6200 systems

```
# vtl show ports
```

```
-----HBA 1-----
| Port 1   Port 2   |
-----HBA 2-----
| Port 1   Port 2   |
-----
```

View Fibre Channel Ports on Back of Node

Node 1:

VTL Port Number	Physical Slot	Location Port	Configuration Speed	Connection
1	HBA1	Port1	4 Gbs	Fabric
not used	HBA1	Port2	4 Gbs	Fabric
2	HBA2	Port1	4 Gbs	Fabric
not used	HBA2	Port2	4 Gbs	Fabric

Node 2:

VTL Port Number	Physical Slot	Location Port	Configuration Speed	Connection
1	HBA1	Port1	4 Gbs	Fabric
not used	HBA1	Port2	4 Gbs	Fabric
2	HBA2	Port1	4 Gbs	Fabric
not used	HBA2	Port2	4 Gbs	Fabric

Null

VTL Port

Number

0 Indicates no port is assigned to vtl

Command Successful

5 Support and other resources

Contacting HP

For worldwide technical support information, see the HP support website:

<http://www.hp.com/support>

Before contacting HP, collect the following information:

- Product model names and numbers
- Technical support registration number (if applicable)
- Product serial numbers
- Error messages
- Operating system type and revision level
- Detailed questions

Related information

The following documents [and websites] provide related information:

- [example] *HP StorageWorks Command View EVA user guide*
- [example] *HP StorageWorks Command View EVA release notes*

You can find these documents on the Manuals page of the HP Business Support Center website:

<http://www.hp.com/support/manuals>

In the Storage section, click **link label** and then select your product.

Websites

- HP Event Monitoring Service and HA Monitors Software <http://www.hp.com/go/hpux-ha-monitoring-docs>
- HP Serviceguard Solutions for HP-UX <http://www.hp.com/go/hpux-serviceguard-docs>
- HP Systems Insight Manager website: <http://www.hp.com/go/hpsim>
- HP Technical support for HP Integrity servers website: <http://www.hp.com/support/itaniumservers/>
- HP Technical Support website: <http://www.hp.com/support>
- Net-SNMP website: <http://www.net-snmp.net>
- Red Hat website: <http://www.redhat.com>
- Single Point of Connectivity Knowledge (SPOCK) website: <http://www.hp.com/storage/spock>
- White papers and Analyst reports: <http://www.hp.com/storage/whitepapers>

Typographic conventions

Table 4 Document conventions


Convention	Element
Blue text: Table 4 (page 173)	Cross-reference links and e-mail addresses
Blue, underlined text: http://www.hp.com	Website addresses

Table 4 Document conventions (continued)

Convention	Element
Bold text	<ul style="list-style-type: none">• Keys that are pressed• Text typed into a GUI element, such as a box• GUI elements that are clicked or selected, such as menu and list items, buttons, tabs, and check boxes
<i>Italic</i> text	Text emphasis
Monospace text	<ul style="list-style-type: none">• File and directory names• System output• Code• Commands, their arguments, and argument values
<i>Monospace, italic</i> text	<ul style="list-style-type: none">• Code variables• Command variables
Monospace, bold text	Emphasized monospace text

 **WARNING!** Indicates that failure to follow directions could result in bodily harm or death.

 **CAUTION:** Indicates that failure to follow directions could result in damage to equipment or data.

 **IMPORTANT:** Provides clarifying information or specific instructions.

NOTE: Provides additional information.

 **TIP:** Provides helpful hints and shortcuts.

Documentation feedback

HP welcomes your feedback.

To make comments and suggestions about product documentation, please send a message to storagedocsFeedback@hp.com. All submissions become the property of HP.

Glossary

C

CLI	Command-line interface. An interface comprised of various commands which are used to control operating system responses.
command	elements entered into the Common CLI by the user to convey instructions
command sequence	a sequence of commands which uniquely defines an instruction for the StoreOnce appliance
command set	the entire list of unique command sequences and their associated syntax which provides a clear, unambiguous method for a user to provide instructions to control the operation of a StoreOnce appliance
common CLI	a text-based terminal interface by which you enter instructions for StoreOnce appliances

E

element	a grouping of characters surrounded by white space (typically a word)
----------------	---

F

FTP	file transfer protocol
------------	------------------------

G

GUI	graphical user interface
------------	--------------------------

I

instruction	a sequence of elements uniquely defining an intended operation
--------------------	--

N

NTP	Network Time Protocol. A protocol that enables the storage system's time and date to be obtained from a network-attached server, keeping multiple hosts and storage devices synchronized.
------------	---

O

object	an element representing an item in a StoreOnce appliance
object store	a data backup transfer protocol and standard which allows metadata to be included with the data being backed up. This allows further control of the backed up data during its storage.
operation	an event to control a StoreOnce appliance or to provide/obtain information

P

parameter	an element which provides details to refine an operation
------------------	--

T

TCP	Transmission Control Protocol
------------	-------------------------------

U

user	a person interfacing with the Common CLI (can also be an account accessing a CIFS share)
UTC	Universal Time Coordinate (time definition protocol)

V

VIF	Virtual interface.
------------	--------------------

W

white space

any combination of spaces, tabs and carriage returns

word

an element whose characters having meaning in the natural language of the user. The meaning of the word is directly related to the intended operation defined by the words in the command sequence

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