
Actifio CLI Reference

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Preface

The **Actifio CLI Reference** provides detailed description, syntax and examples of Actifio CLI commands. It also describes how to access the command-line interface using SSH.

This guide assumes you have read **Getting Started with Actifio Copy Data Management** and have a grasp of basic VDP concepts.

Unless otherwise specified, all commands detailed in this document apply to appliances and to AGM.

The ActifioNOW Customer Portal

During the configuration and initialization of your appliance or AGM, your customer support representative provided you with a user name and password for the ActifioNOW customer portal.

From the customer portal you can obtain detailed reports about your appliance as well as search the portal's knowledge base for answers to specific questions.

To log into the ActifioNOW customer portal:

1. Go to: <https://now..com>
2. When prompted, enter the user name and password provided by your representative.

Support Centers

To contact an Actifio support representative, you can:

- Send email to: support@.com
- Call:
 - From anywhere:** +1.315.261.7501
 - US Toll-Free:** +1.855.392.6810
 - Australia:** 0011 800-16165656
 - Germany:** 00 800-16165656
 - New Zealand:** 00 800-16165656
 - UK:** 0 800-0155019

1 CLI Overview

The VDP appliance CLI provides a collection of commands for a system administrator, programmer, or other qualified personnel to use as a means to access, configure, and monitor an appliance or node. You may require access to the CLI to configure the advanced features of the appliance or to develop a series of scripts to automate its configuration. Additional features and functionality are available in the AGM RESTAPI.

You access the VDP appliance CLI by establishing a Secure Shell (SSH) connection between the SSH client software on your computer and the SSH server on an appliance.

Note: See [Chapter 2, Accessing the CLI from a VDP Appliance or AGM](#) for details on defining CLI usage rights and accessing the CLI.

This chapter has the following topics:

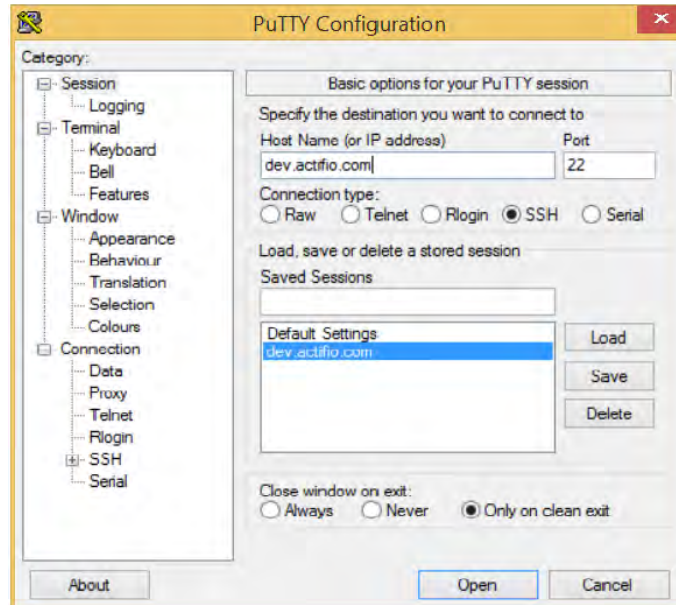
- [Run Modes for the CLI](#) on page 2
- [Restricted Bash Shell](#) on page 2
- [Command Sets Supported by the CLI](#) on page 3
- [Command-Line Interface Syntax Conventions](#) on page 3
- [CLI Command Syntax Conventions Required for AGM](#) on page 5
- [Using the -delim, -nohdr, or -filtervalue Parameters](#) on page 6
- [Operational Hints and Tips](#) on page 9
- [Obtaining CLI Help](#) on page 10
- [Understanding AGM Constructs With the CLI](#) on page 11
- [CLI Return Codes and Error Messages](#) on page 11

Run Modes for the CLI

The CLI can be run in two modes, Interactive and Single Shot.

Interactive

You start an interactive session by logging into VDP appliance using an SSH client such as PuTTY or native SSH. See [Chapter 2, Accessing the CLI from a VDP Appliance or AGM](#).



Using an SSH Client to Log In to the Appliance

Single Shot Mode

SSH commands can be sent to be run instantly in a non-interactive session. You may want to run an occasional command on one command line. Since only one command is run, this is called single shot mode. Unix operating systems can send single shot commands using the SSH command like this:

```
ssh -i ~/.ssh/id_rsa admin@10.1.1.1 "udsinfo lsuser"
```

When using the Windows operating system, an example of an application that can be used is **plink**. For example:

```
plink -i id_rsa.ppk admin@10.1.1.1 "udsinfo lsuser"
```

Restricted Bash Shell

The Actifio appliance CLI runs in a restricted shell known as an RBASH shell. This is done to ensure that the VDP appliance adheres to the highest levels of security and data integrity.

The main difference that a Unix administrator will find running in RBASH is that many shell commands do not work, such as **cd** for change directory. If you attempt to enter commands that are not allowed, a message similar to the following is displayed:

```
rbash: cd: restricted
```

Six Unix commands can be run from the CLI by all users: udstask, udsinfo, udsgather, udscli, help, actlogger.

There are additional six Unix commands that can be run from the CLI by users with 'administrator' privileges: cut, date, grep, less, sep, ping, sed, sort, tail.

All standard commands delivered by the bash shell itself are usable, such as if/then loops and for/next loops.

Command Sets Supported by the CLI

The CLI supports two command sets: **udsinfo** and **udstask**. The **udsinfo** command set includes the information-based commands and the **udstask** command set includes the commands that modify the appliance. There are also CLI commands for configuring AGM-specific functions.

These two command sets are described in this section.

udsinfo CLI Command Set

The **udsinfo** CLI commands are used to retrieve information from an appliance (for example, **lsapplication**, **lsorg**, **lsorgresource**, and so on).

For example, to display a list of previously created organizations:

```
$ udsinfo lsorg
id description name
  3 ALL organization, all objects be... ALL
  5 PUBLIC organization, every object... PUBLIC
131684 Children QA & DEV Company
137346 Admin
150949 Lab1 Lab1_org
```

udstask CLI Command Set

The **udstask** CLI commands affect an appliance (for example, **appdiscovery**, **backup**, **cloneimage**, and so on). You use these commands to make configuration changes to the appliance.

Note: Typically no message is returned if a UDSTASK command succeeds; however, helpful messages may be returned for certain commands.

For example, to start a backup on demand job on an appliance:

```
$ udstask backup -app 5840 -policyid 5111
Job_0012345
```

Once executed, the **udstask backup** command informs you that Job_0012345 has been initiated to perform the backup job.

To perform the same job from AGM on one of the managed VDP appliances, you must indicate which appliance:

```
$ udstask backup -app 5840 -policyid 5111 -appliance Appliance_V1
```

Command-Line Interface Syntax Conventions

This section describes the CLI syntax diagram conventions used in this document. It outlines the different syntax symbols that represent the components of a command in the CLI and the rules associated with the syntax components.

Included below is an example of the CLI syntax used in this document. This example is for the **vmddiscovery** command of the **udstask** command set:

```
>>- udstask -- -- vmddiscovery -- +-+-----+----->
                                   '- -discoverclusters -'
>--+-----+-----+--+-----+--+-----+----->
  '- -discovervms -'      '- -addall -'      '- -addvms -'
>--+-----+-----+--+-----+----->
  '- -cluster -- cluster_name -'      '- -delim -- delim -' (in a CDS environment)
  '- -esxcluster -- cluster_name -'      '- -delim -- delim -' (in an AGM environment)
>--+ -host +-+ host_name +-+ +-+-----+----->
      '- host_id ---'      '- -org +-+ org_id ---+--'
```

```

                                '- org_name -'
>--+-----+-----+-----+-----><
'- -vms -- vms -'          '- -nohdr -- nohdr -'
>--+-----+-----+-----+-----><
'- -appliance -- appliance -'(in an AGM environment)

```

This table explains how to read the syntax diagrams that represent the command-line interface (CLI) commands throughout this document.

Command-Line Interface Syntax Conventions

Notation	Syntax	Description
Main path line	>>><	<p>Begins on the left with double arrowheads and ends on the right with arrows facing each other. When a syntax diagram is longer than one line, each line to be continued ends with a single > arrowhead and the next line begins with a single >. Read the diagrams from left-to-right and top-to-bottom following the main path line.</p>
Required keywords	>-- -host ---+	<p>Indicates the parameters or arguments that you must specify for the command. Required keywords appear on the main path line. Mutually exclusive required keywords are stacked vertically.</p> <hr/> <p>Note: Keywords appear in bold throughout this Actifio CLI Reference.</p>
Optional keywords	>+-----+ --+- org_id ----+ '--- org_name -'	<p>Indicates the optional parameters or arguments that you can choose to specify for the command. Optional keywords appear below the main path line. Mutually exclusive optional keywords are stacked vertically.</p> <hr/> <p>Note: Optional keywords appear in bold throughout this Actifio CLI Reference.</p>
Variable	>+-----+ --+- org_id ----+ '--- org_name -'	<p>Represents the value that you need to supply for a parameter or argument, such as a file name, user name, object name, object ID, source ID (AGM only), or password. If a parameter has mutually exclusive options, those parameters are stacked below the first parameter. Optional variables appear below the main path line.</p> <hr/> <p>Note: Variables appear in italics throughout this Actifio CLI Reference.</p>

Command-Line Interface Syntax Conventions (Continued)

Notation	Syntax	Description
Single quotation mark delimiters	-basedn 'dc=example,dc=com'	Indicates the start and end of a parameter or argument that contains multiple values. Enclose one or more name–value pairs in a set of single quotation marks for a particular parameter or argument.

CLI Command Syntax Conventions Required for AGM

AGM provides centralized management capabilities in a virtual appliance that can be deployed on standard VMware ESX servers. Use AGM to manage multiple VDP appliances, view status and performance for the managed VDP appliances, and perform various day-to-day operations from one centralized management system. You can manage up to 40 VDP appliances.

Many of the AGM-issued CLI command operations can be performed directly at the AGM or initiated at a target Actifio appliance. In general, the AGM CLI commands are issued using an AGM identifier that follows the same CLI syntax conventions used by VDP appliances. To keep the CLI commands in parity between the AGM and the Actifio appliance, the AGM CLI syntax conventions provide you with the capability to remotely execute the CLI commands from the AGM to the appliances managed by AGM. This remote connectivity requires a combination of **-appliance** and/or **-id** arguments in the CLI syntax to properly execute the AGM CLI commands.

Use of **-appliance** Parameter in a CLI Command

The inclusion of the **-appliance** parameter in an AGM CLI command identifies the name or ID of the target VDP appliance where you will execute a particular command. The **-appliance** parameter can be either a required or optional argument depending on the function of the particular CLI command. Use the **udsinfo lscluster** command to retrieve the Actifio appliance name or ID to help you identify the correct appliance to include in the **-appliance** parameter.

When you include **-appliance** in a **udsinfo** CLI command, the **-appliance** argument instructs AGM to return a set of information from the delegated appliance. For example, the use of the **udsinfo lsdiskpool** command without **-appliance** will display a listing of disk pools across the entire AGM database. If you include **-appliance** in the **udsinfo lsdiskpool**, AGM will display a listing of disk pools only from the specified appliance.

```
[katie@wizkt> udsinfo lscluster
id      operativeip  lastsync  ipaddress  calldommode  description  datacenter  clusterid  name  productname  calldomedis
10
280669  172.16.115.121    skywizkt1  sqa.actifio.com  mail  7  -823628181390667782  AGM
279475  172.16.115.122    skywizkt2  sqa.actifio.com  mail  7  144131330600  skywizkt1.sqa.actifio.com  Sky  false
[katie@wizkt>
[katie@wizkt>
[katie@wizkt> udsinfo lsdiskpool
id      freeMB  usage  usagMB  clusterid  safept  capacityMB  pooltype  udsuic  modifydate  srcid  name  mdiskgrp
279540  92341   8.385495064930232  8452  144131330600  90  100793  primary  1305260831  2319-01-22  15:39:59.333  71  act_pri_pool000  act_pri_pool000
280717  866226  2.0457555870782337  18103  144131330600  100  884326  dedup  1305260832  2319-01-22  15:39:59.333  72  act_ded_pool000  act_dec_pool000/act
280719  1040384  0.0  0  144131330600  90  1040384  perf  1305260833  2319-01-22  15:39:59.333  73  act_per_pool000  act_per_pool000
280715  93169   7.564930233134959  7624  144131330600  90  100793  primary  1305260831  2319-01-22  15:39:59.333  71  act_pri_pool000  act_pri_pool000
279542  863758  2.3259158043917085  20563  144131330600  100  884326  dedup  916264455  2318-08-17  10:38:48.371  72  act_ded_pool000  act_dec_pool000/act
279544  884736  14.950629921259043  155648  144131330600  90  1040384  perf  916264460  2318-08-17  10:38:48.371  73  act_per_pool000  act_per_pool000
[katie@wizkt>
[katie@wizkt>
[katie@wizkt> udsinfo lsdiskpool -appliance 280669
id      freeMB  usage  usagMB  clusterid  safept  capacityMB  pooltype  udsuic  modifydate  srcid  name  mdiskgrp
280715  93169   7.564930233134959  7624  144131330600  90  100793  primary  1305260831  2319-01-22  15:39:59.333  71  act_pri_pool000  act_pri_pool000
280717  866226  2.0457555870782337  18103  144131330600  100  884326  dedup  1305260832  2319-01-22  15:39:59.333  72  act_ded_pool000  act_dec_pool000/act
280719  1040384  0.0  0  144131330600  90  1040384  perf  1305260833  2319-01-22  15:39:59.333  73  act_per_pool000  act_per_pool000
[katie@wizkt> ]
```

When you include **-appliance** in a **udtask** CLI command, the **-appliance** parameter performs the configuration task at the identified appliance. For example, the **udtask configusercli** command with the inclusion of the **-appliance** argument can allow or disallow user access to the command-line interface for the specified appliance (Appliance_C1).

```
udtask configusercli -username foo -keyfile /tmp/foo.pub -appliance Appliance_C1
```

Role of SRCID in CLI Commands

SRCID is an appliance-specific identifier that AGM replicates from the source appliance. As the **-appliance** argument in an AGM CLI command identifies which target VDP appliance to access for CLI command execution, the **-id** argument, if required, identifies the source ID of an object such as host, application, consistency group, or image that is required to perform the configuration task. You use the corresponding **udsinfo** command to locate the SRCID. For example, the **udtask appdiscovery** command discovers applications on a specific host that is running the Actifio Connector. The **-id** argument specifies either the SRCID or name of the host from which you want to discover the applications that are running on it. You would use the **udsinfo lshost** command to locate the SRCID or name of the host.

Using the **-delim**, **-nohdr**, or **-filtervalue** Parameters

The **udsinfo** CLI command set includes commands that display information about the appliance and its components. Many of the **udsinfo** CLI commands support the use of the **-delim**, **-nohdr**, and **-filtervalue** parameters to facilitate scripting.

- The **-nohdr** and/or **-delim** parameters enable the easy retrieval of output fields through a script. The **-nohdr** parameter skips the display of column headings and **-delim** overrides the display of column data in separate rows.
- The **-filtervalue** parameter allows you to reduce the amount of data returned in a report by a series of filter attributes.

Depending on your requirements, you can use any or all of these parameters as part of a CLI command. If required, you can also return the details of an object by including its ID.

For example, here is the output for the **udsinfo lsslt** command:

```
$ udsinfo lsslt
id override description          name
1001 true   Daily Local 14-day       zSample1
1002 true   Daily Local DB + Logs 30-day  zSample2
1003 true   Daily Local 6-month tiered    zSample3
1004 true   Daily Replicated 30-day       zSample4
1005 true   Daily Dedup Async 30-day      zSample5
1006 true   Daily Stream Snap 30-day      zSample6
1007 true   Monthly Vault                 zSample7
1008 true   8-Hour Local 14-day          zSample8
15207 true   new description              snap
```

You can include **-delim** to facilitate scripting:

```
$ udsinfo lsslt -delim ,
1001,true,Daily Local 14-day,zSample1
1002,true,Daily Local DB + Logs 30-day,zSample2
1003,true,Daily Local 6-month tiered,zSample3
1004,true,Daily Replicated 30-day,zSample4
1005,true,Daily Dedup Async 30-day,zSample5
1006,true,Daily Stream Snap 30-day,zSample6
1007,true,Monthly Vault,zSample7
1008,true,8-Hour Local 14-day,zSample8
15207,true,new description,snap
```

You can include `-nohdr` to skip the display of column headers for data, and include `-delim` to facilitate scripting:

```
$ udsinfo lsslt -nohdr -delim ,
1001,true,Daily Local 14-day,zSample1
1002,true,Daily Local DB + Logs 30-day,zSample2
1003,true,Daily Local 6-month tiered,zSample3
1004,true,Daily Replicated 30-day,zSample4
1005,true,Daily Dedup Async 30-day,zSample5
1006,true,Daily Stream Snap 30-day,zSample6
1007,true,Monthly Vault,zSample7
1008,true,8-Hour Local 14-day,zSample8
15207,true,new description,snap
```

You can include `-filtervalue` to select only the data you are interested in displaying:

```
$ udsinfo lsslt -delim , -filtervalue name=snap
id,override,description,name
15207,true,new description,snap
```

And you can also use wild cards with `-filtervalue`:

```
$ udsinfo lsslt -delim , -filtervalue name=zSample*
id,override,description,name
1001,true,Daily Local 14-day,zSample1
1002,true,Daily Local DB + Logs 30-day,zSample2
1003,true,Daily Local 6-month tiered,zSample3
1004,true,Daily Replicated 30-day,zSample4
1005,true,Daily Dedup Async 30-day,zSample5
1006,true,Daily Stream Snap 30-day,zSample6
1007,true,Monthly Vault,zSample7
1008,true,8-Hour Local 14-day,zSample8
```

If an object ID is known, you can obtain the details of an SLT:

```
$ udsinfo lsslt -delim = 15207
sourceobjectid=0
fromremote=false
name=snap
description=new description
sourcecluster=0
id=15207
override=true
Additional examples include:
```

- Locate a host, with name "foo":

```
$ udsinfo lshost -filtervalue hostname=foo
id vcenterhostid svcname      ... hostname ...
5839 4241                ... foo      ...
```

- Locate all applications that run on this host:

```
$ udsinfo lsapplication -filtervalue hostid=5839
id ... hostid ... appname ...
5840 ... 5839 ... nvm1 ...
```

- Locate the SLA that is used to protect the application:

```
$ udsinfo lssla -filtervalue appid=5840
id ... slpid ... appid ... sltid
5080 ... 51 ... 5840 ... 5008
```

- Locate all policies in the SLA template:

```
$ udsinfo lspolicy -filtervalue sltid=5008
```

Using the -delim Parameter

By default, all columns of data are separated by spaces in the concise view. In the detailed view, each column of data gets displayed in a separate row and if the headers are displayed, the header is separated from the data by a space. The **-delim** parameter overrides this behavior.

Valid input for the **-delim** parameter is a one byte character. To display the data, the recommended delimiter is a comma (',') for list view, and an equal sign ('=') for detail view.

The comma is typically a safe choice as a delimiter, however, there are certain commands that contain output where a comma exists in one or more of the fields. This is routinely the description field since there are effectively no illegal characters in that field. In this case, commands such as **udsinfo lsapplication** and **udsinfo lssl** can be complex to delimit. You can use multi-character delimiters such as **@##@** which are less likely to appear in a field.

Using the -filtervalue Parameter

The **-filtervalue** parameter instructs the appliance that you want your report to display any or all of the specified list of valid filter attributes. Valid filter attributes can vary with the different CLI commands. The filter is formed with an attribute and a value. The CLI supports the use of special characters and wild cards with the **-filtervalue** parameter.

Note: The CLI shell will attempt to interpret any of the special characters if they are not escaped (preceded with a backslash ('\') character).

For example, to locate a host with the name "foo":

```
$ udsinfo lshost -filtervalue hostname=foo
  id vcenterhostid svcname      ... hostname ...
  5839 4241                ... foo      ...
```

You can then locate all applications that run on this host:

```
$ udsinfo lsapplication -filtervalue hostid=5839
  id ... hostid ... appname ...
  5840 ... 5839 ... nvm1 ...
```

And locate the SLA that is used to protected the application:

```
$ udsinfo lssla -filtervalue appid=5840
  id ... slpid ... appid ... sltid
  5080 ... 51 ... 5840 ... 5008
```

And, finally, locate all policies in the service-level template:

```
$ udsinfo lspolicy -filtervalue sltid=5008
```

Note the following guidelines when using **-filtervalue**:

- When you specify more than one filter, combine multiple filters with the ampersand ('&') character (escaped with the backslash ('\') character as required by the shell). For string filters, only the equal ('=') operator is allowed.
- You can use the asterisk (*) wild card character. For example:
 - o To match disk pools with a name that begins with 'foo', use '-filtervalue name=foo*'
 - o To list all jobs with a job name that begins with 'Job_0001', use '-filter value jobname=Job_0001*'.
- For number and date types, allowed operators include: =, >, >=, <, <=. These operators must be escaped with the backslash ('\'), or enclosed in a single quote (') or double quote ("), as required by the CLI shell script. For example:
 - o -filtervalue warnpct\>=80
 - o -filtervalue "warnpct>=80"
 - o -filtervalue 'warnpct>=80'

The `expiration`, `expirationdate`, `date`, `startdate`, `enddate`, and `backupdate` parameters can also use these operators. For example:

- o `-filtervalue 'startdate>2014-09-28'`
 - o `-filtervalue 'expirationdate>2014-09-28 6:50:00'`
- Certain attributes only allow predefined constants. For example:
 - o `protectable` allows only none, fully, or partially (e.g. `'- filtervalue protectable=fully'`).
 - o `status` allows only running, queued, paused, interrupted, or stalled, (e.g. `'- filtervalue status=running'`).
 - o `characteristic` allows only primary, mount, unmount, vdisk, or clone (e.g. `'-filtervalue characteristic=mount'`).
 - o `exclusiontype` allows daily, weekly, monthly, or yearly (e.g. `'-filtervalue exclusiontype=weekly'`).
- A job may have sub-jobs. To filter sub-jobs, use `"- filtervalue parentid=0"` to list only the top-level jobs.

Operational Hints and Tips

This section outlines a series of hints and tips when you use the VDP CLI. It covers:

[Scripted Solutions](#) on page 9

[Quoting Commands](#) on page 9

[Understanding AGM Constructs With the CLI](#) on page 11

Scripted Solutions

An extension of single shot mode is to issue short script-like collections of commands. Because the RBASH shell supports only a limited set of Unix commands, these commands could be used as a short script run by the CLI.

For example, to learn the timezone for `newuser1`, you can enter the following command since `cut -d, -f5` reads the comma delimited output and displays the fifth field.

```
$ ssh newuser1@172.24.1.180 "udsinfo lsuser -nohdr -delim , | grep newuser | cut -d, -f5"
EST
```

Single shot SSH commands can be run as part of a host side script.

Quoting Commands

When issuing a single shot command, it is important to include double quotes around the command syntax that you want executed by the CLI.

For example, the following command will initially list all backups, `grep` (search) the output first for a particular host (called `hq-postgresql`), and then `grep` (search) the output of the first search for any snapshot jobs. The two greps will be run locally on the host server that issued the commands and **not** by the appliance.

```
$ ssh admin@172.30.10.44 udsinfo lsbackup | grep hq-postgresql | grep snapshot
```

As an alternate method, if you include double quotes around the entire command, the `grep` commands will be run by the Actifio CLI and the entire command will execute much faster. This increased speed occurs because no unwanted data is sent over the network from the appliance to the issuing workstation.

```
$ ssh admin@172.30.10.44 "udsinfo lsbackup | grep hq-postgresql | grep snapshot"
```

Note: Keep in mind that if you intend to include double quotes around a command this may cause a behavior issue if you also include quotes within the command itself.

For example, the following command requires that `lsjobhistory -filtervalue` includes double quotes.

```
$ ssh admin@172.30.10.44 udsinfo lsjobhistory -filtervalue "jobhistory since 1 hours"
```

However, when run as a single shot command you would encounter this error:

```
$ ssh admin@172.30.10.44 udsinfo lsjobhistory -filtervalue "jobhistory since 1 hours"
ACTERR-010018 only one argument allowed for command
```

In this case, include backslashes (escaped with `\`) for each quote to force the local shell to send the commands as is without splitting the command when it encounters the first quote.

```
$ ssh admin@172.30.10.44 "udsinfo lsjobhistory -filtervalue \"jobhistory since 1 hours\" "
```

Obtaining CLI Help

You can specify either `-h` or `-?` to obtain CLI command help. You can get help on the use and syntax of a particular command, or obtain a listing of all CLI commands associated with the `udsinfo` or `udstask` command set.

For example, entering `lsapplication -h` provides the syntax and a list of the actions available with `lsapplication` command.

```
$ udsinfo lsapplication -h
```

`lsapplication`

The `lsapplication` command returns a concise list of applications, or a detailed view of an application.

Syntax

```
>>- udsinfo -- -- lsapplication -- ----->
>--+-----+----->
    - -appliance -- appliance -(in an AGM environment)
>--+-----+-- --+-----+-- ----->
    '- -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+-- -- --+-----+-----><
    '- -delim -- delimiter -'      +- object_id ---+
```

Parameters

`-appliance`

(Optional) (AGM only) Specifies the name or ID of the target Sky appliance to retrieve all objects in a list view.

`-delim delimiter`

(Optional) By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The `-delim` parameter overrides this behavior. Valid input for the `-delim` parameter is a one-byte character. If you enter `-delim:` on the command line, the colon character (`:`) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.

`-filtervalue attrib=value`

(Optional) Specifies that you want your report to display any or all of the list of valid filter attributes. The valid filter attribute for the 'udsinfo lsapplication' command are:

- * appname
- * apptype
- ...

For example, entering `udstask -h` lists of all CLI commands supported by the `udstask` command set.

```
$ udstask -h
  abortupgradehostconnector
  addcluster
  ...
```

Understanding AGM Constructs With the CLI

When you use the AGM to manage your application, the flow of creating templates (including policies) and resource profiles occurs in the SLA Architect, which are then applied to applications in the Application Manager to create SLAs.

When you use the CLI to develop these same appliance constructs, the interaction between CLI commands may be slightly confusing. You can track the mapping of what you see in AGM to what can be displayed in the CLI through the use of the various `udsinfo` commands.

For example, consider the following SLA construct hierarchy. A template is a collection of policies that, when applied to an application in combination with a resource profile, creates an SLA. You can use the `udsinfo` command set to track the construct mapping between the AGM and the CLI:

AGM Action	CLI Command
Display a list of policy templates (service level templates) or a detailed view of a template.	lssl
Display a list of policies or the detailed view of a policy (a template (SLT) is made up of one or more policies).	lspolicy
Display a list of applications or a detailed view of an application.	lsapplication
Displays a list of profiles (service level profiles), or a detailed view of a profile.	lssl
Display a list of SLAs or a detailed view of an SLA.	lssla
Display a list of policy options or the detailed view of a policy option.	lspolicyoption

Displaying the policy templates using the `udsinfo lssl` command will not show which applications are using these templates. However, displaying the SLAs which were created when a template is applied to an application will display which application is using which template.

CLI Return Codes and Error Messages

When the command line processor finishes processing a command, it returns a return (or exit) code. Each CLI command adheres to the following return code convention:

- A return code of 0 indicates that the CLI command succeeds. When the command succeeds, there may or may not be an accompanying message.
- A non-0 return code indicates an error with the CLI command. In the case of an error, an error message is returned.

Failed CLI commands contain an error message in the following format:

ACTERR-*<error-code>* *<message>*, where:

<error-code> is the VDP error type code in decimal format, with a minimum length of 6 digits (including possible leading "0"s).

<message> is the textual message indicating the potential problem that resulted in the error condition.

For example:

```
$ udsinfo verifyimage
```

```
ACTERR-010005 missing required image
```

2 Accessing the CLI from a VDP Appliance or AGM

VDP appliance users with the CLI usage right can access the command-line interface of an appliance using SSH. The SSH server software is pre-installed on the appliance. The VDP appliance manages communication with the SSH client software on your computer using SSH public and private keys.

AGM users with a CLI usage right can access the command-line interface of AGM using SSH. You access the AGM CLI in a restricted shell (RBASH shell). The SSH server software is pre-installed on AGM. AGM manages communication with the SSH client software on your computer using SSH public and private keys.

The process to install and use an SSH client to access the appliance CLI or AGM CLI includes:

1. (VDP appliance only) Defining appliance CLI usage rights as part of a user's role.
2. Installing an SSH client on the host computer that you will use to access the AGM CLI. The examples in this **Actifio CLI Reference** use PuTTY with the default installation options.
3. Generating an SSH public/private key pair on the host using either PuTTYgen or SSH-Keygen.
4. (AGM only) Enabling CLI access and copying the SSH public key file for the user on AGM.
5. Configuring the SSH session on the host.

Note: An SSH public/private key pair must be generated on a per user basis to access the appliance or AGM CLI.

From the AGM CLI you can use the two command sets (**udsinfo** and **udstask**) to take action on one or more appliances. The **udsinfo** command set includes the information-based commands and the **udstask** command set includes the commands that modify the operation of AGM. See [Chapter 1, CLI Overview](#) for background details on CLI usage.

Note: Many shell commands do not work in RBASH, such as **cd** for change directory. There are six Unix commands that can currently be run from the CLI: *cut, grep, less, sed, sort, tail*. If you attempt to enter commands that are not allowed, a message similar to the following is displayed: **rbash: command not found**.

This chapter describes:

- [Defining CLI Usage and Administrative Rights](#) on page 14
- [Generating an SSH Public/Private Key Pair](#) on page 16
- [Uploading the SSH Public Key File to the VDP Appliance](#) on page 18
- [Configuring the SSH Session on the Host](#) on page 19
- [Identifying VDP Appliance Software Version](#) on page 21

Defining CLI Usage and Administrative Rights

Actifio VDP allows you to create and manage multiple users, roles, and organizations. A user must have CLI usage rights as part of their user role to access to the appliance CLI. To add CLI usage rights to a role or for a specific user, refer to “Defining CLI Administrative Usage and Access Rights for a User” in the AGM Online Help.

There are two classes of rights:

- Access to an entire service. You can un-check a service, or select it and then restrict it to some degree through Access Control Levels (ACLs).
- ACLs provide additional rights and permit you to restrict some of the rights. ACLs are detailed in [VDP Access Control Levels \(ACLs\)](#) on page 14.

Note: Assigning a right automatically assigns all subordinate rights.

You can assign specific rights to a role, which provides the proper privileges to use certain CLI commands. For example, for a command that allows you to make changes to the attributes of a host, you must have the 'Host Manage' right to change the attributes of a host.

From the appliance CLI, you can use the following commands to assign specific rights to a user role:

- **lsrights:** Displays a concise list of all rights available with the appliance or the rights of a role.
- **roleaddrights:** Adds rights to a role.
- **roledelrights:** Deletes rights from a role.

VDP Access Control Levels (ACLs)

Rights	Description
CLI Usage	To use appliance Command-Line Interface.
Host Manage	To create/modify/delete hosts, to add virtual machines, to restore, clone, mount, unmount, and delete backup images.
Application Manage	To create/modify/delete/view groups and consistency groups, to restore, clone, mount, unmount, and delete backup images, to run an on-demand backup, and to export templates.
Backup Manage	To perform backup management operations such as Backup Now, Expire, and Modify Expiration.
Clone Manage	To create a cloned image.
LiveClone Manage	To manage LiveClone images.
Mirroring Manage	To perform Failover, Syncback, Cleanup, Failback, and Delete operations for a Dedup-Async or StreamSnap replication image.
Restore Manage	To restore an image.
Test-Failover	To perform Test Failover and Delete Test Failover operations for a Dedup-Async or StreamSnap replication image.

VDP Access Control Levels (ACLs)

Rights	Description
Mount Manage	To Mount Image, Unmount Image, Re-Mount Image, and Delete Image.
Join Appliance	To join two VDP appliances for copy data replication.
SLA Manage	To create/modify/delete/view and assign policy templates and resource profiles.
SLA Assign	To assign pre-configured policy templates and resource profiles to applications.
SLA View	To view policy templates and resource profiles.
Storage Manage	<p>To add/remove/view storage and to add/remove/ view disk-pools.</p> <hr/> <p>Note: The Storage Manage right is CDS only.</p> <hr/>
Storage View	<p>To view the storage and disk pool configuration.</p> <hr/> <p>Note: The Storage View right is CDS only.</p> <hr/>
System Manage	To manage all appliance configuration, including users, roles, and organization.
System View	To view appliance configuration information.
Workflow Manage	To add/remove/view workflows. A workflow can be scheduled or initiated on-demand.
Workflow Run	To allow a user to run a workflow. This ACL right does not include the right for that user to also manage a workflow. This level of permission is required in a Test/Dev environment.

Note: Only Administrator users can use bash utilities such as **cut** and **grep**. To modify a user's role, refer to the "Creating a Role" and "About Administrative Rights" topics in the AGM Online Help.

Generating an SSH Public/Private Key Pair

You can generate an SSH public/private key pair by:

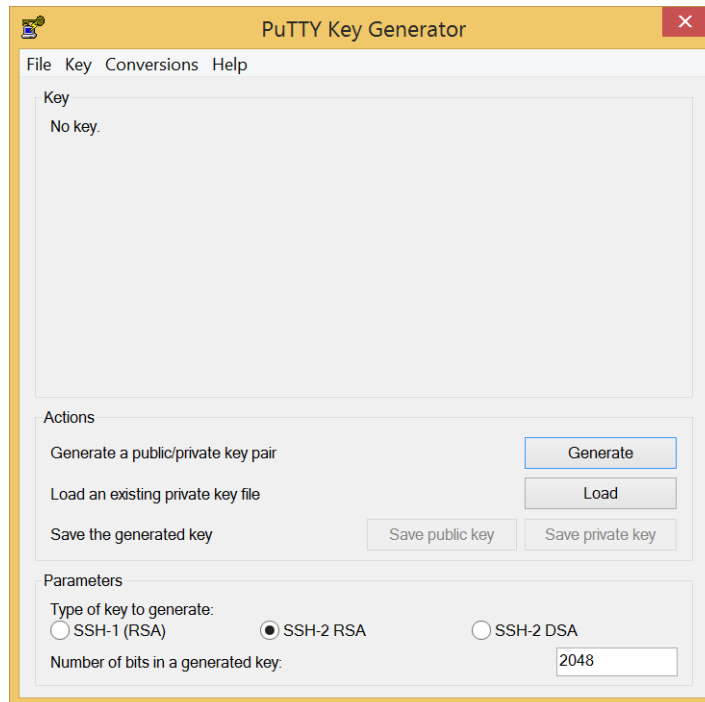
- [Generating an SSH Public/Private Key Pair using PuTTYgen](#) on page 16
- [Generating an SSH Public/Private Key Pair using SSH-Keygen](#) on page 17

Generating an SSH Public/Private Key Pair using PuTTYgen

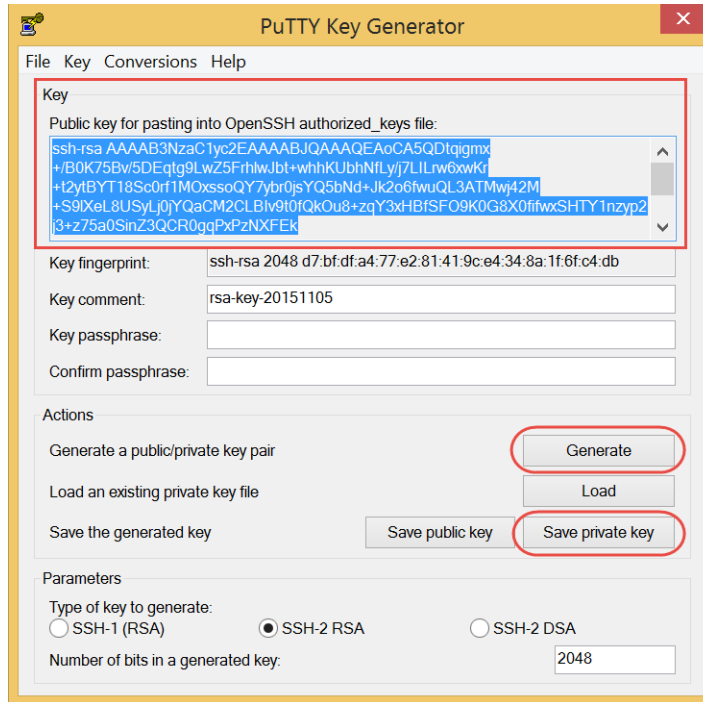
PuTTYgen is a Windows utility that generates and manages public and private key pairs to encrypt/decrypt communication with a trusted server.

To generate the key pair using PuTTYgen:

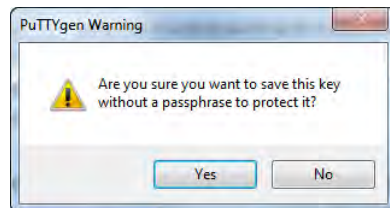
1. Select **Start > Programs > PuTTY > PuTTYgen**.



2. By default, SSH2 RSA from Parameters is selected. Leave the SSH2 RSA option unchanged.
3. Retain the default value of **Number of bits in a generated key value** as 2048.
4. Click **Generate**.
5. Move the cursor over the blank area labeled Key to generate the keys. Continue to move the mouse pointer over this blank area until the keys are generated. This action generates random characters to create a unique public/private key pair.



6. Copy the entire generated public key listed under Key and paste it into a text editor such as Notepad. Browse to an appropriate location and save the generated public key. This public key will be required when adding CLI access for a user (see [Uploading the SSH Public Key File to the VDP Appliance](#) on page 18).
7. From PuTTYgen, click **Save private key**. You are prompted with a warning message.



8. Click **Yes** to save the private key without a passphrase.
9. Click **Save private key**. The Save Private Key As window appears.
10. Browse to an appropriate location, enter a name for the private key, and click **Save**. The PuTTY Key Generator saves the private key with the PPK extension.
11. Select **File>Exit** to quit the PuTTY Key Generator.

Generating an SSH Public/Private Key Pair using SSH-Keygen

SSH-Keygen is a Unix/Linux utility that is used to generate and manage public/private key pairs, and encrypt/ decrypt communication with a trusted server.

To generate the key pair using SSH-Keygen:

1. Enter the following command:

```
$ ssh-keygen -t rsa -b 1024
```
2. Enter a file name and location in response to the message:
 Generating public/private rsa key pair. Enter file in which to save the key:

Note: By default, on Unix/Linux systems, public and private key files are created under `$HOME/.ssh` with file names `id_rsa` and `id_rsa.pub`. You can assign a different name and location to the public and private key files.

3. Press **Enter** to configure an empty passphrase in response to the following message:

Enter passphrase (empty for no passphrase): Enter same passphrase again:

The following message is displayed:

Your identification has been saved in `$HOME/.ssh/id_rsa`. Your public key has been saved in `$HOME/.ssh/id_rsa.pub`.

Uploading the SSH Public Key File to the VDP Appliance

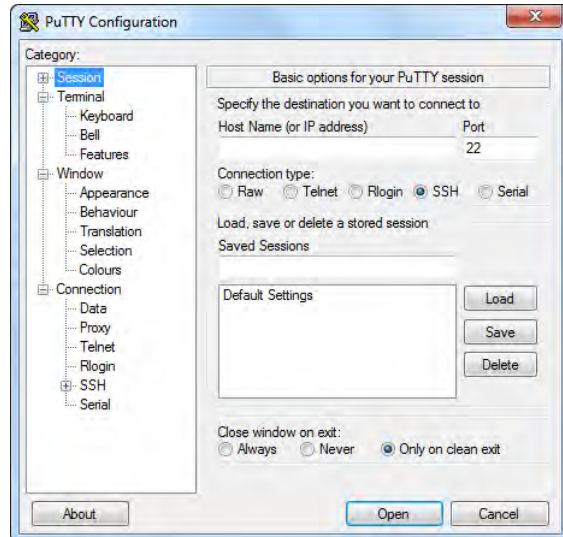
The public/private key pair identifies a single user uniquely. The administrator should enter one public key for each user with CLI access. The procedure for this is in the AGM Online Help topic "Adding CLI Access for a User".

Note: Be sure to copy the entire public key from the text editor. Do not include additional spaces.

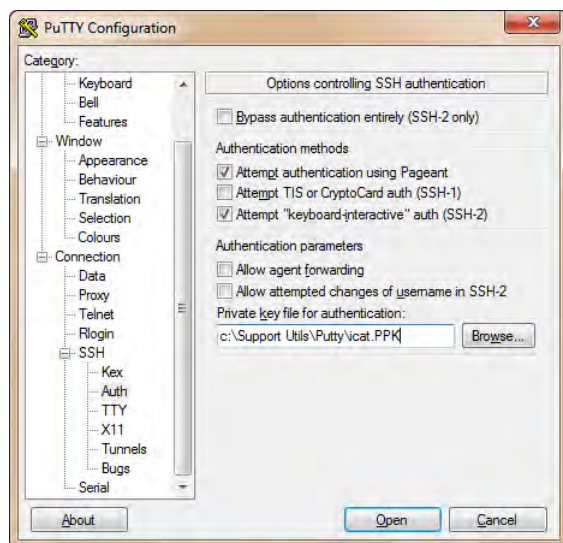
Configuring the SSH Session on the Host

Configure the PuTTY client on the host as outlined below to manage the client session.

1. Select **Start > Programs > PuTTY > PuTTY** to open the PuTTY Configuration window.
2. Click **Session** from the Category pane. The **Basic options for your PuTTY session** pane appears.

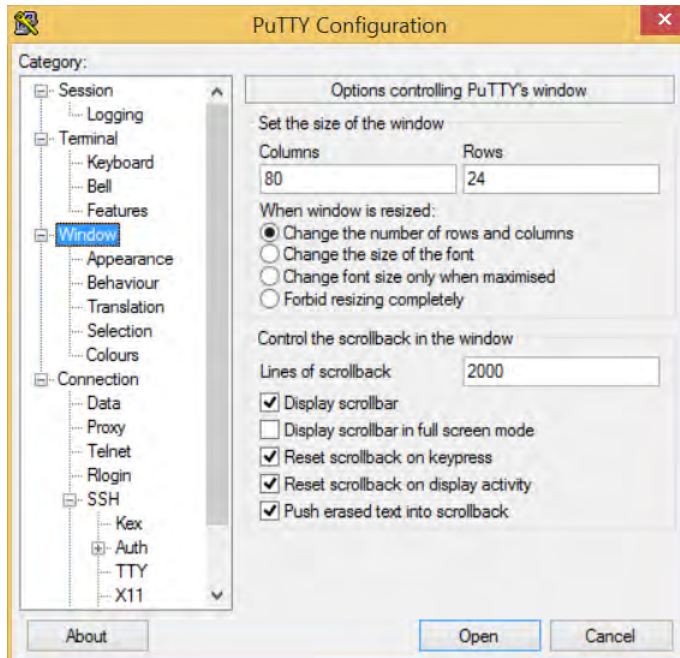


3. Select **SSH** as the Connection type.
4. Select **Only on clean exit** from **Close window on exit** to let the host display connection errors.
5. Click **Connection > SSH** from the Category pane. The **Options controlling SSH connections** pane appears. Select **2** as the Preferred SSH protocol version.
6. Click **Connection > SSH > Auth** from the Category pane. The **Options controlling SSH authentication** pane appears.

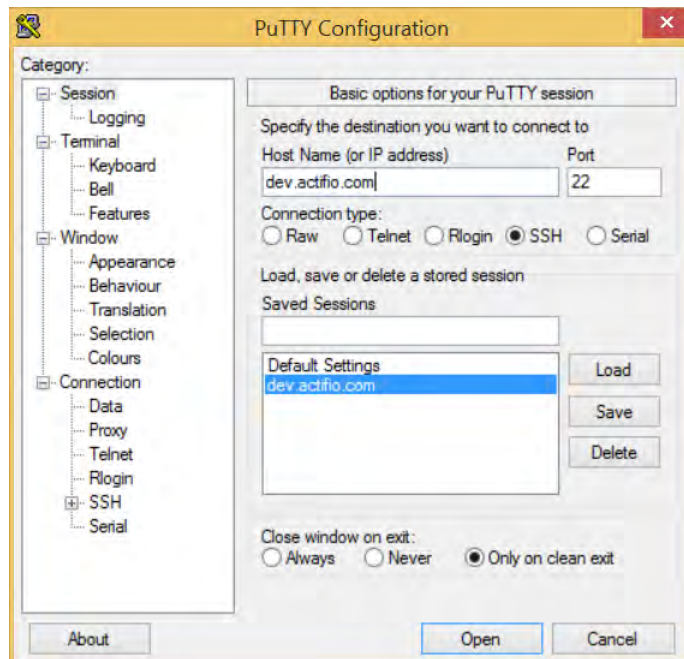


7. Click **Browse** or type the path or directory name of the SSH private key generated earlier.
8. Click **Open** to connect to the appliance using SSH.

9. Click **Window** from the Category pane. By default, PuTTY buffers 200 lines of output. For optimal viewing, change the **Lines of scrollbar** setting to a higher number.

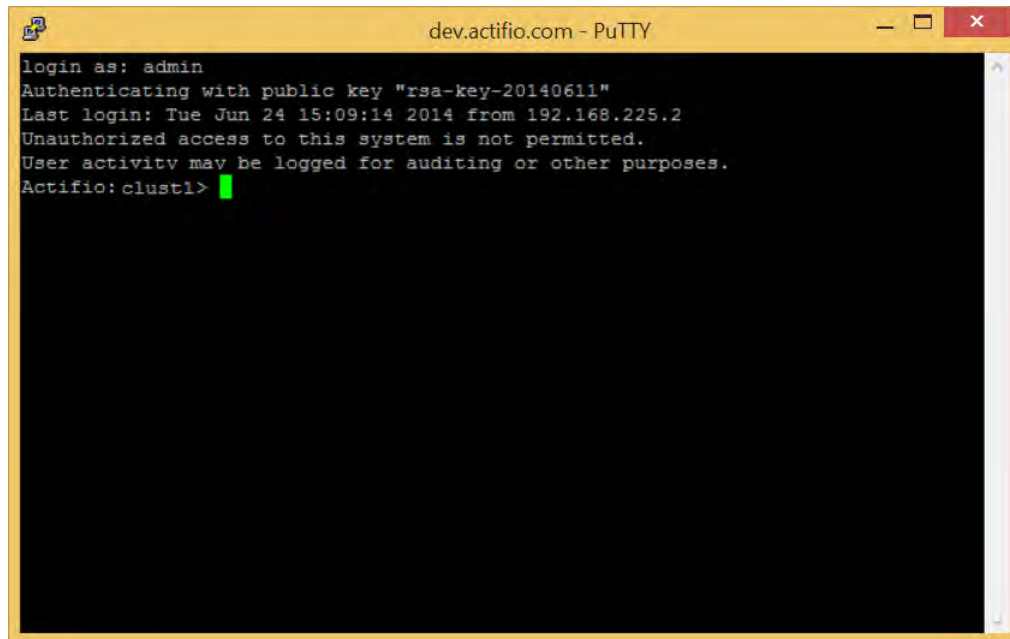


10. Click **Session** from the Category pane. The **Basic options for your PuTTY session** pane appears.
11. In **Host name (or IP address)**, enter the appropriate information to access the appliance
12. Type **22** in the Port field to specify the standard SSH port.



13. Click **Save** to store this information as a saved session for subsequent VDP CLI logins.

14. At the login in as prompt, enter your VDP appliance user name. An SSH session launches allowing you to run CLI commands from the CLI.



Starting an SSH Client Session in a Non-Interactive Environment

If required, SSH commands can be sent to be run instantly in a non-interactive session on one command line. To start an SSH client session on the host:

1. Depending on the location of the private key, perform one of the following actions:
 - o If the saved private key is in the default directory, enter:
ssh admin@xxx.xxx.xxx.xxx
 - o If the private key is saved in any location other than the default directory such as /tmp, enter:
ssh admin@xxx.xxx.xxx.xxx -i /tmp/id_rsa
2. An SSH session with the user is started. You can send single shot commands using the SSH command, such as:
ssh -i ~/.ssh/id_rsa admin@10.1.1.1 "udsinfo lsuser"

Identifying VDP Appliance Software Version

To identify the software version of your appliance, use the **udsinfo -V** command.

```
$ udsinfo -V
9.0.0
```


3 User Management Commands

These commands are for user management. The GUI interface for these commands can be found in the AGM under the Users section of the Domain Manager. For detailed information about VDP appliance user management, refer to the AGM Online Help.

Note: This chapter details the following user management commands:

Managing Users

User Commands

[mkuser](#) on page 24
[lsuser](#) on page 26
[chuser](#) on page 28
[rmuser](#) on page 30

Role Commands

[mkrole](#) on page 31
[lsrights](#) on page 32
[roleaddrights](#) on page 33
[roledelrights](#) on page 35
[lsrole](#) on page 37
[mkuserrole](#) on page 39
[lsuserrole](#) on page 40
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Org Commands

[mkorg](#) on page 44
[mkorgresource](#) on page 45
[lsorg](#) on page 46
[chorg](#) on page 48
[lsorgresource](#) on page 49
[rmorgresource](#) on page 51
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LDAP Commands

[mkldapserver](#) on page 53
[testldapserver](#) on page 55
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[mkldapgroup](#) on page 59
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Other Commands

[configusercli](#) on page 72
[getauthservice](#) on page 73

User Commands

mkuser

[About mkuser Command on page 24](#)

[Employing this Command through the CLI on page 25](#)

About mkuser Command

Description

Use this command to create a user.

Rights

You must have the 'System Manage' right to create a user.

Parameters

Parameter	Description
-comments <i>comments</i>	Optional. Specifies the comments for the user.
-email <i>email</i>	Optional. Specifies an email address for the user.
-firstname <i>firstname</i>	Optional. Specifies the first name.
-lastname <i>lastname</i>	Optional. Specifies the last name.
-name <i>user_name</i>	Required. Specifies the name of the user, which should be unique within the appliance.
-org <i>org_id</i> <i>org_name</i>	Optional. Specifies a default organization id or organization name that the user should be added to after creation. Use the udsinfo lsorg command to retrieve organization information. Note: To use this option, the user must have the 'System Manage' right.
-password <i>password</i>	Required. Specifies the password for the user.
-timezone <i>timezone</i>	Optional. Specifies a time zone. On CDS, use following command to get a list of timezones <code>o'usvcinfo lstimezones'</code> . For Sky, use the valid Linux timezone.

Parameter	Description
-denylogin <i>true false</i>	Optional. Specifies the Actifio Desktop login access for a user. Options include: <ul style="list-style-type: none"> false -This user will be allowed to login and access the Actifio Desktop. This is the default value. true -This user will be restricted from being able to login and access the Actifio Desktop. An error message appears when this user attempts to login to the Actifio Desktop of an appliance. <hr/> Note: Set this to true only under the direction of a Support representative. <hr/>

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- mkuser -- --+-----+-->
                                '- -comments -- comments -'
>--+-----+-- --+-----+-->
  '- -email -- email_addr -'    '- -firstname -- name -'
>--+-----+-- -- -name -- user_name ----->
  '- -lastname -- name -'
>--+-----+-- -- -password -- password ---->
  '- -org -- org_id ---+-'
    '- org_name -'
>--+-----+-----><
  '- -timezone -- timezone -'
>--+-----+-- --+-----+--><
  '- -denylogin --+- true --+-'
    '- false -'
```

CLI Example

```
$ udstask mkuser -name john -password testpassword -email john@my.org
```

lsuser

[About lsuser Command on page 26](#)

[Employing this Command through the CLI on page 27](#)

About lsuser Command

Description

Use this command to retrieve details of users. The reserved user 'admin' has full privileges. The 'admin' user cannot be deleted nor can the name be modified.

Rights

You must have the 'System View' or 'System Manage' right to use this command.

Parameters

Parameter	Description
-delim <i>delimiter</i>	<p>Optional. By default, all columns of data are separated by a tab in the concise view. In the detailed view, each column of data is displayed in a separate row and if the headers are displayed, the header is separated from the data by a space. The -delim parameter overrides this behavior.</p> <p>Valid input for the -delim parameter is a one byte character. To display the data, use a comma (',') for list view, and equal ('=') for detail view.</p>
-filtervalue <i>attrib=value</i>	<p>Optional. Specifies that you want your report to display any or the entire list of valid filter attributes. The valid filter attributes for the udsinfo lsuser command are:</p> <ul style="list-style-type: none">• comments• clienabled [true false]• email• firstname• isprotected [true false] (deprecated)• lastname• name• timezone <p>The filter is formed with an attribute and a value. When you specify more than one filter, they must be combined with '&' character (which should be escaped with '\'). For example, to match users with the username that begins with 'foo', use -filtervalue username=foo* '.</p>
-nohdr	<p>Optional. By default, a heading is displayed for each column of data in a concise style view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.</p>

Parameter	Description
<i>object_id</i> <i>object_name</i>	Optional. Specifies the name or ID of the user. When you use this, a detailed view of the object is returned and any value specified by the -filtervalue parameter is ignored. If you do not specify the ID or name, a concise view of all objects matching the filter criteria is displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsuser -- ----->
>--+-----+-- --+--+----->
  '- -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+-- --+--+-----><
  '- -delim -- delimiter -'              +- object_id ---+
                                          '- object_name -'
```

CLI Example

```
$ udsinfo lsuser
id clienabled lastname firstname timezone externalid email name isprotected comments
1 false      Admin    Systemadmin true   admin
11501 true    User     New      US/Eastern    rpsan  false
```

chuser

[About chuser Command](#) on page 28

[Employing this Command through the CLI](#) on page 29

About chuser Command

Description

Use this command to modify the details of a user. Use the **udinfo lsuser** command to obtain the ID or name of the user.

Rights

You must have the 'System Manage' right to modify the details of a user.

Parameters

Parameter	Description
-comments <i>comments</i>	Optional. Specifies a comment.
-email <i>email</i>	Optional. Specifies an email address.
-firstname <i>firstname</i>	Optional. Specifies the first name.
-lastname <i>lastname</i>	Optional. Specifies the last name.
-name <i>name</i>	Optional. Specifies a unique name for the user.
-password <i>password</i>	Optional. Specifies a password.
-timezone <i>timezone</i>	Optional. Specifies a timezone.
-denylogin <i>true false</i>	<p>Optional. Specifies the Actifio Desktop login access for a user. Options include:</p> <ul style="list-style-type: none">false -This user will be allowed to login and access the Actifio Desktop. This is the default state.true -This user will be restricted from being able to login and access the Actifio Desktop. An error message appears when this user attempts to login to the Actifio Desktop of an appliance. <hr/> <p>Note: Set this to true only under the direction of a Support representative.</p> <hr/>
<i>user_id user_name</i>	Required. Specifies the ID or name of the user whose details should be modified.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- chuser -- --+----->
                                '- -comments -- comments -'
>--+-----+--+----->
  '- -email -- email -'      '- -firstname -- firstname -'
>--+-----+--+----->
  '- -lastname -- lastname -'  '- -name -- name -'
>--+-----+--+----->
  '- -password -- password -'  '- -timezone -- timezone -'
>--+-----+--+----->
  '- -denylogin --+ true --+-'
                        '- false -'
>--+ user_name +-----><
  '- user_id ---'
```

CLI Example

```
$ udstask chuser -email foo@gmail.com user1
```

rmuser

[About rmuser Command on page 30](#)

[Employing this Command through the CLI on page 30](#)

About rmuser Command

Description

Use this command to delete a user.

Rights

You must have the "System Manage" right to delete a user.

Parameters

Parameter	Description
<i>user_id user_name</i>	Required. Specifies the ID or name of the user to be removed. Use <code>udsinfo lsuser</code> to get the ID or name of the user.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmuser -- --+- user_name -+-----><
                               '- user_id ---'
```

CLI Example

```
$ udstask rmuser foo
```

Role Commands

mkrole

[About mkrole Command on page 31](#)

[Employing this Command through the CLI on page 31](#)

About mkrole Command

Description

Use this command to create a new role object.

Rights

You must have the 'System Manage' right to create a role.

Parameters

Parameter	Description
-description <i>desc</i>	Optional. Specifies a description for the role.
-name <i>role_name</i>	Required. Specifies a name. The role name should be unique within the VDP appliance.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- mkrole -- --+-----+----->
                                '- -description -- desc -'
>---- -name -- role_name -----><
```

CLI Example

```
$ udstask mkrole -name myrole
```

lsrights

[About lsrights Command](#) on page 32

[Employing this Command through the CLI](#) on page 32

About lsrights Command

Description

Use this command to display a concise list of all rights available with the VDP appliance or the rights of a role.

Rights

You must have the 'System View' or 'System Manage' right to use this command.

Parameters

Parameter	Description
-role <i>role_name</i> <i>role_id</i>	Optional. Specifies the role name or role ID. When you use this parameter, the rights of the role are listed. Use udsinfo lsuserrole to get the ID or name of the role.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsrights -- ----->
>--+-----+-----><
  '- -role --+- role_name -+-- -'
    '- role_id ----+
```

CLI Example

```
$ udsinfo lsrights -role myrole
Access Application Manager
Application Manage
```


roleaddrights

[About roleaddrights Command on page 33](#)

[Employing this Command through the CLI on page 34](#)

About roleaddrights Command

Description

Use this command to add rights to a role. The user-to-role mapping ID can be obtained using the **udsinfo lsuserrole** command.

Rights

You must have the 'System Manage' right to add rights to a role.

Parameters

Parameter	Description
-role <i>role_name role_id</i>	Required. Specifies the ID or name of the role to add rights to.
-rights <i>rights</i>	Required. Specifies the rights to be added. The list should be colon-separated if more than one right is specified. The rights are: <ul style="list-style-type: none">• <i>Access Application Manager</i>• <i>Access Domain Manager</i>• <i>Access SLA Architect</i>• <i>Access System Monitor</i>• <i>Application Manage</i>• <i>Backup Manage</i>• <i>CLI Usage</i>• <i>Clone Manage</i>• <i>Host Manage</i>• <i>Join Appliance</i>• <i>LiveClone Manage</i>• <i>Mirroring Manage</i>• <i>Mount Manage</i>• <i>Restore Manage</i>• <i>SLA Assign</i>• <i>SLA Manage</i>• <i>SLA View</i>• <i>Storage Manage</i>• <i>Storage View</i>• <i>System Manage</i>• <i>System View</i>• <i>Test-Failover</i>• <i>WorkFlow Manage</i>• <i>WorkFlow Run</i>• <i>WorkFlow View</i>

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- roleaddrights -- -+- -role -- role_name -+---->
                                     '- -role -- role_id ---'
>--+- -rights -- rights -+-----><
```

CLI Example

```
$ udstask roleaddrights -role role1 -rights "Host View:Host Manage"
```

roledelrights

[About roledelrights Command](#) on page 35

[Employing this Command through the CLI](#) on page 35

About roledelrights Command

Description

Use this command to delete rights from a role.

Rights

You must have the 'System Manage' right to delete rights from a role.

Parameters

Parameter	Description
-role <i>role_name</i> <i>role_id</i>	Required. Specifies the ID or name of the role to delete the rights from.
-rights <i>rights</i>	Required. Specifies the rights to be deleted. The list should be colon-separated if more than one right is specified. The rights are: <ul style="list-style-type: none">• Access Application Manager• Access Domain Manager• Access SLA Architect• Access System Monitor• Application Manage• Backup Manage• CLI Usage• Clone Manage• Host Manage• Join Appliance• LiveClone Manage• Mirroring Manage• Mount Manage• Restore Manage• SLA Assign• SLA Manage• SLA View• Storage Manage• Storage View• System Manage• System View• Test-Failover• WorkFlow Manage• WorkFlow Run• WorkFlow View

Employing this Command through the CLI

CLI Syntax

```
>>> udstask -- -- roledelrights -- +- -role -- role_name +----->
                                     '- -role -- role_id ---'
```

```
>---+- -rights -- rights -+-----><
```

CLI Example

```
$ udstask roledelrights -role role1 -rights "Host View:Host Manage"
```

lsrole

[About lsrole Command on page 37](#)

[Employing this Command through the CLI on page 37](#)

About lsrole Command

Description

Use this command to retrieve the details of roles. A role is made up of one or more rights. The reserved role 'administrator' has all privileges. The 'administrator' role cannot be deleted or modified. To retrieve the rights of a role use the [lsrights](#) command.

Rights

You must have the 'System View' or 'System Manage' right to use this command.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default, all columns of data are separated by a tab in the concise view. In the detailed view, each column of data is displayed in a separate row and if the headers are displayed, the header is separated from the data by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one byte character. To display the data, use a comma (',') for list view, and equal ('=') for detail view.
-filtervalue <i>attrib=value</i>	Optional. Specifies that you want your report to display any or the entire list of valid filter attributes. The valid filter attribute for the udsinfo lsrole command is: name For string type of filters, the only operator allowed is '='. You can also use the wild card character '*'. For example, to match roles with name begins with 'foo', use ' -filtervalue name=foo*'.
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.
<i>object_id</i> <i>object_name</i>	Optional. Specifies the name or ID of an object. When you use this parameter, a detailed view of the object is returned and any value specified by the -filtervalue parameter is ignored. If you do not specify the <i>object_id</i> or the <i>object_name</i> parameter, a concise view of all objects matching the filter criteria is displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsrole -- ----->

>--+-----+-- --+-----+-- ----->
  '- -filtervalue -- attrib=value -'      '- -nohdr -'

>--+-----+-- -- --+-----+-----><
```

```
'- -delim -- delimiter -'      +- object_id ---+
                                '- object_name -'
```

CLI Example

```
# udsinfo lsrole
```

id	description	name
2	System Administrator role	administrator
4	Basic role	Basic
202	Compliance Admin role	Compliance Admin
203	Storage Admin role	Storage Admin
204	Backup Admin role	Backup Admin

mkuserrole

[About mkuserrole Command on page 39](#)

[Employing this Command through the CLI on page 39](#)

About mkuserrole Command

Description

Use this command to add a role to a user.

Rights

You must have the 'System Manage' right to assign a role to a user.

Parameters

Parameter	Description
-roleid <i>role_id</i>	Required. Specifies the role ID to be assigned to a user. To learn roleid, use lsrole .
-userid <i>user_id</i>	Required. Specifies the user ID that the role will be assigned to. To learn userid, use lsuser .

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- mkuserrole -- ---- -roleid -- role_id ----->
>---- -userid -- user_id -----><
```

CLI Example

```
$ udstask mkuserrole -roleid 1020 -userid 1000
```

lsuserrole

[About lsuserrole Command](#) on page 40

[Employing this Command through the CLI](#) on page 40

About lsuserrole Command

Description

Use this command to retrieve the details of user-to-role mappings.

Rights

You must have the 'System View' right is to see all role mappings. Only a user with 'System Manage' right can create or delete the mappings.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default, all columns of data are separated by a tab in the concise view. In the detailed view, each column of data is displayed in a separate row and if the headers are displayed, the header is separated from the data by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one byte character. To display the data, use a comma (',') for list view, and equal ('=') for detail view.
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.
<i>user_id</i>	Optional. Specifies the userid of a particular user for which the role mapping is displayed. To learn userid, use lsuser .

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsuserrole -- ----->
>--+-----+--+ +--+-----+----->
>  '- -nohdr -'      '- -delim -- delimiter -'
>--+-----+-----><
>  '- user_id ---'
```

CLI Example

```
$ udsinfo lsuserrole
```

```
id  username rolename roleid rights userid
1024 foo      Basic    4      Access Domain Manager,Access Application Manager,CLI Usage11501
```


chrole

About chrole Command on page 41

Employing this Command through the CLI on page 41

About chrole Command

Description

Use this command to change the name or description attributes of a role. Use **udsinfo lsrole** to obtain ID or name of the role.

Rights

You must have the 'System Manage' right to change the attributes of a role.

Parameters

Parameter	Description
-description <i>description</i>	Optional. Specifies new description for the role.
-name <i>name</i>	Optional. Specifies the new name for the role, which should be unique.
<i>role_id</i> <i>role_name</i>	Required. Specifies the role object to modify, either by ID or by name.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- chrole -- --+-----+>
                                '- -description -- description -'
>--+-----+-- +- role_name +-----><
  '- -name -- name -'      '- role_id ---'
```

CLI Example

```
$ udstask chrole -description 'storage admin role' storageadmin
```

rmuserrole

[About rmuserrole Command on page 42](#)
[Employing this Command through the CLI on page 42](#)

About rmuserrole Command

Description

Use this command to delete a user-to-role mapping. The user-to-role mapping ID can be obtained using the **udsinfo** [lsuserrole](#) command.

Rights

You must have the 'System Manage' right to delete a user-to-role mapping.

Parameters

Parameter	Description
<i>userrole_id</i>	Required. Specifies the ID of the user-to-role mapping to be deleted.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmuserrole -- -- userrole_id -----><
```

CLI Example

```
$ udstask rmuserrole 1002
```

rmrole

[About rmrole Command](#) on page 43

[Employing this Command through the CLI](#) on page 43

About rmrole Command

Description

Use this command to delete a role.

Rights

You must have the "System Manage" right to delete a role.

Parameters

Parameter	Description
<i>role_id</i> <i>role_name</i>	Required. Specifies the ID or name of the role to be removed. Use <code>udsinfolrole</code> to locate the ID or name of the role.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmrole -- --+- role_name -+-----><
                               '- role_id ---'
```

CLI Example

```
$ udstask rmrole role1
```

Org Commands

mkorg

About mkorg Command on page 44
Employing this Command through the CLI on page 44

About mkorg Command

Description

Use this command to create a new organization object. An organization determines a user's access to organizational resources. An organization is effective after organizational resources are added to the organization.

Rights

You must have the 'System Manage' right to create an organization.

Parameters

Parameter	Description
-description <i>description</i>	Optional. Describes the organization.
-name <i>name</i>	Required. Specifies a name for the organization. The name should be unique.
-org <i>org_id</i> <i>org_name</i>	Optional. Specifies a default organization in which the organization should be added to after creation. Use udsinfo lsorg to retrieve organization information. <div>Note: To use this option user needs the 'System Manage' right.</div>

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- mkorg -- --+-----+-->
                                '- -description -- description -'
>-- -name -- name ----- +-----+-----><
                                '- -org +- org_id ---+-'
                                '- org_name -'
```

CLI Example

```
$ udstask mkorg -name 'org1'
```

mkorgresource

[About mkorgresource Command on page 45](#)

[Employing this Command through the CLI on page 45](#)

About mkorgresource Command

Description

Use this command to add a resource to an organization. An organization consists of resources and users. It allows the member users to access all its resources. An organization can contain one or more organizations as its members.

Rights

You must have the 'System Manage' right to add a resource to an organization.

Parameters

Parameter	Description
-org <i>org_id</i> <i>org_name</i>	Required. Specifies the ID or name of the organization. Use udsinfo lsorg to retrieve organization information.
-resources <i>resource_list</i>	Required. Specifies the resource names or IDs to add to the organization. If there is more than one resource, they should be separated by a comma (','), Use the udsinfo lsorgresource command to locate the ID of the organization resource by displaying a list of organization-to-resource mappings.
-type user app diskpool host slt slp org cluster group	Required. Specifies the type of resource to be added to an organization. Note: For information on adding an appliance to an organization through specification of -type cluster to define multi-tenancy access, see Enabling Multi-Tenancy with Organizations in NOW.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- mkorgresource -- ----->
>-- -org ---+ org_name ---+ -- -resources -- resource_list -->
      '- org_id ---'
>-- -type ---+ user -----+-----><
      +- app -----+
      +- diskpool -+
      +- host -----+
      +- slt -----+
      +- slp -----+
      +- org -----+
      +- cluster --+
      '- group ----'
```

CLI Example

```
$ udstask mkorgresource -org eng -resources 4111 -type host
```

lsorg

[About lsorg Command](#) on page 46

[Employing this Command through the CLI](#) on page 46

About lsorg Command

Description

Use this command to retrieve the details of organizations. There are two reserved organizations, 'all', which includes all objects within the system; and 'public', which includes objects that are viewable by everyone. The 'all', and 'public' organizations cannot be deleted or modified.

Rights

You must have the 'System View' or 'System Manage' right to use this command.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default, all columns of data are separated by a tab in the concise view. In the detailed view, each column of data is displayed in a separate row and if the headers are displayed, the header is separated from the data by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one byte character. To display the data, use a comma (',') for list view, and equal ('=') for detail view.
-filtervalue <i>attrib=value</i>	Optional. Specifies that you want your report to display any or the entire list of valid filter attributes. The valid filter attribute for the udsinfo lsorg command is: name . A filter is formed with an attribute and a value. When you specify more than one filter, they must be combined with the ampersand (&) character. When specified, this character should be preceded by a backward slash '\'. For string type of filters, the only operator allowed is '='. You can also use wild card character '*'. For example, to list organizations with a name that begins with 'foo', use '-filtervalue name=foo*'.
-nohdr	Optional. By default, titles are displayed for each column of data in a concise style view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.
<i>object_id</i> <i>object_name</i>	Optional. Specifies the name or ID of an object. When you use this parameter, a detailed view of the object is returned and any value specified by the -filtervalue parameter is ignored. If you do not specify the ID or name, a concise view of all objects matching the filter criteria is displayed.

Employing this Command through the CLI

CLI Syntax

```
>>> udsinfo -- -- lsorg -- ----->
>--+-----+--+-----+----->
  '- -filtervalue -- attrib=value -'  '- -nohdr -'
```

```
>--+-----+-- -- --+-----+-----><
  '- -delim -- delimiter -'      +- object_id ---+
                                   '- object_name -'
```

CLI Example

```
$ udsinfo lsorg
```

```
idmodifydatedescriptionnamecreatedate
```

```
32010-08-13 00:45:47.868 All Organizationall2010-08-11 04:16:34.000
```

```
131702010-08-13 00:45:09.526 sales orgsales_org2010-08-13 00:43:19.146
```

chorg

[About chorg Command on page 48](#)

[Employing this Command through the CLI on page 48](#)

About chorg Command

Description

Use this command to change the attributes of an organization object.

Rights

You must have the 'System Manage' right to change the attributes of an organization.

Parameters

Parameter	Description
-description <i>description</i>	Optional. Specifies a description for the organization.
-name <i>name</i>	Optional. Specifies a unique name for the organization, name must be unique.
<i>org_id</i> <i>org_name</i>	Required. Specifies the organization object to modify, either by ID or by name. Use udsinfo lsorg to obtain the ID or name of the organization.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- chorg -- -+-----+-->
                                '- -description -- description -'
>--+-----+-- -- --+ org_name +-+-----><
  '- -name -- name -'      '- org_id ---'
```

CLI Example

```
$ udstask chorg -description 'sales org' org1
```


lsorgresource

[About lsorgresource Command](#) on page 49

[Employing this Command through the CLI](#) on page 49

About lsorgresource Command

Description

Use this command to retrieve the details of resource-to-organization mappings.

Rights

You must have the 'System View' or 'System Manage' right to use this command.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default, all columns of data are separated by a tab in the concise view. In the detailed view, each column of data is displayed in a separate row and if the headers are displayed, the header is separated from the data by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one byte character. To display the data, use a comma (',') for list view, and equal ('=') for detail view.
-filtervalue <i>attrib=value</i>	Optional. Specifies that you want your report to display any or the entire list of valid filter attributes. The valid filter attributes for the udsinfo lsorgresource command are: <ul style="list-style-type: none">• orgid• resourceid• typecode [app host org slp slt user] The filter is formed with an attribute and a value. When you specify more than one filter, they must be combined with '&' character (which should be escaped with '\'). Some filters allow only predefined constants. For example, typecode allows only app, host, org, slp, slt and user. To match the typecode for app, use ' -filtervalue typecode=app '.
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.
<i>object_id</i>	Optional. Specifies the ID of an object. When you use this parameter, a detailed view of the object is returned and any value specified by the -filtervalue parameter is ignored. If you do not specify the <i>object_id</i> parameter, a concise view of all objects matching the filter criteria is displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsorgresource -- ----->
```

```

>--+-----+--+--+-----+--+----->
  '- -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+--+--+-----+--+-----><
  '- -delim -- delimiter -'              '- object_id ---'

```

CLI Example

```

$ udsinfo lsorgresource
idtypecodeorgidresourceid
4097user34096
11502user311501

```

rmorgresource

[About rmorgresource Command on page 51](#)

[Employing this Command through the CLI on page 51](#)

About rmorgresource Command

Description

Use this command to delete a resource from an organization.

Rights

You must have the “System Manage” right to delete a resource-to-organization mapping.

Parameters

Parameter	Description
<i>orgresource_id</i>	Required. Specifies the ID of the resource-to-organization mapping to be deleted. Use the <code>udsinfo lsorgresource</code> command to get the ID or name of the organization resource.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmorgresource -- -- orgresource_id -----><
```

CLI Example

```
$ udstask rmorgresource 4111
```

rmorg

[About rmorg Command on page 52](#)

[Employing this Command through the CLI on page 52](#)

About rmorg Command

Description

Use this command to delete an organization.

Rights

You must have the 'System Manage right to delete an organization.

Parameters

Parameter	Description
<i>org_id</i> <i>org_name</i>	Required. Specifies the ID or name of the organization to be deleted. Use the <code>udsinfo lsorg</code> command to get the ID or name of the organization.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmorg -- --+- org_name -+-----><
                               '- org_id ---'
```

CLI Example

```
$ udstask rmorg org1
```

LDAP Commands

mkldapserver

[About mkldapserver Command](#) on page 53

[Employing this Command through the CLI](#) on page 53

About mkldapserver Command

Description

Use this command to configure an LDAP server for authentication.

Rights

You must have the 'System Manage' right to configure an LDAP server.

Parameters

Parameter	Description
-ip <i>ipaddress</i>	Required. Specifies the IP address for the server.
-port <i>port</i>	Required. Specifies the port for the server.
-basedn <i>basedn</i>	Required. Specifies the basedn for the LDAP lookups.
-userattribute <i>name</i>	Required. Specifies the attribute to use as the username.
-lookupuser <i>user</i>	Optional. Specifies the user to perform the LDAP lookups.
-lookuppasword <i>password</i>	Optional. Specifies the password for the lookup user.
-noss	Optional. When set, SSL is not used to connect to the LDAP server.
-fallback	Optional. When true, cached credentials will be used if the LDAP server is unavailable.
-uniqueidname <i>name</i>	Optional. Specifies unique object attribute name to identify LDAP objects.

Employing this Command through the CLI

CLI Syntax

For VDP Appliance:

```
>>> udstask -- -- mkldapserver -- -- -basedn -- basedn -- ----->
>--+-----+-- -- -- -ip -- ipaddress -- ----->
>  '- fallback -'
>--+-----+----->
>  '- -lookuppasword -- password -'
>--+-----+-- -- -- -port -- port -- ----->
>  '- -lookupuser -- user -'
>--+-----+-- +-----+----->
```

```
'- -noss1 -'      '- -uniqueidname -- name -'
>-- -userattribute -- attribute -----><
```

For AGM:

```
>>- udstask -- -- mkldapserver -- --+-----+-- --+-----+-->
                                     '- -ip -- ipaddress -' '- -port -- port -'
>--+-----+-- --+-----+-->
    '- -basedn -- basedn -'      '- -userattribute attribute -'
>--+-----+-- --+-----+-->
    '- -lookupuser -- user -'    '- -lookuppasword -- password --'
>--+-----+-- --+-----+-->
    '- -noss1 -'      '- -fallback -'
```

CLI Example

```
$ udstask mkldapserver -ip 192.168.1.1 -port 629 -basedn 'dc=example,dc=com'
  -userattribute 'cn' -lookupuser admin -lookuppasword 'secret'
```

testldapserver

[About testldapserver Command on page 55](#)

[Employing this Command through the CLI on page 55](#)

About testldapserver Command

Description

Use this command to test the LDAP configuration.

Rights

You must have “System Manage” right to test the LDAP configuration.

Parameters

Parameter	Description
-user <i>user</i>	Required. The username with which to test.
-password <i>password</i>	Required. The password associated with the user.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- testldapserver -- ----->
>---- -user -- user -- -- -- -password -- password -----<
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udstask testldapserver -user foo -password bar -appliance Appliance_C1
```

Success

lsldapserver

[About lsldapserver Command on page 56](#)

[Employing this Command through the CLI on page 56](#)

About lsldapserver Command

Description

Use this command to list LDAP server settings.

Rights

You must have the 'System View' right is allowed to view the LDAP server configuration.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default, all columns of data are separated by a tab in the concise view. In the detailed view, each column of data is displayed in a separate row and if the headers are displayed, the header is separated from the data by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one byte character. To display the data, use a comma (',') for list view, and equal ('=') for detail view.
-nohdr	Optional. By default, headings are displayed for each column of data in a concise view, and for each item of data in a detailed view. The -nohdr parameter suppresses the display of these headings. If there is no data to be displayed, headings are not displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsldapserver -- ----->
>--+-----+--+-----+-----><
>  '- -delim -- delimiter -'      '- -nohdr -'
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udsinfo lsldapserver -appliance Appliance_C1
```

Address	Port	Base DN	User Attribute
-ldap.example.com	389	dc=example,dc=com	cn

Lookup User	Lookup Password	Using SSL	Database	Fallback	Uniqueidname
		False		False	entryGUID

chldapserver

[About chldapserver Command](#) on page 57

[Employing this Command through the CLI](#) on page 58

About chldapserver Command

Description

Use this command to change the configuration of an LDAP server.

Rights

User must have 'System Manage' right to change the configuration of an LDAP server.

Parameters

Parameter	Description
-basedn <i>basedn</i>	Optional. Specifies the Base DN for the LDAP lookups.
-fallback <i>true false</i>	Optional. When set, cached credentials will be used if the LDAP server is unavailable.
-ip <i>ipaddress</i>	Optional. Specifies the IP address of the server.
-lookuppassword <i>password</i>	Optional. Specifies the password for the lookup user.
-lookupuser <i>user</i>	Optional. Specifies the user to perform the LDAP lookups.
-port <i>port</i>	Optional. Specifies the port for the server.
-ssl <i>true false</i>	Optional. When set, the LDAPS protocol is used instead of LDAP.
-uniqueidname <i>name</i>	Optional. Specifies unique object attribute name to identify LDAP objects for an VDP Appliance.
-userattribute <i>attribute</i>	Optional. Specifies the attribute to use as the username.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the VDP Appliance name or ID to help you identify the correct appliance to include in the -appliance argument. Note: AGM only.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- chldapserver -- --+-----+----->
                                     '- -basedn -- basedn -'
>--+-----+-----+-----+----->
   '- fallback --+ true --+-'      '- -ip -- ipaddress -'
                                     '- false -'
>--+-----+-----+-----+----->
   '- -lookuppasword -- password -'
>--+-----+-----+-----+----->
   '- -lookupuser -- user -'      '- -port -- port -'
>--+-----+-----+-----+----->
   '- -ssl --+ true --+-'      '- -uniqueidname -- name -'
                                     '- false -'
>--+-----+-----+-----+-----<
   '- -userattribute -- attribute -'
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udstask chldapserver -ip 192.168.1.1 -port 629 -appliance Appliance_C1
```

mkldapgroup

[About mkldapgroup Command on page 59](#)

[Employing this Command through the CLI on page 59](#)

About mkldapgroup Command

Description

Use this command to create an LDAP group object. This group must already exist in the LDAP server. Once the LDAP group is added with this command, use **udstask** [mkldapgrouprole](#) to create the mapping.

Rights

You must have the 'System Manage' right to create an LDAP group.

Parameters

Parameter	Description
-dn <i>name</i>	Required. Specifies the Distinguished Name (DN) of the LDAP group.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- mkldapgroup ----->
>-- -dn -- name -----><
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udstask mkldapgroup -dn CN=DnsUpdateProxy,CN=Users,DC=example.com,DC=com -appliance
Appliance_C1
```

Isldapgroup

[About Isldapgroup Command](#) on page 60

[Employing this Command through the CLI](#) on page 61

About Isldapgroup Command

Description

Use this command to retrieve details of LDAP groups.

Rights

You must have the 'System View' or 'System Manage' right to view the LDAP groups.

Parameters

Parameter	Description
-delim <i>delimiter</i>	<p>Optional. By default, all columns of data are separated by a tab in the concise view. In the detailed view, each column of data is displayed in a separate row and if the headers are displayed, the header is separated from the data by a space. The -delim parameter overrides this behavior.</p> <p>Valid input for the -delim parameter is a one byte character. To display the data, use a comma (',') for list view, and equal ('=') for detail view. If you enter -delim on the command line, the colon character (':') separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.</p>
-filtervalue <i>attrib=value</i>	<p>Optional. Specifies that you want your report to display any or all of the list of valid filter attributes. The valid filter attribute for the udsinfo Isldapgroup command is: name.</p> <p>For string filters, the only operator allowed is '='. You can use the wildcard '*'. For example, to match consistency groups with name begins with 'foo', use '-filtervalue name=foo*'.</p>
-nohdr	<p>Optional. By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed style view. The -nohdr parameter suppresses the display of these headings. If there is no data to be displayed, headings are not displayed.</p>
<i>object_id object_name</i>	<p>Optional. Specifies the name or ID of an object. When you use this parameter, the detailed view of the specific object is returned and any value specified by the -filtervalue parameter is ignored.</p> <p>If you do not specify the <i>object_id object_name</i> parameter, the concise view of all objects matching the filter criteria is displayed.</p>
-appliance <i>appliance</i>	<p>Required. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo Iscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.</p> <hr/> <p>Note: AGM only.</p> <hr/>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsldapgroup -- ----->
>--+-----+-- --+-----+-- ----->
' - -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+-- --+-----+-----><
' - -delim -- delimiter -'              +- object_id ---+
                                         '- object_name -'

>-- -appliance -- appliance -----><
```

CLI Example

```
$ udsinfo lsldapgroup -delim = DnsAdmins -appliance Appliance_C1
guid=fbca4882-b65b-3c2e-952f-c489d94320d9
id=12736
name=DnsAdmins
dn=CN=DnsAdmins,CN=Users,DC=actmad,DC=com
```

mkldapgrouprole

[About mkldapgrouprole Command](#) on page 62

[Employing this Command through the CLI](#) on page 62

About mkldapgrouprole Command

Description

Use this command to add a new LDAP group role mapping. An LDAP group can map to multiple roles. A user that belongs to the LDAP group automatically has the roles specified in the mapping. Use `udsinfo lsldapgroup` to obtain ID of the LDAP group. Use `udsinfo lsrole` to obtain the ID of the role.

Rights

You must have the 'System Manage' right to add a new LDAP group role mapping.

Parameters

Parameter	Description
-groupid <i>group_id</i>	Required. Specifies the LDAP group ID.
-roleid <i>role_id</i>	Required. Specifies the role ID to be assigned to the LDAP group.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target appliance to execute this command. All other parameters should use appliance-specific values. Use the <code>udsinfo lscluster</code> command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- mkldapgrouprole -- -- -groupid -- group_id --->
>---- -roleid -- role_id -----><
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udstask mkldapgrouprole -groupid 4111 -roleid 4203 -appliance Appliance_C1
```

lsldapgrouprole

[About lsldapgrouprole Command](#) on page 63

[Employing this Command through the CLI](#) on page 63

About lsldapgrouprole Command

Description

Use this command to retrieve LDAP group role mappings, for all LDAP groups or for a specific LDAP group.

Rights

You must have the 'System View' or 'System Manage' right to view role mappings.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default, all columns of data are separated by a tab in the concise view. In the detailed view, each column of data is displayed in a separate row and if the headers are displayed, the header is separated from the data by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one byte character. To display the data, use a comma (',') for list view, and equal ('=') for detail view. If you enter -delim on the command line, the colon character (':') separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-nohdr	Optional. By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed style view. The -nohdr parameter suppresses the display of these headings. If there is no data to be displayed, headings are not displayed.
<i>object_id</i>	Optional. Specifies the ID of an LDAP group role object, to show the role mapping for a particular LDAP group role.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. <hr/> Note: AGM only. <hr/>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsldapgrouprole -- ----->
>--+-----+--+-----+----->
>'- -nohdr -'      '- -delim -- delimiter -'
>--+-----+----->
>'- objectid ---'
>-- -appliance -- appliance ----->
```

CLI Example

```
$ udsinfo lslapgrouprole -appliance Appliance_C1
id  groupid roleid
1024 67324 4
```


mkldapgrouporg

[About mkldapgrouporg Command on page 65](#)

[Employing this Command through the CLI on page 65](#)

About mkldapgrouporg Command

Description

Use this command to add a new LDAP group organization mapping. An LDAP group can map to multiple organizations. A user that belongs to the LDAP group automatically has the organizations specified in the mapping. Use `udsinfo lsldapgroup` to obtain ID of the LDAP group. Use `udsinfo lsorg` to obtain ID of the organization.

Rights

You must have 'System Manage' right to add new LDAP group organization mapping.

Parameters

Parameter	Description
-groupid <i>group_id</i>	Required. Specifies the LDAP group ID.
-orgid <i>org_id</i>	Required. Specifies the organization id to be assigned to the LDAP group.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- mkldapgrouporg -- -- -groupid -- group_id --->
>----- -orgid -- org_id -----><
```

CLI Example

```
$ udstask mkldapgrouporg -groupid 4111 -orgid 4203
```

lsldapgrouporg

[About lsldapgrouporg Command on page 66](#)

[Employing this Command through the CLI on page 66](#)

About lsldapgrouporg Command

Description

Use this command to retrieve LDAP group organization mappings, for all LDAP groups or for a specific LDAP group.

Rights

You must have 'System View' or 'System Manage' rights to view the organization mappings.

Parameters

Parameter	Description
-delim <i>delimiter</i>	<p>Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior.</p> <p>Valid input for the -delim parameter is a one byte character. To display the data, use a comma (',') for list view, and equal ('=') for detail view. If you enter -delim : on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.</p>
-nohdr	<p>Optional. By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed view. The -nohdr parameter suppresses the display of these headings.</p> <div>Note: If there is no data to be displayed, headings are not displayed.</div>
<i>object_id</i>	<p>Optional. Specifies the ID of an LDAP group organization object, to show the organization mapping for a particular LDAP group organization.</p>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsldapgrouporg -- ----->
>--+-----+-- +-----+-----+----->
>  '- -nohdr -'      '- -delim -- delimiter -'
>--+-----+-----><
>  '- objectid ---'
```

CLI Example

```
$ udsinfo lsldapgrouporg
id  groupid orgid
1024 67324    4
```


rmldapgrouporg

[About rmldapgrouporg Command on page 68](#)

[Employing this Command through the CLI on page 68](#)

About rmldapgrouporg Command

Description

Use this command to delete an LDAP group organization mapping. The group organization ID can be obtained using `udsinfo lsldapgrouporg` command.

Rights

You must have “System Manage” right to delete an LDAP group org mapping.

Parameters

Parameter	Description
<i>object_id</i>	Required. Specifies the ID of the LDAP group organization mapping to be removed.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmldapgrouporg -- -- object_id -----><
```

CLI Example

```
$ udstask rmldapgrouporg 1002
```

rmldapgrouprole

[About rmldapgrouprole Command](#) on page 69

[Employing this Command through the CLI](#) on page 69

About rmldapgrouprole Command

Description

Use this command to delete an LDAP group role mapping.

Rights

You must have the 'System Manage' right to delete an LDAP group role mapping.

Parameters

Parameter	Description
<i>object_id</i>	Required. Specifies the ID of the LDAP group role mapping to be removed. Use the <code>udsinfo lsldapgrouprole</code> command to locate the ID or name of the LDAP group role.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmldapgrouprole -- -- object_id -----><
```

CLI Example

```
$ udstask rmldapgrouprole 1002
```

rmldapgroup

[About rmldapgroup Command on page 70](#)
[Employing this Command through the CLI on page 70](#)

About rmldapgroup Command

Description

Use this command to delete an LDAP group, including all of the mapping to roles.

Rights

You must have the 'System Manage' right to delete an LDAP group.

Parameters

Parameter	Description
<i>group_id</i> <i>group_name</i>	Required. Specifies the ID or name of the LDAP group to be removed. Use the <code>udsinfo lsldapgroup</code> command to locate the ID or name of the LDAP group.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmldapgroup -- --+- group_name -+-----><
                                     '- group_id ---'
```

CLI Example

```
$ udstask rmldapgroup 4111
```

rmldapserver

[About rmldapserver Command on page 71](#)

[Employing this Command through the CLI on page 71](#)

About rmldapserver Command

Description

Use this command to remove the LDAP server configuration.

Rights

You must have “System Manage” right to remove the LDAP configuration.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmldapserver -- -----><
```

CLI Example

```
$ udstask rmldapserver
```

Other Commands

configusercli

[About configusercli Command](#) on page 72

[Employing this Command through the CLI](#) on page 72

About configusercli Command

Description

Use this command to enable or disable CLI access for a user. Accessing the CLI on the Actifo appliance requires authentication and authorization using an SSH key. For detailed information, see [Chapter 2, Accessing the CLI from a VDP Appliance or AGM](#).

Rights

You must have the 'System Manage' right to allow a user to access the CLI.

Parameters

Parameter	Description
-disable	Optional. Disables the CLI access for a user.
-keyfile <i>keyfile</i>	Required. Specifies the SSH public key used to authenticate a user
-username <i>username</i>	Required. Specifies the user name for whom the CLI access should be enabled or disabled.
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target VDP Appliance to execute this command. When specified, -appliance controls target appliance's CLI access. Use the udsinfolcluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- configusercli -- ----->
>--+-----+-- -- -keyfile -- -keyfile -- ----->
' - -disable '
>-- username -- username -----><
>--+-----+-----><
' - -appliance -- appliance -'
```

CLI Example

```
$ udstask configusercli -username foo -keyfile /tmp/foo.pub -appliance Appliance_C1
```


getauthservice

[About getauthservice Command on page 73](#)

[Employing this Command through the CLI on page 73](#)

About getauthservice Command

Description

Use this command to retrieve the name of the authentication service in use. The value will be either 'database' or 'ldap'.

Rights

User with 'System View' right is allowed to see the service in use. Only user with 'System Manage' right can change the authentication service.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- getauthservice
```

CLI Example

```
$ udsinfo getauthservice  
database
```

lsstorage

[About lsstorage Command on page 74](#)

[Employing this Command through the CLI on page 75](#)

About lsstorage Command

Description

Use this command to retrieve details of application storage layout which indicates the disk groups of an application occupies. When application shares same disk groups, they can be, and should be grouped together in a consistency group for protection, to take advantage of in-band capabilities.

Rights

You must have 'Storage View' or 'Application Manage' right to view the details of job.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target appliance to retrieve all objects in a list view. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. Note: AGM only.
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.
-filtervalue <i>attrib=value</i>	Optional. Specifies that you want your report to display any or the entire list of valid filter attributes. The valid filter attributes for the udsinfo lsarray command are: <ul style="list-style-type: none">• appid• appname• hostid The filter will be formed with an attribute and a value. When you specify more than one filter, they must be combined with '&' character (which needs to be escaped with '\'). For string type of filters, the only operator allowed is '='. One can also use wildcard character '*'. For example, to match disk pools with name begins with 'foo', use -filtervalue name=foo* .

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsstorage -- ----->

>--+-----+--+-----+-----><
  '- -filtervalue -- attrib=value -'    '- -nohdr -'
```

CLI Examples

```
$ udsinfo lsstorage
      id  appid hostid appname diskgroup
154394 154393   4772 dbs2db  FRA,DATA
154401 154395   4772 dbs3db  FRA1,DATA1,DATA
154434 154433   4795 dbs1db  FRA,DATA
```


4 Host Management Commands

These commands are used for managing hosts and appliances. The GUI interface for these commands can be found in the AGM under the Security section of the Domain Manager. For detailed information, refer to the AGM Online Help.

This chapter details the following host management commands:

Managing Hosts

Host Commands

[mkhost](#) on page 78
[lshost](#) on page 82
[chhost](#) on page 85
[rmhost](#) on page 90
[chproxyhost](#) on page 91
[removeroutefromhost](#) on page 96
[setautodiscovery](#) on page 98
[getautodiscovery](#) on page 100
[lsetchosts](#) on page 102
[mketchosts](#) on page 104
[rmetchosts](#) on page 105

Other Commands

[getsysteminfo](#) on page 106
[configdns](#) on page 108
[lsdns](#) on page 110
[testdns](#) on page 112
[configinterface](#) on page 113
[configipfailover](#) on page 115
[iscsitest](#) on page 118
[configchap](#) on page 120
[lsdatastore](#) on page 122
[lsssd](#) on page 124
[lsnasshare](#) on page 126
[nfstest](#) on page 128

Host Commands

mkhost

[About mkhost Command](#) on page 78

[Employing this Command through the CLI](#) on page 80

About mkhost Command

Description

Use this command to create a new host object. The ID is displayed when the command completes. For generic or Hewlett Packard Unix (HP-UX) or Target Port Group Support (TPGS) or OpenVMS host, hostname must start with a letter, and can only use letter, digit or '_'. This is generally the DNS name for a host. For vCenter host, you may also use IP address of the host as the hostname.

Rights

You must have the 'Host Manage' right to create a host.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. <i>Note: AGM only.</i>
-alternateip <i>ip_list</i>	Optional. Specifies the alternate IP address of the host. Multiple -alternateip can be specified in a comma-delimited list.
-description <i>description</i>	Optional. Specifies the description of the host.
-diskpref BLOCK NFS	Optional. Specifies preference (BLOCK or NFS) for presenting the staging disk. Default value is BLOCK.
-dbauthentication <i>true false</i>	Optional. For VDP appliance only, specifies whether the Oracle database running on this host should be using DB Authentication or Host authentication.
-friendlypath <i>friendlypath</i>	Optional. Specifies the friendly name for the host.

Parameter	Description
-hbawwpn <i>wwn_list</i>	<p>Required for generic/HP-UX/TPGS/openvms hosts when an iSCSI name is not specified. Multiple -hbawwpn can be specified in a <i>comma</i>-delimited list. Not allowed for virtual machine hosts. You can get a list of potential port names with usvcinfo lshbaportcandidate.</p> <p>Specifies one or more host bus adapter (HBA) worldwide port names (WWPNs) to add to the specified host. For generic/HP-UX/TPGS hosts, at least one WWPN or iSCSI name should be specified. You cannot use this parameter with the -iscsiname parameter.</p>
-hostname <i>name</i>	Required. Specifies the name of the host.
-iogrp <i>iogrp_list</i>	Optional. Not allowed for virtual machine hosts. Specifies a set of one or more I/O groups that the host can access the VDisks from. I/O groups are specified using their names or IDs separated by a colon. Names and IDs can be mixed in the list. If this parameter is not specified, the host is associated with all I/O groups.
-ipaddress <i>ipaddress</i>	Optional. Specifies IP address of the host. A DNS lookup will be attempted if this is not specified.
-iscsiname <i>iscsi_name_list</i>	<p>Required for generic/HP-UX/TPGS/openvms hosts. At least one WWPN or iSCSI name should be specified. You cannot use this parameter with the -hbawwpn parameter. Multiple -iscsiname can be specified in a comma-delimited list.</p> <p>However, this parameter is not allowed for virtual machine hosts.</p>
-mask <i>port_mask</i>	Optional for generic/HP-UX/TPGS hosts. However, not allowed for virtual machine hosts. Specifies which node target ports the host can access. The port mask is four binary bits and is made up of a combination of zeros and ones, where 0 indicates that the corresponding target port cannot be used and 1 indicates that it can be used. The right-most bit in the mask corresponds to the lowest numbered target port (1 not 4) on a node. Valid mask values range from 0000 (no ports enabled) to 1111 (all ports enabled). For example, a mask of 0011 enables port 1 and port 2. The default value is 1111 (all ports enabled).
-nfsoption <i>options</i>	Optional. Comma (,) separated NFS options to use, when diskpref is NFS. Both server and client options are supported, separated by a semi-colon (;). For example: "server:writedelay=true,subtreecheck=false;client:retrans=2".
-org <i>org_id org_name</i>	Optional. Specifies the ID or name of a default organization in which the host should be added to after creation. To use this option user needs to have 'System Manage' right. If a default organization is not specified, an organization that the user belongs to is used.
-password <i>password</i>	Required for vCenter type. Specifies the password to access the Actifio Connector of the host. For the case that a vCenter also has a connector installed, set the password for vCenter in mkhost, then use udstask chhost to add the username, password and port for connector, if necessary.
-port <i>port</i>	Optional. Specifies the agent port number for the host. The default is 5106 for generic/hpux/tpgs/openvms hosts, and 0 for VM related hosts.

Parameter	Description
-svcname <i>name</i>	Optional. Specifies the SVC host name, which limits to 15 characters, first character cannot be a number, and no space, or '.' is allowed.
-type <i>generic hmc hpux hyperv isilon openvms tpgs vcenter netapp svm netapp 7 mode </i>	Required for vCenter or HMC type. Specifies the type of the new host: <i>generic</i> , <i>hmc</i> , <i>hpux</i> , <i>hyperv</i> , <i>isilon</i> , <i>netapp svm</i> , <i>netapp 7 mode</i> , <i>openvms</i> , <i>tpgs</i> , or <i>vcenter</i> . The <i>tpgs</i> type enables extra target port unit attentions. With the <i>vcenter</i> type, discovery (see udstask vmdiscovery) allows Virtual Machines to be discovered. <i>isilon</i> , <i>netapp svm</i> and <i>netapp 7 mode</i> hosts are used with the NAS Director. <i>hyperv</i> and <i>isilon</i> types are for VDP only. A host can be of more than one type, one of generic/hpux/tpgs/openvms, and of vcenter. Separate the two types with a colon, ':', if the vCenter also has access to storage configured.
-username <i>username</i>	Required for vCenter. Specifies the username to access the Actifio Connector running on the host.
-transport <i>option</i>	Optional. Specifies the transport option for host. This is applicable only for VMware vCenters and manually discovered ESX hosts.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- mkhost -- --+-----+----->
                                '- -type --+- asm -----+-- -'
                                    +- generic -----+
                                    +- hmc -----+
                                    +- hpux -----+
                                    +- hyperv -----+
                                    +- isilon -----+
                                    +- netapp 7 mode -+
                                    +- netapp svm ----+
                                    +- openvms -----+
                                    +- tpgs -----+
                                    +- vcenter -----+
>--+-----+----->
    '- -dbauthentication --+- true --+- -'
                                '- false -'
>--+-----+-----+-----+----->
    '- -description -- desc -'      '- -diskpref --+- BLOCK -+-'
                                    '- NFS ---'
>--+-----+-----+----->
    +- -iscsiname -- iscsi_name_list -+
    '- -hbawwpn -- wwpn_list -----'
>--+-----+-----+-----+----->
    '- -iogrp -- iogrp_list -'      '- -alternateip -- ip_list -'
>--+-----+-----+-----+----->
    '- -nfsoption -- options -'
>--+-----+-----+-----+----->
    '- -friendlypath -- friendlypath -'      '- -svcname -- name -'
>--+-----+-----+-----+----->
    '- -ipaddress -- ipaddress -'      '- -mask -- port_mask -'
>--+-----+-----+-----+----->
```



```

'- -org +- org_id ---+-'      '- -password -- password -'
      '- org_name -'
>---+-----+-----+----->
'- -transport -- transport -'
>---+-----+-----+-----><
'- -port -- port -'      '- -username -- username -'

```

CLI Example

```
$ udstask mkhost -hostname myhost -hbawpn 210000E08B12368F -ipaddress 10.10.1.2 -appliance
Appliance_C1
```

```
$ udstask mkhost -hostname myhost -type vcenter -ipaddress 10.10.1.2 \
  -username newuser -password mypwd -appliance Appliance_C1
```

lshost

[About lshost Command on page 82](#)

[Employing this Command through the CLI on page 83](#)

About lshost Command

Description

Use this command to display a concise list of hosts or a detailed view of a host. There are various types of hosts that exist within the system. They can be divided into two types in general: Virtual Machine related hosts and non-Virtual Machine related.

Non-Virtual Machine related hosts have applications running on the host with primary storage connected.

Virtual Machine related hosts can be the vCenter type, which manage Virtual Machines. Virtual Machines are discovered through the vCenter hosts. There are also ESX servers as well as the actual Virtual Machines.

Rights

No rights are required for lshost.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target VDP Appliance to retrieve all objects in a list view. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. <i>Note: AGM only.</i>
-delim <i>delimiter</i>	Optional. By default, all columns of data are separated by a tab in the concise view. In the detailed view, each column of data is displayed in a separate row and if the headers are displayed, the header is separated from the data by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one byte character. To display the data, use a comma (',') for list view, and equal ('=') for detail view.

Parameter	Description
-filtervalue <i>attrib=value</i>	<p>Optional. Specifies that you want your report to display any or the entire list of valid filter attributes. The valid filter attributes for the udsinfo lshost command are:</p> <ul style="list-style-type: none"> • alternateip • description • diskpref • friendlypath • hasagent • hostname • hosttype • isclusterhost • ipaddress • isesxhost • isvcenterhost • isvm • originalhostid • osrelease • ostype • osversion • sourcecluster • svcname • uniqueness • vcenterhostid <p>The filter is formed with an attribute and a value. When you specify more than one filter, they must be combined with '&' character (which should be escaped with '\'). For string type of filters, the only operator allowed is '='. You can also use the wild card character '*'. For example, to list all hosts with a name that begins with 'foo', use -filtervalue hostname=foo*.</p>
-nohdr	<p>Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.</p>
<i>object_id</i>	<p>Optional. Specifies the ID of an object. When you use this parameter, a detailed view of the object is returned and any value specified by the -filtervalue parameter is ignored. If you do not specify the <i>object_id</i> or the <i>object_name</i>, a concise view of all objects matching the filter criteria is displayed.</p>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lshost -- ----->
>-- -appliance -- appliance ----->
>+-----+-----+-----+----->
'- -filtervalue -- attrib=value -'      '- -nohdr -'
>+-----+-----+-----+----->
'- -delim -- delimiter -'      +- object_id ---+
```

CLI Example

```
$ udsinfo lshost 44758
uniquename 466cf196-c15b-4555-879d-0e1197b1a49c
ipaddress 172.28.6.20
```

```
svcname h006020_0004475
vcenterhostid
hosttype vcenter
timezone
friendlypath 172.28.6.20
description
isvcenterhost true
hasagent true
isvm false
hostname 172.28.6.20
modifydate 2019-01-16 07:51:59.840
dbauthentication false
isproxyhost false
sourcecluster 142021223569
id 4475
isesxhost false
dataip
maxjobs 0
vmtype
alternateip
ostype
vddkversion
transport NFS
isclusterhost false
osrelease
diskpref BLOCK
osversion
originalhostid 0
properties 0
  guestvmiscsi false
type vcenter
```

chhost

[About chhost Command on page 85](#)

[Employing this Command through the CLI on page 87](#)

About chhost Command

Description

Use this command to changes the attributes of a host.

Rights

You must have the 'Host Manage' right to change the attributes of a host.

Parameters

Parameter	Description
-alternateip <i>ip</i>	Optional. Specifies the alternate IP address of the host. Multiple -alternateip can be specified in a comma-delimited list. To remove the alternate IP address, use an empty field with double quotes: For example: <code>udstask chhost -alternateip "" 4011</code>
-chapsecret <i>chap_secret</i>	Optional. Sets the Challenge Handshake Authentication Protocol (CHAP) secret used to authenticate the host for iSCSI I/O. The CHAP secret is shared between the host and the appliance. <hr/> Note: AGM only. <hr/>
-clearconnector	Optional. Specifies whether to clear udsagent information for the host, if the connector has been already uninstalled from the host. Use it cautiously. <i>VDP appliance only.</i>
forceclearconnector	Optional. If <i>forceclearconnector</i> flag is used with the <i>clearconnector</i> , then udsagent (connector) information for the host will be removed from the database regardless of its installation status on the host. Use it cautiously. <code>udstask chhost -clearconnector -forceclearconnector <id-or-name></code>
-dbauthentication <i>true false</i>	Optional. Specifies whether Oracle database running on this host should be using DB Authentication or Host authentication. <i>VDP appliance only.</i>
-description <i>desc</i>	Optional. Specifies a description of the host.
-diskpref <i>BLOCK NFS</i>	Optional. Specifies preference (BLOCK or NFS) for presenting the staging disk. Default value is BLOCK.

Parameter	Description
-friendlypath <i>friendlypath</i>	Optional. Specifies a new friendly name for the host. Change of friendly path of a VM is not allowed.
-hostname <i>host_name</i>	Optional. Specifies the new host name for the host.
-hbawwpn <i>wwn_list</i>	Optional. Specifies the comma-separated list of WWPN names for the host. The existing WWPN names are replaced.
-ipaddress <i>ip</i>	Optional. Specifies an IP address of the host.
-iscsiname <i>iscsi</i>	Optional. Specifies the comma-separated list of iSCSI names to add to the host. The existing iSCSI names are replaced.
-mask <i>port_mask</i>	Optional. Specifies the node target ports that the host can access. The port mask has four binary bits and is made up of a combination of zeros and ones, where 0 indicates that the corresponding target port cannot be used and 1 indicates that it can be used. The right-most bit in the mask corresponds to the lowest numbered target port on a node. Valid mask values range from 0000 (no ports enabled) to 1111 (all ports enabled). For example, a mask of 0011 enables port 1 and port 2. The default value is 1111 (all ports enabled).
-maxjobs <i>maxjobs</i>	Optional for VDP appliance only. Specifies the maximum number of jobs allowed. This parameter applies only to backup jobs. Specify 0 to use the system default.
-nfsoption <i>options</i>	Optional. Comma (,) separated NFS options to use, when diskpref is NFS. Both server and client options are supported, separated by a semi-colon (;). For example: "server:writedelay=true,subtreecheck=false;client:retrans=2".
-nochapsecret	Optional. Clears any previously set CHAP secret for the host. <hr/> Note: AGM only. <hr/>
-password <i>password</i>	Optional. Specifies the password to start the Actifio Connector running on the host.
-properties <i>guestvmiscsi:true guestvmiscsi:false</i>	Optional for VDP appliance only. Enables/disables various properties of the host. <ul style="list-style-type: none"> <i>guestvmiscsi:true</i> maps a LUN to Virtual Machine directly. <i>guestvmiscsi:false</i> maps through hypervisor.
-port <i>port</i>	Optional. Specifies a port for the Actifio Connector running on the host.

Parameter	Description
-svcname <i>name</i>	Optional. Specifies the SVC host name. The name should not exceed 15 characters. The first character should not be a number. The name should not contain the space (' ') or period('.') characters. Note: The -svcname parameter is not supported for .
-type <i>asm generic hmc hpux isilon netapp openvms tpgs vcenter netapp svm netapp 7 mode </i>	Optional. Specifies a new type for the host, which replaces existing host type(s). Separate the two types with a colon, ':', if the host is of more than one type. This is required if the host has multiple username, passwords, or ports with different type of connections. This can happen when a vCenter also has connector installed. In which case use '-type' to specify the correct username, password, and port to be changed. Note: The <i>hpux</i> , <i>openvms</i> , and <i>tpgs</i> types are not supported for Sky appliances. The <i>isilon</i> , <i>netapp svm</i> , and <i>netapp 7 mode</i> types are used with the NAS Director.
-username <i>name</i>	Optional. Specifies the user name to start the Connector running on the host.
-blockcbt <i>enable disable</i>	Optional. Activates/deactivates CBT tracking for the application connector of a Linux host. <i>VDP appliance only.</i>
<i>host_id</i>	Required. Specifies the ID of the host to be modified. Use the udsinfolshost command to retrieve the ID.
-transport <i>NFS SAN GUESTVMISCSI</i>	Optional. Specifies the transport option for host. This is applicable only for VMware vCenters and manually discovered ESX hosts. GUESTVMISCSI is only applicable for VMware VM. Note: Any newly created vCenter on appliances will default the transport type to 'NFS'. In case you are using ESP, you must change to 'SAN'. Use this command to change the transport setting, udstask chhost -transport san <id> .

Employing this Command through the CLI

CLI Syntax

For VDP Appliance:

```
>>> udstask -- -- chhost -- +-----+----->
                             '- -alternateip -- ip -'

>--+-----+----->
  '- -blockcbt --+- enable --+- -'
                        +- disable +-

>--+-----+----->
```

```

'- -connect2actip -- ip-list -'

>--+-----+-----+-----+----->
'- -clearconnector -'      '- -forceclearconnector -'

>--+-----+-----+-----+----->
'- -description -- desc -'      '- -diskpref --+ BLOCK +- '
                                   '- NFS ---'

>--+-----+-----+-----+----->
'- -dbauthentication --+ true --+-- -'
                                   '- false -'

>--+-----+-----+-----+----->
'- -friendlypath -- friendlypath -'

>--+-----+-----+-----+----->
'- -hostname -- host_name -'      '- -ipaddress -- ip -'

>--+-----+-----+-----+----->
'- -iscsiname -- iscsi -'      '- -mask -- port_mask -'

>--+-----+-----+-----+----->
'- -maxjobs -- maxjobs -'      '- -nfsoption -- options -'

>--+-----+-----+-----+----->
'- -password -- password -'      '- -port -- port -'

>--+-----+-----+-----+----->
'- -properties --+ guestvmiscsi:true ---+-- -'
                                   '- guestvmiscsi:false --'

>--+-----+-----+-----+----->
'- -svcname -- name -'      '- -transport -- transport -'

>--+-----+-----+-----+----->
'- -type --+ asm -----+-- -'      '- -hbawwpn -- wwpn -'
      +- generic -----+
      +- hmc -----+
      +- hpux -----+
      +- hyperv -----+
      +- isilon -----+
      +- netapp 7 mode --+
      +- netapp svm -----+
      +- openvms -----+
      +- tpgs -----+
      '- vcenter -----'

>--+-----+-----+-----+-----><
'- -username -- name -'      host_id -----><

```

For AGM:

```

>>- udstask -- -- chhost -- +-----+----->
                                   '- -alternateip -- ip -'

>--+-----+-----+-----+----->
'- -chapsecret -- chap_secret -'

>--+-----+-----+-----+----->
'- -description -- desc -'

```



```

>---+-----+-----+----->
  '- -friendlypath -- friendlypath -'
>---+-----+-----+----->
  '- -hostname -- host_name -'      '- -ipaddress -- ip -'
>---+-----+-----+----->
  '- -mask -- port_login_mask -'     '- -nochapsecret -'
>---+-----+-----+----->
  '- -password -- password -'        '- -port -- port -'
>---+-----+-----+----->
  '- -svcname -- name -'             '- -type --+- vcenter ----+-'
                                     '- connector -'
>---+-----+-----+----->
  '- -username -- name -'            -- -- host_id -----><

```

CLI Example

```
$ udstask chost -ipaddress 192.168.0.12 4111
```

rmhost

[About rmhost Command on page 90](#)

[Employing this Command through the CLI on page 90](#)

About rmhost Command

Description

Use this command to delete a host. Use the **udsinfo** [lshost](#) command to retrieve the ID or name of the host.

Rights

You must have the 'Host Manage' right to delete a host.

Parameters

Parameter	Description
<i>host_id</i>	Required. Specifies the ID of the host to be deleted.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmhost -- -- host_id -----><
```

CLI Example

```
$ udstask rmhost 4111
```

chproxyhost

[About chproxyhost Command on page 91](#)

[Employing this Command through the CLI on page 92](#)

About chproxyhost Command

Description

Use this command to configure the proxy host server. It allows a proxy host server to:

- Join an ADS or NT Domain membership.
- Leave from an ADS or NT Domain membership.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	-
Actifio Global Manager	-

Rights

You must have the 'Host Manage' right to configure a proxy host server.

Parameters

Parameter	Description
-domain <i>domain</i>	Optional. Specifies the name of the domain to be joined. Required when the -joindomain option is specified.
-joindomain	Optional. If specified, adds the membership to an ADS or NT Domain. KDC details are automatically determined by the ads net lookup command.
-leavedomain	Optional. If specified, removes the membership from an ADS or NT Domain.
-username <i>user</i>	Optional. Specifies the user name to authenticate to join/leave an ADS or NT Domain. Required when either the -joindomain or -leavedomain option is specified.
-password <i>password</i>	Optional. Specifies the password of the user to authenticate to join/leave an ADS or NT domain. Required when either the -joindomain or -leavedomain option is specified.

Parameter	Description
-port3ip <i>ip</i>	Optional. Specifies the IP address for the port 3 interface.
-port3netmask <i>mask</i>	Optional. Specifies the netmask for the port 3 interface.
-port3mtu <i>mtu</i>	Optional. Specifies the MTU value for the port 3 interface. Setting an incorrect MTU value can result in serious networking issues. If -port3ip and -port3netmask are not being set and are not currently set, trying to set -port3mtu will result in an error. Setting the value to an empty string ("") will remove an existing MTU setting.
-port4ip <i>ip</i>	Optional. Specifies the IP address for the port 4 interface.
-port4netmask <i>mask</i>	Optional. Specifies the netmask for the port 4 interface.
-port4mtu <i>mtu</i>	Optional. Specifies the MTU value for the port 4 interface. Setting an incorrect MTU value can result in serious networking issues. If -port4ip and -port4netmask are not being set and are not currently set, trying to set -port4mtu will result in an error. Setting the value to an empty string ("") will remove an existing MTU setting.
<i>host_id host_name</i>	Required. Specifies the object id or name of the proxy host. To see the proxy host server details refer to udsinfolshost command.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- chproxyhost -- ----->
>--+-----+-----+-----+----->
>'- -domain -- domain -'      '- -joindomain -'
>--+-----+-----+-----+----->
>'- -leavedomain -'      '- username -- user -'
>--+-----+-----+-----+----->
>'- -password -- password -'      '- port3ip -- ip -'
>--+-----+-----+-----+----->
>'- -port3netmask -- mask -'      '- port3mtu -- mtu -'
>--+-----+-----+-----+----->
>'- -port4ip -- ip -'      '- -port4netmask -- mask -'
>--+-----+-----+-----+----->
>'- -port4mtu -- mtu -'      '- host_id ----'
```

CLI Example

Joining an ADS domain:

```
$ udstask chproxyhost -joindomain -domain example.company.com
  -username Administrator -password password 38660
```

Leaving an ADS domain:

```
$ udstask chproxyhost -leavedomain -username Administrator -password password 38660
```

Setting port3:

```
$ udstask chproxyhost -port3ip 192.168.1.1 -port3netmask 255.255.255.0 -port3mt
```

Removing the MTU from port3:

```
$ udstask chproxyhost -port3mtu "" 38660
```

addroutetohost

[About addroutetohost Command on page 94](#)

[Employing this Command through the CLI on page 94](#)

About addroutetohost Command

Description

Use this command to add a network route to a host to route traffic over a specified interface. You may want to do this based on your network configurations and different network hardware on your host.

This command will connect to the host and update its routing table based on the given parameters. This command will return an error if the host with the provided host ID is not a Proxy Host (BDD).

Note: Changing network routing can have significant consequences including loss of connectivity so be sure you understand the consequences before making changes to the host's routing tables.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	-
NAS Director	-
Actifio Global Manager	-

Rights

You must have the 'Host Manage' right to add a network route to a host.

Parameters

Parameter	Description
-route <i>route</i>	Required. The route to apply to the host. it can be a single IP address or a network range in CIDR notation.
-gateway <i>gateway</i>	Required. The gateway to use for this route.
-interface <i>interface</i>	Required. The network interface on the host to which this routing should apply.
<i>host_id</i>	Required. The host to which this route should be applied.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- addroutetohost -- ----->
>--+-----+-- -- -+-----+----->
```

```
'- -route -- route -'          '- -gateway -- gateway -'
```

```
>+-----+-----+-----+-----+<
```

```
'- interface -- interface -'    '- host_id -'
```

CLI Example

Adding a route to a single IP address:

```
$ udstask addroutetohost -route 192.168.1.150 -gateway 192.168.1.1 -interface eth2 10001
```

Adding a route to a network range using CIDR notation:

```
$ udstask addroutetohost -route 192.168.0.0/24 -gateway 192.168.1.1 -interface eth2 10001
```

removeroutefromhost

[About removeroutefromhost Command on page 96](#)

[Employing this Command through the CLI on page 96](#)

About removeroutefromhost Command

Description

Use this command to remove a network route to a host. The route to be removed is based on an exact match of the interface, route, and gateway parameters. If no matching route can be found, this command will return an error saying that the route could not be found. This command will connect to the host and update its routing table based on the given parameters.

Note: Changing network routing can have significant consequences including loss of connectivity so be sure you understand the consequences before making changes to the host's routing tables.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	-
NAS Director	-
Actifio Global Manager	-

Rights

You must have the 'Host Manage' right to remove a network route to a host.

Parameters

Parameter	Description
-route <i>route</i>	Required. The route to apply to the host you wish to remove. It can be a single IP address or a network range in CIDR notation.
-gateway <i>gateway</i>	Required. The gateway to use for this route.
-interface <i>interface</i>	Required. The network interface on the host to which this routing should be removed.
<i>host_id</i>	Required. The host to which this route should be removed.

Employing this Command through the CLI

CLI Syntax

```
>>- udtask -- -- removeroutefromhost -- ----->
```



```

>---+-----+--- -- +-----+-----+----->
    '- -route -- route -'      '- -gateway -- gateway -'
>---+-----+--- -- +-----+-----+-----><
    '- interface -- interface -'      '- host_id -'

```

CLI Example

Removing a route from a single IP address:

```
$ udstask removeroutefromhost -route 192.168.1.150 -gateway 192.168.1.1 -interface eth2 10001
```

Removing a route from a network range where the route uses CIDR notation:

```
$ udstask removeroutefromhost -route 192.168.0.0/24 -gateway 192.168.1.1 -interface eth2 10001
```

setautodiscovery

[About setautodiscovery Command](#) on page 98

[Employing this Command through the CLI](#) on page 99

About setautodiscovery Command

Description

Use this command to configure/remove a host from the auto-discovery list. For a vCenter, an auto-discovery automatically adds all discovered VMs. For non-vCenter, all discovered applications are added.

For VDP appliances only: use `udstask setschedule` to set the schedule for `autodiscovery`. By default, `autodiscovery` is performed once a day at 3 am.

Applicability of this Command

This command can be used on:

CDS appliance	✓
appliance	✓
NAS Director	-
Actifio Global Manager	✓

Rights

You must have the "Application Manage", "Host Manage", or "System Manage" right to add or remove a host to the auto-discovery host list.

Parameters

Parameter	Description
-clear	Optional. Specifies the host to be removed from the auto-discovery list.
-host <i>host_name host_id</i>	<i>Required for VDP appliance and optional for AGM.</i> Required. Specifies the name or ID of the host. Use the <code>udsinfo lshost</code> command to locate the ID or name of the host.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values. Use the <code>udsinfo lscluster</code> command to retrieve the appliance name or ID to help you identify the correct appliance to include in the <code>-appliance</code> argument. <i>Note: AGM only.</i>

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- setautodiscovery -- ----->
>--+-----+-- -- -host +- host_name -+-----><
    '- -clear -'          '- host_id ---'
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udstask setautodiscovery -host myhost -appliance Appliance_C1
$ udstask setautodiscovery -clear -host financevcenter -appliance Appliance_C1
```

getautodiscovery

[About getautodiscovery Command](#) on page 100

[Employing this Command through the CLI](#) on page 101

About getautodiscovery Command

Description

Use this command to return a concise list of hosts to perform auto-discovery on a schedule. For a vCenter, an auto-discovery automatically adds all discovered VMs. For non-vCenter, all discovered applications are added.

Use `udsinfo getschedule -name autodiscovery` to display the schedule.

Note: For VDP appliances only: By default, the schedule runs once a day at 3 am.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	-
Actifio Global Manager	✓

Rights

You must have 'System View' or 'System Manage' or 'Application Manage' or 'Host Manage' right to perform auto-discovery on a schedule.

Parameters

Parameter	Description
-hostid <i>hostid</i>	Optional. For VDP appliances only, it specifies the ID of the host to get its hostname if autodiscovery is set.
-delim <i>delimiter</i>	Optional. By default, all columns of data are separated by a tab in the concise view. In the detailed view, each column of data is displayed in a separate row and if the headers are displayed, the header is separated from the data by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one byte character. To display the data, use a comma (',') for list view, and equal ('=') for detail view.
-nohdr	Optional. By default, titles are displayed for each column of data in a concise style view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.

Parameter	Description
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. <i>Note: AGM only.</i>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- getautodiscovery -- ----->
>--+-----+----->
>  '- -hostid -- hostid -'
>--+-----+--+-----+-----><
>  '- -delim -- delimiter -'      '- -nohdr -'
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udsinfo getautodiscovery -appliance Appliance_C1
hostname
mkthost
financevcenter
$ udsinfo getautodiscovery -hostid 6168
hostname
Amithost
```

lsetchosts

[About lsetchosts Command on page 102](#)

[Employing this Command through the CLI on page 102](#)

About lsetchosts Command

Description

Use this command to retrieve contents of /etc/hosts.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	-
Actifio Global Manager	✓

Rights

You must have 'System View' or 'System Manage' right to view contents of /etc/hosts.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default, all columns of data are separated by a tab in the concise view. In the detailed view, each column of data is displayed in a separate row and if the headers are displayed, the header is separated from the data by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one byte character. To display the data, use a comma (',') for list view, and equal ('=') for detail view.
-nohdr	By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed style view. The -nohdr parameter suppresses the display of these headings. <hr/> Note: <i>If there is no data to be displayed, headings are not displayed.</i> <hr/>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsetchosts -- --+-----+-- -->
                                     '- -delim -- delimiter -'
>--+-----+----->
   '- -nohdr -'
```

CLI Example

```
$ udsinfo lsetchosts
```

ipaddress	hostname	alias
192.168.192.29	esx1.company.com	esx1
192.168.192.30	esx2.company.com	esx2
192.168.192.31	esx3.company.com	esx3
192.168.192.32	esx4.company.com	esx4

mketchosts

[About mketchosts Command on page 104](#)

[Employing this Command through the CLI on page 104](#)

About mketchosts Command

Description

Use this command to add an entry to /etc/hosts.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	-
Actifio Global Manager	✓

Rights

You must have 'System Manage' right to add a host into /etc/hosts.

Parameters

Parameter	Description
-alias <i>alias_list</i>	Optional. Specifies the alias of the host (comma separated if more than one alias). Each alias has to be unique.
-ipaddress <i>ip</i>	Required. Specifies the IP address of the host to be added. The ipaddress has to be unique.
-name <i>name</i>	Required. Specifies the name of the host. The name has to be unique.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- mketchosts -- ----->
>--+-----+-----+-- -- -ipaddress -- ip -- ----->
' - -alias -- alias_list - '
>-- -name -- name -----><
```

CLI Example

```
$ udstask mketchosts -ipaddress 192.168.192.29 -name esx1.company.com -alias esx1
```


rmetchosts

[About rmetchosts Command on page 105](#)
[Employing this Command through the CLI on page 105](#)

About rmetchosts Command

Description

Use this command to delete an entry from /etc/hosts.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	-
Actifio Global Manager	✓

Rights

You must have 'System Manage' right to delete a host from /etc/hosts.

Parameters

Parameter	Description
-name <i>name</i>	Required. Specifies the name of the host to be removed from /etc/hosts.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmetchosts -- -- -name -- name -----><
```

CLI Example

```
$ udstask rmetchosts -name esx1.company.com
```

Other Commands

getsysteminfo

[About getsysteminfo Command on page 106](#)

[Employing this Command through the CLI on page 106](#)

About getsysteminfo Command

Description

Use this command to return a unique fingerprint of the VDP appliance. This fingerprint is used when applying an VDP software license. A software license is required by some VDP products, such as the appliance.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	-
Actifio Global Manager	✓

Rights

You should have the 'System View' or 'System Manage' right to execute this command.

Parameters

Parameter	Description
-full	Optional. If not specified, only fingerprint is displayed (in backward compatible format). If specified, more information may be provided regarding AGM if applicable. <i>Note: AGM only.</i>
-delim <i>delimiter</i>	Optional. Specifies the delimiter to be used when displaying the results. It defaults to ' '. <i>Note: AGM only.</i>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- getsysteminfo -- --+-----+---->
'- -delim -- delimiter -'
```

```
>--+-----+-- --+-----><
  '- -full -'
```

CLI Example

```
$ udsinfo getsysteminfo
```

```
590021132492:ae8a7053-82c4-31bd-9bbe-8eecff12f6ef:8ea3a625
```

```
$ udsinfo getsysteminfo -full
```

```
Fingerprint 1415058401:09eb7e66-ca9b-30eb-954d-06722a57c3ad:0cd42e0a
```

```
AGM_IP_address 172.17.139.215
```

```
AGM_uuid -605939106975037443
```

```
AGM_last_access 2017-02-03 16:31:35
```

configdns

[About configdns Command](#) on page 108

[Employing this Command through the CLI](#) on page 109

About configdns Command

Description

Use this command to configure DNS settings.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	-
Actifio Global Manager	✓

Rights

You must have 'System Manage' right to configure DNS settings.

Parameters

Parameter	Description
-type <i>servers domain search</i>	Optional. Specifies the type of DNS settings to change: servers: DNS servers, maximum of 3 servers are supported. domain: DNS domain, system uses 'local' if no domain is specified. search: search domain, set name to 'disable' to clear the search domain list. Maximum of 6 search domains are supported.
-name <i>name</i>	Required. Specifies server name or domain name (comma separated if more than one is needed).
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. Note: AGM only.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- configdns -- -- -name -- name_list -- -->
>--+-----+-----><
    '- -type --+- domain --+-'
        +- servers +-
        '- search --'
```

CLI Example

To set two DNS servers

```
$ udstask configdns -type servers -name 192.168.1.1,8.8.8.8
```

To set the local domain

```
$ udstask configdns -type domain -name Actifio Desktop.com
```

To set two domains as the DNS suffix search list

```
$ udstask configdns -type search -name marketing.company.com,engineering.company.com
```

lsdns

[About lsdns Command](#) on page 110

[Employing this Command through the CLI](#) on page 111

About lsdns Command

Description

Use this command to retrieve a concise list of DNS servers.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	-
Actifio Global Manager	✓

Rights

You must have 'System View' or 'System Manage' right to use this command.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default, all columns of data are separated by a tab in the concise view. In the detailed view, each column of data is displayed in a separate row and if the headers are displayed, the header is separated from the data by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one byte character. To display the data, use a comma (',') for list view, and equal ('=') for detail view.
-nohdr	Optional. By default, headings are displayed for each column of data in a concise view, and for each item of data in a detailed view. The -nohdr parameter suppresses the display of these headings. If there is no data to be displayed, headings are not displayed.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP Appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. <hr/> Note: AGM only. <hr/>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsdns -- --+-----+-- ->
                                     '- -delim -- delimiter -'
>--+-----+-----><
   '- -nohdr -'
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udsinfo lsdns -appliance Appliance_C1
ipaddress
192.168.0.71
```

testdns

[About testdns Command](#) on page 112

[Employing this Command through the CLI](#) on page 112

About testdns Command

Description

Use this command to test the name or IP address of a host.

Applicability of this Command

This command can be used on:

CDS appliance	✓
appliance	✓
NAS Director	-
Actifio Global Manager	✓

Rights

You must have 'System View' or 'System Manage' right to use this command.

Parameters

Parameter	Description
-type <i>delimiter</i>	Optional. Specifies the either the host name or the IP address to lookup.
-value <i>string</i>	Required. Specifies the host name or IP address to lookup.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- testdns -- ----->
>--+-----+--+ -- value -----><
  '- -type --+- name --+-'
    '- ip ----'
```

CLI Example

```
$ udstask testdns -type ip -name 8.8.8.8
```


configinterface

[About configinterface Command on page 113](#)

[Employing this Command through the CLI on page 114](#)

About configinterface Command

Description

Use this command to set an IP address on an interface on the appliance.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	-
Actifio Global Manager	✓

Rights

You must have the 'System Manage' right to be able to set IP address.

Parameters

Parameter	Description
-ipaddress <i>ip-address</i>	Required. Specifies the IP address to assign. To remove an IP address, specify '0.0.0.0' and select the node, interface and type.
-mask <i>mask</i>	Optional. (required except with ipaddress of '0.0.0.0'). Specifies subnet mask or prefix length. For example 255.255.255.0 (subnet mask) or 24 (prefix length).
-dhcp	Optional. Specifies whether DHCP is used to configure a node.
-gateway <i>gateway</i>	Optional. Specifies the default gateway for the interface. Must be a valid IP address that's within the network described by ipaddress and mask. Optional, to support the case of non-routed subnets. Specify '0.0.0.0' to remove an existing gateway.
-interface <i>interface</i>	Required. Specifies the interface.
-node <i>node</i>	Optional. Specifies the node name (panelname), blank, or "peer" to automatically select the "CLU" (secondary) node. Note: This option is not valid on appliances.

Parameter	Description
-mtu <i>mtu</i>	Optional. Specifies the maximum transmit unit for the interface. Can only be set on the node IP, but affects all IPs on the interface. Minimum legal value is 84 (but not recommended). Maximum legal value is dependent upon the interface hardware. Specify 'default' to revert to the default value of 1500.
-type node iscsi cluster	Optional. Specifies type of IP: node, iscsi, or cluster. Sky appliances only support type 'node'. Type 'cluster' may only be specified with interface eth0 or eth1. Default to node if not specified. Only node is allowed for DHCP.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- configinterface -- ----->

>-- +-----+-- --+-----+-- ----->
    '- -dhcp -'      '- -ipaddress -- ipaddress -'

>-- +-----+-- -- -gateway -- gateway -- ----->
    '- -mask -- mask -'
>-- -- -interface -- interface -- --+-----+-- ----->
                                   '- -node -- node -'

>-- +-----+-- --+-----+-- ----->
    '- -mtu -- mtu -'      '- -type --+ cluster --+ -'
                               +- iscsi ---+
                               '- node ---'
```

CLI Example

To set a node IP on eth0 of the primary node on a CDS

```
$ udstask configinterface -ipaddress 192.168.1.2 -mask 255.255.255.0 -gateway 192.168.1.1 -
interface eth0
```

To set a node IP on eth0 of the secondary node on a CDS

```
$ udstask configinterface -ipaddress 192.168.1.3 -mask 255.255.255.0 -gateway 192.168.1.1 -
interface eth0 -node peer
```

To set a cluster IP on eth0 of a CDS cluster

```
$ udstask configinterface -ipaddress 192.168.1.4 -mask 255.255.255.0 -gateway 192.168.1.1 -
interface eth0 -type cluster
```

To set an iSCSI IP on eth0 of the primary node on a CDS

```
$ udstask configinterface -ipaddress 192.168.1.5 -mask 255.255.255.0 -gateway 192.168.1.1 -
interface eth0 -type iscsi
```

To remove the node IP on eth1 of the primary node on a CDS

```
$ udstask configinterface -ipaddress 0.0.0.0 -interface eth1 -type node
```

configipfailover

[About configipfailover Command on page 115](#)

[Employing this Command through the CLI on page 115](#)

About configipfailover Command

Description

Use this command to configure or remove IP fail-over interface pair. This puts the node IP on the alternate port if the primary port goes down. Associations are mutual; that is, if interface1 goes down, interface2 takes over, and vice versa.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	-
Actifio Global Manager	-

Rights

You must have the 'System Manage' right to configure or remove IP fail-over interface pair.

Parameters

Parameter	Description
-clear	Optional. Specifies that the IP fail-over interface pair to be removed. Otherwise, the interface pair is added.
-interface1 <i>interface1</i>	Required. Specifies the first interface in the pair.
-interface2 <i>interface2</i>	Optional, but required for configuration. Specifies the second interface in the pair.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- configipfailover -- ----->
>--+-----+-- -- -interface1 -- interface1 ----->
  '- -clear -'
>--+-----+-----+-----><
  '- -interface2 -- interface2 -'
```

CLI Example

```
$ udstask configipfailover -interface1 eth2 -interface2 eth3
$ udstask configipfailover -clear -interface1 eth2
```

Isipfailover

[About Isipfailover Command on page 116](#)

[Employing this Command through the CLI on page 116](#)

About Isipfailover Command

Description

Use this command to retrieve a concise list of IP fail-over interface pairs. This command is supported only on CDS appliances. If you run this command on a Sky appliance, you will see the error: "Command Isipfailover not supported."

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	-
NAS Director	-
Actifio Global Manager	-

Rights

You must have the 'System View' or 'System Manage' right to view IP fail-over interface pairs.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one byte character. To display the data, use a comma (',') for list view, and equal ('=') for detail view. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur.
-nohdr	Optional. By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed style view. The -nohdr parameter suppresses the display of these headings. <i>Note: If there is no data to be displayed, headings are not displayed.</i>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsipfailover -- ----->
>--+-----+--  +-----+----->
```

```
'- -delim -- delimiter -'      '- -nohdr -'
```

CLI Example

```
$ udsinfo lsipfailover
```

```
interface1 interface2
```

```
eth2          eth3
```

iscsitest

[About iscsitest Command on page 118](#)

[Employing this Command through the CLI on page 119](#)

About iscsitest Command

Description

Use this command to determine if the iSCSI configuration is properly set up in the appliance and host. The iSCSI test can be performed on the generic host and ESX hosts. It also recommends users with corrective action.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	-
AGM	-

Rights

You must have the 'Host Manage' rights to perform iSCSI test.

Parameters

Parameter	Description
-host <i>host</i>	Required. Specifies the host on which the iSCSI test is to be performed, either the source ID or name of the host is required. Use udsinfo lshost to locate the ID or name of the host.
-port <i>name</i>	Optional. Specifies the port that the Actifio Connector is running on. The default is 5106.
-iscsiports <i>iscsiport</i>	Optional. Specifies the iSCSI port on which the test needs to be performed. If you do not specify this option, the test will be run for all iSCSI ports.
-delim <i>delimiter</i>	<p>Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior.</p> <p>Valid input for the -delim parameter is a one byte character. To display the data, use a comma (',') for list view, and equal ('=') for detail view. If you enter -delim : on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.</p>

Parameter	Description
-nohdr	Optional. By default, headings are displayed for each column of data in a concise view, and for each item of data in a detailed view. The -nohdr parameter suppresses the display of these headings. If there is no data to be displayed, headings are not displayed.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfolcluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. Note: AGM only.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- iscsitest -- ----->
>-- -host --+- host_name -+----->
      '- host_id ---'
>--+-----+-- +-- --+-----+-->
      '- -port -- port -'          '- -iscsiports -- iscsiport -'
>--+-----+-- --+-----+-->
      '- -delim -- delimiter -'    '- -nohdr -'

>-- -appliance -- appliance -----><
```

CLI Example

```
$ udstask iscsitest -host 4142 -appliance Appliance_C1
iSCSIPort                               Test Status Hint
iqn.1994-05.com.redhat:7c6e4c9c6ac1 Host iSCSI initiator installed and configured Passed
iqn.1994-05.com.redhat:7c6e4c9c6ac1 CDS has valid IQN Failed
CDS doesn't have IQN configured or IQN on CDS doesn't match IQNs in host. Please copy the IQN
from the host enter it into the iSCSI ports field.
iqn.1994-05.com.redhat:7c6e4c9c6ac1 Host has logged into the CDS iSCSI target Skipped
iqn.1994-05.com.redhat:7c6e4c9c6ac1 Mapping disk from CDS to host Skipped
iqn.1998-01.com.VMware:esxhyd1-6e1403ff Host iSCSI initiator installed and configured Passed
iqn.1998-01.com.VMware:esxhyd1-6e1403ff CDS has valid IQN Passed
iqn.1998-01.com.VMware:esxhyd1-6e1403ff Host has logged into the CDS iSCSI target Passed
iqn.1998-01.com.VMware:esxhyd1-6e1403ff Mapping disk from CDS to host Passed

$ udstask iscsitest -host 4142 -iscsiports iqn.1998-01.com.VMware:esxhyd1-6e1403ff -appliance
Appliance_C1
iSCSIPort                               Test Status Hint
iqn.1998-01.com.VMware:esxhyd1-6e1403ff Host iSCSI initiator installed and configured Passed
iqn.1998-01.com.VMware:esxhyd1-6e1403ff CDS has valid IQN Passed
iqn.1998-01.com.VMware:esxhyd1-6e1403ff Host has logged into the CDS iSCSI target Passed
iqn.1998-01.com.VMware:esxhyd1-6e1403ff Mapping disk from CDS to host Passed
```

configchap

[About configchap Command on page 120](#)

[Employing this Command through the CLI on page 120](#)

About configchap Command

Description

Use this command to configure or remove a CHAP secret for authentication between iSCSI initiators and iSCSI target.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	-
AGM	-

Rights

You must have the 'System Manage' right to configure or clear the CHAP secret.

Parameters

Parameter	Description
-clear	Optional. Specifies that the CHAP secret is to be cleared. This effectively disables CHAP authentication.
-password <i>password</i>	Optional. Specifies the password for CHAP authentication, the value must be between 12 and 16 characters. For CDS, this is the chap secret for the host.
-username <i>username</i>	Optional. Specifies the username for CHAP authentication. The limit is a maximum of 16 characters for Sky. For CDS, username is not supported.
-host <i>host</i>	Optional. Specifies the host name or ID for the CHAP authentication to be configured. If host is not specified, the loopback CHAP authentication is configured for Sky. For CDS, host is required.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- configchap -- --+-----+-- ----->
                                     '- -clear -'

>--+-----+-- +-----+-- -->
   '- -host -- host -'      '- -password -- password -'
```



```
>--+-----+-----><
  '- -username -- username -'
```

CLI Example

```
$ udstask configchap -username newuser -password newpwdnewpwd
$ udstask configchap -username testuser -password testuser -host 7658
```

lsdatastore

[About lsdatastore Command](#) on page 122

[Employing this Command through the CLI](#) on page 123

About lsdatastore Command

Description

Use this command to retrieve a concise list of data stores that the specified vCenter and ESX host can reference.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	-
AGM	✓

Rights

You must have 'System View' or 'System Manage' right to use this command.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. <hr/> Note: AGM only. <hr/>
-delim <i>delimiter</i>	Optional. By default, all columns of data are separated by a tab in the concise view. In the detailed view, each column of data is displayed in a separate row and if the headers are displayed, the header is separated from the data by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one byte character. To display the data, use a comma (',') for list view, and equal ('=') for detail view.
-esxhost <i>esx_host</i>	Required. ESX host that data stores can reference.
-vcenter <i>vcenter_host</i>	Required. vCenter host that data stores can reference.

Parameter	Description
-nohdr	Optional. By default, headings are displayed for each column of data in a concise view, and for each item of data in a detailed view. The -nohdr parameter suppresses the display of these headings. If there is no data to be displayed, headings are not displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsdatastore -- --+-----+---->
                                   '- -delim -- delimiter -'
>-- -appliance -- appliance ----->
>--+ -esxhost -- esx_host -+-- -+-----+-- ----->
                                   '- -nohdr -'
>--+ -vcenter -- vcenter_host -+-----+-----><
```

CLI Example

```
$udsinfo lsdatastore -vcenter vcenter -esxhost esxhost -delim , -appliance Appliance_C1
name,type,capacity,freespace
datastore3,VMFS,244544700416,32043433984
```

datastore4,VMFS,321854111744,255999344640Example for returning datastore for virtual machine, where vm can be an application ID, host ID, hostname or host UUID

```
$udsinfo lsdatastore -vm 84363
name      type capacity      freespace      isrdmsupported
Sky-Snap  VMFS 10994847842304 10058668703744 true
datastore2 VMFS 5497289703424 3807631114240 true
datastore1 VMFS 290984034304 289962721280 true
DVC       NFS 429126578176 118496296960 false
```

lsssd

[About lsssd Command](#) on page 124

[Employing this Command through the CLI](#) on page 125

About lsssd Command

Description

Use this command to retrieve a concise list of SSD (Solid State Disk) devices, or a detailed view of an SSD device.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	-
AGM	-

Rights

You must have 'System View', or 'System Manage' right to view SSDs.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one byte character. To display the data, use a comma (',') for list view, and equal ('=') for detail view. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-nohdr	Optional. By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed style view. The -nohdr parameter suppresses the display of these headings. If there is no data to be displayed, headings are not displayed.
<i>ssd_name</i>	Optional. Specifies the name of the SSD device to get detailed information.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsssd -- ----->
>--+-----+--+-----+----->
>  '- -nohdr -'      '- -delim -- delimiter -'
>--+-----+-----><
>  '- ssd_name ---'
```

CLI Example

```
$ udsinfo lsssd
```

id	wwid	slot	status
1	scsi-3600605b004fff9801c5bcf5863ff6d07	3	managed
2	scsi-3600605b004fff9801c5bcf5863fb89ba	2	managed

```
$ udsinfo lsssd -delim = 1
```

```
id=1
wwid=scsi-3600605b004fff9801c5bcf5863ff6d07
slot=3
status=managed
healthstatus=OK
remainingpct=100
state=in-use
```

Isnasshare

[About Isnasshare Command](#) on page 126

[Employing this Command through the CLI](#) on page 127

About Isnasshare Command

Description

Use this command to return a concise list of NAS shares as well as their details.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	-
AGM	-

Rights

You must have the 'System Manage', or 'System View' rights to be able to retrieve NAS share data.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one byte character. To display the data, use a comma (',') for list view, and equal ('=') for detail view. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-nohdr	Optional. By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed style view. The -nohdr parameter suppresses the display of these headings. If there is no data to be displayed, headings are not displayed.
<i>object_id</i>	Optional. Specifies the ID of an object. When you use this parameter, the detailed view of the specific object is returned. If you do not specify the parameter, the concise view of all objects matching the filter criteria is displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsnasshare -- ----->
>--+-----+-- --+-----+-- ----->
' - -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+-- --+-----+-----><
' - -delim -- delimiter -'              +- object_id ---+
```

CLI Example

\$ udsinfo lsnasshare

id	modifydate	sharetype	filerpath	hostid	sharedesc	filerip	space	shareid	exportpath	snapshotpath
12345	0	/vol/testvol1	5305	172.17.130.10	12345	/vol/testvol1	testvol1			
14341	0	testetest0	5305	0.0.0.0	1	test	9.0.0.9			
15362	0	random/test	5305	9.0.0.9	1	random/test	9.0.0.9			
19479	2	testetest0000	5305	0.0.0.0	0	test				
28948	2	/vol/testshare	5305	nastest	172.17.130.10	0	/vol/testshare			

nfstest

[About nfstest Command](#) on page 128

[Employing this Command through the CLI](#) on page 128

About nfstest Command

Description

Use this to test NFS configuration in the appliance and host. The NFS test can be performed on generic hosts and ESX hosts.

Rights

You must have the 'Host Manage' right to run NFS test.

Parameters

Parameter	Description
-host <i>host_id host_name</i>	Required. Specifies the host in which NFS test to be performed, either ID or name of the host is needed. Use 'udsinfo lshost' to locate the ID or name of the host.
-port <i>port</i>	Optional. Specifies the port that the Actifio Connector is running on, defaults to 56789.
-options <i>options</i>	Optional. Comma (,) separated NFS options to use, when diskpref is NFS. Both server and client options are supported, separated by a semi-colon (;). For example: "server:writedelay=true,subtreecheck=false;client:retrans=2"
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim : on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-nohdr	Optional. By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed view. The -nohdr parameter suppresses the display of these headings.
Note: If there is no data to be displayed, headings are not displayed.	

Employing this Command through the CLI

CLI Syntax

```
>>> udstask -- -- nfstest -- ----->
>-- -host ---+ host_name -+----->
      '- host_id ---'
>--+-----+-- +-- --+-----+--->
```



```

'- -port -- port -'          '- -options -- options -'

>--+-----+--+-----+----->
'- -delim -- delimiter -'    '- -nohdr -'

```

CLI Example

```
$ udstask nfstest -host 4142
```

Test	Status	Hint	Message
NFS services are running and Appliance exported NFS share	Passed		
Host has logged into the Appliance NFS target	Passed		

5 Appliance Management Commands

These commands are used for managing hosts and appliances. The GUI interface for these commands can be found in the AGM under the Security section of the Domain Manager. For detailed information, refer to the AGM Online Help.

This chapter details the following appliance management commands:

Managing Appliances

Certificate Commands

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[certexchange](#) on page 135

Cluster Commands

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Dedup Load Factor Commands

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Managing Pools

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Auto Update and Remote Setup Commands

Auto Update Commands

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Certificate Command

installtrustedcertificate

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About installtrustedcertificate command

Description

The **installtrustedcertificate** command installs/replaces a SSL server certificate on the appliance. The certificate and key files have to be in "/home/admin/upload".

The **installtrustedcertificate** also restarts Tomcat, and all active GUI sessions will be lost.

If the certificate is not a wildcard certificate, this command also updates the GUI links to have consistent hostname as the one defined in certificate's Subject attribute. Please make sure the certificate has the correct hostname that resolves to the IP address of the appliance.

AGM only - The **installtrustedcertificate** command installs a trusted certificate onto the appliance server. The certificate file has to be either with absolute path, or in "/home/admin/upload" for relative path.

Rights

There are no specific rights associated with this operation. Admin/User with 'administrator' role can install the trusted certificate on to the appliance server.

Parameters

Parameter	Description
-certfile <i>certfile</i>	Required. Specifies the filename of the certificate(s). The certificate(s) should be in PEM formats. All certificates that build up the trust chain need to be concatenated together in this file. Typically they include one SSL certificate, an intermediate CA certificate and a root CA certificate. If any of the certificates is missing, the command will fail.
-keyfile <i>keyfile</i>	Required. Specifies the filename of the private key. The key should be in raw format (not encrypted).
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. <i>Note: AGM only.</i>

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- installtrustedcertificate -- ----->
>-- -- -certfile -- cert_file -- -- -keyfile -- key_file -----><
>-- -- -appliance -- appliance -----><
```

CLI Example

```
$ udstask installtrustedcertificate -certfile cert.pem -keyfile key.pem -appliance Appliance_C1
```

certexchange

[About certexchange command on page 135](#)

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About certexchange command

Description

Use this command to exchanges certificates with a remote cluster to establish a trusted relationship.

AGM only: Use this command to exchange SSL certificates between AGM and an appliance that is managed by the AGM, or between two VDP appliances. If you specify **-appliance**, certificates are exchanged between the target VDP appliance and a remote VDP appliance.

Rights

You must have the 'System Manage' right to exchange certificates.

Parameters

Parameter	Description
-ipaddress <i>ipaddress</i>	Required. Specifies the IP address of the remote cluster.
-user <i>user</i>	Optional. Specifies the user with admin role. Default is 'admin'. Note: AGM only.
-password <i>password</i>	Required. Specifies the password for admin on remote cluster.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. Note: AGM only.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- certexchange -- ----->
>---- -ipaddress -- ipddress ----->
>-----+-----+----- -password -- password ----->
>      '- -user -- user -'
>--+-----+-----+----->
>      '-appliance -- appliance -'
```

CLI Example

```
$ udstask certexchange -ipaddress 192.168.16.10 -password secret
```

Cluster Commands

mkcluster

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About mkcluster command

Description

The **mkcluster** command is intended only for AGM.

Use the **mvapplication** command to create a cluster object from an appliance. After you run this command in either dryrun mode or force mode, a summary report is generated about the outcome of the command if a conflict exists. All conflicts need to be resolved before continuing. Determine if you wish to remove the duplicate object (Templates, Organizations, Roles, and Users) from either the AGM or from the appliance that is to be added and remove the duplicate object.

Note: Before running this command use the **udtask certexchange** command to exchange certificates between the EM server and the target cluster.

Applicability of this Command

This command can be used on:

CDS appliance	-
Sky appliance	-
NAS Director	-
Actifio Global Manager	✓

Rights

You must have the 'System Manage' right to create a datacenter object.

Parameters

Parameter	Description
-ip <i>ip_address</i>	Required. Specifies the IP address of the appliance.
-mode <i>mode</i>	Required. Specifies the import mode of the appliance. Supported modes include: <ul style="list-style-type: none">dryrun - Perform a dry-run to find import conflicts.force - Perform an import and fail when encountering any errors.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- mkcluster ----->
>-- -ipaddress -- ip_address ----->
>-- -mode -- mode -----><
```

CLI Example

```
$ udstask mkcluster -ipaddress 172.17.3.190 -mode dryrun
```

joincluster

[About joincluster command on page 137](#)

[Employing this Command through the CLI on page 137](#)

About joincluster command

Description

Use this to join two VDP appliances. Prior to joining, the two VDP appliances must exchange security certificates to allow secure communication between them. Use AGM to download and upload the security certificates.

When a VDP appliance joins another appliance, the former becomes the slave and the latter, the master. The slave appliance takes on the shared data of the master appliance. The shared data includes users, roles, organizations, and templates. You may want to review the shared data on the slave, as it may be removed after joining the master, if it is not present on the master already.

Example: When the **joincluster** command is executed on the 'seattle' appliance to join the 'boston' appliance, the 'boston' appliance becomes the master and 'seattle', the slave. After the join operation, both 'seattle' and 'boston' appliance will contain the same shared data, that is, users, roles, organizations, and templates.

Note: Before running this command use the **udstask certexchange** command to exchange certificates between the EM server and the target cluster.

Rights

You must have the 'System Manage' right to join two VDP appliances.

Parameters

Parameter	Description
-ipaddress <i>ip</i>	Required. Specifies the IP address of the appliance to join to.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. Note: AGM only.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- joincluster -- -- -ipaddress -- ip -----><
```

>-- -appliance -- appliance -----><

CLI Example

\$ udstask joincluster -ipaddress 192.168.0.70 -appliance Appliance_C1

addcluster

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About addcluster Command

Description

Use this command to add an appliance, either as part of a domain (which shares all appliance specific data, such as organizations, templates, roles, and users), or to be used as a dedup-only VDP appliance (which allows for remote dedup or dedup-async target).

Note: Before adding two VDP appliances, the appliances must exchange certificates to communicate securely. Use the AGM to download and upload the security certificates.

Note: Before running this command use the `udtask certexchange` command to exchange certificates between the EM server and the target cluster.

Rights

You must have 'System Manage' right to add two VDP appliances.

Parameters

Parameter	Description
-ipaddress <i>ipaddress</i>	Required. Specifies the IP address of the appliance to be added.
-deduponly	Optional. Specifies whether the added appliance is used for dedup-only. The default value is false.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target appliance to execute this command. Use the <code>udsinfo lscluster</code> command to retrieve the appliance name or ID to help you identify the correct appliance to include in the <code>-appliance</code> argument. Note: AGM only.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- addcluster ----->
>--+-----+-- -- -ipaddress -- ipaddress -----><
>  '- -deduponly -'
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udstask addcluster -deduponly -ipaddress 192.168.0.70 -appliance Appliance_C1
```

synccluster

[About synccluster Command on page 140](#)

[Employing this Command through the CLI on page 140](#)

About synccluster Command

Description

Use this command to trigger a synchronization between joined VDP appliances. All of the shared data between the appliances is resynchronized. The command triggers the sync from the master so that all joined appliances will be synced regardless of whether a slave or the master initiates the command.

Rights

You must have the 'System Manage' right to synchronize the persistent data between VDP appliances.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP appliance to execute this command. Use the udsinfo lscluster command to retrieve the VDP appliance name or ID to help you identify the correct appliance to include in the -appliance argument. <i>Note: AGM only.</i>

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- synccluster -----><
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udstask synccluster -appliance Appliance_C1
```

lscluster

[About lscluster Command on page 141](#)

[Employing this Command through the CLI on page 142](#)

About lscluster Command

Description

Use this command to retrieve details of an appliance. There is only one VDP appliance that describes the local appliance with the name 'thisisme'. All other appliances are added or joined from remote appliances. Use the **udstask addcluster** or **udstask joincluster** command to add an appliance to an existing appliance.

Rights

You must have the 'System View' or 'System Manage' right to retrieve details of an appliance.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target appliance to retrieve all objects in a list view. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. <hr/> Note: AGM only. <hr/>
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim : on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.

Parameter	Description
-filtervalue <i>attrib=value</i>	<p>Optional. Specifies that you want your report to display any or the entire list of valid filter attributes. The valid filter attributes for the udsinfo lscluster command are:</p> <ul style="list-style-type: none"> • clusterid • bandwidth • dedupid • defaultdiskpool • description • ipaddress • masterid • name • streamsnapbw • thisisme <p>The filter is formed with an attribute and a value. When specifying more than one filter, the filters must be combined with the '&' character (which needs to be escaped with '\'). For string type of filters, the only operator allowed is '='. You can also use wild card character '*'. For example, to list all appliances with a name that begins with 'foo', use '-filtervalue lscluster=foo*'.</p>
-nohdr	<p>Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.</p>
<i>object_id</i> <i>object_name</i>	<p>Optional. Specifies the name or ID of an object. When you use this parameter, a detailed view of the object is returned and any value specified by the -filtervalue parameter is ignored. If you do not specify the <i>object_id</i> or the <i>object_name</i>, a concise view of all objects matching the filter criteria is displayed.</p>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lscluster -- ----->
>--+-----+----->
+  '- -appliance -- appliance -'
>--+-----+-- +--+----->
+  '- -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+-- +--+-----<
+  '- -delim -- delimiter -'      +- object_id ---+
                                   '- object_name -'
```

CLI Example

\$ udsinfo lscluster

```
id vcenter bwschedule location dedupid   clusterid defaultdiskpool ipaddress   datastore
bandwidth description name  thisisme esxhost  masterid readyvm override disabled      props
operativeip
11  true                126 590023229566 act_per_pool000 192.168.17.151      0
longoffcluster true                590023229566 false  false  false      sharing 192.168.17.151
155225      true                124 590044201084 act_per_pool000 192.168.17.140
0          midoncluster  false                590023229566 false  false  false      sharing
192.168.17.140
```


chcluster

[About chcluster Command on page 144](#)

[Employing this Command through the CLI on page 145](#)

About chcluster Command

Description

Use this command to change the properties of an appliance.

Rights

You must have the 'System Manage' right to modify the attributes of an appliance.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. Note: AGM only.
-bandwidth <i>bandwidth</i>	Optional. Specifies out-going bandwidth limit used by dedup for the appliance, in Mb/s. Enter 0 to indicate unlimited bandwidth.
-bwschedule <i>true false</i>	Optional. Specifies whether bandwidth schedule for the appliance should be enabled. Setting this to false will suspend the bandwidth schedule for the appliance.
-datastore <i>datastore</i>	Optional. Specifies data store to be used when replicating VM to a data store during dedup-async operation. This applies to Virtual Machine replication if -readyvm is true. For multiple datastores, use a comma ',' to separate them, if a data store has a comma ',' or backslash '\' in its name, it needs to be escaped with '\\.
-defaultdiskpool <i>diskpool</i>	Optional. Specifies the default disk pool name for the specified appliance. This is the pool to be used for remote target (such as dedup-async) appliance.
-description <i>desc</i>	Optional. Specifies the description of the appliance.
-esxhost <i>esx</i>	Optional. Specifies ESX host to be used when replicating VM to a data store during dedup-async operation. This applies to VM replication if readyvm is true.
-location <i>loc</i>	Optional. Specifies the location of the appliance.
-operativeip <i>ip</i>	Optional. Specifies the IP address for communication with remote VDP appliance, typically the same as IP address.


```

'- -datastore -- ds -'      '- -description -- desc -'
>---+-----+-----+-----+----->
'- -defaultdiskpool -- pool -'      '- -esxhost -- esx -'
>---+-----+-----+-----+----->
'- -ipaddress -- ip -'      '- -operativeip -- ip -'
>---+-----+-----+-----+----->
'- -location -- loc -'      '- -readyvm ---+ true ---+ -'
                                '- false -'
>---+-----+-----+-----+----->
'- -streamsnapbw -- bandwidth -'
>---+-----+-----+-----+----->
'- -timezone -- timezone -'      '- -name -- cluster_name -'

>---+-----+-----+-----+----->
'- -vcenter -- vcenter -'      '- cluster_id ---'

```

CLI Examples

```
$ udstask chcluster -bandwidth 2 cluster1
```

For AGM:

```
$ udstask chcluster -description "new description" Appliance_C1
```

For target cluster:

```
$ udstask chcluster -bandwidth 2 -appliance cluster1 Appliance_C2
```

chappcluster

[About chappcluster Command on page 147](#)

[Employing this Command through the CLI on page 147](#)

About chappcluster Command

Description

Use this command to change the property of an application-to-node mapping.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	-
AGM	-

Rights

You must have 'Application Manage' or 'Host Manage' right to change the property of an application to node mapping.

Parameters

Parameter	Description
-noprotection <i>true false</i>	Optional. Specifies whether the node is used for protection for this application.
-ordering <i>mapping_id</i>	Optional. Specifies order of protection. Required. Specifies the ID of the application mapping to be changed. Use udsinfo lsappgroup to locate the ID.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- chappcluster -- --+-----+---->
                                     '- -ordering -- order -'
>--+-----+-----+ -- mapping_id -----><
    '- -noprotection --+- true --+-'
                        '- false -'
```

CLI Example

```
$ udstask chappcluster -ordering 1 4111
```

lsappcluster

[About lsappcluster Command on page 148](#)

[Employing this Command through the CLI on page 149](#)

About lsappcluster Command

Description

Use this command to retrieve details of application-to-node mappings.

Parameters

Parameter	Description
-appliance <i>appliance</i>	<p>Required. Specifies the name or ID of the target appliance to retrieve all objects in a list view. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.</p> <hr/> <p>Note: AGM only.</p>
-delim <i>delimiter</i>	<p>Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim : on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.</p>
-filtervalue <i>attrib=value</i>	<p>Optional. Specifies that you want your report to display any or all of the list of valid filter attributes. The valid filter attributes for the udsinfo lsappcluster command are:</p> <ul style="list-style-type: none">• nodeid• appid <p>The filter will be formed with an attribute and a value. When specifying more than one filter, the filters must be combined with '&' character(which needs to be escaped with '\').</p>
-nohdr	<p>Optional. By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed style view. The -nohdr parameter suppresses the display of these headings. If there is no data to be displayed, headings are not displayed.</p>
<i>object_id</i>	<p>Optional. Specifies the ID of an object. When you use this parameter, the detailed view of the specific object is returned and any value that is specified by the -filtervalue parameter is ignored. If you do not specify the <i>object_id</i>, the concise view of all objects matching the filter criteria is displayed.</p>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsappcluster -- ----->
>--+-----+----->
>  - -appliance -- appliance -'
>--+-----+-----+-----+----->
>  '- -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+-----+-----+-----><
>  '- -delim -- delimiter -'      '- object_id ---'
```

CLI Example

\$ udsinfo lsappcluster

id	noprotection	ordering	active	appid	nodeid
282227	false		0 false	282226	282204
282228	false		0 true	282226	282208

lsclustermember

[About lsclustermember Command](#) on page 150

[Employing this Command through the CLI](#) on page 151

About lsclustermember Command

Description

Use this command to retrieve details of a concise list of node to appliance mappings, or a detailed view of node to appliance mapping.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Manager	-

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-filtervalue <i>attrib=value</i>	Optional. Specifies that you want your report to display any or all of the valid filter attributes. The valid filter attributes for the udsinfo lsappcluster command are: <ul style="list-style-type: none">• nodeid• appid The filter will be formed with an attribute and a value. When specifying more than one filter, the filters must be combined with '&' character (which needs to be escaped with '\').
-nohdr	Optional. By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed style view. The -nohdr parameter suppresses the display of these headings. If there is no data to be displayed, headings are not displayed.

Parameter	Description
<i>object_id</i>	Optional. Specifies the ID of an object. When you use this parameter, the detailed view of the specific object is returned and any value that is specified by the -filtervalue parameter is ignored. If you do not specify the <i>object_id</i> , the concise view of all objects matching the filter criteria is displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsclustermember -- ----->
>--+-----+-- --+--+----->
  '- -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+-- --+--+-----><
  '- -delim -- delimiter -'              '- object_id ---'
```

CLI Example

```
$ udsinfo lsclustermember
id clusterid nodeid
116737      111616  4139
116738      111616 103462
```

rmappcluster

[About rmappcluster Command on page 152](#)

[Employing this Command through the CLI on page 152](#)

About rmappcluster Command

Description

Use this command to remove an application-to-node mapping. Use **udsinfo lsappcluster** to locate the ID of the mapping.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Manager	-

Rights

You must have 'Application Manage' or 'System Manage' right to remove an application-to-node mapping.

Parameters

Parameter	Description
<i>mapping_id</i>	Required. Specifies the ID of the application to node mapping to be removed. Use udsinfo lsappgroup to locate the ID.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmappcluster -- -- mapping_id -----><
```

CLI Example

```
$ udstask rmappcluster 4111
```


rmclustermember

[About rmclustermember Command](#) on page 153

[Employing this Command through the CLI](#) on page 153

About rmclustermember Command

Description

Use this command to remove a node from an appliance. Use `udsinfo lsclustermember` to locate the ID of the node to appliance mapping.

Rights

You must have 'System Manage' right to remove a node from an appliance.

Parameters

Parameter	Description
<i>member_id</i>	Required. Specifies the ID of the node to appliance mapping to be removed.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmclustermember -- -- member_id -----><
```

CLI Example

```
$ udstask rmclustermember 4111
```

rmcluster

[About rmcluster Command on page 154](#)
[Employing this Command through the CLI on page 154](#)

About rmcluster Command

Description

Use the **rmcluster** command to delete an appliance. Use the **udsinfo lscluster** command to retrieve the ID or name of the appliance. You cannot delete a appliance when the appliance is a member of an SLP unless the -force flag is set. When a appliance is removed, the corresponding certificate for that appliance is also removed. In addition, an attempt is made to remove the entry for this appliance from the other appliance. An explicit **udstask rmcluster** must be performed on the other appliance to completely dissolve the two appliances.

Rights

You must have the 'System Manage' right to delete a VDP appliance.

Parameters

Parameter	Description
-cluster <i>cluster_id cluster_name</i>	Optional. Specifies the name or ID of the target VDP appliance to run the rmcluster command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -cluster argument. <i>Note: AGM only.</i>
-force <i>force</i>	Optional. When set, this removes an appliance even if the appliance is used in an SLP.
<i>cluster_id cluster_name</i>	Required. Specifies the ID or name of the appliance to be removed. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to remove. <i>If you include the -cluster option, the cluster_name or cluster_ID is for the appliance. Otherwise, the cluster_name or cluster_ID is the AGM displayed ID or name.</i>

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmcluster -- --+-----+----->
                                     '- -force -'
>--+-----+----->
  '- -cluster +- cluster_name +-
                    '- cluster_id -'
>--+ cluster_id ---+-----><
  '- cluster_name -'
```

CLI Examples

```
$ udstask rmcluster Appliance_C1
```

Remove an appliance from AGM:

```
$ udstask rmcluster Appliance_C1
```

Remove a joined appliance from a target appliance

```
$ udstask rmcluster -cluster Appliance_C1
```

Job Commands

lsjob

[About lsjob Command](#) on page 156

[Employing this Command through the CLI](#) on page 158

About lsjob Command

Description

Use this command to retrieve a concise list of jobs, or a detailed view of a job.

Rights

For SSH you only require CLI access. For Actifio Desktop and AGM you only require access to the System Monitor. You can only view jobs for applications that in your organizations, unless you are in the ALL Org.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target VDP appliance to retrieve all objects in a list view. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. <hr/> Note: AGM only. <hr/>
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.
<i>object_id object_name</i>	Optional. Specifies the name or ID of an object. When you use this parameter, a detailed view of the object is returned and any value specified by the -filtervalue parameter is ignored. If you do not specify the <i>object_id</i> or the <i>object_name</i> , a concise view of all objects matching the filter criteria is displayed.

Parameter	Description
-filtervalue <i>attrib=value</i>	<p>Optional. Specifies that you want your report to display any or the entire list of valid filter attributes. The valid filter attributes for the <code>udsinfo lsjob</code> command are:</p> <ul style="list-style-type: none"> • appid • appname • component • enddate • errorcode • expirationdate • hostname • immutabilitydate • isscheduled [true false] • jobclass [snapshot dedup expiration gc mount unmount clone restore delete syncback unmount-delete remote-dedup remote-restore remote-clone remote-mount logreplicate createliveclone refreshliveclone failover failovertest deletetest failback directdedup seedin seedout verification rollbackliveclone OnVault StreamSnap LogReplicate reprovision] • jobname • jobtag • parentid • policyname • priority • progress • date • relativesize • retrycount • sltname • startdate • status [running queued paused interrupted stalled] • sourceid • virtualsize <p>When you specify more than one filter, they must be combined with '&' character(which should be escaped with '\'). For string type of filters, the only operator allowed is '='. You can also use wild card character '*'. For example, to list all jobs with a job name that begins with 'Job_0001', use '-filtervalue jobname=Job_0001*'.</p> <p>Some filters allow only predefined constants. For example, status allows only running, queued, paused, interrupted, or stalled. To match job status that is running, used '-filtervalue status=running'.</p> <p>For number and date types, allowed operators are: =, >, >=, <, <=. These must be escaped with '\' or enclosed in '"' or "'", as required by the shell. For example,</p> <pre>-filtervalueerrorcode\>0 -filtervalue "errorcode>0" -filtervalue'errorcode>0'</pre> <p>The expirationdate, date, startdate, and enddate parameters can also use these operators. For example:</p> <pre>-filtervalue 'startdate>2010-09-28' -filtervalue 'expirationdate>2010-09-28 6:50:00'</pre> <p>Note that a job may have sub-jobs. To filter out sub-jobs, it is common to use "- filtervalue parentid=0" to list the top level jobs.</p>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsjob -- ----->
>--+-----+----->
>  '- -appliance -- appliance -'
>--+-----+-----+-----+----->
>  '- -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+-----+-----+-----><
>  '- -delim -- delimiter -'              +- object_id ---+
                                           '- object_name -'
```

CLI Example

```
$ udsinfo lsjob -delim = 13133
id=13133
progress=26
virtualsize=100
queuedate=2010-08-12 10:40:51.918
jobname=Job_0013133
expirationdate=2010-08-12 11:40:51.918
parentid=0
policyname=editpolicy
jobcount=0
component=udp
description=
changerequest=IGNORE
priority=5
isscheduled=true
jobclass=snapshot
status=running
relativesize=100
hostname=chandnichowk
pid=5093
retrycount=0
startdate=2010-08-12 10:40:51.918
sltname=editslt
appname=M:\
sourceid=
errorcode=0
enddate=
```

lsjobhistory

[About lsjobhistory Command on page 159](#)

[Employing this Command through the CLI on page 161](#)

About lsjobhistory Command

Description

Use this command to retrieve a list of jobs details and their details based on a filter or the detailed view of a job.

Rights

For SSH you only require CLI access. For Actifio Desktop and AGM you only require access to the System Monitor. You can only view jobs for applications that in your organizations, unless you are in the ALL Org.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target VDP appliance to retrieve all objects in a list view. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. <hr/> Note: AGM only. <hr/>
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.
<i>object_id object_name</i>	Optional. Specifies the name or ID of an object. When you use this parameter, a detailed view of the object is returned and any value specified by the -filtervalue parameter is ignored. If you do not specify the <i>object_id</i> or the <i>object_name</i> , a concise view of all objects matching the filter criteria is displayed.

Parameter	Description
-filtervalue <i>attrib=value</i>	<p>Optional. Specifies that you want your report to display any or the entire list of valid filter attributes. The valid filter attributes for the <code>udsinfo lsjobhistory</code> command are:</p> <ul style="list-style-type: none"> • <code>appid</code> • <code>appname</code> • <code>enddate</code> [usage: 'enddate since 24 hours' for jobs started since last 24 hours, 'enddate before 7 days' for jobs started older than 7 days] • <code>errorcode</code> • <code>expiration</code> • <code>hostname</code> • <code>immutabilitydate</code> • <code>isscheduled</code> [true false] • <code>isexpired</code> [true false] • <code>jobclass</code>[snapshot dedup expiration gc mount unmount clone restore delete syncback unmount-delete remote-dedup remote-restore remote-clone remote-mount liveclone refreshliveclone failover failovertest deletetest failback directdedup seedin seedout verification rollbackliveclone dedupasync OnVault StreamSnap LogReplicate prep-mount prep-unmount cleanupmirroring filebrowse] • <code>jobname</code> • <code>jobtag</code> • <code>polycname</code> • <code>priority</code> • <code>relativesize</code> • <code>sltname</code> • <code>sourceid</code> • <code>status</code> [succeeded failed canceled succeeded with warning retry notrun] • <code>startdate</code> [usage: 'startdate since 24 hours' for jobs started since last 24 hours, 'startdate before 7 days' for jobs started older than 7 days] <p>The filter is formed with an attribute and a value. When you specify more than one filter, they must be combined with the '&' character (which should be escaped with '\').</p> <p>For string type of filters, the only operator allowed is '='. You can also use the wild card character '*'.</p> <p>For example, to list all jobs with a jobname that begins with 'Job_0001', use '-filtervalue jobname=Job_0001*'.</p> <p>Some filters allow only predefined constants. For example, status allows only running, d, paused, interrupted, or stalled. To match job status that is running, used '-filtervalue status=running'.</p> <p>For number and date types, allowed operators are: =, >, >=, <, <=. To use <, <=, >, or >=, they should be escaped with '\' or enclosed in '"' or "'", as required by the shell:</p> <pre>-filtervalueerrorcode\>0 -filtervalue"errorcode>0" -filtervalue'errorcode>0'</pre> <p>The expirationdate, date, startdate, and enddate parameters can also use these operators. For example:</p> <pre>-filtervaluestartdate\>"2010-01-01 00:00:00" -filtervaluestartdate\>2010-01-01</pre>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsjobhistory -- ----->
>--+-----+--+-----+--+-----+--+----->
' - -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+--+-----+--+-----+--+-----><
' - -delim -- delimiter -'              +- object_id ---+
                                         '- object_name -'
```

CLI Examples

```
$ udsinfo lsjobhistory -delim : 4487
```

```
id 4487
virtualsize 100
jobclass expiration
jobname Job_0004485
status succeeded
expiration 2010-09-17 16:11:14.000
isexpired true
hostname tuvok
policyname Policy2
message Success
startdate 2010-09-17 16:11:15.126
sltname Stemplate1
priority 1
appname E:\
isscheduled true
errorcode 0
enddate 2010-09-17 16:11:15.808
sourceid Image_0004130
duration 0:0:0
```

```
$ udsinfo lsjobhistory -filtervalue 'startdate since 24 hours'
```

id	jobname	startdate	enddate	duration	hostname	appname	jobclass	status	expiration
4487	Job_0004485	2010-09-17 16:11:15.126	2010-09-17 16:11:15.808	0:0:0	tuvok	E:\	expiration	succeeded	2010-09-17 16:11:14.0
4488	Job_0004486	2010-09-17 16:11:15.41	2010-09-17 16:11:16.247	0:0:0	tuvok	E:\	expiration	succeeded	2010-09-17 16:11:13.952
4491	Job_0004489	2010-09-17 16:11:36.111	2010-09-17 16:11:36.779	0:0:0	paris	F:\	expiration	succeeded	2010-09-17 16:11:35.0
4492	Job_0004490	2010-09-17 16:11:36.391	2010-09-17 16:11:37.235	0:0:0	paris	F:\	expiration	succeeded	2010-09-17 16:11:34.448

```
$ udsinfo lsjobhistory -filtervalue jobclass=reprovision
```

lsjobwarnings

[About lsjobwarnings Command on page 162](#)

[Employing this Command through the CLI on page 161](#)

About lsjobwarnings Command

Description

Use this command to retrieve details of warnings for jobs with a status of “succeeded with warnings”. If the image created by the job has been removed, the list of warnings will no longer be available. If a job has no warnings, the command will return an empty list of warnings.

Rights

There are no specific rights associated with this operation. User with 'administrator' role can retrieve the list of job warnings.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.
<i>object_id</i> <i>object_name</i>	Optional. Specifies the name or ID of an object. When you use this parameter, a detailed view of the object is returned and any value specified by the -filtervalue parameter is ignored. If you do not specify the <i>object_id</i> or the <i>object_name</i> , a concise view of all objects matching the filter criteria is displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsjobwarnings-- ----->

>--+-----+-- --+-----+-- --+-----+--><
  '- -nohdr -'    '- -delim delim -'    +- object_id ---+
                                           +- object_name -+
```

CLI Examples

```
$ udsinfo lsjobwarnings 1234
```

volume	file	reason
v2	/baz	other thing
v2	/xyxy	last thing

v1	/foo	something something
v1	/bar	something else

chjob

[About chjob Command on page 164](#)

[Employing this Command through the CLI on page 164](#)

About chjob Command

Description

Use this command to change the attribute of a running job. Use `udsinfo lsjob` to obtain the ID or name of the job.

Rights

You must have the 'System Manage', or 'Application Manage' or 'Host Manage' right to change the attribute of a job.

Parameters

Parameter	Description
-changerequest <i>pause resume cancel</i>	Optional. Specifies a change request for a job. For VDP appliances, the allowed value is cancel. For AGM, the allowed values are pause, resume, or cancel
-priority <i>low medium high</i>	Optional. Specifies the priority of a job.
<i>job_id job_name</i>	Required. Specifies the ID or name of the job to be modified.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- chjob -- -+-----+-->
                                '- -changerequest --+ cancel --+
>--+-----+-- --+ job_name -+-----><
  '- -priority --+ low ----+   '- job_id ---'
                        +- medium +-
                        '- high ---'
>>- udstask -- -- chjob -- -+-----+-->
                                '- -changerequest --+ pause --+
                                                +- resume +-
                                                '- cancel -'
>--+-----+-- --+ job_name -+-----><
  '- -priority --+ low ----+   '- job_id ---'
                        +- medium +-
                        '- high ---'
```

CLI Example

```
$ udstask chjob -changerequest cancel Job_0001045
```

Schedule Commands

setschedule

[About setschedule Command on page 165](#)

[Employing this Command through the CLI on page 166](#)

About setschedule Command

Description

Use this command to change/create various administrative schedule for appliance maintenance.

Rights

You must have the 'System Manage' right to configure a schedule.

Parameters

Parameter	Description
-day <i>day</i>	Optional. Specifies the day of the frequency, 0- based. For weekly frequency, 0 indicates Sunday, and 1 is Monday, etc. For monthly, 0 is first day of the month, and 1 is 2nd day of the month. This is ignored for SLA analysis.
-frequency <i>daily weekly monthly</i>	Optional. Specifies the frequency of the schedule. This is ignored for SLA analysis.
-name <i>archive autodiscovery storagestatus</i>	Required. Specifies the name of the schedule. <i>VDP only</i> .
-name <i>archive autodiscovery gc slaAnalysis storagestatus</i>	Required. Specifies the name of the schedule. Use udstask setgcschedule to set GC schedule, this is kept for backward compatibility. Note: <i>AGM only.</i>
-op <i>now delete</i>	Optional. Specifies operation for the schedule. Specifying <i>now</i> for the operation, results in the schedule being run immediately. This is ignored for SLA analysis.
-repeatinterval <i>interval</i>	Optional. Specifies the repeat interval of the schedule, default to 1, which means every week or every month, depending on the frequency. This is ignored for SLA analysis.
-time <i>time</i>	Optional. Specifies the time of the schedule.

Parameter	Description
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP appliance to execute this command. Use the <code>udsinfo lscluster</code> command to retrieve the appliance name or ID to help you identify the correct appliance to include in the <code>-appliance</code> arguments.
	Note: AGM only.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- setschedule -- -- -name --+- archive -----+>
                                         +- autodiscovery +-
                                         +- gc -----+
                                         +- storagestatus -'
>--+-----+--+-----+----->
  '- -day -- day -'      '- -frequency --+- daily ---+-- -'
                               +- weekly --+
                               '- monthly -'
>--+-----+--+-----+----->
  '- -op --+- now ----+      '- -repeatinterval -- interval -'
                        '- delete -'
>--+-----+-----><
  '- -time -- time -'
>-- -appliance -- appliance -----><
```

CLI Example

```
## Runs autodiscovery each week at Sunday 1:00 AM
$ udstask setschedule -name autodiscovery -frequency weekly -time '01:00' -day 0
## Runs GC each week at Sunday 1:00 AM
$ udstask setschedule -name gc -frequency weekly -time '01:00' -day 0 -appliance Appliance_C1
```

getschedule

[About getschedule Command on page 167](#)

[Employing this Command through the CLI on page 167](#)

About getschedule Command

Description

Use this command to display a schedule.

Rights

You must have the 'System View' or 'System Manage' right to view the schedule.

Parameters

Parameter	Description
-delim delimiter	Optional. Specifies the delimiter to be used when displaying the results. The default delimiter is a space (' ').
-name archive autodiscovery storagestatus	Required. Specifies the name of the schedule to display. <i>VDP appliances only.</i>
-name archive gc slaAnalysis storagestatus	Required. Specifies the name of the schedule. The support for <i>gc</i> schedule is for backward compatibility. Use the getgcschedule command to view the garbage collection schedules. Note: AGM only.
-appliance appliance	Required. Specifies the name or ID of the target VDP appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. Note: AGM only.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- getschedule -- --+-----+---->
                                   '- -delim -- delimiter -'
>-- -name --+ archive -----+-----><
           '- autodiscovery ---'
           '- storagestatus ---'
>-- -name --+ archive -----+-----><
           '- gc -----'
           '- slaAnalysis ---'
           '- storagestatus -'
```

```
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udsinfo getschedule -name archive -appliance Appliance_C1  
frequency weekly  
repeatinterval 2  
day 3  
time 02:00
```


setgcschedule

[About setgcschedule Command on page 169](#)

[Employing this Command through the CLI on page 170](#)

About setgcschedule Command

Description

Use this command to create, modify, or run a garbage collection schedule. There are four types of garbage collection tasks:

- **gc**: Performs full GC mark to mark unreferenced objects so the space can be reclaimed during the sweep phase.
- **sweep**: Performs a full GC sweep to reclaim space marked in the gc phase.
- **igc**: *Incremental GC has been deprecated. Due to GC performance improvements, it is no longer needed.*
- **isweep**: *Incremental GC has been deprecated. It is no longer needed.*

If a sweep schedule is not set up, a sweep is performed at the end of the corresponding gc phase.

Rights

You must have the 'System Manage' right to configure the garbage collection schedule.

Parameters

Parameter	Description
-day <i>day</i>	Optional. Specifies the day of the frequency. For weekly frequency, 0 indicates that the schedule should run on Sunday, 1 indicates Monday, and so on. For monthly frequency, 0 indicates that the schedule should run on the first day of a month, and 1 indicates the second day of the month, and so on.
-duration <i>min</i>	Optional. Specifies the duration (in minutes), for the sweep or isweep phase. The phase runs as long as necessary if duration is not specified.
-frequency <i>daily weekly monthly</i>	Optional. Specifies the frequency of the schedule.
-op <i>now delete</i>	Optional. Specifies whether the operation should run immediately or delete the schedule type. <ul style="list-style-type: none">• now: runs scheduled operation right away, using saved options• delete: deletes specified schedule type, for VDP appliances gc cannot be deleted
-repeatinterval <i>num</i>	Optional. Specifies the repeat interval of the schedule (default of 1), which means every week or every month depending on the schedule frequency.
-time <i>hh:mm</i>	Optional. Specifies the time of the schedule, in 24- hour format.
-type <i>gc sweep</i>	Required. Specifies the type of the GC schedule to be created or modified.

Parameter	Description
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP appliance to execute this command. Use the <code>udsinfo lscluster</code> command to retrieve the appliance name or ID to help you identify the correct appliance to include in the <code>-appliance</code> argument. <i>Note: AGM only.</i>

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- setgcschedule -- -+-----+-- ----->
                                     +- -day -- day +-
>--+-----+-- --+-----+-->
  '- -duration -- min -'      '- -frequency --+ daily ---+-'
                                     '- weekly --'
                                     '- monthly -'
>--+-----+-- --+-----+-->
  '- -op --+ now ----+-'      '- -repeatinterval -- num -'
      '- delete-'
>--+-----+-- -- -type --+ gc -----+-----><
  '- -time -- time -'          '- sweep --'
>-- -appliance -- appliance -----><
```

CLI Example

The following example runs a GC each week at Sunday 1:00 AM:

```
$ udstask setgcschedule -type gc -frequency weekly -time '01:00' -day 0 -appliance Appliance_C1
```

getgcschedule

[About getgcschedule Command on page 171](#)

[Employing this Command through the CLI on page 171](#)

About getgcschedule Command

Description

Use this command to display specific garbage collection schedules.

Rights

You must have the 'System View' or 'System Manage' right to view the garbage collection schedule.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. Specifies the delimiter to be used when displaying the results. The default delimiter is a space (' ').
-type <i>gc sweep</i>	Required. Specifies the type of GC schedule.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.
<hr/> Note: AGM only. <hr/>	

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- getgcschedule -- --+-----+-->
                                     '- -delim -- delimiter -'

>-- -type --+ gc -----+-----><
          '- sweep --'
>-- -appliance -- appliance -----><
```

CLI Examples

```
$ udsinfo getgcschedule -type gc -appliance Appliance_C1
frequency weekly
repeatinterval 2
interval 3
time 02:00
```

rmgcschedule

[About rmgcschedule Command](#) on page 172

[Employing this Command through the CLI](#) on page 172

About rmgcschedule Command

Description

Use this command to delete GC schedules. The following GC schedule types can be deleted:

- **sweep**: Performs a full GC sweep to reclaim space marked in the *gc* phase.
- **igc**: *Incremental GC has been deprecated. Due to GC performance improvements, it is no longer needed.*
- **isweep**: *Incremental GC has been deprecated. It is no longer needed.*

Rights

You must have the 'System Manage' right to delete a GC schedule.

Parameters

Parameter	Description
-type <i>sweep</i>	Required. Specifies the type of GC schedule to delete.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. Note: AGM only.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmgcschedule -- -- -type --+- sweep -----><
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udstask rmgcschedule -type sweep -appliance Appliance_C1
```

Other Commands

addssd

[About addssd Command on page 173](#)

[Employing this Command through the CLI on page 173](#)

About addssd Command

Description

Use this command to add SSD devices to the appliance.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Manager	-

Rights

You must have the 'System Manage' right to add SSD devices.

Parameters

Parameter	Description
-component <i>pool_name adhd</i>	Optional. Specifies the pool name or adhd (dedup) to add the SSD device(s) to the Sky appliance. If a component is not specified, the specified devices is designated as an SSD device, which is used for a virtual SSD device that cannot be automatically detected. For the CDS appliance, the SSD device is added to the dedup engine only.
device_list	Required. For the Sky appliance, this is a comma (,) separated list of devices to be added. For the CDS appliance, only one device can be specified.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- addssd -- ----->
>--+-----+-- -- device_list ----->
  '- -component --+ pool_name --+
    +- adhd --
```

CLI Example

```
$ udstask addssd -component act_ded_pool000 pci-0000:03:00.0-scsi-0:0:3:0
```

rmssd

[About rmssd Command on page 174](#)

[Employing this Command through the CLI on page 174](#)

About rmssd Command

Description

Use this command to remove SSD devices from the appliance.

Rights

You must have the 'System Manage' right to remove SSD devices.

Parameters

Parameter	Description
device_list	Required. For the Sky appliance, this is a comma (,) separated list of devices to be removed. For the CDS appliance, only one device can be specified.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmssd -- ----- device_list -----><
```

CLI Example

```
$ udstask rmssd pci-0000:03:00.0-scsi-0:0:3:0
```

setarchiveconfig

[About setarchiveconfig Command on page 175](#)

[Employing this Command through the CLI on page 175](#)

About setarchiveconfig Command

Description

Use this command to configure historical data archive attributes. The appliance archives historical data, job histories, and event (traps) data into archived files. This data that is archived is removed from the persistent storage. These archived files can then be downloaded (through UI) for future references.

Rights

You must have the 'System Manage' right to configure the archiving of historical data.

Parameters

Parameter	Description
-dataage <i>weeks</i>	Optional. Specifies the data age for job history and event data before they are archived. The default value is set to 12 (weeks). Data older than this age is archived to a file and removed from the appliance persistent data storage. Units for the age depends on the 'measure' value.
-retention <i>weeks</i>	Optional. Specifies the retention age for archived job history and event data. The default value is set to 6 (weeks). Archives created older than this age are discarded. Units for the age depends on the 'measure' value.
-measure <i>days weeks</i>	Optional. Specifies the period to store data before it is archived. The default value is weeks.
-filepath <i>path</i>	Optional. Specifies the file path to store the archive files. The default file path is /act/pg/archive
-outputfile <i>file</i>	Optional. Specifies the output file name to store the archived data in. The default name is 'archive'.
-delim <i>delimiter</i>	Optional. By default, all columns of data are separated by a tab in the concise view. In the detailed view, each column of data is displayed in a separate row and if the headers are displayed, the header is separated from the data by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one- byte character. To display the data, recommended delimiter to use is comma (',') for list view, and equal ('=') for detail view.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- setarchiveconfig -- ----->
>--+-----+--+--+-----+--+-----+----->
  '- -dataage -- weeks -'      '- -delim -- delimiter -'
```

```

>--+-----+--+-----+--+>
  '- -filepath -- path -'      '- -measure --+ days --+-- -'
                                '- weeks -'

>--+-----+--+-----+--+><
  '- -outputfile -- file -'    '- -retention -- weeks -'

>-- -appliance -- appliance -----><

```

CLI Example

```

$ udstask setarchiveconfig -dataage 24 -retention 12 -measure weeks -filepath
/act/pg/archive -outputfile archive -delim , -appliance Appliance_C1

```


setparameter

[About setparameter Command on page 177](#)

[Employing this Command through the CLI on page 177](#)

About setparameter Command

Description

Use this command to set a new system parameter value for the VDP appliance. You can set the appliance system parameters listed under [lsaudit](#) on page 180. See [Appendix D, List of Parameters Used With getparameter and setparameter](#) for more information. Prior to changing any system parameters, please consult your customer support representative.

Rights

You must have the 'System Manage' right to set a new parameter value.

Parameters

Parameter	Description
-param <i>param</i>	Required. Specifies the name of the parameter to be set. Use udsinfo getparameter to retrieve the name and range of values for the parameter. setparameter uses the parameters detailed in Appendix D, List of Parameters Used With getparameter and setparameter .
-value <i>value</i>	Required. Specifies the value of the parameter.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. Note: AGM only.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- setparameter -- -- -param -- param ----->
>-- -value -- value -----><
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udstask setparameter -param reservedsnapslots -value 10 -appliance Appliance_C1
```

```
$ udstask setparameter -param slaAnalysis.analysisType -value advanced
```

```
$ udstask setparameter -param sso.saml.idp.metadata -value <metadata content in one line>
```

getparameter

[About getparameter Command on page 178](#)

[Employing this Command through the CLI on page 178](#)

About getparameter Command

Description

Use this command to display the appliance parameters and their values. These system parameters are detailed in [Appendix D, List of Parameters Used With getparameter and setparameter](#).

Note: Prior to changing any system parameters, please consult your customer support representative.

Rights

You must have the 'System Manage' or 'System View' right to view the appliance parameters.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. Specifies the delimiter to be used when displaying the results. The default value is a space (' ') character.
-param <i>param</i>	Optional. Specifies the name of the parameter to retrieve the value. If you do not use this option, it displays all the appliance parameters with their values.
-type <i>backup dedup psrv udppm</i>	Optional. Specifies the type of system parameter.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP appliance to execute this command. Use the <code>udsinfo lscluster</code> command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. <hr/> Note: AGM only. <hr/>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- getparameter -- --+-----+--->
                                     '- -delim -- delimiter -'
>--+-----+-- +-----+-----><
  '- -param -- param -'      '- -type --+ backup +-- -'
                                '- dedup --'
                                '- psrv ---'
                                '- udppm --'

>-- -appliance -- appliance -----><
```

CLI Example

```
$ udsinfo getparameter -delim = -appliance Appliance_C1
```

```
reservedrdedupslots=3
reservedlidedupslots=3
unreservedslots=12
reservedexpirationlots=3
reservedondemandslots=3
reserveddarslots=3
reservedsnapslots=3

udsinfo getparameter -param sso.saml.sp.metadata
```

lsaudit

[About lsaudit Command](#) on page 180

[Employing this Command through the CLI](#) on page 181

About lsaudit Command

Description

Use this command to retrieve a concise list of system audit trail data, or a detailed view of a system audit trail data.

Rights

You must have 'System Manage', or 'System View' rights to be able to retrieve audit trail data.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target VDP appliance to retrieve all objects in a list view. Use the udsinfo lsccluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. <hr/> Note: AGM only. <hr/>
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.

Parameter	Description
-filtervalue <i>attrib=value</i>	<p>Optional. Specifies that you want your report to display any or all of the list of valid filter attributes. The valid filter attributes for the udsinfo lsaudit command are:</p> <ul style="list-style-type: none"> command component ipaddress issuedate [usage: 'issuedate since 24 hours' for audited logs since last 24 hours, 'issuedate before 7 days' for audited logs older than 7 days] status username <p>The filter will be formed with an attribute and a value. When specifying more than one filter, the filters must be combined with '&' character (which needs to be escaped with '\').</p> <p>For string type of filters, the only operator allowed is '='. You can also use the wildcard character '*'. For example, to match disk pools with name begins with 'foo', use '-filtervalue name=foo*'.</p> <p>For numbers and date types, allowed operators are: =, >, >=, <, <=. These must be escaped with '\' or enclosed in ' or ", as required by shell. For example:</p> <ul style="list-style-type: none"> -filtervaluestatus\>0 -filtervalue"status>0" -filtervalue'status>0' <p>Date parameter issuedate can also use these operators, for example,</p> <p>-filtervalue'issuedate>2010-09-28'</p> <p>-filtervalue'issuedate>2010-09-28 6:50:00'</p>
-nohdr	<p>Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.</p>
<i>object_id </i> <i>object_name</i>	<p>Optional. Specifies the name or ID of an object. When you use this parameter, a detailed view of the object is returned and any value specified by the -filtervalue parameter is ignored. If you do not specify the <i>object_id</i> or the <i>object_name</i>, a concise view of all objects matching the filter criteria is displayed.</p>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsaudit -- ----->
>--+-----+----->
  - -appliance -- appliance -'

>--+-----+-- --+-----+-- ----->
  '- -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+-- -- --+-----+-----><
  '- -delim -- delimiter -'      +- object_id ---+
```

'- object_name -'

CLI Example

```
$ udsinfo lsaudit -appliance Appliance_C1
```

```
id username status component issuedate proxy command ipaddress
```

```
4271 admin 0 UI 2012-11-19 05:50:08.738 login admin
```

```
4270 admin 0 udstask 2012-11-19 05:47:29.720 -ipaddress 172.17.4.73 51
```

lsmetricstat

[About lsmetricstat Command on page 183](#)

[Employing this Command through the CLI on page 185](#)

About lsmetricstat Command

Description

Use this command to retrieve a concise list of stats, or a detailed view of stats that are collected for each application or for a group of resources.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Manager	-

Rights

You must have 'System Manage', or 'System View' rights to be able to view details of metric statistics.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.

Parameter	Description
-filtervalue <code>attrib=value</code>	<p>Optional. Specifies that you want your report to display any or all of the list of valid filter attributes. The valid filter attributes for the 'udsinfo lsmetricstat' command are:</p> <ul style="list-style-type: none"> • appid • appname • hostid • hostname • apptype [FileSystem Oracle SQL Microsoft Exchange Writer Microsoft Hyper-V VSS Writer VMBBackup] • jobclass [snapshot StreamSnap OnVault] • stattype [Daily Hourly] • clusterid • poolid • poolname • jobname • metricname [dataingest networkdata dataread vdiskcount totalused] • status [succeeded failed cancelled] • starttime • endtime • stattime • grouptype [application jobclass hostid apptype poolid clusterid] <p>When user specifies more than one filter, they must be combined with '&' character (which needs to be escaped with '\').</p> <p>For string type of filters, the only operator allowed is '='. One can also use wildcard character '*'. For example, to match metric stats with jobname begins with 'Job_0001', use '-filtervalue jobname=Job_0001*'. </p> <p>Some filters allow only predefined constants. For example, stattype allows only Daily or Hourly stats, to match metrics with stattype "Daily" use '-filtervalue status=Daily'.</p> <p>For number and date types, allowed operators are: =, >, >=, <, <=. To use <, <=, >, or >=, they need to be escaped with '\ ' or enclosed in ' ' or ", as required by shell. For example: -filtervalue appid\>0</p> <p>-filtervalue "appid>0"</p> <p>-filtervalue 'appid>0'</p> <p>Date parameters startdate, enddate and expiration can also use these operators, for example,</p> <p>-filtervalue starttime\>"2010-01-01 00:00:00"</p> <ul style="list-style-type: none"> • -filtervalue starttime\>2010-01-0'
-nohdr	<p>Optional. By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed style view. The -nohdr parameter suppresses the display of these headings.</p> <hr/> <p>Note: If there is no data to be displayed, headings are not displayed.</p> <hr/>

Parameter	Description
<i>object_id</i>	Optional. Specifies the name or ID of an object. When you use this parameter, the detailed view of the specific object is returned and any value that is specified by the -filtervalue parameter is ignored. If you do not specify the object_id object_name , the concise view of all objects matching the filter criteria is displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsmetricstat -- ----->
>--+-----+-- --+-----+-- ----->
>  '- -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+-- --+-----+-----><
>  '- -delim -- delimiter -'              +- object_id ----+
```

CLI Example

```
$ udsinfo lsmetricstat -delim : 97299
```

```
poolname:act_per_pool000
apptype:
hostid:96387
endtime:2016-08-04 06:52:58.222
clusterid:0
starttime:2016-08-03 06:52:58.222
jobclass:unknown
metricvalue:1
hostname:rkvm-01
groupype:application
appname:rkvm-01
appid:96388
stattype:Daily
poolid:73
stattime:2016-08-04 06:52:58.241
id:97299
metricname:vdiskcount
jobname:
valueunit:Number
```

```
$ udsinfo lsmetricstat -filtervalue groupype=application
```

```
      id clusterid appid hostid hostname      appname apptype      jobclass poolid poolname
jobname  metricname metricvalue valueunit stattype starttime                      endtime
stattime
      groupype
97299      0 96388 96387 rkvm-01      rkvm-01      unknown      73 act_per_poolsakha
vdiskcount      1 Number      Daily 2016-08-03 06:52:58.222      2016-08-04 06:52:58.222
2016-08-04 06:52:58.241      application
97300      0 96388 96387 rkvm-01      rkvm-01      unknown      73 act_per_poolsakha
totalused      8192 Bytes      Daily 2016-08-03 06:52:58.222      2016-08-04 06:52:58.222
2016-08-04 06:52:58.251      application
97302      0 59798 59516 inband      C:\      unknown      73 act_per_poolsakha
vdiskcount      1 Number      Daily 2016-08-03 06:52:58.222      2016-08-04 06:52:58.222
2016-08-04 06:52:58.269      application
```

```

97303      0 59798 59516 inband      C:\      unknown  73 act_per_poolsakha
totalused      8192 Bytes      Daily 2016-08-03 06:52:58.222      2016-08-04 06:52:58.222
2016-08-04 06:52:58.272      application
97305      0 7258 7224 ravi-rhel66-2 /      unknown  73 act_per_poolsakha
vdiskcount      1 Number      Daily 2016-08-03 06:52:58.222      2016-08-04 06:52:58.222
2016-08-04 06:52:58.299      application
97306      0 7258 7224 ravi-rhel66-2 /      unknown  73 act_per_poolsakha
totalused      8192 Bytes      Daily 2016-08-03 06:52:58.222      2016-08-04 06:52:58.222
2016-08-04 06:52:58.310      application
97312      0 7258 7224 ravi-rhel66-2 /      FileSystem unknown  0
DataIngest      10468289 Bytes      Daily 2016-08-03 00:00:00.000      2016-08-03 23:59:59.000
2016-08-04 06:52:58.471      application
97313      0 59798 59516 inband      C:\      FileSystem unknown  0
DataIngest      136571984 Bytes      Daily 2016-08-03 00:00:00.000      2016-08-03 23:59:59.000
2016-08-04 06:52:58.479      application

```

runpreflight

[About runpreflight Command on page 187](#)

[Employing this Command through the CLI on page 187](#)

About runpreflight Command

Description

Use this command to run **preflight** to look for updates that are available for installation on the appliance. This command also checks if the system is in a good state to apply the available update.

Rights

User must have 'administrator' role and privileges.

Parameters

Parameter	Description
-name <i>name of update</i>	Required. Specifies the name of the update to run the preflight check.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- runpreflight -- -----><
>--+-----+-----><
  '- -name --+----- name of update -----+
```

CLI Example

```
$ udstask runpreflight -name hf-CDS7.1.0.123344
```

lssystemdetail

[About lssystemdetail Command on page 188](#)

[Employing this Command through the CLI on page 189](#)

About lssystemdetail Command

Description

Use this command to view the default data in source image and know the parameters required to construct key-value pairs in "systemprops" argument of `mountimage`, for doing the systemstate recovery in a cloud.

Rights

User must have 'administrator' role and privileges.

Parameters

Parameter	Description
-cloudtype <i>cloud_type</i>	Required. To get the parameters needed for systemstate recovery in the required cloud.
-image <i>imagename</i>	Optional. Based on the imagename/id, get the sourceimage default values like cpu, memory and ostype, and show them under default header of display.
-structure <i>structure</i>	Optional. To fetch the subproperties of a structure.
-subselect	<p>Optional. Name for the subselect type. This property is related to the selectvalue property. For a selectvalue, return the properties for the subselect.</p> <hr/> <p>Note: subselect property is related to the selectvalue property. For a selected value, there would be a subselect list. If the output contains a value for the subselect property, it indicates that one more call is needed to fetch the subselect list for the selected value.</p> <hr/>
-selectvalue	Optional. Value to be used for the subselect.
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.

Parameter	Description
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lssystemdetail -- -cloudtype --+ cloud_type -- -->
>+-----+-----+-----+-----+-----+-----+-----+-----+
'- -image -- imagename/backup id -'
>+-----+-----+-----+-----+-----+-----+-----+-----+<
'- -delim -- delimiter -' '- -nohdr -'
>+-----+-----+-----+-----+-----+-----+-----+-----+>
'- -structure -- structure -'
```

CLI Example

```
$ udsinfo lssystemdetail -image xxx -cloudtype xxxx
name      type      min required multi value      default      selection
subselect  description
RegionCode string      true      asia-east1,...,      true
zone      GCP regions
                        asia-east
```

In the above response subselect has a value - zone, so we need to execute another command to get the zones corresponding to any of the regions displayed under value column.

```
$ udsinfo lssystemdetail -cloudtype gcp -subselect zone -selectvalue australia-southeast1
```

```
name type      min required multi value      default selection subselect description
Zone string      true      australia-southeast1-a,...,      true      Region Zones
```

Here we pass selectvalue as a region code (australia-southeast1) and subselect as zone in the command and the output contains all the zones (under values column) that belong to this region.

For a Windows image in AWS:

```
$ udsinfo lssystemdetail -image 1234 -cloudtype AWS
name      type      min required multi value      default selection description
Memory    number    1      8      Memory in GB
RegionCode string    true      us-east-1,us-east-2,us-west-1,us-west-2,ca-central-1
true      Amazon region code
SecretKey  string    true      Secret Access Key
CloudType  string    true      AWS,VMware      AWS      true      Cloud type
NICInfo    structure true      true      Amazon NIC Details
CPU        number    1      8      Number of CPU
OSType     string    Windows,Linux,Linux_x86      Windows true      OS type
WithApps   boolean   Recover with all available application backups
AccessKeyID string    true      Access Key ID
BootDiskSize number    10      41      Boot Disk Size in GB
NetworkId  string    true      Network ID from Amazon
```

For a Linux image in AWS:

```
$ udsinfo lssystemdetail -image SKY8.0_Image_1214697 -cloudtype AWS
name      type      min required multi value      default selection description
Memory    number    1                                8                                Memory in GB
RegionCode string      true      us-east-1,us-east-2,us-west-1,us-west-2,ca-central-1
true      Amazon region code
SecretKey  string      true                                Secret Access Key
CloudType  string      true      AWS,VMware      AWS      true      Cloud type
NICInfo    structure   true      true                                Amazon NIC Details
CPU        number    1                                8                                Number of CPU
OSType     string                                Windows,Linux,Linux_x86 Windows true      OS type
WithApps   boolean                                Recover with all available application backups
AccessKeyID string      true                                Access Key ID
BootDiskSize number    10                                41                                Boot Disk Size in GB
NetworkId  string      true                                Network ID from Amazon
```

To get subproperties of a structure in AWS for an image:

```
$ udsinfo lssystemdetail -image SKY8.0_Image_1214697 -cloudtype AWS -structure NICInfo
name      type      min required multi value      default selection description
SubnetId   string      true                                Subnet ID from Amazon
SecurityGroupId string      true      true                                SecurityGroup ID from Amazon
```

lssystemimages

[About lssystemimages Command on page 191](#)

[Employing this Command through the CLI on page 191](#)

About lssystemimages Command

Description

Use this command to retrieve the images required for SystemstateRecovery. The lssystemimages command returns the default source image value for performing the systemstate recovery in a cloud.

Rights

You must have 'System View' right to retrieve the images required for SystemstateRecovery.

Parameters

Parameter	Description
-cloudtype <i>cloud_type</i>	Required. Target cloud type to get the parameters needed for systemstaterecovery, such as AWS, GCP, AZURE.
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur.
-nohdr	Optional. By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed style view. The -nohdr parameter suppresses the display of these headings. Note: If there is no data to be displayed, headings are not displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lssystemimages -- -cloudtype -- cloud_type -- -->
>--+-----+--+-----+----->
  '- -delim -- delimiter -'      '- -nohdr -'
```

CLI Example

Invocation examples for GCP:

```
$udsinfo lssystemimages -cloudtype gcp
otype image                                region
windows actifio-tw-windows-2016--10-0-5--10-0-0-213  all
```

```
linux    aktifio-tw-linux-64--10-0-495--10-0-0-2564    all
```

Invocation examples for AZURE:

```
$udsinfo lssystemimages -cloudtype azure
```

```
ostype image          region
```

```
windows https://md-jxs4rl1znqn4.blob.core.windows.net/hp35zrrd1ddr/abcd?sv=2017-04-17&sr=b&si=62acc867-82c0-4017-adb9-bb119d6da185&sig=Y1fhDfZm4WUoVhW6PHIHcG%2F4XAiznA%3D
```

```
all
```

```
linux    https://md-bwd5pnfd0cqq.blob.core.windows.net/k3tdkk4jffz4r/abcd?sv=2017-04-
```

```
17&sr=b&si=bb8d82dc-317d-450e-b712-de3df66d0b73&sig=Qw00AlpzdZdkIYcTD6KiU%2FIFgvbgh3QDBbcMY%3D
```

```
all
```

Invocation examples for AWS:

```
$udsinfo lssystemimages -cloudtype aws
```

```
ostype image          region
```

```
windows ami-080215d5d5d8bd050 us-east-1
```

```
windows ami-07f28f5r1ec02b272 us-east-2
```

```
linux    ami-00295b586f951d46a us-east-1
```

```
linux    ami-0dbd7ef5b8d4dad73  ap-northeast-1
```


Disk Commands

mkdiskpool

[About mkdiskpool Command on page 193](#)

[Employing this Command through the CLI on page 194](#)

About mkdiskpool Command

Description

Use this command to create a new disk pool object.

Rights

You must have the 'Storage Manage' right to create a new disk pool.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. Note: AGM only.
-ext <i>extent_size</i>	Optional. Specifies the size of the extents for this disk pool in MB. The extent_size parameter must be one of the following values: 16, 32, 64, 128, 256, 512, 1024, or 2048 (MB). If not specified, the default size of 512 MB is used.
-mdisk <i>mdisk_name_list</i>	<i>Required for AGM. Optional.</i> Specifies a colon-separated list of managed disks to add to the disk pool. The mdisks added to the performance pool should be named as 'act_per_mdsknnnn', where nnnn is a 4-digit number. Similarly, the mdisks added to the primary pool should be named as 'act_pri_mdsknnnn', where nnnn is a 4-digit number. Their mdisk name will be renamed if they do not follow this convention. Once added to the pool, they cannot be removed from the pool. Note: To change the name of a managed disk, use usvctask chmdisk -name new_name old_name . Use the usvctask addmdisk command to add mdisks to a diskpool.
-name <i>pool_name</i>	Required. Specifies the name for the disk pool.
-org <i>org_id org_name</i>	Optional. Specifies a default organization to which the disk pool should be added. To use this option you must have the 'System Manage' right.

Parameter	Description
-properties <i>props</i>	Optional. Specifies properties for vault type of pools, comma (,) separated name value pair. Use the <code>udsinfo lsvaulttype</code> command to view a list of available properties for a specific type of vault pool. For example, <code>-properties "bucket=mybucket,accessId=myid"</code> . Special characters ',' and '=' must be escaped, by repeating the same character. For ("xx,=x") <code>-properties "bucket=mybucket,accessKey=xx,,==x"</code> .
-safepct <i>safepct</i>	Optional. Specifies the safe percentage for the disk pool. When the disk usage exceeds this value, some operations are turned off and attention is required, such as adding more storage to the pool or expiring some backup images. The value should be between 10 and 99%.
-type <i>perf vault</i>	Required. Specifies the type of pool (performance/ primary/vault) to create. <ul style="list-style-type: none"> perf - the performance pool is used to store snapshot images. vault - The vault pool is used for selecting Amazon S3 and Google Cloud Storage. (<i>VDP appliances only</i>)
-warnpct <i>warnpct</i>	Optional. Specifies the warning percentage for the disk pool. The value must be between 10 and 99. The value of <code>-warnpct</code> should be equal to or less than that of <code>-safepct</code> . When the disk usage exceeds this percentage, a warning event is raised. For a dedup disk pool, the warnpct cannot be more than 75%.

Employing this Command through the CLI

CLI Syntax

For VDP appliances:

```
>>> udstask -- -- mkdiskpool -- --+-----+----->
                                     '- -ext -- extent_size -'
---- -name -- pool_name -- --+-----+----->
                                     '- -mdisk -- mdisk_list --'
>--+-----+-----+-----+----->
   '- -org +- org_id ---+-'      '- -properties -- props -'
                                     '- org_name -'
>--+-----+-----+-----+----->
   '- -safepct -- safepct -'      '- -warnpct -- warnpct -'
>--+-- -type +- perf +--+-----+-----><
                                     +- primary +-
                                     '- vault ---'
```

For AGM:

```
>>> udstask -- -- mkdiskpool -- --+-----+----->
                                     '- -ext -- extent_size -'
>-- -appliance -- appliance ----->
>---- -name -- pool_name -- -- -mdisk -- mdisk_name_list ----->
>--+-----+-----+-----+----->
   '- -org +- org_id ---+-'      '- -safepct -- safepct -'
                                     '- org_name -'
>--+-- -type +- perf +--+-----+-----><
```

```
'- primary -'      '- -warnpct -- warnpct -'
```

CLI Example

```
$ udstask mkdiskpool -name pool_mkt -warnpct 70 -type perf -mdisk mdisk1:mdisk2  
-appliance Appliance_C1
```

Isdiskpool

[About Isdiskpool Command on page 196](#)

[Employing this Command through the CLI on page 197](#)

About Isdiskpool Command

Description

Use this command to retrieve the details of disk pools. vDisks reside in a disk pool. VDP maintains three reserved diskpools,: 'act_per_pool000' to store the snapshot backup images, 'act_ded_pool000' to store the dedup images, and 'act_pri_pool000' to store some internal metadata as well as the cloned images.

Each diskpool maintains two thresholds, warnpct and safept. When the diskpool usage exceeds warnpct, more storage can be added, or some obsolete backup images can be expired. When the usage exceeds the safept, relevant backup schedule is turned off immediately. For example, when the safept of act_ded_pool000 is exceeded, dedup schedule is turned off. No more dedup is allowed, until the usage drops below the safept.

For act_ded_pool000, perform a garbage collection to reclaim space in the dedup diskpool with **udstask setschedule -name gc -op now**. Note that warnpct should be less than safept for each diskpool. For 'act_ded_pool000', safept cannot be more than 75%.

Rights

You must have 'Storage View', 'Storage Manage', 'SLA View', 'SLA Assign', or 'SLA Manage' rights to be able to retrieve disk-pool data.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target VDP appliance to retrieve all objects in a list view. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. <i>Note: AGM only.</i>
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.

Parameter	Description
-filtervalue <i>attrib=value</i>	<p>Optional. Specifies that you want your report to display any or the entire list of valid filter attributes. The valid filter attributes for the udsinfo lsdiskpool command are:</p> <ul style="list-style-type: none"> name safepct warnpct <p>The filter is formed with an attribute and a value. When you specify more than one filter, they must be combined with '&' character (which should be escaped with '\'). For string type of filters, the only operator allowed is '='. You can also use wild card character '*'. For example, to match disk pools with name begins with 'foo', use '-filtervalue name=foo*'.</p> <p>For number types, allowed operators are: =, >, >=, <, <=. These must be escaped with '\' or enclosed in ' or ", as required by shell. For example: -filtervalue warnpct\>=80</p> <p>-filtervalue "warnpct>=80"</p> <p>-filtervalue 'warnpct>=80'</p>
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.
<i>object_id </i> <i>object_name</i>	Optional. Specifies the name or ID of an object. When you use this parameter, a detailed view of the object is returned and any value that is specified by the -filtervalue parameter is ignored. If you do not specify the <i>object_id</i> or the <i>object_name</i> , a concise view of all objects matching the filter criteria is displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsdiskpool -- ----->

>--+-----+----->
+  '- -appliance -- appliance -'

>--+-----+--+-----+----->
+  '- -filtervalue -- attrib=value -'      '- -nohdr -'

>--+-----+--+-----+-----><
+  '- -delim -- delimiter -'              +- object_id ---+
+                                         '- object_name -'
```

CLI Example

```
$ udsinfo lsdiskpool -appliance Appliance_C1
id warnpct udsritical name          safepct
71      80 true      act_pri_pool000    90
```

72	80 true	act_ded_pool000	90
73	80 true	act_per_pool000	90

lsvaulttype

[About lsvaulttype Command](#) on page 199

[Employing this Command through the CLI](#) on page 199

About lsvaulttype Command

Description

Use this command to provides a list of available OnVault types or provides detailed information for a specific OnVault type.

Rights

You must have 'System View', 'System Manage', 'Storage View', or 'Storage Manage' rights to view OnVault type information.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.
<i>vaulttypename</i>	Optional. The OnVault type name (Google, Amazon, and so on).

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsvaulttype -- --+-----+-- ->
                                     '- -delim -- delimiter -'
>--+-----+-- --+-----+-----><
   '- -nohdr -'    '- vaulttypename -'
```

CLI Example

```
$ udsinfo lsvaulttype
```

```
name          label
Google        Google Nearline
```

```
$ udsinfo lsvaulttype Google
```

name	type	label	required	default	description
vaulttype			false		
accessKey	file	Private key file in PKCS12 format	true		Private key
accessId	string	Access ID	true		accessId
bucket	string	Bucket	true		bucket
compression	boolean	Compression	false	true	Compression

lsvaultstat

[About lsvaultstat Command on page 200](#)
[Employing this Command through the CLI on page 200](#)

About lsvaultstat Command

Description

Use this command to provide a list of vault pool stats for each application and pool.

Rights

You must have 'System View', 'System Manage' rights to retrieve lsvaultstat data.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.
-hr	(Optional) By default, usages are displayed in bytes, -hr parameter will usage in Kilo/ Mega/Giga bytes format.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsvaultstat -- --+-----+-- ->
>--+-----+-- --+-----+-- ----->
    '- -nohdr -'                '- -hr -
>--+-----+-- -- +-----+-----><
    '- -delim -- delimiter -'
```

CLI Example

```
$ udsinfo lsvaultstat
```


appid	appname	poolid	poolname	used	lastupdated
11470627	W2K8SP2-IOV-2	653240	mioioc	8972646316	2018-11-02 18:01:44.0
11470805	IOV_SQL	653240	mioioc	136952539042	2018-11-02 18:01:51.0
11558596	IOV_FS2	653240	mioioc	189317795766	2018-11-02 18:04:40.0
11559593	IOV-FS3	653240	mioioc	50090521701	2018-11-02 18:06:05.0
11635991	ST-W2K8SP2-IOV-7	653240	mioioc	7431268408	2018-11-02 18:05:55.0
11636002	ST-W2K8SP2-IOV-8	653240	mioioc	2820618337	2018-11-02 18:04:28.0
26081487	ST_Catalog_18	653240	mioioc	14473422436	2018-11-02 18:00:26.0

\$ udsinfo lsvaultstat -hr

appid	appname	poolid	poolname	used	lastupdated
11470805	IOV_SQL	653240	mioioc	127 GB	2018-11-02 18:01:51.0
11558596	IOV_FS2	653240	mioioc	176 GB	2018-11-02 18:04:40.0
11559593	IOV-FS3	653240	mioioc	46 GB	2018-11-02 18:06:05.0
11635991	ST-W2K8SP2-IOV-7	653240	mioioc	6 GB	2018-11-02 18:05:55.0
11636002	ST-W2K8SP2-IOV-8	653240	mioioc	2 GB	2018-11-02 18:04:28.0
26081487	ST_Catalog_18	653240	mioioc	13 GB	2018-11-02 18:00:26.0

chdiskpool

[About chdiskpool Command on page 202](#)

[Employing this Command through the CLI on page 202](#)

About chdiskpool Command

Description

Use this command to change the attributes of a disk pool. Use `udsinfo lsdiskpool` to obtain the ID or name of the disk pool.

When the disk usage exceeds warnpct, a warning event is generated.

When the disk usage exceeds safe_pct, some operations are disabled based on the type of disk pool and an error is raised. For example, when a performance pool's safe percentage is exceeded, access to snapshots is disabled. To change the name of a managed disk, use `svctask chmdisk -name new_name oldname`.

Rights

You must have the 'Storage Manage' right to change the attributes of a disk pool.

Parameters

Parameter	Description
-name <i>pool_name</i>	Optional. Specifies a name for the disk pool.
-safe_pct <i>safe_pct</i>	Optional. Specifies the safe percentage for the disk pool. Disk usage exceeding this value results in some operations getting suspended. Immediate attention is required, such as adding more storage to the pool or expiring some backup images. The value must be between 10 and 100. For dedup pool, the safe_pct is 100 and cannot be modified
-warnpct <i>warnpct</i>	Optional. Specifies warning percentage for the disk pool. The value must be between 10 and 100. The value for -warnpct must be less than or equal to that of -safe_pct .
-properties <i>props</i>	Optional. Specifies properties for vault type of pools, comma (,) separated name value pair. Use <code>lsvaulttype</code> command to view a list of available properties for a specific type of vault pool. For example: -properties "bucket=mybucket,accessId=myid" . Special characters ',' and '=' must be escaped, by repeating the same character. For ("xx,=x") -properties "bucket=mybucket,accessKey=xx,,==x" . (VDP appliances only.)
<i>diskpool_id diskpool_name</i>	Required. Specifies the ID or name of the diskpool to be modified.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- chdiskpool -- +-----+---->
>--+-----+-- +-----+----->
```

```

'- -name -- pool_name -'      '- -safepct -- safepct -'

>--+-----+-- --+- diskpool_name +-----><
'- -warnpct -- warnpct -'      '- diskpool_id ---'
>--+-----+-- --+- -><
'- -properties -- props -'

```

CLI Example

For a CDS appliance:

```

$ udstask chdiskpool -warnpct 60 pool1
$ udstask chdiskpool -warnpct 60 act_ded_pool000

```

For a SkyVDP appliance:

```

$ udstask chdiskpool 72

```

For a CDS appliance:

```

$ udstask chdiskpool -warnpct 60 pool1
$ udstask chdiskpool -warnpct 60 -adddevice mdisk1:mdisk2 act_ded_pool000

```

For a SkyVDP appliance:

```

$ udstask chdiskpool -adddevice sd1 72

```

rmdiskpool

[About rmdiskpool Command on page 204](#)
[Employing this Command through the CLI on page 204](#)

About rmdiskpool Command

Description

Use this command to delete a disk pool.

Rights

You must have the 'Storage Manage' right to delete a disk pool.

Parameters

Parameter	Description
<i>diskpool_id diskpool_name</i>	Required. Specifies the ID or name of the diskpool to be deleted. Use the udsinfo lsdiskpool command to locate the ID or name of the disk pool.
-force	Optional. Forces the removal of an OnVault storage pool, The -force argument applies only to an OnVault pool. (VDP appliances only). An OnVault storage pool cannot be deleted when there are OnVault images referencing the pool unless you specify -force .

Employing this Command through the CLI

CLI Syntax

```
>---+-----+-- --+- diskpool_name -+-----><
    '- -force -'    '- diskpool_id ---'
```

Example

```
$ udstask rmdiskpool diskpool1
```

lsdeduppoolstat

[About lsdeduppoolstat Command](#) on page 205

[Employing this Command through the CLI](#) on page 206

About lsdeduppoolstat Command

Description

Use this command to retrieve statistics of deduppool usage for each protected application. The statistics are collected once a day.

Rights

You must have 'System View' or 'System Manage' rights to be able to retrieve deduppoolstat data.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. <hr/> Note: AGM only. <hr/>
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.

Parameter	Description
-filtervalue <i>attrib=value</i>	<p>Optional. Specifies that you want your report to display any or all of the list of valid filter attributes. The valid filter attributes for the <code>udsinfo lsdeduppoolstat</code> command are:</p> <ul style="list-style-type: none"> • stattime • sourcecluster • appid • hostname • appname • dedupusage • totalappsize • appsize • newsize • dedupsize • compresssize • dedupcount <p>The filter will be formed with an attribute and a value. When specifying more than one filter, the filters must be combined with '&' character (which needs to be escaped with '\').</p> <p>For string type of filters, the only operator allowed is '='. You can also use the wildcard character '*'. For example, to match disk pools with name begins with 'foo', use '-filtervalue name=foo*'. </p> <p>For number types, allowed operators are: =, >, >=, <, <=. These must be escaped with '\ ' or enclosed in ' ' or " ", as required by shell. For example:</p> <pre>-filtervaluededupcount\>=80 -filtervalue"dedupcount>=80" -filtervalue'dedupcount>=80'</pre>
-nohdr	<p>Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The <code>-nohdr</code> parameter suppresses the display of headings. If there is no data to display, headings are not displayed.</p>
<i>object_id</i>	<p>Optional. Specifies the ID of an object. When you use this parameter, a detailed view of the object is returned and any value that is specified by the <code>-filtervalue</code> parameter is ignored. If you do not specify the <i>object_id</i>, a concise view of all objects matching the filter criteria is displayed.</p>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsdeduppoolstat -- ----->
>-- -appliance -- appliance ----->

>--+-----+-- --+-----+-- ----->
  '- -filtervalue -- attrib=value -'      '- -nohdr -'

>--+-----+-- -- --+-----+-----><
  '- -delim -- delimiter -'          +- object_id ----+
```

CLI Example

```
$ udsinfo lsdeduppoolstat -appliance Appliance_C1
```

id	appsize	dedupusage	appid	hostname	dedupcount	dedupsize	compresssize
sourcecluster	appname		newsize	stattime		totalappsize	
14932	21474836480	892615000064	4410	archer2	150	337427021280	336327413456
590027423756	bigdedupapp	335915581440	2013-02-08	03:00:07.250		217026076672	
14933	18351967232	892615000064	4283	haymarket	4	10350106592	10315705632
590021132306	T:\	10239672320	2013-02-08	03:00:07.258		217026076672	
14934	10758666240	892615000064	4359	archer5	80	5033376160	2439031440
590027423756	Archer5	10868031488	2013-02-08	03:00:07.266		217026076672	
14935	53687091200	892615000064	4418	archer2	14	111673676768	111259184032
590027423756	50GB	166265618432	2013-02-08	03:00:07.275		217026076672	
14936	5379333120	892615000064	4357	archer4	80	3102725248	1789986960
590027423756	Archer4	5584125952	2013-02-08	03:00:07.281		217026076672	
14937	107374182400	892615000064	4361	linuxsystem	80	33474176	477600
590027423756	LinuxSystem	107363762176	2013-02-08	03:00:07.291		217026076672	

lsdiskpoolstat

[About lsdiskpoolstat Command on page 208](#)

[Employing this Command through the CLI on page 209](#)

About lsdiskpoolstat Command

Description

Use this command to retrieve statistics of deduppool usage for each protected application. The statistics are collected once a day.

Use this command to retrieve statistics of an appliance's disk pools. The stats shows disk's capacity, used space and free space by pool type. The statistics are collected once a day. To see the details on disk pools use **udsinfo diskpool** command.

Rights

You must have 'System View' or 'System Manage' rights to be able to retrieve diskpoolstat data.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. <hr/> Note: AGM only. <hr/>
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.
<i>object_id</i>	Optional. Specifies the ID of an object. When you use this parameter, a detailed view of the object is returned and any value that is specified by the -filtervalue parameter is ignored. If you do not specify the <i>object_id</i> , a concise view of all objects matching the filter criteria is displayed.

Parameter	Description
-filtervalue <i>attrib=value</i>	<p>Optional. Specifies that you want your report to display any or all of the list of valid filter attributes. The valid filter attributes for the <code>udsinfo lsdiskpoolstat</code> command are:</p> <ul style="list-style-type: none"> • statime • poolname • pooltype • capacity • used <p>The filter will be formed with an attribute and a value. When specifying more than one filter, the filters must be combined with '&' character (which needs to be escaped with '\').</p> <p>For string type of filters, the only operator allowed is '='. You can also use the wildcard character '*'. For example, to match disk pools with names that begin with 'foo', use '-filtervalue name=foo*'. </p> <p>For number types, allowed operators are: =, >, >=, <, <=. These must be escaped with '\ ' or enclosed in ' ' or " ", as required by shell. For example:</p> <ul style="list-style-type: none"> • -filtervaluepooltype\>=1 • -filtervalue"pooltype>=1" • -filtervalue'pooltype>=1'

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsdiskpoolstat -- ----->

>-- -appliance -- appliance ----->

>--+-----+-- --+-----+-- ----->
  '- -filtervalue -- attrib=value -'      '- -nohdr -'

>--+-----+-- --+-----+-----><
  '- -delim -- delimiter -'              +- object_id ----+
```

CLI Example

```
$ udsinfo lsdiskpoolstat -appliance Appliance_C1
id pooltype capacity statime poolname used
14923 1 107374182400 2013-02-08 03:00:00.044 act_pri_pool000 12884901888
14924 2 8796093022208 2013-02-08 03:00:00.044 act_ded_pool000 892615000064
14925 3 1099511627776 2013-02-08 03:00:00.044 act_per_pool000 191126044672
35258 1 107374182400 2013-02-09 03:00:00.058 act_pri_pool000 12884901888
35259 2 8796093022208 2013-02-09 03:00:00.058 act_ded_pool000 1997716652032
35260 3 1099511627776 2013-02-09 03:00:00.058 act_per_pool000 163208757248
```

lssnappoolstat

[About lssnappoolstat Command on page 210](#)

[Employing this Command through the CLI on page 211](#)

About lssnappoolstat Command

Description

Use this command to retrieve statistics of snapshotpool usage for each protected application in the appliance. The statistics are collected once a day.

Rights

You must have 'System View' or 'System Manage' rights to be able to retrieve snappoolstat data.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lsccluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. <i>Note: AGM only.</i>
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.

Parameter	Description
<i>object_id</i> <i>object_name</i>	Optional. Specifies the name or ID of an object. When you use this parameter, a detailed view of the object is returned and any value that is specified by the -filtervalue parameter is ignored. If you do not specify the <i>object_id</i> or the <i>object_name</i> , a concise view of all objects matching the filter criteria is displayed.
-filtervalue <i>attrib=value</i>	<p>Optional. Specifies that you want your report to display any or all of the list of valid filter attributes. The valid filter attributes for the udsinfo lssnappoolstat command are:</p> <ul style="list-style-type: none"> • sourcecluster • appid • hostname • appname • appsize • vdiskcount • totalused • totalstaging <p>The filter will be formed with an attribute and a value. When specifying more than one filter, the filters must be combined with '&' character (which needs to be escaped with '\').</p> <p>For string type of filters, the only operator allowed is '='. You can also use the wildcard character '*'. For example, to match disk pools with name begins with 'foo', use '-filtervalue name=foo*'.</p> <p>For number types, allowed operators are: =, >, >=, <, <=. These must be escaped with '\ ' or enclosed in ' ' or " ", as required by shell. For example:</p> <ul style="list-style-type: none"> • -filtervalue vdiskcount\>=10 • -filtervalue "vdiskcount>=10" • -filtervalue 'vdiskcount>=10'

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lssnappoolstat -- ----->

>-- -appliance -- appliance ----->

>--+-----+-- --+-----+-- ----->
  '- -filtervalue -- attrib=value -'      '- -nohdr -'

>--+-----+-- -- --+-----+-----><
  '- -delim -- delimiter -'      +- object_id ----+
```

CLI Example

```
$udsinfo lssnappoolstat -appliance Appliance_C1
  id      appsize appname      sourcecluster vdiskcount hostname  appid stattime
totalused totalstaging
14926  21474836480 bigdedupapp  590027423756      19 archer2    4410 2013-02-08
03:00:07.056 35573465088      0
14927  10737418240 testapp    590027423756      1 archer3    5495 2013-02-08
03:00:07.137 2359296      0
```

14928	10758666240	Archer5	590027423756	10	archer5	4359	2013-02-08
03:00:07.155	10786701312	10761535488					
14929	53687091200	50GB	590027423756	22	archer2	4418	2013-02-08
03:00:07.182	56952094720	0					
14930	5379333120	Archer4	590027423756	10	archer4	4357	2013-02-08
03:00:07.196	5433720832	5381029888					
14931	107374182400	LinuxSystem	590027423756	10	linuxsystem	4361	2013-02-08
03:00:07.224	7864320	786432					

Dedup Load Factor Commands

lsdedupefficiency

[About lsdedupefficiency Command](#) on page 213

[Employing this Command through the CLI](#) on page 213

About lsdedupefficiency Command

Description

Use this command to retrieve dedup efficiency statistics for a list of applications with successful local dedup, direct dedup, or dedup-async jobs. The average FIDI and IIDI are average values for all applications in the system. The statistics are collected once a day and are also updated when this command is run.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Manager	-

Rights

You must have 'System View' or 'System Manage' rights to view the dedup efficiency data.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsdedupefficiency -- ----->
>--+-----+-----+--+-----+----->
```

```
'- -nohdr -'
```

```
'- -delim -- delimiter -'
```

CLI Example

```
$ udsinfo lsdedupefficiency
```

id	appid	baseappsize	avgingestion	avgFIDI	avgIIDI	lastjobenddate
1051651	26580	0.00	123.00	0.073928	0.115705	2015-02-12 20:24:39.0
1051652	26644	0.00	220.00	0.073928	0.115705	2015-02-12 20:20:09.0
1051665	987036	61440.00	0.00	0.073928	0.115705	2015-02-11 22:48:36.0
1051661	986520	40960.00	0.00	0.073928	0.115705	2015-02-12 20:25:59.0
1051660	986006	40960.00	396.00	0.073928	0.115705	2015-02-12 18:42:14.0
1051668	987471	40960.00	547.00	0.073928	0.115705	2015-02-11 22:17:29.0

getdedupsafelimits

[About getdedupsafelimits Command on page 215](#)

[Employing this Command through the CLI on page 215](#)

About getdedupsafelimits Command

Description

Use this command to retrieve the safe limits for the various dedup load metrics.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Manager	-

Rights

You must have the 'System View' or 'System Manage' right to view safe limit for dedup load metrics.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. Specifies the delimiter to be used when displaying the results. The default delimiter is a space (' ').
-nohdr	Optional. By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed style view. The -nohdr parameter suppresses the display of these headings. If there is no data to be displayed, headings are not displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- getdedupsafelimits -- ----->
>--+-----+-----+-----+-----+-----+----->
      '- -delim -- delimiter -'      '- -nohdr -'
```

CLI Example

```
$ udsinfo getdedupsafelimits
metricname          value
dedup max load      16.0
dedup datamovement safelimit 9.6
dedup max uniqueblocks 34359738368.000
```

```
dedup ingest throughput safelimit 4398046511104.000
```


getdedupstats

[About getdedupstats Command on page 217](#)

[Employing this Command through the CLI on page 218](#)

About getdedupstats Command

Description

Use this command to retrieve statistics for an identified dedup load metric (uniqueblocks, ingestdata, or dedupload).

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Manager	-

Rights

You must have the 'System View' or 'System Manage' right to view statistics for dedup load metrics.

Parameters

Parameter	Description
-startdate <i>startdate</i>	Optional. Specifies the start date value of the date range window. Date format can be in yyyy-MM-dd or in yyyy-MM-dd HH:mm:ss . If you do not specify the -startdate argument, the appliance assumes 30 days earlier from the end date (the -enddate argument).
-enddate <i>enddate</i>	Optional. Specifies the end date value of the date range window. Date format can be in yyyy-MM-dd or in yyyy-MM-dd HH:mm:ss . If you do not specify the -enddate argument then the end date would be set to the current appliance system date.
-metricname <i>uniqueblocks ingestdata dedupload</i>	Required. Specifies the name of dedup metric whose statistics need to be retrieved. Choices include: <ul style="list-style-type: none"><i>uniqueblocks</i> - Lists a summary of unique blocks information. <hr/> Note: This selection does not require a value in the -startdate and -enddate arguments. <hr/> <ul style="list-style-type: none"><i>ingestdata</i> - Lists a summary of ingest data metrics.<i>dedupload</i> - Lists a summary of dedup slot utilization metrics.

Parameter	Description
-nohdr	Optional. By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed style view. The -nohdr parameter suppresses the display of these headings. If there is no data to be displayed, headings are not displayed.
-units <i>bytes KB MB GB TB</i>	Optional. Specifies the units parameter to display the ingested data in the output. By default, data is displayed in bytes. You can specify KB, MB, GB, or TB to display the data in a specific unit format.
-delim <i>delimiter</i>	Optional. Specifies the delimiter to be used when displaying the results. The default delimiter is a space (' ').

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- getdedupstats -- ----->
>---+-----+---+-----+----->
>   '- -startdate -- date -'      '- -enddate -- date -'
>---+---metricname -- uniqueblocks+---+-----+----->
>       '- ingestdata --'        '- -nohdr -'
>       '- dedupload --'
>---+-----+---+-----+-----+><
>   '- -units ---+ bytes ---+ -'    '- -delim -- delimiter -'
>       +- KB ---+
>       +- MB ---+
>       +- GB ---+
>       +- TB ---+
```

CLI Example

```
$ udsinfo getdedupstats -metricname uniqueblocks
metricname      value
dedup max uniqueblocks      34359738368.000
dedup uniqueblocks consumed 1814220175.000

$ udsinfo getdedupstats -metricname dedupload
metricname      value
dedup max load      16
dedup datamovement safelimit      9.6
dedup background load      4.800
dedup datamovement load      0.215
95thpercentile      11.618

$ udsinfo getdedupstats -metricname ingestdata -units bytes
metricname      value
dedup ingest throughput safelimit      4398046511104.000
dedup average ingest data per day      18768900176.494
95thpercentile      253380152382.672

$ udsinfo getdedupstats -metricname ingestdata -units GB
metricname      value(GB)
```

```
dedup ingest throughput safelimit 0.000
dedup average ingest data per day 227.559
95thpercentile 6476.108
```

lsdeduploadstat

[About lsdeduploadstat Command on page 220](#)

[Employing this Command through the CLI on page 221](#)

About lsdeduploadstat Command

Description

Use this command to retrieve details of dedup load stats.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Manager	-

Rights

You must have the 'System View' or 'System Manage' right to list statistics for dedup load metrics.

Parameters

Parameter	Description
-nohdr	(Optional) By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed style view. The -nohdr parameter suppresses the display of these headings. <i>Note: If there is no data to be displayed, headings are not displayed.</i>
-startdate <i>startdate</i>	Optional. Specifies the start date value of the date range window. Date format can be in yyyy-MM-dd or in yyyy-MM-dd HH:mm:ss . If you do not specify the -startdate argument, the appliance assumes 30 days earlier from the end date (the -enddate argument).
-enddate <i>enddate</i>	Optional. Specifies the end date value of the date range window. Date format can be in yyyy-MM-dd or in yyyy-MM-dd HH:mm:ss . If you do not specify the -enddate argument, then it is set to the current appliance system date.
-delim <i>delimiter</i>	Optional. Specifies the delimiter to be used when displaying the results. The default delimiter is a space (' ').

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsdeduploadstat -- --+-----+----->
                                     '- -nohdr --'
>--+-----+-----+-----+-----+-----+----->
   '+-startdate --startdate --'      '+-enddate --enddate --'
--+-----+-----+-----+-----+-----+-----><
   '- -delim -- delimiter -'
```

CLI Example

```
$ udsinfo lsdeduploadstat
id      stattime      datamovementload  backgroundload  totalload
412482   2016-07-03 05:06:10  0.300           0.300           0.600
412552   2016-07-03 05:36:10  3.001           0.560           3.561
412558   2016-07-03 05:51:10  3.000           0.340           3.340
412587   2016-07-03 06:06:10  4.001           0.240           4.241
412630   2016-07-03 06:21:10  3.000           0.230           3.230
```

SLP Commands

mkslp

[About mkslp Command on page 222](#)

[Employing this Command through the CLI on page 223](#)

About mkslp Command

Description

Use this command to create a new server level profile (SLP) object.

Rights

You must have the 'SLA Manage' right to create a profile.

Parameters

Parameter	Description
-dedupasyncnode <i>node</i>	Optional. Specifies the name of the remote dedup-async node. The remotenode is used if not specified. <i>Note: Sky only.</i>
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. <i>Note: AGM only.</i>
-description <i>desc</i>	Optional. Specifies the description for new profile.
-name <i>name</i>	Required. Specifies the name for new profile. The name must be unique within the appliance.
-org <i>org_id org_name</i>	Optional. Specifies a default organization in which the profile should be added after creation. To use this, you must have 'System Manage' right.
-performancepool <i>pool_name</i>	Required. Specifies the name of the performance pool.
-primarystorage <i>primarystorage</i>	Optional. Specifies the name of the primary storage.
-remotenode <i>node</i>	Optional. Specifies the name of the remote appliance node.

Parameter	Description
-vaultpool <i>pool_id</i> <i>pool_name</i>	Optional. Specifies the name or ID of the OnVault storage pool.
	Note: <i>VDP only.</i>

Employing this Command through the CLI

CLI Syntax

```
>>> udstask -- -- mkslp -- --+-----+-- -->
                                '- -description -- desc -'
>-- -name -- slp_name -- --+-----+-- -->
                                '- dedupasyncnode -- node -'
>--+-----+-- -performancepool -- pool ->
    '- -org --+ org_id ---+-'
        '- org_name -'
>--+-----+-- ----->
    '- -primarystorage -- primarystorage -'
>--+-----+----->
    '- -remotenode -- node -'
>--+-----+----->
    '- -vaultpool --+ pool_id ---+-'
        '- pool_name -'
>>> udstask -- -- -- --+-----+-- -->
                                '- -description -- desc -'
>-- -name -- slp_name -- --+-----+-- -->
                                '- dedupasyncnode -- node -'
>--+-----+-- -performancepool -- pool ->
    '- -org --+ org_id ---+-'
        '- org_name -'
>--+-----+-- ----->
    '- -primarystorage -- primarystorage -'
>--+-----+----->
    '- -remotenode -- node -'
>>> udstask -- -- mkslp -- --+-----+-- -->
                                '- -description -- desc -'
>-- -name -- slp_name -- --+-----+-- ----->
                                '- -org --+ org_id ---+-'
                                    '- org_name -'
>--+ -performancepool -- pool ----->
>--+-----+----->
    '- -primarystorage -- primarystorage -'
>--+-----+----->
    '- -remotenode -- node -'
>-- -appliance -- appliance ----->
```

CLI Example

```
$ udstask mkslp -performancepool mktpool -name "profile1" -appliance Appliance_C1
```

lsslp

[About lsslp Command on page 224](#)

[Employing this Command through the CLI on page 225](#)

About lsslp Command

Description

Use this command to retrieve details of profiles (SLPs). A profile (SLP) specifies mapping of a name in a policy to an actual resource in the appliance.

Rights

You must have the 'SLA View', 'SLA Assign', or 'SLA Manage' right to view the details of profiles.

Parameters

Parameter	Description
-appliance <i>appliance</i>	<p>Optional. Specifies the name or ID of the target VDP appliance to retrieve all objects in a list view. Use the udsinfo lslcluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.</p> <hr/> <p>Note: AGM only.</p> <hr/>
-delim <i>delimiter</i>	<p>Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.</p>
-filtervalue <i>attrib=value</i>	<p>Optional. Specifies that you want your report to display any or the entire list of valid filter attributes. The valid filter attributes for the udsinfo lsslp command are:</p> <ul style="list-style-type: none">• name• localnode• performancepool• primarystorage• remotenode <p>The filter is formed with an attribute and a value. When you specify more than one filter, they must be combined with '&' character (which should be escaped with '\\'). For string type of filters, the only operator allowed is '='. You can also use wild card character '*'. For example, to list all profiles (SLPs) with a name that begins with 'foo', use '-filtervalue name=foo*'.</p>
-nohdr	<p>Optional. By default, headings are displayed for each column of data in concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.</p>

Parameter	Description
<i>object_id</i> <i>object_name</i>	Optional. Specifies the name or ID of an object. When you use this parameter, a detailed view of the object is returned and any value that is specified by the -filtervalue parameter is ignored. If you do not specify the object ID or the object name, a concise view of all objects matching the filter criteria is displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsslp -- ----->
>--+-----+----->
    '- -appliance -- appliance -'
>--+-----+-- --+-----+-- ----->
    '- -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+-- -- --+-----+-----><
    '- -delim -- delimiter -'              +- object_id ---+
                                           '- object_name -'
```

CLI Example

```
$ udsinfo lsslp -appliance Appliance_C1
```

```
id description name  performancepool primarystorage remotenode localnode
4170          sales act_per_pool000                                cluster4
4171          mkt   act_per_pool000                        cluster3 cluster4
```

chslp

[About chslp Command](#) on page 226

[Employing this Command through the CLI](#) on page 227

About chslp Command

Description

Use this command to change the properties of a profile. Use the **udsinfo lsslp** command to obtain the ID or name of the profile.

Rights

You must have the 'SLA Manage' right to modify a profile.

Parameters

Parameter	Description
-description <i>desc</i>	Optional. Specifies new description for the SLP.
-dedupasyncnode	Optional. Specifies the name of the remote dedup-async node, remote node is used if not specified. Note: <i>VDP only.</i>
-name <i>name</i>	Optional. Specifies new name for the SLP.
-org <i>org_id</i> <i>org_name</i>	Optional. Specifies a default organization associated with the resource profile. To use this option You must have 'System Manage' right. Note: <i>AGM only.</i>
-performancepool <i>pool</i>	Optional. Specifies new performance pool for the SLP.
-primarystorage <i>pool</i>	Optional. Specifies new primary storage for the SLP.
-remotenode <i>node</i>	Optional. Specifies new remote appliance node for the SLP.
<i>slp_id</i> <i>slp_name</i>	Required. Specifies the ID or name of the profile (SLP) to be changed.
-vaultpool <i>pool_name</i> <i>poolid</i>	Optional. Specifies the name or ID of the OnVault pool. Use 0 to clear the OnVault pool of the profile.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- chslp -- ---+-----+----->
                                '- -description -- desc -'

>---+-----+--- +-----+-----+--- -->
    '- -name -- name -'      '- dedupasyncnode -- node -'

>---+-----+--- +----->
    '- -performancepool -- pool -'

>---+-----+--- +----->
    '- -primarystorage -- primarystorage -'

>---+-----+--- +----->
    '- -remotenode -- node -'

>---+-----+-----+--- slp_name -+-----><
    '- -vaultpool -+- pool_id ---+-'      '- slp_id ---'
        '- pool_name -'
```

CLI Example

```
$ udstask chslp -description "profile description" profile1 12304
```

rmslp

[About rmslp Command on page 228](#)

[Employing this Command through the CLI on page 228](#)

About rmslp Command

Description

Use this command to delete a profile.

Rights

You must have the 'SLA Manage' right to delete a profile.

Parameters

Parameter	Description
<i>slp_id slp_name</i>	Required. Specifies the ID or name of the profile to be deleted.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmslp -- --+- slp_name -+-----><
                               '- slp_id ---'
```

CLI Example

```
$ udstask rmslp profile1
```

Other Commands

chauthservice

[About chauthservice Command](#) on page 229

[Employing this Command through the CLI](#) on page 229

About chauthservice Command

Description

Use this command to change the authentication service in use.

Rights

You must have 'System Manage' right to change the authentication service.

Parameters

Parameter	Description
-type <i>database ldap</i>	Required. Specifies the new authentication service to use. Either LDAP or database.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. <i>Note: AGM only.</i>

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- chauthservice -- --+-----+>
>--+-----+-----+-----+-----+><
    '- -type --+- database -+-'
        '- ldap -----'
>--- -appliance -- appliance -----><
```

CLI Example

```
$ udstask chauthservice -type ldap -appliance Appliance_C1
udtask chauthservice -type database | ldap | saml
```


configresourcewarning

[About configresourcewarning Command](#) on page 231

[Employing this Command through the CLI](#) on page 231

About configresourcewarning Command

Description

Use this command to configure the warning level for a system resource within the appliance. To view the existing configuration, use the `udsinfo getresourcewarning` command.

Rights

You must have the 'System Manage' right to configure the warning level for a resource.

Parameters

Parameter	Description
-name <i>vdisk copy snap remote mirror</i>	Required. Specifies the name of the resource to set the warning level. The supported resources and the permitted resources are: <ul style="list-style-type: none">• vdisk: You can configure a maximum of 2048 virtual disks for one iogrp.• copy: You can create a maximum of 256 copies per VDisk.• snap: snapshot bitmap memory (pre- configured)• remote: remote copy memory (pre-configured)• mirror: mirror copy memory (pre-configured)
-warnpct <i>percentage</i>	Optional. Specifies the warning percentage for the resource, between 10 and 99. The default warning percentage is 90%.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP appliance to execute this command. Use the <code>udsinfo lscluster</code> command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. <div>Note: AGM only.</div>

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- configresourcewarning -- ----->

>-- -name ---+ vdisk ----+-- --+-----+-----><
      '- copy ----'      '- -warnpct -- percentage -'
      '- snap ----'
      '- remote ---'
      '- mirror ---'
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udstask configresourcewarning -name vdisk -warnpct 80 -appliance Appliance_C1
```

getresourcewarning

[About getresourcewarning Command](#) on page 232

[Employing this Command through the CLI](#) on page 232

About getresourcewarning Command

Description

Use this command to fetch the warning level for the system resource within your appliance. This is a percentage for resource usage and the warning is generated when usage crosses the warning threshold set in [configresourcewarning](#) on page 231.

Rights

You must have 'System View' or 'System Manage' right to view the warning threshold of a resource.

Parameters

Parameter	Description
-name <i>vdisk copy snap remote mirror</i>	Required. Specifies the name of the resource to configure the warning level for. You can configure a warning level for the following resources: <ul style="list-style-type: none">• vdisk: You can create a maximum of 2048 VDisks on a VDP appliance.• copy: You can create a maximum of 256 copies per VDisk.• snap: Snapshot bitmap memory. This is pre-configured.• remote: Remote copy memory. This is pre-configured.• mirror: Mirror copy memory. This is pre-configured.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument. <i>Note: AGM only.</i>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- getresourcewarning -- ----->
>-- -name --+- vdisk --+-----><
        '- copy ---'
        '- snap ---'
        '- remote -'
        '- mirror -'
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udsinfo getresourcewarning -name vdisk 90 -appliance Appliance_C1
```


mkarray

[About mkarray Command on page 233](#)

[Employing this Command through the CLI on page 233](#)

About mkarray Command

Description

Use this command to create a new array object, which represents external storage for external snapshot pools.

Rights

You must have 'Storage Manage' right to create a new array.

Parameters

Parameter	Description
-arraytype <i>type</i>	Required. Specifies type of array. The valid array types are: <ul style="list-style-type: none">• IBM_Storwize• PureStorage_Flash array
-ipaddress <i>ipaddress</i>	Required. Specifies the UI/Management IP.
-name <i>array_name</i>	Required. Specifies the name for the array. It has to be unique within the appliance.
-properties <i>props</i>	Required. Specifies properties for the array. Each property is a comma (,) separated name value pair. For a list of available properties for a specific type of array, use udsinfo lsarrayoption command. For example, -properties username=name,password=password <i>Note: When using PureStorage_Flash array, the British Pound Sterling character (£) is not supported in the password.</i>

Employing this Command through the CLI

CLI Syntax

```
>>> udstask -- -- mkarray -- -- -arraytype -- type -- ----->
>---- -ipaddress -- ipaddress -- ----->
>---- -name -- array_name -- -- -- -properties -- props ----->
```

CLI Example

```
$ udstask mkarray -arraytype IBM_Storwize -ipaddress 1.2.3.4 -properties
username=superuser,password=password -name mystore
```

lsarray

[About lsarray Command on page 234](#)

[Employing this Command through the CLI on page 234](#)

About lsarray Command

Description

Use this command to retrieve details of attached arrays. An array is an external storage that is available to the appliance for snapshot management.

Rights

You must have 'Storage View' right to see array details.

Parameters

Parameter	Description
-filtervalue <i>attrib=value</i>	<p>Optional. Specifies that you want your report to display any or the entire list of valid filter attributes. The valid filter attributes for the udsinfo lsarray command are:</p> <ul style="list-style-type: none">• arraytype• name• status <p>The filter is formed with an attribute and a value. When you specify more than one filter, they must be combined with '&' character (which should be escaped with '\'). For string type of filters, the only operator allowed is '='. You can also use wild card character '*'. For example, to list all profiles (SLPs) with a name that begins with 'foo', use '-filtervalue name=foo*'.</p>
-delim <i>delimiter</i>	<p>Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.</p>
-nohdr	<p>Optional. By default, headings are displayed for each column of data in concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.</p>
<i>object_id</i> <i>object_name</i>	<p>Optional. Specifies the ID of an object. When you use this parameter, a detailed view of the object is returned and any value specified by the -filtervalue parameter is ignored. If you do not specify the <i>object_id</i> or the <i>object_name</i>, a concise view of all objects matching the filter criteria is displayed.</p>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsarray -- ----->
```

```

>--+-----+--+--+-----+----->
  '- -filtervalue -- attrib=value -'      '- -nohdr -'

>--+-----+--+--+-----+-----><
  '- -delim -- delimiter -'              +- object_id ---+
                                          '- object_name -'

```

CLI Example

```

$ udsinfo lsarray
   id name    ipaddress arraytype status
4111 mystore 1.2.3.4  IBM_Storwize  Active

```

lsarrayoption

[About lsarrayoption Command on page 236](#)

[Employing this Command through the CLI on page 236](#)

About lsarrayoption Command

Description

Use this command to returns a concise list of options for arrays; needed when creating a new array object. Two types of options are available, property and threshold. The property option is needed for setting up an array, while threshold is for setting threshold limits for disk pools on the array.

Rights

You must have 'Storage View' right to retrieve array options.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-nohdr	Optional. By default, headings are displayed for each column of data in concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.
<i>array_type</i>	Optional. Specifies the type of array to retrieve the options.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsarrayoption -- --+-----+-- ----->
                                     '- -nohdr -'

>--+-----+-- -- --+-----+-----><
  '- -delim -- delimiter -'      +- array_type +-

```

CLI Example

```
$ udsinfo lsarrayoption
arraytype name      optiontype required valuetype max updatable label
IBM_Storwize username property true string false Superuser username
IBM_Storwize password property true string false Superuser password
IBM_Storwize vdisklimit threshold false number false Number of vdisks can be used
for the pool
IBM_Storwize vdiskwarn threshold false number 100 false Percentage of vdisk used
for warning
PureStorage_Flash array pureuser property true string false Pure username
```

PureStorage_Flash array password property true string false *User password*

charray

[About charray Command on page 238](#)

[Employing this Command through the CLI on page 238](#)

About charray Command

Description

Use this command to modify an array object.

Rights

You must have 'Storage Manage' right to modify an array.

Parameters

Parameter	Description
-ipaddress <i>ipaddress</i>	Optional. Specifies the IP address for the array
-name <i>new_name</i>	Required. Specifies the name for the array. It has to be unique within the appliance.
-properties <i>props</i>	Required. Specifies properties for the array. Each property is a comma (,) separated name value pair. For a list of available properties for a specific type of array, use <code>udsinfo lsarrayoption</code> command. For example, <code>-properties username=name,password=password</code> <i>Note: Not all properties can be changed for an array.</i>
-reset	Optional. To reconfigure the array with newly supplied "properties". This is necessary when the external array properties are changed.
<i>array_id</i> <i>array_name</i>	Required. Specifies the array object to modify, either by ID or by name.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- charray -- --+-----+-- ----->
                                '- -name -- new_name -'
>--+-----+-- +-----+-- ----->
  '- -ipaddress -- ip -'      '- -properties -- props -'
>--+-----+-- --+ array_name +-----><
  '- -reset -'      '- array_id ---'
```

CLI Example

```
$ udstask charray -ipaddress 1.2.3.4 mystore
```

rmarray

[About rmarray Command on page 239](#)

[Employing this Command through the CLI on page 239](#)

About rmarray Command

Description

Use this command to delete an array.

Rights

You must have 'Storage Manage' right to remove an array.

Parameters

Parameter	Description
<i>array_id</i> <i>array_name</i>	Required. Specifies the ID or name of the array to be removed.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmarray -- --+- array_name +------><
                               '- array_id ---'
```

CLI Example

```
$ udstask rmarray mystore
```

lsappstorage

[About lsappstorage Command](#) on page 240

[Employing this Command through the CLI](#) on page 240

About lsappstorage Command

Description

Use this command to retrieve details of application storage layout, which indicates disk groups of an application occupies. When application shares same disk groups, they can be, and should be grouped together in a consistency group for protection, to take advantage of in-band capabilities.

Rights

User must have 'Storage View', or 'Application Manage' right to see application storage details.

Parameters

Parameter	Description
-filtervalue <i>attrib=value</i>	Optional. Specifies that you want your report to display any or the entire list of valid filter attributes. The valid filter attributes for the udsinfo lsarray command are: <ul style="list-style-type: none">• appid• appname• hostid The filter is formed with an attribute and a value. When specifying more than one filter, the filters must be combined with the '&' character (which needs to be escaped with '\'). For string type of filters, the only operator allowed is '='. You can also use wild card character '*'. For example, to list all appliances with a name that begins with 'foo', use '-filtervalue lscluster=foo*' .
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsappstorage -- ----->

>--+-----+--+--+-----+--+-----><
```



```
'- -filtervalue -- attrib=value -'      '- -nohdr -'
```

CLI Example

```
$ udsinfo lsappstorage
      id  appid  hostid  appname  diskgroup
154394 154393   4772  dbs2db   FRA,DATA
154401 154395   4772  dbs3db   FRA1,DATA1,DATA
154434 154433   4795  dbs1db   FRA,DATA
```

Auto Updates Commands

lsversion

[About lsversion Command](#) on page 242

[Employing this Command through the CLI](#) on page 242

About lsversion Command

Description

Use this command to retrieve installed appliance version, including any installed hot-fix.

Rights

There are no specific rights associated with this operation. User with 'administrator' role can retrieve the release note.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-nohdr	Optional. By default, headings are displayed for each column of data in a concise view, and for each item of data in a detailed style view. The -nohdr parameter suppresses the display of these headings. If there is no data to be displayed, headings are not displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsversion -- --+-----+-- ----->
                                     '- -nohdr -'
>--+-----+-----><
  '- -delim -- delimiter -'
```

CLI Example

```
$ udsinfo lsversion
6.1.0.23116
hf5.0.3.64
```

getreleasenote

[About getreleasenote Command on page 243](#)

[Employing this Command through the CLI on page 243](#)

About getreleasenote Command

Description

Use this command to retrieve the release notes for an update.

Rights

There are no specific rights associated with this operation. User with 'administrator' role can retrieve the release note.

Parameters

Parameter	Description
update	Required. Specifies the name of the update.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP appliance to execute this command. <i>Note: AGM only.</i>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- getreleasenote -- -- update -----><
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udsinfo getreleasenote hf5.0.3.64
```

lsupdate

[About lsupdate Command on page 244](#)

[Employing this Command through the CLI on page 244](#)

About lsupdate Command

Description

Use this command to retrieve a list of updates available to be installed onto the VDP appliance.

Rights

There are no specific rights associated with this operation. Admin/User with 'administrator' role can retrieve a list of updates available to be installed onto the VDP appliance.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-nohdr	Optional. By default, headings are displayed for each column of data in a concise view, and for each item of data in a detailed view. The -nohdr parameter suppresses the display of these headings. Headings are not displayed if there is no data.
-appliance <i>cluster</i>	Required. Specifies the name or ID of the target appliance to execute this command. Note: AGM only.

Employing this Command through the CLI

CLI Syntax

```
>>> udsinfo -- -- lsupdate -- --+-----+-- ----->
                                '- -nohdr -'
>--+-----+----->
  '- -delim -- delimiter -'
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udsinfo lsupdate
update
hf5.0.2.64
```

uploadupdate

[About uploadupdate Command](#) on page 245

[Employing this Command through the CLI](#) on page 245

About uploadupdate Command

Description

Use this command to upload a VDP-provided update file. The file must be copied (scp) to /home/admin/upload directory before you can run this command.

Rights

Admin/User with 'administrator' role can upload VDP update file.

Parameters

Parameter	Description
<i>filename</i>	Required. Specifies the name of the file to be uploaded.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- uploadupdate -- -- filename -----><
```

Example

```
$ udstask uploadupdate hf7.0.1.64.gpg
```

installupdate

[About installupdate Command on page 246](#)

[Employing this Command through the CLI on page 246](#)

About installupdate Command

Description

Use this command to install all Actifio provided update files. Use **udsinfo lsupdate** to view a list of files to be installed. Use **udsinfo getreleasenote** to view the release note for each update.

Applicability of this Command

This command can be used on:

CDSappliance	✓
Sky appliance	✓
Actifio NAS Director	-
Actifio Global Manager	-

Rights

There are no specific rights associated with this operation. A user with 'administrator' role can install all Actifio provided update files.

Parameters

Parameter	Description
-force	Optional. When set, any preflight errors will be ignored and proceed with installation.

Employing this Command through the CLI

CLI Syntax

```
>>> udstask -- -- installupdate -- -----><
>--+-----+-----><
>  '- -name --+----- name_of_update -----+
>--+-----+-----><
>  '- -force --'
```

CLI Example

```
$ udstask installupdate
```


Remote Setup Commands

setremotesupport

[About setremotesupport Command on page 248](#)
[Employing this Command through the CLI on page 248](#)

About setremotesupport Command

Description

Use this command to set administrative support for SecureConnect remote support.

Rights

You must have 'System Manage' right to be able to configure SecureConnect remote support.

Parameters

Parameter	Description
-restricted <i>on off</i>	Optional. Enables/disables VDP remote access.
-secureconnect <i>on off</i>	Optional. Enables secure connect.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target appliance to execute this command. <div>Note: AGM only.</div>

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- setremotesupport -- ----->
>--+-----+----->
  '- -restricted --+ on---+- -'
                        +- off -+
>--+-----+-----><
  '- -secureconnect --+ on --+- -'
                        +- off -+
```

CLI Example

```
$ udstask setremotesupport -secureconnect on
```


getremotesupport

[About getremotesupport Command](#) on page 249

[Employing this Command through the CLI](#) on page 249

About getremotesupport Command

Description

Use this command to display remote support.

Rights

You must have 'System View' or 'System Manage' right to view remote support.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-nohdr	Optional. By default, headings are displayed for each column of data in a concise view, and for each item of data in a detailed view. The -nohdr parameter suppresses the display of these headings.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target appliance to execute this command. Note: AGM only.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- getremotesupport -- --+-----+-- ----->
                                     '- -nohdr -'
>--+-----+----->
  '- -delim -- delimiter -'
```

CLI Example

```
$ udsinfo getremotesupport
type          enabled
restricted    off
secureconnect on
securitycode   A1-0008c-00000000
```


6 License Management Commands

These commands are for a Sky appliance license management. The GUI interface for these commands can be found in the AGM under the Domain Manager section. For information, see the AGM Online Help.

Note: *The license management commands are specific only to the Sky appliance.*

This chapter details the following license management commands:

Managing License

Commands

[getlicenseinfo](#) on page 252

[lslicense](#) on page 253

[mklicense](#) on page 255

[rmlicense](#) on page 256

getlicenseinfo

[About getlicenseinfo Command on page 252](#)
[Employing this Command through the CLI on page 252](#)

About getlicenseinfo Command

Description

Use this command to display licensing information. If no option is supplied, a summary of all installed licenses is provided.

Applicability of this Command

This command can be used on:

CDS	-
Sky appliance	✓
NAS Director	-
Actifio Global Managerr	-

Rights

You must have 'System View' or 'System Manage' role.

Parameters

Parameter	Description
-licensekey <i>licensekey</i>	Optional. Specifies the license key.
-licensefile <i>file</i>	Optional. Specifies the file that contains license key.
-id <i>id</i>	Optional. Specifies the ID of the license key.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- getlicenseinfo ----->
>--+-----+--+-----+----->
>  '- -licensekey -- key -'      '- -licensefile -- file -'
>--+-----+-----><
>  '- -id -- id -'
```

CLI Example

```
$ udsinfo getlicenseinfo -id 52
License Detail: Installed. Type: [PRODUCT] Customer: [] Product Version: [Sky] Issue Date:
[2018-02-08 15:02:26.534]] Install Date: [2018-02-08 15:05:23.59883]] Variables:
[MDL:5,dedupPoolSize:5]
```

lslicense

[About lslicense Command on page 253](#)

[Employing this Command through the CLI on page 254](#)

About lslicense Command

Description

Use this command to retrieve a concise list of all installed license keys, or a detailed view of an installed license key. Use **udstask mklicense** to add a license key.

Applicability of this Command

This command can be used on:

CDS	-
Sky appliance	✓
NAS Director	-
Actifio Global Manager	-

Rights

You must have 'System View' or 'System Manage' rights to retrieve license key info.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-nohdr	Optional. By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed style view. The -nohdr parameter suppresses the display of these headings. If there is no data to be displayed, headings are not displayed.
object_id	Optional. Specifies the ID of an object. When you use this parameter, the detailed view of the specific object is returned and any value that is specified by the -filtervalue parameter is ignored. If you do not specify the <i>object_id</i> parameter, the concise view of all objects matching the filter criteria is displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lslicense -- ----->
>--+-----+--+-----+--+-----+--+----->
' - -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+--+-----+--+-----+--+-----><
' - -delim -- delimiter -'      +- object_id ---+
```

CLI Example

id	invaliddate	createdate	licensekey
52		2018-02-08 15:05:23.598	GE2

mklicense

[About mklicense Command on page 255](#)

[Employing this Command through the CLI on page 255](#)

About mklicense Command

Description

Use this command to install a new license key object.

Applicability of this Command

This command can be used on:

CDS	-
Sky appliance	✓
NAS Director	-
Actifio Global Manager	-

Rights

You must have 'System Manage' right to install license key.

Parameters

Parameter	Description
-licensekey <i>key</i>	Optional. Specifies the license key.
-licensefile <i>file</i>	Optional. Specifies the file that contains license key.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- mklicense -- --+-----+-->
                                     '- -licensekey -- key -'
>--+-----+----->
   '- -licensefile -- file -'
```

CLI Example

```
$ udstask mklicense -licensekey GE2
```

rmlicense

[About rmlicense Command on page 256](#)
[Employing this Command through the CLI on page 256](#)

About rmlicense Command

Description

Use this command to uninstall a license key.

Note: *It is not mandatory to remove an installed license key that is no longer valid. The use of the **rmlicense** command is optional.*

Applicability of this Command

This command can be used on:

CDS	-
Sky appliance	✓
NAS Director	-
Actifio Global Manager	-

Rights

You must have "System Manage" right to uninstall a license.

Parameters

Parameter	Description
<i>license_id</i>	Required. Specifies the ID of the license key to be removed.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmlicense -- ---+ license_id -+-----><
```

CLI Example

```
$ udstask rmlicense 52
```


7 Application Management Commands

These commands are for application management. The GUI interface for these commands can be found in the AGM. For detailed information, refer to the AGM Online Help.

Managing Applications

Application Commands

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Group Commands

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Discovery Commands

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Managing Copy Data

Virtual Machine Commands

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Image Management Commands

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Workflow Commands

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Other Command

[mksideband](#) on page 405

Application Commands

mkapplication

[About mkapplication Command](#) on page 261

[Employing this Command through the CLI](#) on page 262

About mkapplication Command

Description

Use this command to create a generic application object.

Rights

You must have the 'Application Manage' or 'Host Manage' right to create a generic application.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.
-appname <i>name</i>	Required. Specifies the name.
-appversion <i>version</i>	Optional. Specifies the version.
-description <i>desc</i>	Optional. Specifies the description.
-apptype <i>type</i>	Optional. Specifies the application type of the application. For NAS application, the type should be 'nas'. For generic out-of-band application, the type should be 'LVM Volume'. Otherwise, a 'generic' in-band application is created. This parameter applies to VDP Appliance.
-friendlytype <i>type</i>	Optional. Specifies the friendly type of the application. Note: AGM Only.
-hostid <i>host_id</i>	Required. Specifies the host ID where the application runs.
-org <i>org</i>	Optional. Specifies a default organization in which the application should be added after creation. If a default organization is not specified, an organization that the user belongs to is used.
-volumes <i>vol</i>	Required. Specifies the names of the VDisks allotted to the application. Multiple VDisk names should be separated with a colon (:).

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- mkapplication -- ----->
>-- -appliance -- appliance ----->
>-- -appname -- name -----+-----+----->
                        '- -appversion -- version -'
>--+-----+-----+-- -hostid -- host_id ----->
    '- -description -- desc -'
>--+-----+-----+-- ----->
    '- -apptype -- type -'
    '- -friendlytype -- type -'
>--+-----+-----+-- -- -volumes -- vols -----><
    '- -org +- org_id ---+-'
        '- org_name -'
```

CLI Example

```
$ udstask mkapplication -appname myapp -hostid 4111 -volumes vdisk1:vdisk2 -appliance
Appliance_C1
```

lsapplication

[About lsapplication Command on page 263](#)

[Employing this Command through the CLI on page 264](#)

About lsapplication Command

Description

Use this command to display a concise list of applications or a detailed view of an application. Use the **udtask appdiscovery** command to discover applications on non-VMs and use the **udtask vmdiscovery** command to discover applications running on the virtual machines. Generic applications (not supported by the Connector) can be created using **udtask mkapplication**.

Rights

You must have the 'Application Manage' or 'Host Manage' right to create a generic application.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target VDP Appliance to retrieve all objects in a list view. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.
-delim <i>delimiter</i>	Optional. By default, all columns of data are separated by a tab in the concise view. In the detailed view, each column of data is displayed in a separate row and if the headers are displayed, the header is separated from the data by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one- byte character. To display the data, recommended delimiter to use is comma (',') for list view, and equal ('=') for detail view.

Parameter	Description
-filtervalue <i>attrib=value</i>	<p>Optional. Specifies that you want your report to display any or the entire list of valid filter attributes. Valid filter attributes for the udsinfo lsapplication command are:</p> <ul style="list-style-type: none"> • appname • apptype • appversion • auxinfo • description • friendlytype • hostid • hostname • id • ignore • isclustered • networkip • networkname • originalappid • pathname • protectable [NONE FULLY PARTIALLY] • sourcecluster <p>The filter is formed with an attribute and a value. When you specify more than one filter, they must be combined with '&' character (which needs to be escaped with '\').</p> <p>For string type of filters, the only operator allowed is '='. You can also use wild card character '*'. For example, to list applications beginning with 'foo', use '-filtervalue appname=foo*'. Some filters allow only predefined constants. For example, protectable allows only NONE, FULLY, or PARTIALLY. To list applications that are protected FULLY, use '- filtervalue protectable=FULLY'.</p>
-nohdr	<p>Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to be displayed, headings are not displayed.</p>
<i>object_id</i>	<p>Optional. Specifies the ID of an object. When you use this parameter, a detailed view of the object is returned and any value that is specified by the -filtervalue parameter is ignored. If you do not specify the <i>object_id</i>, a concise view of all objects matching the filter criteria is shown.</p>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsapplication -- ----->
>--+-----+----->
>  - -appliance -- appliance -'
>--+-----+-----+-----+----->
>  '- -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+-----+-----+-----<
>  '- -delim -- delimiter -'      +- object_id ----
```


CLI Example

```
$ udsinfo lsapplication -delim : 8202 -appliance Appliance_C1
```

```
id:8202
auxinfo:
protectable:FULLY
appversion:
morecredentials:
volumes:
username:
hostid:51
hostname:xx
description:
appname:S:\
apptype:FileSystem
friendlytype:FileSystem
```

Here is an example that shows long output when udsinfo lsapplication is run with an ID.

```
$udsinfo lsapplication 15847
```

```
description
hostid 15843
parentappid 0
originatingjob
backupname
appname centos67-server-v12718-s036-gw254
networkname
ignore false
vaultowner true
sourcecluster 590021132804
id 15847
auxinfo esx44.skyngqalab.actifio.localdom
originalappid 0
appstate 0
protectable FULLY
networkip
isclustered false
apptype VMBBackup
appclass
lastfailover
volumes
appversion
pathname
depth 0
failoverstate normal
morecredentials
sensitivity 0
frommount false
mountedhost
friendlytype VMBBackup
username
hasswitchedimage false
iscustomapp false
isbootvolume true
VM volumes:
  vmvolume-[NetApp100TB-SkyNG_vSphere_Quanta_LUN5] centos67-server-v12718-s036/centos67-server-v12718-s036.vmdk Hard disk 1 dependent
  vmvolume-[NetApp100TB-SkyNG_vSphere_Quanta_LUN5] centos67-server-v12718-s036/centos67-server-v12718-s036_1.vmdk Hard disk 2 dependent
```

\$ udsinfo lsapplication

id	auxinfo	protectable	appversion	morecredentials	volumes	username	hostid	lastfailover	description	appname
29330		FULLY					29230			/export/home
29331		FULLY					29230			/
29902		FULLY					29230			/testpool/ti
29903		FULLY					29230			/testpool
47448		FULLY					29230			/tpool
61904		FULLY					61587			/zones/sun0:

chapplication

[About chapplication Command on page 267](#)

[Employing this Command through the CLI on page 268](#)

About chapplication Command

Description

Use this command to change the attributes of an application.

Rights

You must have the 'Application Manage' or 'Host Manage' right to change an application.

Parameters

Parameter	Description
-appname <i>name</i>	Optional. Specifies a new name for the application. This cannot be changed for a discovered application.
-appclass <i>appclass</i>	Optional. Specifies the application class for the application. An app class dictates the type of option allowed for recovery operations. Note: VDP only.
-appysensitivity	Optional. Applies the sensitivity of the application to all existing local backup images. Note: VDP only.
-appversion <i>version</i>	Optional. Specifies the version of the application.
-description <i>desc</i>	Optional. Specifies the description of the application.
-friendlytype <i>type</i>	Optional. Specifies friendly type for the application.
-hostid <i>host_id</i>	Optional. Specifies the id of the host for the application. Note: AGM only.
-ignore <i>true false</i>	Optional. Specifies whether an application should be ignored. A protected application cannot be ignored.

Parameter	Description
-volumes <i>volumes</i>	<p>Optional.</p> <p>For AGM, this parameter specifies the VDisk names of the application. Multiple VDisk names should be separated by a colon (:).</p> <p>For VDP Appliance, depending on the type of application:</p> <ul style="list-style-type: none"> • Generic Applications - Specifies the VDisk names of the application. Multiple VDisk names should be separated by a colon (:). • VM Applications - Specifies VMDK files to be excluded or included during data capture, or simply the boot VMDK. The syntax for VM VMDK is: <pre>boot include:<VMDK file list delimited by ,> exclude:<VMDK file list delimited by ,></pre> <p>If the VMDK file contains a comma (','), it must be escaped with ",". For example: "exclude:[datastore_remus] tndvm1/test.vmdk"</p> • SQL Instances - Specifies SQL Server databases to be excluded or included during data capture. The syntax for SQL Server database is: <pre>o include:<SQL Server database list delimited by ,> o exclude:<SQL Server database list delimited by ,></pre> <p>If the database contains a comma (','), it needs to be escaped with ",".</p>
<i>app_id</i>	Required. Specifies the ID of the application to be modified. Use udsinfo lsapplication to retrieve the ID.
-networkip <i>networkip</i>	Optional. Specifies the network IP of the application.
-isclustered	Optional. Specifies if the application is part of an appliance.
-sensitivity	Optional. Specifies if the application is sensitive (a backup image has restricted access before scrubbing of sensitive data), specify 1 for sensitive application, 0 for non-sensitive. This parameter applies to VDP Appliance.
-networkname <i>networkname</i>	Optional. Specifies the network name of the application.
-org <i>org_id</i> <i>org_name</i>	<p>Optional. Specifies a default organization in which the application should be added after creation. Use the udsinfo lsorg command to locate the ID or name of the organization.</p> <hr/> <p>Note: To use this option a user must have 'System Manage' right.</p> <hr/>
-pathname <i>path</i>	Optional. Specifies the path name of the application.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- chapapplication -- --+-----+----->
```


mvapplication

[About mvapplication Command on page 270](#)

[Employing this Command through the CLI on page 270](#)

About mvapplication Command

Description

Use the **mvapplication** command to move the protection of a discovered Virtual Machine from one Actifio Appliance to another Actifio Appliance. Use the **udsinfo lsbackup** command to find all backup images associated with the virtual machine before and after the move operation.

Rights

You must have the 'Application Manage' or 'Host Manage' right to use this command.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target appliance to move the virtual machine. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.
-vm <i>vm_name vm_id</i>	Required. Specifies the name or id of the virtual machine to be moved.
-host <i>host_name host_id</i>	Required. Specifies the vCenter host to perform discovery on, either id or name of the vCenter (of type vcenter) host is needed. Use the udsinfo lshost command to locate the ID or name of the vCenter host. The vCenter should be added to the appliance with the udstask mkhost command.
-esxcluster <i>esx_cluster_name</i>	Required. Specifies ESX cluster name that the Virtual Machines should be discovered. Required for -discovervms and -addvms .

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- mvapplication -- ----->
>- -appliance -- appliance ----->
>-- -vm --+- vm_name +------>
      '- vm_id  -'
>-- -host --+- host_name +------>
      '- host_id --'
>- -esxcluster -- esx_cluster_name -----><
```

CLI Example

```
$ udstask mvapplication -vm 5280 -host 5154 -esxcluster 'PlatformHA' -appliance Appliance_CD1
```

rmapplication

[About rmapplication Command on page 271](#)

[Employing this Command through the CLI on page 271](#)

About rmapplication Command

Description

Use this command to delete an application.

Rights

You must have the 'Application Manage' or 'Host Manage' right to delete an application.

Parameters

Parameter	Description
application_id	Required. Specifies the ID of the application to be removed. Use <code>udsinfo lsapplication</code> to retrieve the application ID.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmapplication -- -- application_id -----><
```

CLI Example

```
$ udstask rmapplication 4111
```

Group Commands

mkgroup

[About mkgroup Command on page 272](#)

[Employing this Command through the CLI on page 272](#)

About mkgroup Command

Description

Use this command to create a new group. Applications can be added to or deleted from the group using the **udstask mkgrouppmember** and **udstask rmgroupmember** commands. All applications of a group should be protected by the same template and profile. Note that when an application is removed from the group, it retains the protection.

To protect all applications in a group, use the **udstask mksla** command with the **-group** parameter.

Rights

You must have the 'Application Manage' or 'Host Manage' right to create a group.

Parameters

Parameter	Description
-name <i>name</i>	Required. Specifies the name of the group. The name should be unique.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.
-description <i>description</i>	Optional. Specifies the description for the group.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- mkgroup -- --+- -name -- name -+----->
>-- -appliance -- appliance ----->
>--+-----+----->
'- -description -- description -'
```

CLI Example

```
$ udstask mkgroup -name mktgroup -appliance Appliance_C1
```


lsgroup

[About lsgroup Command on page 273](#)

[Employing this Command through the CLI on page 274](#)

About lsgroup Command

Description

Use this command to display a concise list of application groups or a detailed view of an application group. You can protect the members of a group using a single policy template.

Rights

You must have the 'System View' or 'System Manage' right to display a list of groups.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target VDP Appliance to retrieve all objects in a list view. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.
-delim <i>delimiter</i>	Optional. By default, all columns of data are separated by a tab in the concise view. In the detailed view, each column of data is displayed in a separate row and if the headers are displayed, the header is separated from the data by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one- byte character. To display the data, recommended delimiter to use is comma (',') for list view, and equal ('=') for detail view.
-filtervalue <i>attrib=value</i>	<p>Optional. Specifies that you want your report to display any or the entire list of valid filter attributes. The valid filter attributes for the udsinfo lsgroup command are:</p> <ul style="list-style-type: none">• name• description <p>The filter is formed with an attribute and a value. When you specify more than one filter, they must be combined with '&' character (which should be escaped with '\'). For string type of filters, the only operator allowed is '='. You can also use wild card character '*'. For example, to list all consistency groups with a name that begins with 'foo', use '-filtervalue name=foo*'</p>
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.
<i>object_id</i> <i>object_name</i>	Optional. Specifies the name or ID of an object. When you use this parameter, a detailed view of the object is returned and any value specified by the -filtervalue parameter is ignored. If you do not specify the <i>object_id</i> or the <i>object_name</i> , a concise view of all objects matching the filter criteria is displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsgroup -- ----->
>--+-----+----->
' - -appliance -- appliance -'
>--+-----+-- --+-----+----->
' - -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+-- -- --+-----+-----><
' - -delim -- delimiter -'              +- object_id ---+
                                         '- object_name -'
```

CLI Example

```
$ udsinfo lsgroup -delim = mktgroup -appliance Appliance_C1
id=13167
description=
name=mktgroup
```

chgroup

[About chgroup Command on page 275](#)
[Employing this Command through the CLI on page 275](#)

About chgroup Command

Description

Use this command to change the attributes of a group. Use the `udsinfo lsgroup` command to obtain a list of groups with IDs and names.

Rights

You must have the 'Application Manage' or 'Host Manage' right to modify a group.

Parameters

Parameter	Description
-description <i>description</i>	Optional. Specifies the description.
-name <i>name</i>	Optional. Specifies the name.
<i>group_id</i> <i>group_name</i>	Required. Specifies the ID or name of the group to be modified.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- chgroup -- --+-----+----->
                                   '- -description -- desc -'
>--+-----+-- --+ group_name +-+-----><
  '- -name -- name -'      '- group_id ---'
```

CLI Example

```
$ udstask chgroup -description 'new group description' mktgroup
```

mkgroupmember

[About mkgroupmember Command on page 276](#)

[Employing this Command through the CLI on page 276](#)

About mkgroupmember Command

Description

Use this command to add an application to a group.

Rights

You must have the "Application Manage" or 'System Manage' or 'SLA Assign' right to add an application to a group.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.
-appid <i>appid</i>	Required. Specifies the ID of an application to add to a group. Use udsinfo lsapplication to retrieve the application ID.
-groupid <i>groupid</i>	Required. Specifies the ID of the group to add the application to. Use udsinfo lsconsistgrp command to obtain the ID of the consistency group.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- mkgroupmember -- ----->
>-- -appliance -- appliance ----->
>-- -appid -- app_id -- -- -groupid -- group_id -----><
```

CLI Example

```
$ udstask mkgroupmember -appid 4020 -groupid 4030 -appliance Appliance_C1
```

lsgroupmember

[About lsgroupmember Command on page 277](#)

[Employing this Command through the CLI on page 278](#)

About lsgroupmember Command

Description

Use this command to display a concise list of groups or a detailed view of the grouping of applications.

Rights

You must have the 'System View' or 'System Manage' or 'SLA Assign' right to list group members.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target VDP Appliance to retrieve all objects in a list view. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.
-delim <i>delimiter</i>	Optional. By default, all columns of data are separated by a tab in the concise view. In the detailed view, each column of data is displayed in a separate row and if the headers are displayed, the header is separated from the data by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one- byte character. To display the data, recommended delimiter to use is comma (',') for list view, and equal ('=') for detail view.
-filtervalue <i>attrib=value</i>	Optional. Specifies that you want your report to display any or the entire list of valid filter attributes. The valid filter attributes for the udsinfo lsgroupmember command are: <ul style="list-style-type: none">• groupid• appid The filter is formed with an attribute and a value. When you specify more than one filter, they must be combined with '&' character (which should be escaped with '\\').
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.
<i>object_id</i>	Optional. Specifies the ID of an object. When you use this parameter, a detailed view of the object is returned and any value that is specified by the -filtervalue parameter is ignored. If you do not specify the <i>object_id</i> , a concise view of all objects matching the filter criteria is displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsgroupmember -- ----->
>--+-----+----->
>  '- -appliance -- appliance -'
>--+-----+-- --+-----+----->
>  '- -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+-- -- --+-----+-----><
>  '- -delim -- delimiter -'      '- object_id ---'
```

CLI Example

```
$ udsinfo lsgroupmember -appliance Appliance_C1
id          appid      groupid
116737      4139         111616
116738      103463       111616
```

mkconsistgrp

[About mkconsistgrp Command](#) on page 279

[Employing this Command through the CLI](#) on page 279

About mkconsistgrp Command

Description

Use this command to create a new consistency group object. A consistency group is more than a logical grouping of applications. A consistency group is used to group applications with data that should be protected together when taking a snapshot. All applications of a consistency group should be located on the same host.

Rights

You must have the 'Application Manage' or 'Host Manage' or 'SLA Assign' right to create a consistency group.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.
-description <i>desc</i>	Optional. Specifies the description for consistency group.
-hostid <i>host_id</i>	Required. Specifies the host ID of the consistency group for the VDP appliance.
-groupname <i>group_name</i>	Required. Specifies the name of the consistency group. The name should be unique.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- mkconsistgrp -- ----->
>--+-----+-- -- -hostid -- host_id -- ----->
  '- -description -- desc -'
>-- -appliance -- appliance ----->
>-- -groupname -- group_name -- --+-----+---><
```

CLI Example

```
$ udstask mkconsistgrp -groupname 'appgroup1'-hostid 4111 -appliance Appliance_C1
```

lsconsistgrp

[About lsconsistgrp Command on page 280](#)

[Employing this Command through the CLI on page 281](#)

About lsconsistgrp Command

Description

Use this command to display a concise list of all consistency groups created on the appliance or a detailed view of a consistency group.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target VDP Appliance to retrieve all objects in a list view. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.
-delim <i>delimiter</i>	<p>Optional. By default, all columns of data are separated by a tab in concise view. In the detailed view, each column of data is displayed in a separate row and if the headers are displayed, the header is separated from the data by a space. The -delim parameter overrides this behavior.</p> <p>Valid input for the -delim parameter is a one- byte character. To display the data, the recommended delimiter is a comma (',') for list view, and equal ('=') for detail view.</p>
-filtervalue <i>attrib=value</i>	<p>Optional. Specifies that you want your report to display any or the entire list of valid filter attributes. The valid filter attributes for the udsinfo lsconsistgrp command are:</p> <ul style="list-style-type: none">• groupname• originalappid <p>The filter is formed with an attribute and a value. When user specifies more than one filter, they must be combined with the '&' character (which needs to be escaped with '\'). For string type of filters, the only operator allowed is '='. You can also use wild card character '*'. For example, to list all consistency groups with a name that begins with 'foo', use '-filtervalue groupname=foo*'. For number types, allowed operators are: =, >, >=, <, <=.</p> <p>To use <, <=, >, or >=, they need to be escaped with '\ ' or enclosed in ' ' or " ", as required by shell. For example,</p> <pre>-filtervalue originalappid\>=80 -filtervalue "originalappid>=80" -filtervalue 'originalappid>=80'</pre>
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.

Parameter	Description
<i>object_id</i> <i>object_name</i>	Optional. Specifies the name or ID of an object. When you use this parameter, a detailed view of the object is returned and any value specified by the -filtervalue parameter is ignored. If you do not specify the <i>object_id</i> or the <i>object_name</i> , a concise view of all objects matching the filter criteria is displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsconsistgrp -- ----->
'- -appliance -- appliance -'
>--+-----+-- --+-----+-- ----->
'- -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+-- --+-----+-----><
'- -delim -- delimiter -'              +- object_id ---+
                                      '- object_name -'
```

CLI Example

```
$ udsinfo lsconsistgrp group1
id 13167
auxinfo
protectable 1
appversion
morecredentials
volumes username
hostid
description
apptype
friendlytype
groupname group1
```

chconsistgrp

[About chconsistgrp Command on page 282](#)
[Employing this Command through the CLI on page 282](#)

About chconsistgrp Command

Description

Use this command to change the attributes of a consistency group. A consistency group is more than a logical grouping of applications. It is used to group applications to create a crash consistent backup image when creating a backup. Use `udsinfo lsconsistgrp` command to obtain the ID or name of the consistency group.

Rights

You must have the 'Application Manage' right to change the attributes of a consistency group.

Parameters

Parameter	Description
-description <i>description</i>	Optional. Specifies the description.
-groupname <i>group_name</i>	Optional. Specifies new name of the consistency group.
<i>group_id</i>	Required. Specifies the consistency group ID to be modified.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- chconsistgrp -- --+-----+-->
                                     '- -description -- desc -'
>--+-----+-- -- group_id -----><
   '- -groupname -- name -'
```

CLI Example

```
$ udstask chconsistgrp -description 'new group description' 4111
```

Note: All applications of a consistency group must be on the same host.

mkconsistgrpmember

[About mkconsistgrpmember Command on page 283](#)

[Employing this Command through the CLI on page 283](#)

About mkconsistgrpmember Command

Description

Use this command to add an application to a consistency group.

Rights

You must have the 'Application Manage' right to add an application to a consistency group.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.
-appid <i>appid</i>	Required. Specifies the ID of the application to be added to a consistency group. Use udsinfo lsapplication to retrieve the application ID.
-groupid <i>groupid</i>	Required. Specifies the ID of the consistency group to add the application to. Use udsinfo lsconsistgrp command to obtain the ID of the consistency group

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- mkconsistgrpmember -- ----->
>-- -appliance -- appliance ----->
>-- -appid -- app_id -- -- -groupid -- group_id -----><
```

CLI Example

```
$ udstask mkconsistgrpmember -appid 4020 -groupid 4030 -appliance Appliance_C1
```

rmconsistgrp

[About rmconsistgrp Command on page 288](#)

[Employing this Command through the CLI on page 284](#)

About rmconsistgrp Command

Description

Use this command to delete a consistency group.

Rights

You must have the 'Application Manage' or 'Host Manage' right to delete a consistency group.

Parameters

Parameter	Description
<i>consistgrp_id</i>	Required. Specifies the consistency group ID to be removed. Use udsinfo lsconsistgrp command to obtain the ID or name of the consistency group.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmconsistgrp -- -- consistgrp_id -----><
```

CLI Example

```
$ udstask rmconsistgrp 1234
```

lsconsistgrpmember

[About lsconsistgrpmember Command on page 285](#)

[Employing this Command through the CLI on page 286](#)

About lsconsistgrpmember Command

Description

Use this command to display a concise list of applications-to-consistency-group mapping or a detailed view of a consistency group.

Rights

You must have the 'System View' right to retrieve consistency group (consistgrp) mappings.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target VDP Appliance to retrieve all objects in a list view. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.
-delim <i>delimiter</i>	Optional. By default, all columns of data are separated by a tab in the concise view. In the detailed view, each column of data is displayed in a separate row and if the headers are displayed, the header is separated from the data by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one- byte character. To display the data, recommended delimiter to use is comma (',') for list view, and equal ('=') for detail view.
-filtervalue <i>attrib=value</i>	Optional. Specifies that you want your report to display any or the entire list of valid filter attributes. The valid filter attributes for the udsinfo lsconsistgrpmember command are: <ul style="list-style-type: none">• groupid• appid The filter is formed with an attribute and a value. When you specify more than one filter, they must be combined with '&' character (which should be escaped with '\').
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.
<i>object_id</i>	Optional. Specifies the ID of an object. When you use this parameter, a detailed view of the object is returned and any value that is specified by the -filtervalue parameter is ignored. If you do not specify the <i>object_id</i> , a concise view of all objects matching the filter criteria is displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsconsistgrpmember -- ----->
>--+-----+----->
>  '- -appliance -- appliance -'
>--+-----+-----+--+-----+----->
>  '- -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+-----+--+-----+-----><
>  '- -delim -- delimiter -'      '- object_id ---'
```

CLI Example

```
$ udsinfo lsconsistgrpmember -appliance Appliance_C1
id          appid      groupid
116737      4139       111616
116738      103463     111616
```

rmconsistgrpmember

[About rmconsistgrpmember Command](#) on page 287

[Employing this Command through the CLI](#) on page 287

About rmconsistgrpmember Command

Description

Use this command to deletes an application from a consistency group. Use the `udsinfo lsconsistgrpmember` command to locate the ID of a consistency group member.

Rights

You must have the 'Application Manage' or 'Host Manage' or 'SLA Manage' right to delete an application from a consistency group.

Parameters

Parameter	Description
<i>member_id</i>	Required. Specifies the ID of the application to be deleted from a consistency group.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmconsistgrpmember -- -- member_id -----><
```

CLI Example

```
$ udstask rmconsistgrpmember 4111
```

rmconsistgrp

[About rmconsistgrp Command on page 288](#)

[Employing this Command through the CLI on page 288](#)

About rmconsistgrp Command

Description

Use this command to delete a consistency group.

Rights

You must have the 'Application Manage' or 'Host Manage' right to delete a consistency group.

Parameters

Parameter	Description
<i>consistgrp_id</i>	Required. Specifies the consistency group ID to be removed. Use udsinfo lsconsistgrp command to obtain the ID or name of the consistency group.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmconsistgrp -- -- consistgrp_id -----><
```

CLI Example

```
$ udstask rmconsistgrp 1234
```


rmgroupmember

[About rmgroupmember Command](#) on page 289

[Employing this Command through the CLI](#) on page 289

About rmgroupmember Command

Description

Use this command to delete an application from a group. Use the `udsinfo lsgroupmember` command to list the ID of the Rights

You must have the 'Application Manage' or 'System Manage' or 'SLA Assign' right to delete an application from a group.

Parameters

Parameter	Description
<i>member_id</i>	Required. Specifies the ID of the group mapping to be removed.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmgroupmember -- -- member_id -----><
```

CLI Example

```
$ udstask rmgroupmember 4111
```

rmgroup

[About rmgroup Command on page 290](#)

[Employing this Command through the CLI on page 290](#)

About rmgroup Command

Description

Use this command to delete a group.

Rights

You must have the 'Application Manage' or 'Host Manage' or 'System Manage' right to delete a group.

Parameters

Parameter	Description
<i>group_id</i> <i>group_name</i>	Required. Specifies the ID or name of the group to be deleted. Use <code>udsinfo</code> <code>lsgroup</code> command to obtain the ID or name of a group.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmgroup -- --+- group_name +------><
                                     '- group_id ---'
```

CLI Example

```
$ udstask rmgroup mktgroup
```

Discovery Commands

appdiscovery

[About appdiscovery Command on page 291](#)

[Employing this Command through the CLI on page 291](#)

About appdiscovery Command

Description

Use this command to discover applications on a host. This applies to non Virtual Machine applications discovery. For Virtual Machines, use [vmdiscovery](#).

Rights

You must have the 'Host Manage' or 'Application Manage' right to perform application discovery.

Parameters

Parameter	Description
-host <i>host_name host_id</i>	Required. Specifies the ID for VDP appliance or name of the host to discover the applications running on it. Use the udsinfo lshost command to locate the ID/ SRCID or name of the host.
-ipaddress	(Optional) Specifies the IP address of a host to perform discovery on.
-org <i>org_id org_name</i>	Optional. Specifies a default organization in which a new application should be added after discovery. To use this option user needs to have 'System Manage' right. If a default organization is not specified, an organization that the user belongs to is used.
-port <i>port</i>	Optional. Specifies the port that the Connector is running on, the default value is 5106.
<i>versiononly</i>	Optional. Specifies if only the version should be discovered for this host. By default versiononly is set to false.
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- appdiscovery ----->

>-- -host ---+ host_name -+-- --+-----+----->
      '- host_id ---'      '- -org --+ org_id ---+-'
                          '- org_name -'

>--+-----+-- ----->
```

```
'- -ipaddress -- ipaddress -'  
>---+-----+---+-----+-----><  
'- -port -- port -'      '- -versiononly -'
```

CLI Example

```
$ udstask appdiscovery -host myhost -appliance Appliance_C1
```

lsappvols

[About lsappvols Command](#) on page 293

[Employing this Command through the CLI](#) on page 293

About lsappvols Command

Description

Use this command to discover LVM volumes from the Connector on a Linux host. Generic out-of-band applications can then be added based on the selected LVM volumes. The lsappvols command is supported only by the appliances.

Rights

You must have the 'Host Manage' or 'Application Manage' right to perform application discovery.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default, all columns of data are separated by a tab in the concise view. In the detailed view, each column of data is displayed in a separate row and if the headers are displayed, the header is separated from the data by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. To display the data, recommended delimiter to use is comma (',') for list view, and equal ('=') for detail view.
-host <i>host_name host_id</i>	Required. Specifies the Linux host with a Actifio Connector to perform application discovery using either host ID or name. Use the udsinfo lshost command to locate the host ID or name.
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsappvols -- --+-----+-- ----->
                                '- -delim -- delim -'
>--+ -host --+ host_name +--+ +-----+----->
                                '- host_id ---'    '- -nohdr -- nohdr -'
```

CLI Example

\$ udsinfo lsappvols -host 67697

```
thin-data/thinvol,bAY9bd-Gumf-YDff-7UKb-VfRH-sYzd-uLT09f,10737418240
data/data2,j1hib2-bRw4-hFXR-pk1x-bDPo-FoLh-LbGro3,32212254720
data/data1,synR0g-YopG-8wfI-osqs-MaEP-vbzx-B5qYZX,32212254720
centos/swap,CzHj2e-xNQC-J6sp-P6jE-pjYa-4Tnc-6RJ9Ko,4177526784
centos/root,syYOrA-MFGd-RfGK-hfxn-gcos-C4yd-ZPfGKJ,53687091200
centos/home,3PGCzX-jL20-LlPR-NcLS-gn4u-WZpb-J1ohg1,113405591552
big_vg/big_lv_2,0s4OMd-th20-smG9-Lwpp-eSa9-0ZxG-P2J38P,966367641600
big_vg/big_lv_1,ZNC73B-Gqfs-78Jl-NQtJ-AhiI-hCK1-ZiUG21,1099511627776
```

vmdiscovery

[About vmdiscovery Command](#) on page 294

[Employing this Command through the CLI](#) on page 295

About vmdiscovery Command

Description

Use this command to discover and add virtual machines to the appliance to protect them with SLAs. A typical flow of the commands is:

```
udtask vmdiscovery -discoverclusters -host
```

Use **-discoverclusters** to discover clusters managed by this vCenter.

```
udtask vmdiscovery -discovervms -host -cluster -addall
```

Use **-discovervms** to discover virtual machines on the specified cluster. Use **-esxcluster** as host for AGM.

```
udtask vmdiscovery -addvms -host -cluster -vms
```

Add Virtual Machines on the specified cluster to the appliance with **-addvms**. Use **-esxcluster** as host for AGM.

Note: Multiple VMs must be separated with a colon (:).

Rights

You must have the 'Host Manage' right to discover virtual machines.

Parameters

Parameter	Description
-addall	Optional. Specifies that all virtual machines discovered in the cluster, specified with the -cluster parameter, should be added to the appliance. Valid only when used with the -discovervms parameter.
-addvms	Optional. Virtual machines to be added to the appliance. Specify VM name, UUID of the VM to add.
-cluster <i>cluster_name</i>	Optional. For an appliance, it specifies the cluster name that the virtual machines should be discovered on. Required when using the -discovervms and -addvms parameters.
-esxcluster <i>cluster_name</i>	Optional. For AGM, it specifies the ESX cluster name that the virtual machines should be discovered on. Required when using the -discovervms and -addvms parameters.
-delim <i>delimiter</i>	Optional. The delimiter to be used when displaying results.
-nohdr	Optional. By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed style view. The -nohdr parameter suppresses the display of these headings. If there is no data to be displayed, headings are not displayed.

Parameter	Description
-discoverclusters	Optional, but required to discover clusters on a vCenter.
-discovervms	Optional, but required to discover virtual machines. Discover virtual machines on the specified appliance.
-host <i>host_name host_id</i>	Required. Specifies the vCenter host to perform discovery on using the ID or name of the vCenter host. Use the udsinfo lshost command to obtain the ID or name of the vCenter host. The vCenter should have been added to the appliance with udstask mkhost command.
-org <i>org</i>	Optional. Specifies a default organization in which the new VM should be added after discovery. To use this option user needs to have 'System Manage' right. If a default organization is not specified, an organization that the user belongs to is used.
-vms <i>vms</i>	Optional. Virtual machines to be added to an appliance. The list of virtual machines should be separated by a colon (:). Required when using -addvms .
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target appliance to execute this command. VMs discovered will be added only to the target appliance if requested. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- vmdiscovery -- --+-----+----->
                                     '- -discoverclusters -'
>--+-----+-----+-----+-----+----->
   '- -discovervms -'      '- -addall -'      '- -addvms -'
>--+-----+-----+-----+-----+----->
   '- -cluster -- cluster_name -'      '- -delim -- delim -'
   '- -esxcluster -- cluster_name -'      '- -delim -- delim -'
>--+ -host --+ host_name --+-----+----->
           '- host_id ---'      '- -org --+ org_id ---->
                                   '- org_name -'
>--+-----+-----+-----+-----+-----><
   '- -vms -- vms -'      '- -nohdr -- nohdr -'
>--+-----+-----+-----+-----+-----><
   '- -appliance -- appliance -'
```

CLI Example

Discover clusters for VDP appliance or ESX clusters for AGM:

\$ udstask vmdiscovery -discoverclusters -host vcenter1

name,type

ClusterQA,Cluster

Cluster_London,Cluster

Discover Virtual Machines in a cluster for VDP appliance:

\$ udstask vmdiscovery -discovervms -host vcenter1 -cluster ClusterQA

vmname,osname,hostname,ipaddress,status,esxhostname

```
Adso,Other (32-bit),,,1,esx13
QAS,Microsoft Windows Server 2003, Standard Edition,,,1,esx14
SmallWindowsOrig,Microsoft Windows Server 2003, Standard Edition,,,0,esx13
```

Discover Virtual Machines in an ESX cluster for AGM:

```
$ udstask vmdiscovery -discovervms -host vcenter1 -esxcluster ClusterQA
```

```
vmname,osname,hostname,ipaddress,status,esxhostname
```

```
Adso,Other (32-bit),,,1,esx13
```

```
QAS,Microsoft Windows Server 2003, Standard Edition,,,1,esx14
```

```
SmallWindowsOrig,Microsoft Windows Server 2003, Standard Edition,,,0,esx13
```

Add discovered Virtual Machines to the appliance:

```
$ udstask vmdiscovery -addvms -host vcenter1 -esxcluster ClusterQA -vms Adso:QAS
```


hmcdiscovery

[About hmcdiscovery Command](#) on page 297

[Employing this Command through the CLI](#) on page 298

About hmcdiscovery Command

Description

Use this command to discover VIOs and LPARs on an HMC host.

Note: The **hmcdiscovery** command is supported only by appliances only.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Manager	-

Rights

You must have the 'Host Manage' rights to perform HMC discovery.

Parameters

Parameter	Description
-host <i>host_name</i> <i>host_id</i>	Optional. Specifies the host to perform HMC discovery on. The host has to be an HMC host. This is used when the HMC host already exists in the appliance.
-ipaddress <i>ip</i>	Optional. Specifies the IP address of the HMC host, required when the HMC host does not exist in the appliance.
-org <i>org_id</i> <i>org_name</i>	Optional. Specifies a default organization in which VIO or LPAR hosts should be added after discovery. To use this option user needs 'System Manage' right. If a default organization is not specified, an organization the user belongs to is used.
-password <i>password</i>	Optional. Specifies the password of the HMC host, required when the HMC host does not exist in the appliance.
-port <i>port</i>	Optional. Specifies the port to be used for discovery, default to 22.
-username <i>username</i>	Optional. Specifies the username of the HMC host, required when the HMC host does not exist in the appliance.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- hmcdiscovery -- ----->
>--+-----+--+-----+--+-----+----->
  '- -host --+- host_name +--'      '- -ipaddress -- ip -'
      '- host_id ---'

>--+-----+--+-----+--+-----+----->
  '- -password -- password -'      '- -org +- org_id -----'
                                   '- org_name -'

>--+-----+--+-----+--+-----+----->
  '- -port -- port -'      '- -username -- username -'<
```

CLI Example

\$ udstask hmcdiscovery -host 4011

Other Commands

failback

[About failback Command](#) on page 299

[Employing this Command through the CLI](#) on page 299

About failback Command

Description

Use this to fail back an application that is protected by a Dedup Async or StreamSnap policy, from the remote appliance to the primary appliance. Prior to failing an application back, you should synchronize the application's data on the remote appliance with that of the primary appliance using the **syncback** command.

Rights

You must have the 'Host Manage' or 'Application Manage' or 'Mirroring Manage' right to fail back an application.

Parameters

Parameter	Description
-id <i>app_id consistgrp_id</i>	Required. Specifies the ID for VDP appliance or the SRCID for AGM of the application or the consistency group to fail back. The application should be protected by an enhanced asynchronous replication policy, and is in failed-over state. Use udsinfo lsapplication or udsinfo lsconsistgrp for the ID/SRCID.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values. Use udsinfo lscluster to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- failback -- -- -id --+ app_id -----+-----><
                                     '- consistgrp_id -'
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udstask failback -id 4111 -appliance Appliance_C1
```

failover

[About failover Command on page 300](#)

[Employing this Command through the CLI on page 303](#)

About failover Command

Description

Use this command to fail-over a dedup-async protected application. This command is issued on the remote appliance when the application on the primary appliance is failed.

Rights

You must have the 'Host Manage' or 'Application Manage' right to fail over an application.

Parameters

Parameter	Description
-accessmode <i>ro rw deny root</i>	Optional, valid only for export to CIFS type for VDP appliance. Specifies the type of access that is allowed for the specified user (in -user). Allowed types are: <ul style="list-style-type: none">• ro: read-only• rw: read-write• deny: no access allowed• root: has full access to all the files in the share even if ACLs do not.
-allvolumes	Optional. The flag specifies whether to export all volumes in the backup for VDP appliance. Use -exportobjectid to specify a specific volume to be exported.
-id <i>app_id consistgrp_id</i>	Required. Specifies the ID/SRCID or consistgrp of the application to fail over. The application or consistgrp should be protected by a dedup-async policy.
-datastore <i>datastore</i>	Optional for applications on hosts other than virtual machines but required for VMware Virtual Machine applications. Specifies the data store to be used for fail-over.
-diskpool <i>pool_name pool_id</i>	Optional for VM applications and required only for non-VM applications. Specifies the disk-pool to be used for fail-over.
-exportedname <i>name</i>	Optional. Specifies the exported name of the backup image, valid only for CIFS for VDP appliance.
-exportedpath <i>path</i>	Optional. Specifies sub-directory within the mount volume to be exported for VDP appliance.

Parameter	Description
-exporthost <i>host_list</i>	Optional. Specifies the ID or name of host(s) to which the backup image is to be exported for VDP appliance. If ID is used, the host must already exist in the appliance. Name can contain wild characters. More than one host can be specified, separated by a comma (,).
-exportobjectid <i>objectid</i>	Optional. Specifies the object id of the individual volume within the mounted image to be exported for VDP appliance.
-exportobjecttype <i>objecttype</i>	Optional. Specifies the object type of the individual volume within the mounted image to be exported for VDP appliance.
-exportoption <i>option</i>	<p>Optional. Specifies the export option, a name/value list, separated by equal (=) for VDP appliance. Multiple options are separated by comma (,). An example is,</p> <p style="text-align: center;">"readonly=true,writedelay=false"</p> <p>The following option is allowed for NFS:</p> <ul style="list-style-type: none"> • readonly="true false" • writedelay="true false" • rootsquash="true false" • allsquash="true false" • anonuid="0" "1" • insecurelocks="true false" <p>The following option is allowed for CIFS,</p> <ul style="list-style-type: none"> • allowguest="true false"
-exporttype <i>cifs</i> <i>nfs</i>	Optional. Specifies protocol for VDP appliance, <i>cifs</i> for CIFS, and <i>nfs</i> for NFS. Default to the protocol the backup was created.
-group <i>group</i>	Optional, valid only for export to CIFS type for VDP appliance. Specifies a list of domain groups that are allowed to map the share, separated by a comma (,).
-host <i>host_name</i> <i>host_id</i>	Required. Specifies the host ID for VDP appliance or host name or the name of the virtual machine to fail-over to. For a regular host, the host has to exist already.
-hypervisor <i>hypervisor</i>	Optional (required for Virtual Machine applications for VDP appliance). Specifies the hypervisor on which to failover to. This is the ESX host for VMware, and Microsoft Hyper-V Server for Hyper-V.
-label <i>label</i>	Optional. Specifies label for the fail-over image.
-mgmtserver <i>host_id</i> <i>host_name</i>	Optional. Required for Virtual Machine applications for VDP appliance. Specifies the management server, ID or name, to be used for test failover. This is the vCenter host for VMware and Microsoft System Center Virtual Machine Manager for Hyper-V.

Parameter	Description
-nowait	Optional. The flag specifies not to wait for the completion of the command.
-path <i>path</i>	Optional, valid only for Hyper-V Virtual Machine backup image for VDP appliance. Specifies the path to be used for failover to a new Hyper-V Virtual Machine.
-poweroffvm	(Optional) By default, failover of VM image is powered on automatically. Specifying 'poweroffvm' will leave the VM in the powered off state.
-rdmmode	<p>(Optional) Specifies Raw Device Mapping (RDM) mode for VM. Valid values are:</p> <ul style="list-style-type: none"> • dependentvirtual • independentvirtual (default) • physical <p>Specify dependentvirtual if mounted volume(s) are to be included in VMware snapshots</p> <hr/> <p>Note: <i>dependentvirtual is rarely used.</i></p> <hr/> <p>If there is an SLA assigned to the VM to which these volumes are mounted, they will be captured and will be counted towards MDL usage.</p>
-restoreoption <i>option</i>	Optional. A comma delimited list of restore options where each restore option is a name-value pair. See Appendix F, List of Restore Options for a summary of the supported restore options for this command.
-script <i>script</i>	<p>Optional. Specifies a script during different phases of the operation. Five phases are supported, INIT, PRE, POST, FINAL and ABORT. Each phase, a timeout, name of the script, and argument list can be specified. Name of the script is required, timeout and arguments are optional.</p> <p>Syntax for each phase is:</p> <p>name=<name>:phase={INIT PRE POST FINAL ABORT}:[timeout=<timeout>]:[args=arg1,arg2]Multiple phases can be specified, separated by semi-colon (;), for example, "name=setup.sh:phase=INIT;name=freeze.sh:phase=PRE"</p>
-user <i>user_password</i>	Optional, valid only for export to CIFS type for VDP appliance. Specifies a list of domain users that are allowed to map the share, separated by a comma (.). Also allowed are local user (with specified password), use colon (:) to separate user name and password. The local user does not need to exist in Windows Domain or the appliance, but has to be unique.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values. Use udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.

Employing this Command through the CLI

CLI Syntax

For an Actifio Appliance:

```
>>- udstask -- -- failover -- -- -id ---+ app_id -----+-- ----->
                                     '- consistgrp_id -'

>--+-----+-----+-----+-----+----->
'- -accessmode ---+ ro ---+-- -'      '- -allvolumes -'
      +- rw ---+
      +- deny +-
      '- root -'

>--+-----+-----+-----+-----+----->
'- appaware -'      '- -exporttype ---+ cifs ---+ -'
                                     '- nfs --'

>--+-----+-----+-----+-----+----->
'- -exportedname -- name -'      '- -exportedpath -- path -'

>--+-----+-----+-----+-----+----->
'- exportoption -- option -'      '- -exporthost -- host_list -'

>--+-----+-----+-----+-----+----->
'- -exportobjectid -- objectid -'      '- -group -- group -'

>--+-----+-----+-----+-----+----->
'- -exportobjecttype -- objecttype -'

>--+-----+-----+-----+-----+----->
'- -datastore -- datastore -'      '- -hypervisor -- hypervisor -'

>--+-----+-----+-----+-----+----->
'- -diskpool ---+ pool_name +-+ -'      '- -label -- label -'
      '- pool_id ---'

>--+-----+-----+-----+-----+----->
'- -nfsoption -- option -'      '- -poweroffvm -'

>--+-----+-----+-----+-----+----->
'- -host -- host_name -'      '- -path -- path -'

>--+-----+-----+-----+-----+----->
'- -rdmmode ---+ dependentvirtual ---+-- -'
      +- independentvirtual +-
      '- physical -----'

>--+-----+-----+-----+-----+----->
'- -restoreoption -- option -'      '- -script -- script -'

>--+-----+-----+-----+-----+-----><
'- -mgmtserver ---+ host_id ---+-- -'      '- -user -- user_password -'
      '- host_name -'
```

For AGM:

```
>>- udstask -- -- failover -- -- -id --+- app_id -----+-- ----->
                                     '- consistgrp_id -'
>--+-----+-----+-----+-----+-----+----->
'- -datastore -- datastore -'
>--+-----+-----+-----+-----+-----+----->
'- -diskpool --+- pool_name +- ' '- -label -- label -'
               '- pool_id ---'
>--+-----+-----+-----+-----+-----+----->
'- -host -- host_name -'      '- -restoreoption -- option -'
>--+-----+-----+-----+-----+-----+----->
'- -script -- script -'

>-- -appliance -- appliance -----><
```

CLI Example

```
$ udstask failover -id 4111 -host myhost -diskpool mainpool -appliance Appliance_C1
```


testfailover

[About testfailover Command](#) on page 305

[Employing this Command through the CLI](#) on page 307

About testfailover Command

Description

Use this command to test a Dedup Async protected application for fail-over.

Rights

You must have the 'Host Manage' or 'Application Manage' right to test an application.

Parameters

Parameter	Description
-id <i>app_id consistgrp_id</i>	Required. Specifies the ID for VDP appliance or SRCID for AGM of the application or consistency group to be tested. The application should be protected with a dedup-async policy.
-accessmode <i>ro rw deny root</i>	Optional, valid only for export to CIFS type for VDP appliance. Specifies the type of access that is allowed for the specified user (in -user). Allowed types are: <ul style="list-style-type: none">• ro: read-only• rw: read-write• deny: no access allowed• root: has full access to all the files in the share even if ACLs do not
-allvolumes	Optional. The flag specifies whether to export all volumes in the backup for VDP appliance. Use -exportobjectid to specify a specific volume to be exported.
-datastore <i>datastore</i>	Optional. Required for VMware (VDP appliance) and Virtual Machine applications (AGM). Specifies the datastore to be used to test the fail-over.
-host <i>host_name host_id</i>	Required. Specifies the host source ID, name, or the name of the virtual machine to fail over to. For a regular host, the host should exist already.
-hypervisor <i>hypervisor</i>	Optional. required for Virtual Machine applications for VDP appliance. Specifies the hypervisor to be used for the test failover. This is the ESX host for VMware, and Microsoft Hyper-V Server for Hyper-V.
-label <i>label</i>	Optional. Specifies label for the test failover image.
-mgmtserver <i>host_id host_name</i>	Optional. required for Virtual Machine applications for VDP appliance. Specifies the management server to be used for test fail-over. This is the vCenter host for VMware and Microsoft System Center Virtual Machine Manager for Hyper-V.
-nowait	Optional. Specifies not to wait for the completion of the command.

Parameter	Description
-path <i>path</i>	Optional. Valid only for Hyper-V Virtual Machine backup image for VDP appliance. Specifies the path to be used for test fail-over to a new Hyper-V Virtual Machine.
-rdmmode	<p>(Optional) Specifies Raw Device Mapping (RDM) mode for a VM. Valid values are:</p> <ul style="list-style-type: none"> • dependentvirtual • independentvirtual (default) • physical <p>Specify dependentvirtual if mounted volume(s) are to be included in VMware snapshots</p> <hr/> <p>Note: <i>dependentvirtual is rarely used.</i></p> <hr/> <p>If there is an SLA assigned to the VM to which these volumes are mounted, they will be captured and will be counted towards MDL usage.</p>
-restoreoption <i>option</i>	Optional. A comma delimited list of restore options where each restore option is a name-value pair. See Appendix F, List of Restore Options for a summary of the supported restore options for this command.
-script <i>script</i>	<p>Optional. Specifies a script during different phases of the operation. Five phases are supported, INIT, PRE, POST, FINAL, and ABORT. Each phase, a timeout, name of the script, and argument list can be specified. Name of the script is required, timeout and args are optional.</p> <p>Syntax for each phase is: name=<name>;phase={INIT PRE POST FINAL ABORT};[timeout=<timeout>];[args=arg1,arg2]. Multiple phases can be specified, separated by semi-colon (;), for example, "name=setup.sh;phase=INIT;name=freeze.sh;phase=PRE"</p>
-exportedname <i>name</i>	Optional. Specifies the exported name of the backup image, valid only for CIFS for VDP appliance.
-exportedpath <i>path</i>	Optional. Specifies sub-directory within the mount volume to be exported for VDP appliance.
-exporthost <i>host_list</i>	Optional. Specifies the ID or name of host(s) to which the backup image is to be exported for VDP appliance. If ID is used, the host has to already exist in the appliance. Name can contain wild characters. More than one host can be specified, separated by a comma (,).
-exportobjectid <i>objectid</i>	Optional. Specifies the objectid of the individual volume within the mounted image to be exported for VDP appliance.
-exportobjecttype <i>objecttype</i>	Optional. Specifies the objecttype of the individual volume within the mounted image to be exported for VDP appliance.
-poweroffvm	Optional. By default, testfailover of VM image is powered on automatically. By specifying '-poweroffvm', the VM will be left in the powered off state.

Parameter	Description
-exportoption <i>option</i>	Optional. Specifies the export option for VDP appliance, a name/value list, separated by equal (=). Multiple options are separated by commas (.). An example is: "readonly=true,writedelay=false" The following options are allowed for NFS: <ul style="list-style-type: none"> • readonly="true false" • writedelay="true false" • rootsquash="true false" • allsquash="true false" • anonuid="0" "1" • insecurelocks="true false" The following option is allowed for CIFS: allowguest="true false"
-exporttype <i>cifs nfs</i>	Optional. Specifies protocol for VDP appliance, <i>cifs</i> for CIFS, and <i>nfs</i> for NFS. Default to the protocol the backup was created.
-group <i>group</i>	Optional, valid only for export to CIFS type for VDP appliance. Specifies a list of domain groups that are allowed to map the share, separated by a comma (,).
-user <i>user_password</i>	Optional, valid only for export to CIFS type for VDP appliance. Specifies a list of domain users that are allowed to map the share, separated by comma (,). Also allowed are local user (with specified password), use colon (:) to separate username and password. The local user does not need to exist in Windows Domain or the appliance, but it has to be unique.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.

Employing this Command through the CLI

CLI Syntax

For VDP Appliance:

```
>>- udstask -- -- testfailover -- -- -id --+- app_id -----+-- ----->
                                     '- consistgrp_id -'

>--+-----+-----+-----+-----+----->
  '- -accessmode --+- ro ----+-- -'      '- -allvolumes -'
                                     +- rw ----+
                                     +- deny +-
                                     '- root -'

>--+-----+-----+-----+-----+----->
  '- appaware -'      '- -exporttype --+- cifs -+-- -'
                                     '- nfs --'

>--+-----+-----+-----+-----+----->
```

```

'- -exportedname -- name -'      '- -exportedpath -- path -'

>--+-----+-----+-----+-----+----->
'- exportoption -- option -'      '- -exporthost -- host_list -'

>--+-----+-----+-----+----->
'- -exportobjectid -- objectid -'      '- -group -- group -'

>--+-----+-----+-----+----->
'- -exportobjecttype -- objecttype -'      '- -poweroffvm -'

>--+-----+-----+-----+----->
'- -datastore -- datastore -'      '- -label -- label -'

>-- -host --+ host_name +--+-----+----->
      '- host_id ---'      '- -hypervisor -- hypervisor -'

>--+-----+-----+-----+----->
'- -mgmtserver --+ host_id ---+-'      '- -nowait -'
      '- host_name -'

>--+-----+-----+-----+----->
'- -nfsoption -- option -'

>--+-----+-----+-----+----->
'- -path -- path -'      '- -restoreoption -- option -'

>--+-----+-----+-----+----->
'- -rdmnode --+ dependentvirtual ---+-- -'
      +- independentvirtual +-
      '- physical -----'

>--+-----+-----+-----+-----><
'- -script -- script -'      '- -user -- user_password -'

```

For AGM:

```

>>- udstask -- -- testfailover -- -- -id --+ app_id -----+-->
      '- consistgrp_id -'

>--+-----+-----+-----+-----+----->
'- -datastore -- datastore -'

>-- -host --+ host_name +--+-----+----->
      '- host_id ---'      '- -label -- label -'

>--+-----+-----+-----+----->
'- -nowait -'      >--+-----+-----+-----+-----+----->
'- -restoreoption -- option -'      '- -script -- script -'

>-- -appliance -- appliance -----><

```

CLI Example

```
$ udstask testfailover -id 4111 -host myhost -appliance Appliance_C1
```

rmfailovertest

[About rmfailovertest Command on page 369](#)

[Employing this Command through the CLI on page 369](#)

About rmfailovertest Command

Description

Use this command to delete a test failover image. Use `udsinfo lsbackup` command to locate the backup images to be deleted.

Rights

You must have the 'Host Manage' or 'Application Manage' rights to delete a image.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values. Use the <code>udsinfo lscluster</code> command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.
-image <i>image_name</i> <i>image_id</i>	Required. Specifies the ID for VDP appliance or SRCID for AGM or name of the backup image to be deleted. Use <code>udsinfo lsbackup</code> to locate the ID/SRCID or name for the image.
-script <i>script</i>	Optional. Specifies a script during different phases of the operation. Five phases are supported, INIT, PRE, POST, FINAL, and ABORT. Each phase, a timeout, name of the script, and argument list can be specified. Name of the script is required, timeout and args are optional. Syntax for each phase is: name=<name>:phase={INIT PRE POST FINAL ABORT}:timeout=<timeout>:[args =arg1,arg2] Multiple phases can be specified, separated by semi-colon (;), for example, "name=setup.sh:phase=INIT;name=freeze.sh:phase=PRE"

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmfailovertest -- ----->
>-- -appliance -- appliance ----->
>-- -image --+- image_name -+- -+-----+-----><
'- image_id ---' '- -script -- script -'
```

CLI Example

```
$ udstask rmfailovertest -image Image_000402 -appliance Appliance_C1
```

syncback

[About syncback Command on page 310](#)

[Employing this Command through the CLI on page 310](#)

About syncback Command

Description

Use this command to synchronize a failed-over dedup-async or StreamSnap-protected application back to the original appliance.

This command can be issued only on the failed-over VDP appliance. It merges all changes made to the failed over application on the remote appliance back to the original appliance, in preparation for the eventual fail-back. When an application, protected with a Dedup Async or StreamSnap policy, fails over to a remote appliance, the application data is modified on the remote appliance. However, failing the application back to the primary appliance requires synchronization of the application's data between the remote and primary appliances using the sync-back command.

Rights

You need the 'Host Manage' or 'Application Manage' or 'Mirroring Manage' right to sync-back a failed-over application.

Parameters

Parameter	Description
-id <i>app_id</i> <i>consistgrp_id</i>	Required. Specifies the ID for VDP appliance or SRCID for AGM of the application or consistency group to be synchronized back from the previously failed over application or consistency group. Use udsinfo lsapplication or udsinfo lsconsistgrp for the ID/SRCID.
-label <i>label</i>	Optional. Specifies label for the newly created sync-back image.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- syncback -- -- -id ---+ app_id -----+-- --->
                                     '- consistgrp_id -'
>--+-----+-----><
'- -label -- label -'
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udstask syncback -id 4111 -appliance Appliance_C1
```

lsappclass

[About lsappclass Command on page 311](#)

[Employing this Command through the CLI on page 312](#)

About lsappclass Command

Description

Use this command to list all the available application classes or provide detailed information (provisioning options) for a specific application class. If *appclassname* is provided instead of the other parameters, it will display detailed information about the given Appclass.

Note: The `lsappclass` command is supported only by appliances.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Manager	-

Rights

You must have the 'System Manage' or 'System View' right to view the application class information

Parameters

Parameter	Description
<i>name</i>	Optional. The case sensitive Appclass name (MS-SQL Server, Oracle, EBiz, and so on).
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.

Parameter	Description
-nohdr	Optional. By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed view. The -nohdr parameter suppresses the display of these headings.
Note: If there is no data to be displayed, headings are not displayed.	

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsappclass -- -+-----+-- -->
                                '- -delim -- delimiter -'
>--+-----+-- -+-----+----->
  '- -nohdr -'      '- -name -- appclassname -'
```

CLI Example

\$ udsinfo lsappclass

```
appclass
SQLServer
SQLServerGroup
Oracle
OracleGroup
```

\$ udsinfo lsappclass SQLServer

name	type	label	description
sqlinstance	EDITABLE_SELECT	SQL Server Instance Name	Name of target SQL Server Instance
dbname	STRING	SQL Server Database Name	Name of target SQL Server Database
recover	BOOLEAN	Recover Database After Restore	Bring database online after restore operati
username	STRING	User Name	User name for database provisioning
password	ENCRYPT	Password	Password for user

\$ udsinfo lsappclass SQLServerGroup

name	type	label	description
consistencyGroupName	STRING	Name of Consistency Group	Name of Consistency Group
sqlinstance	EDITABLE_SELECT	SQL Server Instance Name	Name of target SQL Server Instance
dbnameprefix	STRING	Prefix for SQL Server Database Name	Prefix for target SQL Server Database Name
recover	BOOLEAN	Recover Database After Restore	Bring database online after restore operati
username	STRING	User Name	User name for database provisioning
password	ENCRYPT	Password	Password for user

\$ udsinfo lsappclass Oracle

name	type	label	description
databasesid	STRING	Target Database SID	SID for target database
username	STRING	User Name	Oracle OS User name for database provision:
password	ENCRYPT	Password	Password for Oracle OS user
orahome	STRING	Oracle Home Directory	Oracle Home Directory on target machine
tnsadminidir	STRING	TNS ADMIN Directory path	TNS ADMIN Directory path (tnsnames.ora loca
totalmemory	LONG	Database Memory Size in MB	Database total memory size in MB on target
sgapct	LONG	SGA %	Parameter to configure SGA/PGA memory when
tnsip	STRING	TNS Listener IP	TNS Listener IP: SCAN, VIP, or Host IP
tnsport	LONG	TNS Listener port	TNS Listener port (default 1521)
tnsdomain	STRING	TNS Domain Name	TNS Listener Domain name
rrecovery	BOOLEAN	Restore with Recovery	Recover database after AppAware mount
standalone	BOOLEAN	Stand Alone Non-RAC	Clone a stand alone non_RAC instance
envvar	STRING	Environment variable	Environment variable can be separated by c

\$ udsinfo lsappclass OracleGroup

name	type	label	description	required	group
ConsistencyGroupName	STRING	Name of Consistency Group	Name of Consistency Group	true	
databasesid	STRING	Target Database SID	SID for target database	true	
username	STRING	User Name	Oracle OS User name for database provisioning	true	login
password	ENCRYPT	Password	Password for Oracle OS user	false	login
orahome	STRING	Oracle Home Directory	Oracle Home Directory on target machine	true	
tnsadminidir	STRING	TNS ADMIN Directory path	TNS ADMIN Directory path (tnsnames.ora location path)	true	
totalmemory	LONG	Database Memory Size in MB	Database total memory size in MB on target server	false	
sgapct	LONG	SGA %	Parameter to configure SGA/PGA memory when set	false	
tnsip	STRING	TNS Listener IP	TNS Listener IP: SCAN, VIP, or Host IP	false	
tnsport	LONG	TNS Listener port	TNS Listener port (default 1521)	false	
tnsdomain	STRING	TNS Domain Name	TNS Listener Domain name	false	
rrecovery	BOOLEAN	Restore with Recovery	Recover database after AppAware mount	false	
standalone	BOOLEAN	Stand Alone Non-RAC	Clone a stand alone non_RAC instance	false	
envvar	STRING	Environment variable	Environment variable can be separated by common delimiter	false	

lsinstancemember

[About lsinstancemember Command](#) on page 314
[Employing this Command through the CLI](#) on page 315

About lsinstancemember Command

Description

Use this command to retrieve a concise list of application-to-database instance mappings, or a detailed view of application-to-database instance mappings.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Manager	-

Rights

There are no specific rights associated with this operation. User with 'administrator' role can retrieve the list of application-to-database instance mappings.

Parameters

Parameter	Description
-delim delimiter	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-filtervalue <i>attrib=value</i>	<p>Optional. Specifies that you want your report to display any or the entire list of valid filter attributes. The valid filter attributes for the udsinfo lsinstancemember command are:</p> <ul style="list-style-type: none">instanceidappid <p>The filter is formed with an attribute and a value. When you specify more than one filter, they must be combined with '&' character (which needs to be escaped with '\\').</p>

Parameter	Description
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to be displayed, headings are not displayed.
<i>object_id</i>	Optional. Specifies the ID of an object. When you use this parameter, a detailed view of the object is returned and any value that is specified by the -filtervalue parameter is ignored. If you do not specify the <i>object_id</i> parameter, a concise view of all objects matching the filter criteria is shown.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsinstancemember -- ----->
>--+-----+-- --+-----+-- ----->
    '- -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+-- -- --+-----+-----><
    '- -delim -- delimiter -'              '- object_id ---'
```

CLI Example

```
$ udsinfo lsinstancemember
      id  appid instanceid
116737  4139    111616
116738 103463    111616
```

lsmdlstat

[About lsmdlstat Command](#) on page 316

[Employing this Command through the CLI](#) on page 317

About lsmdlstat Command

Description

Use this command to retrieve statistics of MDL (Managed Data License) usage for each protected application in the appliance. The statistics are collected once a day.

When the appid statistic is 0, it contains the total MDL of all applications that this appliance manages.

Rights

You must have 'System View' or 'System Manage' rights to be able to retrieve MDL data.

Parameters

Parameter	Description
-delim delimiter	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.

Parameter	Description
-filtervalue <i>attrib=value</i>	<p>Optional. Specifies that you want your report to display any or all of the list of valid filter attributes. The valid filter attributes for the udsinfo lsmdlstat command are:</p> <ul style="list-style-type: none"> • allocated • appid • appname • appreserved • appsize • capacity • devsize • hostname • manageddata • sourcecluster • stattime <p>The filter will be formed with an attribute and a value. Multiple filters must be combined with '&' character (which must be escaped with '\').</p> <p>For string type of filters, the only operator allowed is '='. You can also use the wildcard character '*'. For example, to match an application with appname beginning with 'foo', use '-filtervalue appname=foo*'.</p> <p>For number types, allowed operators are: =, >, >=, <, <=. To use <, <=, >, or >=, they need to be escaped with '\' or enclosed in ' or " as required by shell. For example:</p> <pre>-filtervalue vdiskcount\>=10 -filtervalue "vdiskcount>=10" -filtervalue 'vdiskcount>=10'</pre>
-nohdr	<p>Optional. By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed style view. The -nohdr parameter suppresses the display of these headings. If there is no data to be displayed, headings are not displayed.</p>
<i>object_id</i>	<p>Optional. Specifies the ID of an object. When you use this parameter, the detailed view of the specific object is returned and any value that is specified by the -filtervalue parameter is ignored.</p> <p>If you do not specify the <i>object_id</i>, the concise view of all objects matching the filter criteria is displayed.</p>
-appliance <i>appliance</i>	<p>Required. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.</p>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsmdlstat -- ----->
>-- -appliance -- appliance ----->
>--+-----+-- --+-----+-- ----->
```

```
'- -filtervalue -- attrib=value -'      '- -nohdr -'
>---+-----+--- --+-----+-----><

'- -delim -- delimiter -'      +- object_id ---+
```

CLI Example

```
$ udsinfo lsmdlstat -appliance Appliance_C1
  id      appsize appreserved      devsize appname      sourcecluster capacity
manageddata hostname      appid stattime      allocated
6556 30064771072 30064771072 30064771072 oracle      590023229566      0
30064771072 oracle      6268 2013-09-21 03:00:00.388 30064771072
6557 30064771072 30064771072 30064771072      590023229566      0 30064771072
0 2013-09-21 03:00:00.390 30064771072
7023 30064771072 30064771072 30064771072 oracle      590023229566      0
30064771072 oracle      6268 2013-09-22 03:00:00.373 30064771072
7024 30064771072 30064771072 30064771072      590023229566      0 30064771072
0 2013-09-22 03:00:00.375 30064771072
7484 30064771072 30064771072 30064771072 oracle      590023229566      0
30064771072 oracle      6268 2013-09-23 03:00:00.373 30064771072
7485 30064771072 30064771072 30064771072      590023229566      0 30064771072
0 2013-09-23 03:00:00.375 30064771072
7944 30064771072 30064771072 30064771072 oracle      590023229566      0
30064771072 oracle      6268 2013-09-24 03:00:00.391 30064771072
7945 30064771072 30064771072 30064771072      590023229566      0 30064771072
0 2013-09-24 03:00:00.393 30064771072
8405 30064771072 30064771072 30064771072 oracle      590023229566      0
30064771072 oracle      6268 2013-09-25 03:00:00.375 30064771072
8406 30064771072 30064771072 30064771072      590023229566      0 30064771072
0 2013-09-25 03:00:00.376 30064771072
```

Virtual Machine Commands

addvm

[About addvm Command](#) on page 319

[Employing this Command through the CLI](#) on page 320

About addvm Command

Description

Use this command to add the Virtual Machines that are managed by a management server (vCenter for VMware, and SCVMM for Hyper-V), which then allows the added Virtual Machines to be protected by the appliance.

Note: The *addvm* command is supported only by VDP appliances.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Manager	-

Rights

You must have 'System Manage' right to add a Virtual Machine.

Parameters

Parameter	Description
-addall	Optional. Specifies that all Virtual Machines discovered are to be added to the appliance.
-host <i>host_name</i> <i>host_id</i>	Required. Specifies the management server host to perform discovery on, either id or name of host is needed. Use udsinfo lshost to locate the ID or name of the management server host.
-org <i>org_name</i> <i>org_id</i>	Optional. Specifies a default organization in which the new VM should be added after discovery. To use this option user needs to have 'System Manage' right. If a default organization is not specified, an organization that the user belongs to is used. Use the udsinfo lsorg command to locate the ID or name of the organization.
-vms <i>vms</i>	Optional. Virtual Machines, colon (:) separated, to be added to the appliance.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- addvm -- --+-----+-- ----->
                                '- -addall -'
>--+ -host --+- host_name +-+ -----+----->
                                '- host_id ---'      '- -org +- org_id ---+-'
                                                '- org_name -'
>--+-----+-----+----->
    '- -vms -- vms -'
```

CLI Example

To discover appliances:

```
$ udstask addvm -host vcenter1 -addall
```

To add discovered Virtual Machines to the appliance:

```
$ udstask addvm -host vcenter1 -vms Adso:QAS
```


lsvm

[About lsvm Command](#) on page 321

[Employing this Command through the CLI](#) on page 321

About lsvm Command

Description

Use this command to discover Virtual Machines managed by a management server, vCenter for VMware, and SCVMM for Hyper-V which then allows the Virtual Machines to be added to the appliance.

Note: The **lsvm** command is supported only by VDP appliances.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Manager	-

Parameters

Parameter	Description
-delim	Optional. The delimiter to be used when displaying results.
-nohdr	Optional. By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed style view. The -nohdr parameter suppresses the display of these headings. If there is no data to be displayed, headings are not displayed.
-host	Required. Specifies the management server host to perform discovery on, either id or name of host is needed. Use udsinfo lshost to locate the ID or name of the management server host.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsvm -- --+-----+-- ----->
                        '- -delim -- delim -'
>--+ -host --+ host_name +--+-----+----->
                        '- host_id ---'      '- -nohdr -- nohdr -'
```

CLI Example

```
$ udsinfo lsvm -host vcenter1
```

```
vmname,osname,hostname,ipaddress,status,esxhostname  
Adso,Other (32-bit),,,1,esx13  
QAS,Microsoft Windows Server 2003, Standard Edition,,,1,esx14  
SmallWindowsOrig,Microsoft Windows Server 2003, Standard Edition,,,0,esx13
```

Mount Commands

prepmount

[About prepmount Command](#) on page 323

[Employing this Command through the CLI](#) on page 324

About prepmount Command

Description

Use this command to prep-mount a LiveClone image to a host to allow prep operation to be performed.

Rights

You must have 'Host Manage' or 'Application Manage' rights to prep-mount a LiveClone image.

Parameters

Parameter	Description
-appaware	Optional. The flag specifies whether the mount is to create an app-aware application from the prep-mount for VDP Appliances.
-host <i>host_name</i> <i>host_id</i>	Required. Specifies the ID or name of an existing host to which the LiveClone image is to be prep-mounted.
-nfsoption	Optional. Uses comma (,) separated nfs options, when diskpref is NFS. Both server and client options are supported, separated by a semi-colon (;), for example, "server:writedelay=true,subtreecheck=false;client:retrans=2".
-image <i>image_name</i> <i>image_id</i>	Required. Specifies the LiveClone image to be mounted. Either image ID for VDPappliance or SRCID for AGM or image name is allowed, which can be retrieved from <code>udsinfo lsbackup</code> .
-nowait	Optional. The flag specifies whether to wait for the completion of the command.
-rdmmode	<p>(Optional) Specifies Raw Device Mapping (RDM) mode for VM. Valid values are:</p> <ul style="list-style-type: none">• dependentvirtual• independentvirtual (default)• physical <p>Specify dependentvirtual if mounted volume(s) are to be included in VMware snapshots</p> <hr/> <p>Note: <i>dependentvirtual is rarely used.</i></p> <hr/> <p>If there is an SLA assigned to the VM to which these volumes are mounted, they will be captured and will be counted towards MDL usage.</p>

Parameter	Description
-recoverytime <i>recoverytime</i>	Optional. Valid only for database applications for VDP appliance. Specify the point-in-time for recovery, by applying log backups to roll forward to the specified time of the host. The time should be within the range set by hostbeginpit and hostendpit when displayed using udsinfo lsbackup xxxx for that image. The time format should be either: yyyy-MM-dd HH:mm:ss or yyyy-MM-dd HH:mm:ss.SSS .
restoreoption	Optional. A comma delimited list of restore options where each restore option is a name=value pair.
-script <i>script</i>	Optional. Specifies a script during different phases of the operation. Five phases are supported, INIT, PRE, POST, FINAL, and ABORT. Each phase, a timeout, name of the script, and argument list can be specified. Name of the script is required, timeout and args are optional. Syntax for each phase is: name=<name>;phase=[INIT PRE POST FINAL ABORT];[timeout=<timeout>];[args =arg1,arg2] Multiple phases can be specified, separated by semi-colon (;), for example, "name=setup.sh;phase=INIT;name=freeze.sh;phase=PRE"
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.
queue	Optional. The flag provides an option to queue prep-mount job and run the job when we have slots available.

Employing this Command through the CLI

CLI Syntax

```
>>> udstask -- -- prepmount -- -- -image --+ image_name +--- ----->
                                         '- image_id ---'

>---+-----+--- -- -host --+ host_name +--- --+-----+--- --->
    '- -appaware -'          '- host_id ---'      '- -nowait -'

>---+-----+--- ----->
    '- -nfsoption -- option -'

>---+-----+--- ----->
    '- -rdmmode --+ dependentvirtual ---+-- -'
                  +- independentvirtual +-
                  '- physical -----'

>---+-----+--- ----->
    '- recoverytime -- recoverytime -'

>---+-----+--- --+-----+--- -----><
    '- -restoreoption -- option -'      '- -script -- script -'
```

CLI Example

```
$ udstask prepmount -image Image_000402 -host boston
```


prepunmount

[About prepunmount Command on page 326](#)

[Employing this Command through the CLI on page 326](#)

About prepunmount Command

Description

Use this command to prep-unmount and optionally discard a prep-mounted LiveClone image. This command optionally discards the prep-mounted LiveClone image after it is prep-unmounted.

Rights

You must have 'Host Manage' or 'Application Manage' rights to prep-unmount a prep-mounted LiveClone image.

Parameters

Parameter	Description
-discard	Optional. The flag specifies whether to discard the prep-mounted LiveClone image, after it is unmounted.
-image <i>image_name</i> <i>image_id</i>	Required. Specifies the LiveClone image to be prep-unmounted, either image ID for VDP appliance or SRCID for AGM or image name is allowed, which can be retrieved from <code>udsinfo lsbackup</code> . The LiveClone image has to be already prep-mounted.
-nowait	Optional. The flag specifies whether to wait for the completion of the command.
-script <i>script</i>	Optional. Specifies a script during different phases of the operation. Five phases are supported, INIT, PRE, POST, FINAL, and ABORT. Each phase, a timeout, name of the script, and argument list can be specified. Name of the script is required, timeout and args are optional. Syntax for each phase is: name=<name>;phase={INIT PRE POST FINAL ABORT};[timeout=<timeout>];[args =arg1,arg2] Multiple phases can be specified, separated by semi-colon (;), for example, "name=setup.sh:phase=INIT;name=freeze.sh:phase=PRE"
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values. Use the <code>udsinfo lscluster</code> command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.

Employing this Command through the CLI

CLI Syntax

```
>>> udstask -- -- prepunmount -- +- -image -- image_name +---->
                                     '- image_id ---'
>--+-----+--+-----+-----+----->
   '- -discard -'      '- -nowait -'
>--+-----+-----+-----+-----><
   '- -script -- script -'
>--+-----+-----+-----+-----><
```

```
'- -appliance -- appliance -'
```

CLI Example

```
$ udstask prepunmount -image Image_000402 -nowait
```

mountimage

[About mountimage Command](#) on page 328

[Employing this Command through the CLI](#) on page 333

About mountimage Command

Description

Use this command to mount a backup image to a host.

Rights

You must have the 'Host Manage' or 'Application Manage' or 'Mount Manage' (for VDP appliance) rights to mount a backup image.

Parameters

Parameter	Description
-host <i>host_name host_id</i>	Required for non-Virtual Machine applications. Specifies the ID for VDP appliance or SRCID for AGM or name of an existing host to which the backup image is to be mounted. If a new Virtual Machine is to be created for Virtual Machine backup, use -vmname to specify the new Virtual Machine name.
-appid <i>appid</i>	Optional. Use the latest snapshot backup image of the application for VDP appliance, specified by the <i>appid</i> for the mount. Use udsinfo lsapplication to retrieve the application ID.
-datastore <i>datastore</i>	Optional. Valid only for VMware or Virtual Machine backup image. Specifies the datastore to be used for mounting the image. Use this option if a different datastore should be used for the mount. Use of this option is not typical.
-diskpool <i>pool_name pool_id</i>	Optional. Specifies the disk pool to be used for mount for VDP appliance. Use udsinfo lsdiskpool to locate the ID or name of the diskpool.
-accessmode <i>ro rw deny root</i>	Optional, valid only for export to CIFS type for VDP appliance. Specifies the type of access that is allowed for the specified user (in -user). Allowed types are: <ul style="list-style-type: none">• ro: read-only• rw: read-write• deny: no access allowed• root: has full access to all the files in the share even if ACLs do not
-allvolumes	Optional. The flag specifies whether to export all volumes in the backup for VDP appliance. Use -exportobjectid to specify a specific volume to be exported.
-appaware	Optional. The flag specifies whether the mount is to create an app-aware application from the mount for VDP appliance.
-exportedname <i>name</i>	Optional. Specifies the exported name of the backup image for VDP appliance. Valid only for CIFS.

Parameter	Description
-exportedpath <i>path</i>	Optional. Specifies sub-directory within the mount volume to be exported for VDP appliance.
-exportobjectid <i>objectid</i>	Optional. Specifies the object ID of the individual volume within the mounted image to be exported for VDP appliance.
-exportobjecttype <i>objecttype</i>	Optional. Specifies the object type of the individual volume within the mounted image to be exported for VDP appliance.
-exportoption <i>option</i>	<p>Optional. Specifies the export option, a name/value list, separated by equal (=) for VDP appliance. Multiple options are separated by comma (.). An example is:</p> <pre>"readonly=true,writedelay=false"</pre> <p>The following option is allowed for NFS,</p> <ul style="list-style-type: none"> • <code>readonly="true false"</code> • <code>writedelay="true false"</code> • <code>rootsquash="true false"</code> • <code>allsquash="true false"</code> • <code>anonuid="0" "1"</code> • <code>insecurelocks="true false"</code> <p>The following option is allowed for CIFS:</p> <ul style="list-style-type: none"> • <code>readonly="true false"</code> • <code>allowguest="true false"</code>
-exporttype <i>cifs nfs</i>	Optional. Specifies protocol for VDP appliance, <i>cifs</i> for CIFS, and <i>nfs</i> for NFS. Default to the protocol the backup was created.
-group <i>group</i>	Optional, valid only for export to CIFS type for VDP appliance. Specifies a list of domain groups that are allowed to map the share, separated by a comma (.).
-exporthost <i>host_list</i>	Optional. Specifies the ID or name of host(s) to which the backup image is to be exported for VDP appliance. If ID is used, the host has to already exist in the appliance. Name can contain wild characters. More than one host can be specified separated by a comma (.).
-hypervisor <i>hypervisor</i>	<p>Optional. Specifies the ID or name of the hypervisor for VDP appliance. When mounting a Virtual Machine backup image to a different (from the Virtual Machine that the backup is taken) Virtual Machine, use this switch to specify a new hypervisor to use. Otherwise, hypervisor associated with the Virtual Machine host is used.</p> <p>This is the ESX host for VMware, and Microsoft Hyper-V Server for Hyper-V.</p>
-image <i>image_name image_id</i>	Required. Specifies the image ID for VDP appliance or SRCID for AGM or name to be mounted. You can retrieve the image name or ID/SRCID using the <code>udsinfo lsbackup</code> command.

Parameter	Description
-label <i>label</i>	Optional. Specifies label for the mounted image.
-instantmount	(Optional) Specifies whether to instant mount a dedup backup image.
-nowait	Optional. The flag specifies not to wait for the completion of the command.
-parts	<p>Optional. Specifies list of logical volumes to be mounted. Logical names of the restorable objects can be retrieved from <code>udsinfo lsbackup</code>, and is one of:</p> <ul style="list-style-type: none"> • vdisk UID name for generic applications • file system or device name for discovered applications • VMDK path name for Virtual Machines <p>A restorable object can be a volume name, VMDK name, or an application name (in the case of an application in a consistency group, or SQL DB in an SQL Instance), which is shown in the details of a backup.</p> <p>A different diskpool is allowed for mounting each volume, to specify a different diskpool, use a colon ':', after the logical volume name.</p> <p>Special characters must be properly escaped:</p> <ul style="list-style-type: none"> • double quote ("): needs to be escaped with '\ ' (shell) • comma (,): needs to be escaped with two commas (,,) • colon (:): needs to be escaped with two colons (::) <p>Example: "my,,vm.vmdk:poolname,your::vm.vmdk".</p>
-path <i>path</i>	Optional, valid only for Hyper-V Virtual Machine backup image for VDP appliance, specifies the path to be used for mounting a new Hyper-V Virtual Machine.
queue	Optional. Specifies whether mount should be queued (otherwise will fail) when resource is not available for mount to proceed.
-mgmtserver <i>host_id</i> <i>host_name</i>	Optional, valid only for VM backup image for VDP appliance. Specifies the management server (name or ID, previously added to the appliance), if the new image is to be mounted to a new management server. This is the vCenter host for VMware and Microsoft System Center Virtual Machine Manager for Hyper-V.
-rdmmode	<p>(Optional) Specifies Raw Device Mapping (RDM) mode for VM. Valid values are:</p> <ul style="list-style-type: none"> • dependentvirtual • independentvirtual (default) • physical <p>Specify dependentvirtual if mounted volume(s) are to be included in VMware snapshots</p> <hr/> <p>Note: <i>dependentvirtual is rarely used.</i></p> <hr/> <p>If there is an SLA assigned to the VM to which these volumes are mounted, they will be captured and will be counted towards MDL usage.</p>

Parameter	Description
-recoverytime	Optional. Valid only for database applications for VDP appliance. Specify the point-in-time for recovery, by applying log backups to roll forward to the specified time.
-restoreoption <i>option</i>	<p>Optional. A comma delimited list of restore options where each restore option is a name-value pair. See Appendix F, List of Restore Options for a summary of the supported restore options for this command.</p> <p>To perform an app-aware mount to a new application for VDP appliance, additional restore options can be provided through the udsinfo lsappclass command. Keep in mind that these provisioning options must adhere to the rules of the appclass of the backup. In addition, the app-aware mounted application can also be optionally protected, with a new, or existing SLT and SLP, if so desired. The existence of provisioningoptions indicates that this is an app-aware mount, regardless of the -appaware flag. For example,</p> <pre>-restoreoption "provisioningoptions=<provisioningoptions> <databasesid>foodb1</databasesid> <orahome>/u01/app/oracle/product/11.2.0/db_1</orahome> <utlfiledirectory>/home/oracle</utlfiledirectory> <username>oracle</username> </provisioningoptions>,reprotect=true"</pre> <p>Included below is an example for SQL:</p> <pre>udstask mountimage -image Image_22196358 -host demo-sql-4 - restoreoption 'mountpointperdisk- dasvol:S:\=C:\Test\jstest,provisioningoptions=<provisioning- options><sqlinstance>DEMO-SQL-4</sqlinstance><dbname>jstest</ dbname><recover>true</recover></provisioning-options>'</pre> <p>For the available appclass, and the provisioning options for each appclass, use udsinfo lsappclass.</p>
-script <i>script</i>	<p>Optional. Specifies a script during different phases of the operation. Five phases are supported, INIT, PRE, POST, FINAL, and ABORT. Each phase, a timeout, name of the script, and argument list can be specified. Name of the script is required, timeout and args are optional. Syntax for each phase is:</p> <pre>name=<name>:phase={INIT PRE POST FINAL ABORT}:[timeout=<timeout>]:[a rgs=arg1,arg2]</pre> <p>Multiple phases can be specified, separated by semi-colon (;), for example, "name=setup.sh:phase=INIT;name=freeze.sh:phase=PRE"</p>

Parameter	Description
-systemprops sysstempops	<p>Optional. A comma delimited list of system properties where each system property is a name/value pair. For available system properties, use 'udsinfo lssystemdetail'.</p> <p>To perform system conversion, properties need to be specified with name=value, separated by a comma. Property that is allowed depends on the cloudtype. The existence of systemprops indicates that this is a systemstate conversation, and is allowed only with a VM backup, or a SystemState backup. No partial volumes are allowed in system conversion.</p> <p>Property with structure needs special handling, which indicates that it has sub-element. For example NICInfo, is of structure type, and it supports multiple values. It needs to be appended with a number (starting with 0) to indicate which NIC. For a property that supports multiple values, it needs to be enclosed with '[' and ']', and separated with colon (:). For example,</p> <pre>-systemprops publicIP=true, --Launches System in Public Network for AWS osType=Windows, cpu=1, memory=4, bootDiskSize=35, networkId=vpc-f6c83591, regionCode=us-east-1, nicInfo0-securityGroupId=[sg-63b5041d:sg-63b7887e], nicInfo0-subnetId=subnet-10bbda3a, cloudtype=aws, accessKey=xxxxx, secretKey=xxxx instanceFlavor=xxx<optional></pre>
-user <i>user_password</i>	Optional. Valid only for export to CIFS type. Specifies list of domain users that are allowed to map the share, separated by comma (,). Also allowed are local user (with specified password), use colon (:) to separate username and password. The local user does not need to exist in Windows Domain or the appliance, but it has to be unique.
-vmname <i>vmname</i>	Optional. Valid only for a virtual machine backup image. Specifies the new Virtual Machine name to be mounted as.
instanceFlavor	Instance type refers to machine type based on CPU and memory sizes in cloud. Note that while running the conversion on the cloud, we are adding one additional disk for boot space in case of Windows and Linux systems and one disk for swap space in case of Linux system. Consider the additional disks while selecting the instance flavor on Azure cloud.
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.

Employing this Command through the CLI

CLI Syntax

For VDP appliance:

```
>>- udstask -- -- mountimage -- -- -image --+- image_name -+-- ----->

>--+-----+-----+-----+-----+----->
  '- -accessmode --+- ro ---- -'      '- -allvolumes -'
      +- rw ----
      +- deny --
      '- root -'

>--+-----+-----+-----+-----+----->
  '- -appaware -'      '- -diskpool --+- pool_name -+-- -'
                          '- pool_id ---'

>--+-----+-----+-----+-----+----->
  '- -exporttype --+- cifs +-- -'      '- -nfsoption -- option -'
      '- nfs --'

>--+-----+-----+-----+-----+----->
  '- -exportedname -- name -'      '- -exportedpath -- path -'

>--+-----+-----+-----+-----+----->
  '- exportoption -- option -'      '- -exporthost -- host_list -'

>--+-----+-----+-----+-----+----->
  '- -exportobjectid -- objectid -'      '- -group -- group -'

>--+-----+-----+-----+-----+----->
  '- -exportobjecttype -- objecttype -'      '- -appid -- appid -'

>-- -host --+- host_name +-- --+-----+-----+----->
      '- host_id ---'      '- -esxhost -- esxhost -'

>--+-----+-----+-----+-----+----->
  '- -datastore -- datastore -'      '- -label -- label -'

>--+-----+-----+-----+-----+----->
  '- -mgmtserver --+- host_name +-- -'      '- -nowait -'
      '- host_id ---'

>--+-----+-----+-----+-----+----->
  '- -parts -- volume_list -'      '- -path -- path -'

>--+-----+-----+-----+-----+----->
  '- -instantmount -'      '- -poweronvm -'

>--+-----+-----+-----+-----+----->
  '- -rdmmode --+- dependentvirtual ---- -'
      +- independentvirtual --
      '- physical -----'

>--+-----+-----+-----+-----+----->
  '- -recoverytime -- recoverytime -'

>--+-----+-----+-----+-----+----->
```

```

'- -restoreoption -- option -'      '- -script -- script -'

>---+-----+-----+-----+-----+----->
'- -systemprops -- systemproperties -'

>---+-----+-----+-----+-----+----->
'- -user -- user_password -'      '- -vmname -- vmname -'

```

CLI Examples

For AGM:

```
$ udstask mountimage -image Image_000402 -host boston -appliance Appliance_C1
```

For VDP appliance:

Mount the most recent snapshot for appid "1234" to host "bighost":

```
$ udstask mountimage -appid 1234 -host bighost
```

Mount of generic application or consistency group:

```
$ udstask mountimage --image Image_0056472 -parts 'vdisk:vd_6','vdisk:vd_7' -host bouncer -
appliance Appliance_C1
-parts 'vuid:638A95F225800001F000000000051C0','vuid:638A95F225800001F000000000051C1'
-host bouncer -appliance Appliance_C1
```

Example for partial mount of VM disks to any host:

```
$ udstask mountimage -image Image_0012095
-partial '[ds600gb] cl_vm_test1/cl_vm_test1_1.vmdk','[ds600gb]
cl_vm_test1/cl_vm_test1.vmdk'
-host smokehost -appliance Appliance_C1
```

Example for partial mount a VM to new VM:

```
$ udstask mountimage -image Image_00120537
-partial '[ds600gb] cl_vm_test1/cl_vm_test1_1.vmdk','[ds600gb]
cl_vm_test1/cl_vm_test1.vmdk'
-vmname abcdefg -esxhost testesxhost -datastore ds600gb -appliance Appliance_C1
```

Example for partial mount:

```
$ udstask mountimage -image Image_0036467 -parts 'M:@act_per_pool000,E:@act_per_pool000' -
host bouncer
```

Example for partial mount of an SQL DB in an SQL Instance:

```
$ udstask mountimage -image Image_0036467 -parts mydb -host bouncer
```

Example for mount with export for VDP appliance:

```
$ udstask mountimage -image Image_0064549 -exportoption "allsquash=true" -exporthost Adoni -
host bouncer
```

Example for mount with export for AGM:

```
$ udstask mountimage -image Image_0036467 -parts 'M:@act_per_pool000,E:@act_per_pool000' -
host bouncer -appliance Appliance_C1
```

For VDP appliance:

Mount with different drive letters:

```
$ udstask mountimage -image 1234 -host 5678 -restoreoption 'mountdriveperdisk-
dasvol:L:\=M:\,mountdriveperdisk-dasvol:S:\=N:\'
```

Mount with different mount points:

```
$ udstask mountimage -image 1234 -host 5678 -restoreoption 'mountpointperdisk-  
dasvol:E:\=C:\Test\Data,mountpointperdisk-dasvol:F:\=C:\Test\Logs'
```

Mount of all volumes under a single mount point:

```
$ udstask mountimage -image 1234 -host 5678 -restoreoption mountpointperimage=/tmp/mnt
```

Mount of all volumes starting with a specified drive letter (all volumes will get consecutive drive letters starting with this drive):

```
$ udstask mountimage -image 1234 -host 5678 -restoreoption mountdriveperimage=F:\\
```

Example for System State Conversion in AWS Cloud:

```
udstask mountimage -image 3362252 -systemprops isPublicIP=true,osType=Windows,vmname=kiran-  
win2016base-conv-212,vmbootuptimeout=60,cpu=1,memory=2,bootDiskSize=50,networkId=vpc-  
374df251,regionCode=us-east-1,nicInfo0-securityGroupId=[sg-cc24dfb0],nicInfo0-subnetId=subnet-  
31790a1c,cloudtype=aws,accessKeyId=xxxxx,secretKey=xxxx
```

Example for System State Conversion in VMware Cloud:

```
udstask mountimage -image Image_1394017 -systemprops ostype=Linux,vmname=kiran-  
centos,vmbootuptimeout=10,cpu=1,memory=1,cloudtype=VMware,nicinfo0-nicnetwork=VM Network -  
datastore P2VHosts -hypervisor 172.16.15.30
```

verifyimage

[About verifyimage Command on page 336](#)

[Employing this Command through the CLI on page 336](#)

About verifyimage Command

Description

Use this command to verify a dedup backup image.

Rights

You must have the 'Host Manage' or 'Application Manage' or 'Backup Manage' rights to verify a backup image.

Parameters

Parameter	Description
-image <i>image_name</i> <i>image_id</i>	Required. Specifies the image to be verified, either image ID for VDP appliance or SRCID for AGM or image name is allowed, which can be retrieved using the udsinfo lsbackup command. Only dedup image verification is supported.
-nowait	Optional. The flag specifies not to wait for the completion of the command.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to identify the correct appliance to include in the -appliance argument.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- verifyimage -- -- -image --+ image_name -+--->
                                     '- image_id ---'
>--+-----+-----><
  '- -nowait -'
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udsinfo verifyimage -image Image_000402 -nowait -appliance Appliance_C1
```


cloneimage

[About cloneimage Command on page 337](#)

[Employing this Command through the CLI on page 339](#)

About cloneimage Command

Description

Use this command to make a completely independent untracked full clone of a backup image. The cloned image is considered a fully operational application that uses the primary storage in case of a non-virtual machine backup image.

Note: Unlike *mountimage*, *cloneimage* does not leave a record in *lsbackup*.

Rights

You must have the 'Host Manage' or the 'Application Manage' or 'Clone Manage' rights to clone a backup image.

Parameters

Parameter	Description
-datastore <i>datastore</i>	Optional. (Valid only for VMware or Virtual Machine backup images). Specifies the datastore to be used for cloning. Use this option if a different datastore should be used for the clone.
-diskpool <i>pool_name</i> <i>pool_id</i>	Optional, valid only for a non-virtual machine backup image. Specifies the diskpool to be used for storing the cloned image.
-hypervisor <i>hypervisor</i>	Optional. (Valid only for Virtual Machine backup image for VDP appliance). Specifies the hyper visor on which clone should happen. Use this option if a different hyper-visor should be used for the clone. This is the ESX host for VMware, and Microsoft Hyper-V Server for Hyper-V.
-host <i>host_id</i>	Optional. For non-VM backup image, host specifies the ID or name of the host to which the backup image should be cloned. Use the udsinfo lshost command to locate the ID or name of the host.
-image <i>image_name</i> <i>image_id</i>	Required. Specifies the image to be cloned, either the image ID for VDP appliance or SRCID for AGM or image name is allowed, which can be retrieved from udsinfo lsbackup .
-label <i>label</i>	Optional. Specifies label for the cloned image.
-nfsoption <i>options</i>	Optional. Comma (,) separated NFS options to use, when diskpref is NFS. Both server and client options are supported, separated by a semi-colon (;). For example: "server:writedelay=true,subtreecheck=false;client:retrans=2".
-nowait	Optional. The flag specifies not to wait for the completion of the command.

Parameter	Description
-parts <i>volume_list</i>	<p>Optional. Specifies list of logical volumes to be cloned. Logical names of the restorable objects can be retrieved from <code>udsinfo lsbackup</code>, and is one of:</p> <ul style="list-style-type: none"> • vdisk UID name for generic applications • file system or device name for discovered applications • VMDK path name for Virtual Machines <p>For Virtual Machines, a different datastore is allowed for each VMDK, to specify a different pool or datastore, use a colon ':', after the logical volume name.</p> <p>Special characters needs to be properly escaped:</p> <ul style="list-style-type: none"> • double quote ("): needs to be escaped with '\ ' (shell) • comma (,): needs to be escaped with two commas (,,) • colon (:): needs to be escaped with two colons (::) <p>Example: "myvm.vmdk:ds,,name,yourvm.vmdk:ds::name"</p>
-path <i>path</i>	Optional, valid only for Hyper-V Virtual Machine backup image for VDP appliance) Specifies the path to be used for cloning to a new Hyper-V Virtual Machine.
-restoreoption <i>option</i>	Optional. A comma delimited list of restore options where each restore option is a name-value pair. See Appendix F, List of Restore Options for a summary of the supported restore options for this command.
-script <i>script</i>	<p>Optional. Specifies a script during different phases of the operation. Five phases are supported, INIT, PRE, POST, FINAL, and ABORT. Each phase, a timeout, name of the script, and argument list can be specified. Name of the script is required, timeout and args are optional. Syntax for each phase is:</p> <p>name=<name>:phase=(INIT PRE POST FINAL ABORT):[timeout=<timeout>]:[args=arg1,arg2]Multiple phases can be specified, separated by semi-colon (;), for example,</p> <p>"name=setup.sh:phase=INIT;name=freeze.sh:phase=PRE"</p>
-vmname <i>vmname</i>	Optional, valid only for a virtual machine backup image. Specifies the new virtual machine name for the clone.
<i>queue</i>	Optional. Specifies whether clone should be queued (otherwise will fail) when resource is not available for clone to proceed.
-poweronvm	Optional. By default, clone of VM image is in the power off state. By specifying ' -poweronvm ' will power on the VM.
-mgmtserver <i>host_id</i> <i>host_name</i>	Optional, valid only for Virtual Machine backup image for VDP appliance. Specifies the management server (name or ID, previously added to the appliance), if the new clone is to be clone to a new management server. This is the vCenter host for VMware and Microsoft System Center Virtual Machine Manager for Hyper-V.

Parameter	Description
-cluster <i>cluster</i>	Optional. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values.

Employing this Command through the CLI

CLI Syntax

For an Actifio Appliance:

```
>>> udstask -- -- cloneimage -- -- -image --+- image_name -+---->
                                         '- image_id ---'
>--+-----+-----+-----+-----+-----+-----+-----+----->
  '- -host --+- host_name -+-- -'      '- -vmname -- vmname -'
    '- host_id ---'
>--+-----+-----+-----+-----+-----+-----+-----+----->
  '- -datastore -- datastore -'
>--+-----+-----+-----+-----+-----+-----+-----+----->
  '- -diskpool --+- pool_name -+-- -'    '- -path -- path -'
    '- pool_id ---'
>--+-----+-----+-----+-----+-----+-----+-----+----->
  '- -hypervisor -- hypervisor -'      '- -label -- label -'
>--+-----+-----+-----+-----+-----+-----+-----+----->
  '- -nfsoption -- option -'
>--+-----+-----+-----+-----+-----+-----+-----+----->
  '- -mgmtserver --+- host_name -+-- -'   '- -nowait -'
    '- host_id ---'
>--+-----+-----+-----+-----+-----+-----+-----+----->
  '- -parts -- volume_list -'          '- -poweronvm -'
>--+-----+-----+-----+-----+-----+-----+-----+----->
  '- -recoverytime -- recoverytime -'
>--+-----+-----+-----+-----+-----+-----+-----+----->
  '- -restorelocation -- locationoptions -'
>--+-----+-----+-----+-----+-----+-----+-----+----->
  '- -restoreoption -- option -'        '- -script -- script -'
```

For AGM:

```
>>> udstask -- -- cloneimage -- -- -image --+- image_name -+---->
                                         '- image_id ---'
>--+-----+-----+-----+-----+-----+-----+-----+----->
  '- -host --+- host_name -+-- -'      '- -vmname -- vmname -'
    '- host_id ---'
  '- -datastore -- datastore -'      '- -esxhost -- esxhost -'
>--+-----+-----+-----+-----+-----+-----+-----+----->
  '- -diskpool --+- pool_name -+-- -'    '- -nowait -'
    '- pool_id ---'
```

```

>--+-----+-- --+-----+-- ----->
  '- -label -- label -'      '- -parts -- volume_list -'
>--+-----+-- --+-----+-- ----->
  '- -poweronvm -'          '- -restoreoption -- option -'
>--+-----+-- ----->
  '- -script -- script -'
>--+-----+----->
  '- -vcenter --+ vcenter_name +--- -'
                    '- vcenter_id ---'
>--+-----+-----><
  '-appliance -- appliance -'

```

Example

```

$ udstask cloneimage -image 5001 -host hudson -diskpool act_per_pool000 -appliance Appliance_C1 -
appliance Appliance_C1
$ udstask cloneimage -image Image_000402 -vmname newvm -esxhost esx1 -appliance Appliance_C1 -
appliance Appliance_C1

```

Clone of generic application or consistgrp:

```

$ udstask cloneimage -image Image_0056472 -parts 'vdisk:vd_6' \
-diskpool act_per_pool000 -host bouncer -appliance Appliance_C1

```

Clone of a VM:

```

$ udstask cloneimage -image Image_0012537 \
-parts '[ds600gb] cl_vm_test1/cl_vm_test1.1.vmdk','[ds600gb] cl_vm_test1/cl_vm_test1.vmdk' \
-vmname abcdefg -esxhost testesxhost -datastore ds600gb -appliance Appliance_C1
$ udstask cloneimage -image Image_0036467 \
-parts 'M:\@act_per_pool000,E:\@act_per_pool000' -host bouncer \
-diskpool act_per_pool000 -appliance Appliance_C1

```

replicateimage

[About replicateimage Command on page 341](#)

[Employing this Command through the CLI on page 342](#)

About replicateimage Command

Description

Use this command to replicate (make a copy of) a dedup or directdedup backup image to a remote appliance. When you use this method to replicate an image to the remote appliance the following information about the image is sent along with the image:

- The Application ID of the application on the source appliance.
- The Application Name of the application on the source appliance.
- The Hostname of the host on the source appliance.
- The Source Appliance ID.
- The consistency date of the image (the point in time that the image is based on).

This information is sufficient to locate a particular application image and decide which image is the most appropriate based on the consistency date.

Note: The name of the policy that originally created this dedup backup image will not be recorded on the remote appliance. This occurs because the replicated image was not created by a policy but by manual replication.

We recommend that you use the `-label` parameter to add any desired additional metadata such as source policy name.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Manager	-

Rights

You must have 'Host Manage' or 'Application Manage' or 'Backup Manage' rights to replicate a dedup backup image.

Parameters

Parameter	Description
<code>-image</code>	Required. Specifies the image to be replicated, either image ID or image name is allowed, which can be retrieved from <code>udsinfo lsbackup</code> .

Parameter	Description
-label <i>label</i>	Optional. Specifies label for the mounted image.
-inheritexpiration	Optional. If specified, the expiration of the replicated image will be the same as the expiration of the source image. This flag cannot be set if -retention is supplied.
-retention	Optional. Specifies the retention period for the replicated dedup backup image. Default is set to one.
-retentionm <i>hours days weeks months years</i>	Optional. Specifies the retention measurement type for the policy. Default is set to months.
-targetcluster <i>cluster_name cluster_id</i>	Required. Target appliance to replicate the dedup backup image to. Use the udsinfo lscluster command to locate the ID or name of the appliance.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- replicateimage -- -- -image --+- name +--- --->
                                     '- id ---'
>--+-----+-- -- -targetcluster --+- cluster_name +--- ---->
'- -nowait -'                               '- cluster_id ---'
>--+-----+-- ----->
'- -inheritexpiration -'
>--+-----+-- --+-----+-- --->
'- -retention -- retention -'           '- -label -- label -'
>--+-----+-- -----><
'- -retentionm --+- hours ----- -'
                        +- days -----+
                        +- weeks -----+
                        +- months ----+
                        '- years ----'
```

CLI Example

```
$ udstask replicateimage -image 5001 -targetcluster 4011
```

replicatelog

[About replicatelog Command on page 343](#)

[Employing this Command through the CLI on page 343](#)

About replicatelog Command

Description

Use this command to trigger an on-demand log replication Oracle or Microsoft® SQL Server database transaction logs for an application or a consistency group to a remote VDP appliance. The application or consistency group must be protected by a template that includes:

- A snapshot policy with log protection enabled
- A replication policy (StreamSnap, Dedup-Async, or Dedup Backup)

Note: The **replicatelog** command is supported only by appliances.

Applicability of this Command

This command can be used on:

CDS appliance	✓
VDP appliance	✓
NAS Director	✓
Actifio Global Manager	-

Rights

You must have 'Host Manage,' or 'Application Manage,' or 'Backup Manage' rights to trigger an on-demand log replication.

Parameters

Parameter	Description
-id appid consistgrp_id	Required. Specifies ID of the application or consistency group with the log to be replicated to a remote appliance. Use <code>udsinfo lsapplication</code> or <code>udsinfo lsconsistgrp</code> for the ID.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- replicatelog -- -- -id --+- app_id -----+---><
                                     '- consistgrp_id -'
```

CLI Example

```
$ udstask replicatelog -id 4111
```

exportimage

[About exportimage Command](#) on page 344

[Employing this Command through the CLI](#) on page 345

About exportimage Command

Description

Use this command to export a backup image to hosts. The backup image has to be mounted first. Optionally, the mounted image can also be exported for NAS/CIFS backup.

Note: The **exportimage** command is supported only by Sky appliances.

Applicability of this Command

This command can be used on:

CDS appliance	-
Sky appliance	✓
NAS Director	-
Actifio Global Manager	-

Rights

You must have 'Host Manage' or 'Application Manage' rights to export a backup image.

Parameters

Parameter	Description
-accessmode ro rw deny root	Optional. valid only for export to CIFS type. Specifies the type of access that is allowed for the specified user (in -user). Allowed types are: <ul style="list-style-type: none">ro: read-onlyrw: read-writedeny: no access allowedroot: has full access to all the files in the share even if ACLs do not
-allvolumes	Optional. The flag specifies whether to export all volumes in the backup. Use -objectid to specify a specific volume to be exported.
-exportedname <i>name</i>	Optional. Specifies the exported name of the backup image, valid only for CIFS.
-exportedpath <i>path</i>	Optional. Specifies sub-directory within the mount volume to be exported.

Parameter	Description
-exportoption <i>option</i>	Optional. Specifies the export option, a name/value list, separated by equal (=). Multiple options are separated by comma (.). An example is: "readonly=true,writedelay=false" The following options are allowed for NFS: <ul style="list-style-type: none"> • readonly="true false" • writedelay="true false" • rootsquash="true false" • allsquash="true false" • anonuid="0" "1" • insecurelocks="true false" The following option is allowed for CIFS: <ul style="list-style-type: none"> • allowguest="true false"
-exporttype <i>cifs nfs</i>	Optional. Specifies protocol, <i>cifs</i> for CIFS, and <i>nfs</i> for NFS. Default to the protocol the backup was created.
-group <i>group</i>	Optional. Valid only for export to CIFS type. Specifies the list of domain groups that are allowed to map the share, separated by a comma (.). The group does not need to exist in Windows Domain or the appliance, but it has to be unique.
-host	Required. Specifies the ID or name of host(s) to which the backup image is to be exported. If ID is used, the host has to already exist in the appliance. Name can contain wild characters. More than one host can be specified, separated by a comma (.).
-image <i>image_name image_id</i>	Required. Specifies the image to be exported, either image ID or image name is allowed, which can be retrieved from udsinfo lsbackup .
-nowait	Optional. The flag specifies whether to wait for the completion of the command.
-objectid	Optional. Specifies the object id of the individual volume within the mounted image to be exported.
-user <i>user_password</i>	Optional. Valid only for export to CIFS type. Specifies the list of domain users that are allowed to map the share, separated by a comma (.). Also allowed are local user (with specified password), use colon (:) to separate user name and password. The local user does not need to exist in Windows Domain or the appliance, but it has to be unique.
-objecttype <i>objecttype</i>	Optional. Specifies the object type of the individual volume within the mounted image to be exported.

Employing this Command through the CLI

CLI Syntax

```
>>> udstask -- -- exportimage -- -- -image --+- image_name -+-- ----->
                                     '- image_id ---'
>--+-----+-----+-----+-----+-----+-----+-----+-----+----->
'- -accessmode --+- ro ----+-- -'
```

```

+- rw ---+
+- deny --
+- root -'
>---+-----+---+-----+----->
+- -allvolumes -'      +- -exporttype --+- cifs +--- -'
                        +- nfs --'
>---+-----+---+-----+----->
+- -exportedname -- name -'      +- -exportedpath -- path -'
>---+-----+---+-----+----->
+- -exportoption -- option -'
>---+-----+---+-----+----->
+- -nowait -'      +- -objectid -- objectid -'
>---+-----+---+-----+----->
+- -user -- user_password -'      +- -group -- group -'
>---+-----+---+-----+-----><
+- -objecttype -- objecttype -'

```

CLI Example

```
$ udstask exportimage -image Image_000402 -host 192.168.10.* -exportedname data
```

unexportimage

[About unexportimage Command on page 347](#)

[Employing this Command through the CLI on page 347](#)

About unexportimage Command

Description

Use this command to un-export an exported backup image.

Note: The **unexportimage** command is supported only by Sky appliances.

Applicability of this Command

This command can be used on:

CDS appliance	-
Sky appliance	✓
NAS Director	-
Actifio Global Manager	-

Rights

You must have 'Host Manage' or 'Application Manage' rights to un-export an exported backup image.

Parameters

Parameter	Description
-exporttype <i>cifs nfs</i>	Optional. Specifies protocol, <i>cifs</i> for CIFS, and <i>nfs</i> for NFS. Default to the protocol the backup was created.
-host <i>host_list</i>	Required. Comma-separated list of hosts that the export should be removed from.
-image <i>image_name image_id</i>	Required. Specifies the image to be un-exported, image ID or image name, which can be retrieved from udsinfo lsbackup . The backup image must be already exported.
-nowait	Optional. The flag specifies whether to wait for the completion of the command.

Employing this Command through the CLI

CLI Syntax

```
>>> udstask -- -- unexportimage -- +- -image -- image_name +-->
                                     '- -image -- image_id ---'
>--+-----+----->
  '- -exporttype --+- cifs +-- -'
```

```
        '- nfs --'
>-- -- -host -- host_list -- --+-----+-----><
                                '- -nowait -'
```

CLI Example

```
$ udstask unexportimage -image Image_0004011 -host 192.168.10.*
```

lsrestoreoptions

[About lsrestoreoptions Command](#) on page 349

[Employing this Command through the CLI](#) on page 350

About lsrestoreoptions Command

Description

Use this command to list applicable restore options for a given restore action or provides detailed information for a specific restore option.

This command provides a list of restore options that are applicable for the given combination of application, restore action and target host. If a restore option name is provided instead of the other parameters it will display detailed information about the given restore option.

Note: The **lsrestoreoptions** command is supported only by Sky appliances.

Applicability of this Command

This command can be used on:

CDS appliance	-
Sky appliance	✓
NAS Director	-
Actifio Global Manager	-

Rights

You must have the “System View” or “System Manage” right to view the restore option information.

Parameters

Parameter	Description
-applicationtype <i>applicationtype</i>	Optional. The application type (SQL Server, Oracle, VM, and so on). See List of Restore Options on page 581 for a complete list of available application types.
-action <i>action</i>	Optional. The restore action to be taken: clone, mount, restore, prepmount, failover or failovertest. See List of Restore Options on page 581 for a complete list of available restore options.
-targethost <i>targethost</i>	Optional. The host ID of the target system. Use the <code>udsinfo lshost</code> command to locate the ID.

Parameter	Description
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-nohdr	Optional. By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed style view. The -nohdr parameter suppresses the display of these headings. If there is no data to be displayed, headings are not displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsrestoreoptions -- ----->
>---+-----+-----+-----+-----+-----+----->
>   '- -applicationtype -- applicationtype -'   '- -action -- action -'
>---+-----+-----+-----+-----+-----+----->
>   '- -targethost -- targethost -'   '- -delim -- delimiter -'
>---+-----+-----+-----+-----+-----+----->
>   '- -nohdr -'   '- restoreoptionname -'
```

CLI Example

```
$ udsinfo lsrestoreoptions -applicationtype VM -action clone -targethost 1001
$ udsinfo lsrestoreoptions vmdkprovisionformat
```

restoreimage

[About restoreimage Command on page 351](#)

[Employing this Command through the CLI on page 352](#)

About restoreimage Command

Description

Use this command to restore a backup image. Before the backup image is restored to the original host, the SLA that protects this application is disabled. The expiration of backup images for this application is also disabled. They should be explicitly turned on using AGM GUI or the `udstask chsla` command.

Rights

You must have the 'Application Manage' or 'Mirroring Manage' or 'Host Manage' or 'Application Manage' or 'Restore Manage' rights to restore a backup image.

Parameters

Parameter	Description
-image <i>image_name</i> <i>image_id</i>	Required. Specifies the name or ID for Sky appliance or SRCID for AGM of the image to be restored.
-nowait	Optional. Specifies not to wait for the completion of the command.
-nfsoption options	Optional. Comma (,) separated NFS options to use, when diskpref is NFS. Both server and client options are supported, separated by a semi-colon (;). For example: "server:writedelay=true,subtreecheck=false;client:retrans=2".
-datastore <i>datastore</i>	Optional. Valid only for VMware virtual machine backup image. Specifies the datastore to be used for restore. Use this option if a different datastore should be used for the restore.
-parts <i>volume_list</i>	Optional. Specifies list of logical volumes to be restored. Logical names of the restorable objects can be retrieved from <code>udsinfo lsbackup</code> , and is one of: <ul style="list-style-type: none">• vDisk UID name for generic applications• File system or device name for discovered applications• VMDK path name for Virtual Machines
-poweroffvm	Optional. By default, restore of VM image is powered on automatically. Specify -poweroffvm to leave the VM in the powered off state.
queue	Optional. Specifies whether restore should be queued (otherwise will fail) when resource is not available for restore to proceed.

Parameter	Description
-restoreoption <i>option</i>	Optional. A comma delimited list of restore options where each restore option is a name-value pair. See Appendix F, List of Restore Options for a summary of the supported restore options for this command.
-password	Optional. Valid only for database applications for VDP appliance. Specify the password to use to apply the logs from log backup.
-recover	Optional. Valid only for SQL Server. If this flag is set the database will be brought online and transaction log backups cannot be used to roll forward the database.
-recoverytime <i>recoverytime</i>	Optional. Valid only for database applications. Specify the point-in-time for recovery, by applying log backups to roll forward to the specified time of the host. For VDP appliance, the time should be within the range set by hostbeginpit and hostendpit when displayed using udsinfo lsbakup xxxx for that image. The time format should be either: yyyy-MM-dd HH:mm:ss or yyyy-MM-dd HH:mm:ss.SSS .
-script <i>script</i>	Optional. Specifies a script during different phases of the operation. Five phases are supported, INIT, PRE, POST, FINAL, and ABORT. Each phase, a timeout, name of the script, and argument list can be specified. Name of the script is required, timeout and args are optional. Syntax for each phase is: name=<name>:phase={INIT PRE POST FINAL ABORT}:[timeout=<timeout>]:[args=arg1,arg2] Multiple phases can be specified, separated by semi-colon (;), for example, "name=setup.sh:phase=INIT;name=freeze.sh:phase=PRE"
-username <i>username</i>	Optional. Valid only for database applications for VDP appliance. Specify the username to use to apply the logs from log backup.
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- restoreimage -- +- -image -- image_name +---->
                                     '- -image -- image_id ---'
>--+-----+-----+-----+-----+-----+-----+----->
  '- -disableschedule --+- true --+- '-
                                '- false -'
>--+-----+-----+-----+-----+-----+-----+----->
  '- -nowait -'          '- -parts -- volume_list -'
>--+-----+-----+-----+-----+-----+-----+----->
  '- -nfsoption -- option -'
```



```

>---+-----+-----+-----+----->
  '- -password -- password -'      '- -poweroffvm -'
>---+-----+-----+-----+----->
  '- -recover -'      '- -recoverytime -- recoverytime -'
>---+-----+-----+-----+----->
  '- -restoreoption -- option -'    '- -script -- script -'
>---+-----+-----+-----+-----+>
  '- -username -- username-'      '- -datastore -- datastore -'

```

CLI Example

```
$ udstask restoreimage -image Image_000402
```

Restore of generic app or Consistency group:

```
$ udstask restoreimage -image Image_0056472 -parts 'vdisk:vd_6'
```

Restore of VM:

```
$ udstask restoreimage -image Image_0012537
-parts '[ds600gb] cl_vm_test1/cl_vm_test1_1.vmdk','[ds600gb] cl_vm_test1/cl_vm_test1.vmdk'
```

restorepreflight

[About restorepreflight Command on page 354](#)
[Employing this Command through the CLI on page 355](#)

About restorepreflight Command

Description

Use this command to perform a preflight check using a switched Oracle database image. When you run the **restorepreflight** command, the Connector run several sub-tests to ensure that database migration can be performed using ASM switch and rebalance functionality. A failure message will be returned if the preflight check fails.

Note: The **restorepreflight** command is supported only by appliances.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Manager	-

Rights

You must have the 'Host Manage' or 'Application Manage' or 'Backup Manage' rights to run a preflight check.

Parameters

Parameter	Description
-image <i>image_name</i> <i>image_id</i>	Required. Specifies the image to be used for ASM switch and rebalance operations, either image ID or image name is allowed, which can be retrieved using the udsinfo 1sbackup command.
-diskgroup <i>diskgroupname</i>	Required. Specifies the name of the ASM diskgroup used to switch the Oracle database.
-delim <i>delimiter</i>	Optional. By default, all columns of data are separated by a tab in the concise view. In the detailed view, each column of data is displayed in a separate row and if the headers are displayed, the header is separated from the data by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one- byte character. To display the data, recommended delimiter is comma (',') for list view, and equal ('=') for detail view.

Parameter	Description
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to be displayed, headings are not displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- restorepreflight -- +- -image -- image_name -+-->
                                     '- -image -- image_id ---'
>-- -diskgroup --+- diskgroupname -+----->
>--+-----+--+-----+----->
  '- -delim -- delimiter -'      '- -nohdr -'
```

CLI Example

```
$ udsinfo restorepreflight -image Image_2994808 -diskgroup testdg
Test                               Status  Hint
verify user oracle                 OK
verify root su to oracle           OK
verify ORACLE_HOME ownership for oracle OK
verify ASM status                  OK
verify CRS status                  OK
verify diskgroup testdg            Failed  Diskgroup testdg is still mounted

$ udsinfo restorepreflight -image Image_2994808 -diskgroup testdg1
Test                               Status  Hint
verify user oracle                 OK
verify root su to oracle           OK
verify ORACLE_HOME ownership for oracle OK
verify ASM status                  OK
verify CRS status                  OK
verify diskgroup testdg1           OK
```

lsasmdevice

About lsasmdevice Command

Description

Use this command to list all the available ASM devices in the host.

Note: The *lsasmdevice* command is supported only by VDP appliances.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Manager	-

Rights

You must have the 'Host Manage' or 'Application Manage' or 'Backup Manage' rights to run a preflight check.

Parameters

Parameter	Description
-image <i>image_name</i> <i>image_id</i>	Required. Specifies the image to be used for ASM switch and rebalance operations, either image ID or image name is allowed, which can be retrieved using the udsinfo lsbackup command.
-diskgroup <i>diskgroupname</i>	Required. Specifies the name of the ASM diskgroup used to switch the Oracle database.
-delim <i>delimiter</i>	Optional. By default, all columns of data are separated by a tab in the concise view. In the detailed view, each column of data is displayed in a separate row and if the headers are displayed, the header is separated from the data by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one- byte character. To display the data, recommended delimiter is comma (',') for list view, and equal ('=') for detail view.
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to be displayed, headings are not displayed.

CLI Syntax

```
>>- udsinfo -- -- lsasmdevice -- +- -image -- image_name -+---->
```

```

                                '-- image_id ---'
>-- -diskgroup --- diskgroupname +------>
>--+-----+--+-----+-----><
  '- -delim -- delimiter -'      '- -nohdr -'

```

CLI Example

```
$ udstask lsasmdevice -image Image_2994808 -diskgroup testdg
```

migrateimage

[About migrateimage Command on page 358](#)

[Employing this Command through the CLI on page 358](#)

About migrateimage Command

Description

Use this to perform an ASM rebalance to migrate data from the -switched image to production storage. This command performs a restore and recovery operation using an ASM switch.

Note: The **migrateimage** command is not currently available in AGM.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Manager	-

Rights

You must have the 'Host Manage', 'Application Manage', or 'Backup Manage' rights to perform ASM rebalance.

Parameters

Parameter	Description
-image <i>image_name</i> <i>image_id</i>	Required. Specifies the image to be migrated, either image ID or image name is allowed, which can be retrieved using the udsinfo lsbackup command.
-devicelist <i>devicelistname</i>	Required. Specifies the list of devices used for performing ASM switch rebalance or migration. Use lsasmdevice to obtain the list of available ASM devices from the host.
-nowait	Optional. The flag specifies not to wait for the completion of the command.

Employing this Command through the CLI

CLI Syntax

```
>>> udstask -- -- migrateimage -- +- -image -- image_name +---->
                                     '- -image -- image_id ---'
>--+-----+-----+-----+-----<
    '- -devicelist -- device_name_list -'      '- -nowait -'
```

CLI Example

```
$ udstask migrateimage -image Image_1234 -devicelist device1:device2
```

creativeliveclone

[About creativeliveclone Command](#) on page 359

[Employing this Command through the CLI](#) on page 359

About creativeliveclone Command

Description

Use this command to create a LiveClone. A LiveClone allows subsequent refresh from a new backup image.

Rights

You must have 'Host Manage' or 'Application Manage' or 'Backup Manage' rights to create a LiveClone.

Parameters

Parameter	Description
-diskpool <i>diskpool_name diskpool_id</i>	Required. Specifies the name or ID of the diskpool to use for the LiveClone. If you do not specify -cluster , use udsinfo lsdiskpool for the ID. If you do specify -cluster , then use the SRCID from the command output.
-label <i>label</i>	Required. Specifies label for LiveClone. Label must be unique in each application.
-nowait	Optional. The flag specifies whether to wait for the completion of the command.
-sourceimage <i>image_name image_id</i>	Required. Specifies ID for VDP appliance or SRCID for AGM or name of the image to create the LiveClone from. If you do not specify -cluster , use udsinfo lsbackup for the SRCID. If you do specify -cluster , then use the SRCID from the command output.
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target VDP appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- creativeliveclone -- -- -label -- label ----->
>-- -diskpool --+- diskpool_name +-+ ---+-----+--- ----->
               '- diskpool_id ---'      '- -nowait -'
>--+-----+--- -- -sourceimage --+- image_name ---><
   '- -script -- script -'              '- image_id ---'
>--+-----+-----><
   '-appliance -- appliance -'
```

CLI Example

```
$ udstask creativeliveclone -label testdb -sourceimage Image_000402 -diskpool act_per_pool000 \
-appliance Appliance_C1
```


refreshliveclone

[About refreshliveclone Command on page 361](#)

[Employing this Command through the CLI on page 361](#)

About refreshliveclone Command

Description

Use this command to refresh a LiveClone from a new backup image.

Rights

You must have 'Host Manage' or 'Application Manage' or 'Backup Manage' rights to refresh a LiveClone.

Parameters

Parameter	Description
-label <i>label</i>	Optional. Required if target image is not specified. Specifies label for the LiveClone to refresh to.
-nowait	Optional. The flag specifies whether to wait for the completion of the command.
-options <i>nobitmap noparent noseed</i>	Optional. Specifies one or more options for on-demand backup. If more than one option is specified, they should be separated by a colon (:). Supported options are: <ul style="list-style-type: none">• nobitmap - Do not use a bitmap or extentlist• noparent - No ancestor object, create a new independent object• noseed - No hydroseeding image
-sourceimage <i>image_name image_id</i>	Required. Specifies ID or name of the image with which to refresh the LiveClone.
-targetimage <i>image_name image_id</i>	Optional. Specifies ID or name of the LiveClone to refresh.
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- refreshliveclone -- --+-----+-- ----->
                                         '- -nowait -'
>--+-----+-- +--+-----+----->
  '- -options --+ nobitmap --+ '- -label -- label -'
                    +- noparent --
                    '- noseed ---'
```

```

>-- -sourceimage --+- image_name -+-- ----->
      '- image_id ---'
>--+-----+-----><
      '- -targetimage --+- image_name -+--'
      '- image_id ---'
>--+-----+-----><
      '-appliance -- appliance -'

```

CLI Example

```
$ udstask refreshliveclone -label testdb -sourceimage Image_000402 -appliance Appliance_C1
```

umountimage

[About umountimage Command on page 363](#)

[Employing this Command through the CLI on page 364](#)

About umountimage Command

Description

Use this command to umount a mounted backup image, and optionally delete the image after it is umounted.

Rights

You must have the 'Host Manage' or 'Application Manage' or 'Mount Manage' rights to umount and delete a backup image.

Parameters

Parameter	Description
-delete	Optional. The flag specifies whether to delete the backup image, after it is umounted.
-force	Optional. The flag specifies whether to ignore errors when unmapping disks from the host for VDP appliance.
-image <i>image_name</i> <i>image_id</i>	Required. Specifies the ID for VDP appliance or SRCID for AGM or name of the image to be umounted. The image name or ID/SRCID can be retrieved using the udsinfo lsbackup command. Note: The backup image has to be already mounted.
-nowait	Optional. The flag specifies not to wait for the completion of the command.
-script <i>script</i>	Optional. Specifies a script during different phases of the operation. Five phases are supported, INIT, PRE, POST, FINAL, and ABORT. Each phase, a timeout, name of the script, and argument list can be specified. Name of script is required, timeout and args are optional. Syntax for each phase is: name=<name>;phase={INIT PRE POST FINAL ABORT};[timeout=<timeou t>]:[args=arg1,arg2] Multiple phases can be specified, separated by semi-colon (;), for example: "name=setup.sh;phase=INIT;name=freeze.sh;phase=PRE"
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.
queue	Optional. Specifies whether umount should be queued (otherwise will fail) when resource is not available for umount to proceed.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- unmountimage -- --+ -image -- image_name -+--->
                                     '- -image -- image_id ---'
>--+-----+--+-----+--+-----+--+-----+----->
   '- -delete -'      '- -force -'      '- -nowait -'
>--+-----+-----+-----+-----+-----><
   '- -nowait -'      '- -script -- script -'
>--+-----+-----+-----+-----+-----><
   '-appliance -- appliance -'
```

CLI Example

```
$ udstask unmountimage -image Image_000402 -nowait
```

expireimage

[About expireimage Command on page 365](#)

[Employing this Command through the CLI on page 365](#)

About expireimage Command

Description

Use this command to expire a backup image, a LiveClone or a syncback image.

Rights

You must have the 'Host Manage' or 'Application Manage' or 'Backup Manage' right to expire a backup image.

Parameters

Parameter	Description
-force	Optional. The flag specifies whether to ignore errors when unmapping disks from the host for VDP appliance.
-image <i>image_name</i> <i>image_id</i>	Required. Specifies the SRCID or name of the backup image to be expired. If you do not specify -cluster , use udsinfo lsbackup for the SRCID for AGM. If you do specify -cluster , then use the SRCID from the command output.
-nowait	Optional. The flag specifies whether to wait for the completion of this command.
cluster <i>cluster</i>	Optional. Specifies the name or ID of the target VDP appliance to execute this command. All other parameters should use appliance-specific values.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- expireimage -- +-----+----->
                                   '- -force -'
>-- -image --+ image_name +-- +-----+-----><
               '- image_id ---'   '- -nowait -'
>--+-----+-----><
   '-appliance -- appliance -'
```

CLI Example

```
$ udstask expireimage -image Image_000402 -appliance ApplianceC1
```

deleteimage

[About deleteimage Command on page 366](#)

[Employing this Command through the CLI on page 366](#)

About deleteimage Command

Description

Use this command to delete an unmounted backup image, a LiveClone image, a fail-over image, or a test fail-over image. Use **udsinfo lsbackup** command to locate the backup images to be deleted. Note that there are three images associated with each fail-over execution. Pick the one with name ending with 'F' to delete fail-over images. Fail-over images can only be deleted when the application is no longer in the fail-over state.

Rights

You must have the 'Host Manage' or the 'Application Manage' or 'Mount Manage' right to delete an unmounted backup image.

Parameters

Parameter	Description
-image <i>image_name</i> <i>image_id</i>	Required. Specifies the ID for VDP appliance or SRCID for AGM or name of the backup image to be deleted. Use the udsinfo lsbackup command to obtain the ID or name of the backup image. If you do not specify -cluster , use udsinfo lsbackup for the SRCID. If you do specify -cluster , then use the SRCID from the command output.
-nowait	Optional. The flag specifies not to wait for the completion of this command.
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target VDP appliance to execute this command. All other parameters should use appliance specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- deleteimage -- ----->
>-- -image --+- image_name -+- --+-----+-----><
>--          '- image_id ---'      '- -nowait -'
>--+------+-----><
      '-appliance -- appliance -'
```

CLI Example

```
$ udstask deleteimage -image Image_000402 -appliance Appliance_C1
```

cleanupmirroring

[About cleanupmirroring Command](#) on page 367

[Employing this Command through the CLI](#) on page 367

About cleanupmirroring Command

Description

Use this command to delete the objects created on protecting an application or a consistency group with a dedup-async or StreamSnap policy.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Manager	-

Rights

You must have the 'Host Manage' or 'Application Manage' or 'Mirroring Manage' right to clean up artifacts from running previously enabled dedup-async or StreamSnap policy.

Syntax

Parameter	Description
-id <i>app_id consistgrp_id</i>	Required. Specifies the ID of the application or consistgrp that no longer has a dedup-async or StreamSnap policy running, to cleanup any artifacts from the policy. Use the udsinfo lsapplication or udsinfo lsconsistgrp command for the ID.
-all <i>true false</i>	Optional. Specifies whether all the images created by protecting the application with a dedup-async or StreamSnap policy should be deleted. If an application remains protected when using this command, use 'false'. Consequently, only failover, failovertest, and sync-back images are deleted. If the application is no longer protected with a dedup-async or StreamSnap policy, use <i>true</i> . The default value is <i>false</i> .

Employing this Command through the CLI

CLI Syntax

```
>>> udstask -- -- cleanupmirroring -- ----->
>-- -id --+ app_id -----+-- +-----+-----><
      '- consistgrp_id -'    '- -all --'
```

CLI Example

```
$ udstask cleanupmirroring -id 4111
```


rmfailovertest

[About rmfailovertest Command](#) on page 369

[Employing this Command through the CLI](#) on page 369

About rmfailovertest Command

Description

Use this command to delete a test failover image. Use `udsinfo lsbackup` command to locate the backup images to be deleted.

Rights

You must have the 'Host Manage' or 'Application Manage' rights to delete a image.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target appliance to execute this command. All other parameters should use appliance-specific values. Use the <code>udsinfo lscluster</code> command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.
-image <i>image_name</i> <i>image_id</i>	Required. Specifies the ID for the appliance or SRCID for AGM or name of the backup image to be deleted. Use <code>udsinfo lsbackup</code> to locate the ID/SRCID or name for the image.
-script <i>script</i>	Optional. Specifies a script during different phases of the operation. Five phases are supported, INIT, PRE, POST, FINAL, and ABORT. Each phase, a timeout, name of the script, and argument list can be specified. Name of the script is required, timeout and args are optional. Syntax for each phase is: name=<name>;phase=(INIT PRE POST FINAL ABORT);[timeout=<timeout>];[args =arg1,arg2] Multiple phases can be specified, separated by semi-colon (;), for example, "name=setup.sh;phase=INIT;name=freeze.sh;phase=PRE"

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmfailovertest -- ----->
>-- -appliance -- appliance ----->
>-- -image --+- image_name -+- --+-----+----->
      '- image_id ---'      '- -script -- script -'
```

CLI Example

```
$ udstask rmfailovertest -image Image_000402 -appliance Appliance_C1
```

Image Management Commands

lsbackup

[About lsbackup Command on page 370](#)

[Employing this Command through the CLI on page 373](#)

About lsbackup Command

Description

Use this command to retrieve details of backup images. The concise view of a backup image shows only a subset of the attributes of the image. The detailed view of a backup image provides more details. Following are details about each attribute available with this command.

- **id**: Index of backup object.
- **appid**: Application object ID.
- **restore lock**: Flag value if it is being used for restore.
- **virtual size**: Backup object application size.
- **original backup id**: ID of dependent backup object from which it is generated.
- **policy name**: Name of the policy on which this object is created.
- **mounted host**: ID of host where backup image is mounted.
- **username**: Name of the user who created backup.
- **sourceimage**: Actual image name which is being backed up.
- **apptype**: Type of the application backed up.
- **mappedhost**: ID of the host to which backup image is mapped.
- **modifiedbytes**: No of bytes modified.
- **modifydate**: Date when backup image is last modified.
- **jobclass**: Type of the job that created this backup image.
- **originaljobclass**: Original backup type that this backup image is based on.
- **flags**: Backup data flag like in-band, out of band, SAN, NBD, readyVM, etc.
- **status**: Status of this backup image. Status like succeeded, failed, running, etc.
- **expiration**: Expiration date time when this should expire.
- **sourcecuds**: Source appliance ID where this image is generated.
- **expirytries**: No of expire attempts made on this image.
- **hostname**: Host name of backup image where application was running.
- **label**: Friendly name of backup image.
- **consistencydate**: Application consistency time stamp.
- **backupdate**: Start date.
- **backupname**: Image name.
- **targetuds**: Target appliance ID to which image is replicated or remote copied.
- **sltname**: SLA template name used while creating this image.
- **slpname**: Profile name used while creating this image.
- **appname**: Application name.
- **prepdata**: Date when LiveClone image is prepped.
- **transport**: Transport medium used for this image (for example, SAN, NBD, and so on).
- **consistency-mode**: Consistency mode of image (for example, application consistent or crash consistent).
- **uniquehostname**: Unique host name for VDP appliance.
- **advancedoptions**: Policy options that is being used to create the backup for VDP appliance.

- **componenttype**: Primary or log backup of a DB/Exchange application type for VDP appliance.

Rights

You must have the 'Host Manage', and 'Application Manage' right to change the expiration time of a backup image.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target VDPappliance to retrieve all objects in a list view. Use udsinfo lscluster to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.

Parameter	Description
-filtervalue <i>attrib=value</i>	<p>Optional. Specifies that you want your report to display any or the entire list of valid filter attributes. The valid filter attributes for the <code>udsinfo lsbackup</code> command are:</p> <ul style="list-style-type: none"> • appid • appname • apptype • backupdate [usage: 'backupdate since 24 hours' for backups started since last 24 hours, 'backupdate before 7 days' for backups started older than 7 days] • backupname • characteristic [PRIMARY MOUNT UNMOUNT VDISK CLONE] • consistencydate • expiration • hostid • hostname • jobclass [[snapshot dedup dedupasync clone liveclone syncback] • label • mappedhost • mountedhost • policyname • prepdate • slpname • sltname • sourceimage • sourceuds • targetuds • virtualsize <p>The filter is formed with an attribute and a value. When more than one filter is specified, they must be delimited with the '&' symbol (which should be escaped with '\'). For string type filters user can use the wild card character '*'. The only operator allowed for a string type filter is '='.</p> <p>For example, to match backup images with appname begins with 'foo', use '-filtervalue appname=foo*'. Some filters allow only predefined constants. For example, characteristic allows only PRIMARY, MOUNT, UNMOUNT, VDISK, or clone. Therefore, to list a backup image that is mounted, use '-filtervalue characteristic=MOUNT'. For number and date types, the permitted operators are: =, >, >=, <, <=. The operators <, <=, >, or >= should be escaped with '\ ' or enclosed in '"' or "'", as required by the shell.</p>

Parameter	Description
-filtervalue <i>attrib=value</i> <i>(continued)</i>	<p>Some examples:</p> <ul style="list-style-type: none"> -filtervalue virtualsize\>128000000000 -filtervalue "virtualsize>128000000000" -filtervalue 'virtualsize>128000000000' <p>The backupdate and expiration parameters can also use these operators. For example:</p> <ul style="list-style-type: none"> -filtervalue 'backupdate>2010-09-28' -filtervalue 'expiration>2010-09-28 6:50:00'
-nohdr	<p>Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of these headings.</p> <hr/> <p>Note: If there is no data to be displayed, headings are not displayed.</p> <hr/>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsbackup -- ----->
>--+-----+----->
' - -appliance -- appliance -'
>--+-----+-- --+-----+-- ----->
' - -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+-- --+-----+-----><
' - -delim -- delimiter -'      +- object_id ----
                                '- object_name -'
```

CLI Example

For Actifio Appliances:

```
$ udsinfo lsbackup -delim = 146537
appid=135601
backuplock=0
originatinguds=590031618350
policyname=Production to Snap 1
username=
sourceimage=
prepdata=
mappedhost=0
componenttype=0
jobclass=snapshot
expiration=2014-09-12 13:41:11.506
```

```

status=succeeded
hostname=192.168.18.98
label=chk
uniquehostname=192.168.18.98_7677_00097
backupname=Image_0146535
slpname=LocalProfile
virtualsize=64424509440
restorelock=0
originalbackupid=0
id=146537
mountedhost=0
apptype=Oracle
advancedoptions=<?xml version="1.0" encoding="UTF-8"?><advancedoptions
options="donotuncatalog#true|forcelevel0#true|forceoobbackup#true|inband#true|password#DtPjgLm
HINhSVzpgfdqhRw==|fs_password#DtPjgLmHINhSVzpgfdqhRw==|restorevalidate#true|username#sys|fs_us
ername#sys|userrole#sysdba"><applications name="outdb"
options="donotuncatalog#true|forcelevel0#true|forceoobbackup#true|inband#true|password#DtPjgLm
HINhSVzpgfdqhRw==|fs_password#DtPjgLmHINhSVzpgfdqhRw==|restorevalidate#true|username#sys|fs_us
ername#sys|userrole#sysdba"/></advancedoptions>
modifiedbytes=0
modifydate=2014-09-10 14:26:23.431
flags=84
sourceuds=590031618350
expirytries=0
consistencydate=2014-09-10 13:40:49.000
backupdate=2014-09-10 13:38:24.000
targetuds=590031618350
sltname=snap
appname=outdb
transport=SAN based, out-of-band storage
consistency-mode=crash-consistent

Image Details:
  nvolumes=1
    logicalname=/u01
    restorableobject=outdb
    uniqueid=dasvol:/u01
    target=vdisk:fc-541007863E00
    capacity=64424509440
    volumekey=0
    isbootvmdk=false
    sourcemountpoint=/u01
    islvm=true
    incarnation=5

```

For AGM:

\$ udsinfo lsbackup -delim = 41345

```
id 41345
restorelock 0
virtualsize 2147483648
originalbackupid 0
backuplock 1
policyname snap7h
mountedhost 0
username
apptype FileSystem
mappedhost 0
modifydate 2012-05-01 02:37:05.247
jobclass snapshot
flags 0
status succeeded
expiration 2012-04-27 00:18:04.000
sourceuds 590021132412
expirytries 0
hostname squarecut
consistencydate 2012-04-26 17:18:32.000
backupdate 2012-04-26 17:18:04.000
backupname Image_0041344
targetuds 590021132412
sltname Template1
slpname Profile1
appname /root/vcs
Image Details:
  napps 1
  Application /root/vcs
  nvolumes 2
    logicalname /dev/vg01/lv1
    uniqueid uuid:638A95F225800001F00000000000000B
    target vdisk:fc-4F99BBA50101
    capacity 1073741824
    isbootvmdk false
    logicalname /dev/vg01/lv1
    uniqueid uuid:638A95F225800001F00000000000000A
    target vdisk:fc-4F99BBA50100
    capacity 1073741824
    isbootvmdk false

  sourcemountpoint /root/vcs,/root/vcs
```

backup

[About backup Command on page 376](#)

[Employing this Command through the CLI on page 377](#)

About backup Command

Description

Use this command to create an on-demand backup of an application or a consistency group that is running the specified policy immediately. Use the following CLI commands to obtain the ID

- `udsinfo lsapplication` command to obtain application ID
- `udsinfo lsconsistgrp` to obtain the consistency group ID
- `udsinfo lspolicy` to obtain policy ID

Rights

You must have the 'Host Manage' or 'Application Manage' or 'Backup Manage' right to back up an application or a consistency group.

Parameters

Parameter	Description
-app <i>app_id</i> <i>consistgrp_id</i>	Required. Specifies the ID of the application or consistency group to back up. Use <code>udsinfo lsapplication</code> or <code>udsinfo lsconsistgrp</code> to obtain the ID.
-backuptype <i>log</i> <i>db</i> <i>dblog</i>	Optional. Specifies the type of backup to perform. It is only valid for Log Protection-enabled database applications. Supported types are: <ul style="list-style-type: none">• log - backup log data only• db - backup db data only• dblog - backup both db and log data
-label <i>label</i>	Optional. Specifies the label for the newly created backup image.
-options <i>nobitmap</i> <i>noparent</i> <i>noseed</i>	Optional. Specifies one or more options for the on-demand backup. If more than one option is specified, they should be separated by a colon (:). Supported options are: <ul style="list-style-type: none">• nobitmap: do not use a bitmap or extent list• noparent: no ancestor object, create a new independent object• noseed: no hydroseeding image
-policy <i>policy_id</i>	Required. Specifies the policy ID to be used for backup. The policy should be a part of the service level agreement (SLA) that protects the application. Use the <code>udsinfo lspolicy</code> command to obtain the policy ID.

Parameter	Description
-script <i>script</i>	Optional. Specifies a script during different phases of the operation. Five phases are supported, INIT, PRE, POST, FINAL, and ABORT. Each phase, a timeout, name of the script, and argument list can be specified. Name of the script is required, timeout and args are optional. Syntax for each phase is: name=<name>:phase={INIT PRE POST FINAL ABORT}:[timeout=<timeout>]:[args =arg1,arg2] Multiple phases can be specified, separated by semi-colon (;), for example, "name=setup.sh:phase=INIT;name=freeze.sh:phase=PRE"

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- backup -- -- -app --+- app_id -----+----->
                                     '- consistgrp_id -'
>--+-----+-----+-----+-----+-----+----->
  '- -backuptype --+- log -----+-'
                        +- db -----+
                        '- dblog ---'
>--+-----+-----+-----+-----+-----+----->
  '- -label -- label -'      '- -options --+- nobitmap +-'-
                                   +- noparent +-
                                   '- noseed ---'
>-- -policy -- policy_id -- --+-----+-----+-----><
                               '- -script -- script -'
```

CLI Example

```
$ udstask backup -app 4222 -policy 4111
```

chbackup

[About chbackup Command on page 378](#)

[Employing this Command through the CLI on page 378](#)

About chbackup Command

Description

Use this command to change a backup image. Use the `udsinfo lsbackup` to obtain the ID or name of the backup image.

Rights

You must have the 'Application Manage' or 'Host Manage' right to change the expiration time of a backup image.

Parameters

Parameter	Description
-expiration <i>timestamp</i>	Optional. Specifies expiration time for the backup image. The format must be 'yyyy-mm-dd HH:MM:SS'.
-sensitivity <i>0 1</i>	Optional. Specifies if the backup image is sensitive (a backup image has restricted access before scrubbing of sensitive data). Specify 1 for a sensitive application or 0 for a non-sensitive application.
-label <i>label</i>	Optional. Specifies a new label for the backup image. For LiveClone, this must be unique.
<i>backup_id backup_name</i>	Required. Specifies the backup image object to modify, either by ID or by name.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- chbackup -- --+-----+---->
                                   '- expiration -- timestamp -'
>--+-----+-----+-----+-----+----->
    '- -sensitivity --+ 0 --+'
                                   '- 1 -'
>--+-----+-----+-----+-----+----->
    '- -label -- newlabel -'      '- backup_id ---'<
```

CLI Example

```
$ udstask chbackup -expiration '2010-08-15 14:59:59' 4111
```

importvaultbackup

[About importvaultbackup Command](#) on page 379

[Employing this Command through the CLI](#) on page 379

About importvaultbackup Command

Description

Use this command to import metadata of OnVault backups from a previously configured object store. Once metadata is imported, the OnVault backups are ready to be used for operations, such as a being mounted, or cloned.

Note: The `importvaultbackup` command is not available in AGM.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Manager	-

Rights

You must have the 'System Manage' right to import OnVault backup metadata.

Parameters

Parameter	Description
<code>-add addid appname</code>	Optional. Indicates OnVault backups metadata of the application to be imported.
<code>-cluster clusterid clustername</code>	Required. Indicates OnVault backups metadata of the cluster to be imported.
<code>-vaultpool poolid poolname</code>	Optional. Specifies the name or ID of the OnVault pool.

[Employing this Command through the CLI](#)

CLI Syntax

```
>>- udstask -- -- importvaultbackup -- ----->
>--+-----+----->
  '- -app ---+ appid ---+-'
    '- appname -'
>--+-----+----->
```

```

'- -cluster --+ clusterid-----+'
          '- clustername -'
>--+-----+-----><
'- -vaultpool --+ poolid ---+-'
          '- poolname -'

```

CLI Example

```

$ udstask importvaultbackup -vaultpool mypool -cluster mycluster
mycluster_Image_2096534
mycluster_Image_2096555
mycluster_Image_2096586

```

lsvaultbackup

[About lsvaultbackup Command on page 381](#)

[Employing this Command through the CLI on page 382](#)

About lsvaultbackup Command

Description

Use this command to return a concise list of OnVault backup images of a particular OnVault pool.

Applicability of this Command

This command can be used on:

CDS appliance	-
Sky appliance	✓
NAS Director	-
Actifio Global Manager	-

Rights

You must have the 'System View' or 'System Manage' right to view OnVault backups.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.

Parameter	Description
-filtervalue <i>attrib=value</i>	<p>Optional. Specifies that you want your report to display any or the entire list of valid filter attributes. Valid filter attributes for the <code>udsinfo lsvaultbackup</code> command are:</p> <ul style="list-style-type: none"> • clusterid • clustername • appid • appname <p>The filter is formed with an attribute and a value. When more than one filter is specified, they must be delimited with the '&' symbol (which should be escaped with '\'). Note that only one of appid or appname can be specified, as is the case for clusterid and clustername.</p> <p>When filter is applied with application name or application ID, details of the backups associated with the application is displayed. Without filtering on application, backups are not included.</p>
-nohdr	<p>Optional. By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed style view.</p> <p>The -nohdr parameter suppresses the display of these headings. If there is no data to be displayed, headings are not displayed.</p>
-vaultpool <i>poolid poolname</i>	Required. Specifies the name or ID of the OnVault pool.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsvaultbackup -- ----->
>--+-----+-- --+-----+-- ----->
  '- -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+-- ----->
  '- -delim -- delimiter -'
>--+-----+-----><
  '- -vaultpool +- pool_id ---+-'
                    '- pool_name -'
```

CLI Example

```
$ udsinfo lsvaultbackup -vaultpool mypool -filtervalue clusterid=1415075314\&appid=8337
clustername clusterid hostname appname appid imagename backupdate
vaults3      1415076294 skuvault3 Skuvault3 8337 Image_0034067 2016-10-14 18:34:25
vaults3      1415076294 skuvault3 Skuvault3 8337 Image_0059242 2016-10-26 21:42:58
vaults3      1415076294 skuvault3 Skuvault3 8337 Image_0059242 2016-10-26 21:52:58
```

forgetvaultimages

[About forgetvaultimages Command on page 383](#)

[Employing this Command through the CLI on page 383](#)

About forgetvaultimages Command

Description

Use this command to cleanup import metadata of OnVault images. Once metadata is removed, the OnVault images no longer appear in system.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Managerr	-

Rights

You must have the 'System Manage' right to import OnVault image metadata

Parameters

Parameter	Description
-app <i>appid</i> <i>appname</i>	Optional. Indicates OnVault images metadata of the application to be imported.
-cluster <i>clusterid</i> <i>clustername</i>	Required. Indicates OnVault images metadata of the cluster to be imported.
-vaultpool <i>poolid</i> <i>poolname</i>	Required. Specifies the name or ID of the OnVault pool.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- forgetvaultimages -- ----->
>--+-----+----->
  '- -app --+- appid ---+-'
    '- appname -'
>--+-----+----->
  '- -cluster --+- clusterid----+-'
    '- clustername -'
>--+-----+-----><
  '- -vaultpool +- poolid ---+-'
    '- poolname -'
```

CLI Example

```
$ udstask forgetvaultimages -vaultpool mypool -cluster mycluster  
mycluster_Image_2096534  
mycluster_Image_2096555  
mycluster_Image_2096586
```


Workflow Commands

mkworkflow

[About mkworkflow Command](#) on page 385

[Employing this command through CLI](#) on page 386

About mkworkflow Command

Description

Use this command to create a new workflow, which can be used to automate, for example, a Test and Development process by leveraging various appliance data protection features.

Rights

User must have 'WorkFlow Manage' right to be able to create any workflow.

Parameters

Parameter	Description
-name <i>name</i>	Required. Specifies the name of the workflow.
-appid <i>app_id</i> <i>app_name</i>	Required. Specifies the ID or name of the application for which you are creating the workflow. Use udsinfo lsapplication to retrieve the application ID or name.
-day <i>day</i>	[Deprecated] Use when instead. Required. Specifies the day of the frequency, 0-based. For weekly frequency, 0 indicates Sunday, and 1 is Monday, etc. For monthly frequency, 0 is first day of the month, 1 is second day of the month and so on.
-type <i>liveclone</i> <i>directmount</i>	Optional. Specifies the workflow type: liveclone or directmount (default). <ul style="list-style-type: none">liveclone: Creates a LiveClone, which allows you to use a script to perform an operation on the image before presenting it to the host. LiveClone workflows are commonly used for data masking: a database that contains sensitive data is mounted to a data masking server, where the sensitive data is scrubbed. Then the scrubbed database is mounted to the host.directmount: Mounts a selected snapshot image to a selected host exactly as it was snapped.
-source <i>snap</i> <i>policyid</i>	Optional. Specifies the source image for the workflow. Valid values are: <ul style="list-style-type: none">snap (default): use any image from snapshot policy.policyid - use images from the specified policy. Supported image types are snap, streamsnap and DAR.
-frequency <i>hourly</i> <i>daily</i> <i>weekly</i> <i>monthly</i>	Required. Specifies the frequency of the schedule.

Parameter	Description
-time <i>time</i>	Required. Specifies the time of the schedule.
-members <i>app_id app_name[,app_id app_name],...</i>	Optional, but required for application groups. Specifies list of restorable objects, identified by application name or ID. Multiple application name or IDs must be separated by commas.
-when	Optional. Specifies a 0-based number whose interpretation depends on the frequency. <ul style="list-style-type: none"> For monthly frequency, 0 is first day of the month, and 1 is 2nd day of the month, and so on. For weekly frequency, 0 indicates Sunday, 1 indicates Monday, and so on. For daily frequency, represents the day intervals. For example, if you specify "2", it indicates intervals of 2 days For hourly frequency, indicates hourly intervals. For example, if you specify the value "3", it means intervals of 3 hours.
-scheduletype <i>ondemand scheduled</i>	Required. Specifies whether the workflow will run on schedule or on demand. Scheduled workflows can also run on demand.

Employing this command through CLI

CLI Syntax

```
>- udstask -- -- mkworkflow -- -- -name -- name -- ----->

>-- -appid --+- app_id ---+-- -- -when -- when -- ----->
    '- app_name -'

>-- -frequency --+- daily ---+-- -- -time -- time -- ----->
    +- weekly ---+
    +- hourly ---+
    '- monthly -'

>-- -type --+- liveclone ---+-- -- -source --+- snap ----->
    '- directmount -'                +- policyid +-

>-- -scheduletype --+- ondemand ---+--
    '- scheduled -'
```

CLI Example

```
$ udstask mkworkflow -name test -appid 4111 -frequency weekly -time '01:00' -when 1 -type
directmount -source snap -scheduletype scheduled
```

Create a new on-demand DirectMount workflow.

```
$ udstask mkworkflow -name QATest1 -type directmount -appid 93251 -source snap -scheduletype
ondemand
```

Create a new scheduled LiveClone workflow that masks data.

```
$ udstask mkworkflow -name Masked1 -type liveclone -appid 93251 -source snap -scheduletype
scheduled -frequency daily -time 21:30
```


lsworkflow

[About lsworkflow Command on page 388](#)

[Employing this Command through the CLI on page 388](#)

About lsworkflow Command

Description

Use this command to retrieve details of a list of workflows, or a detailed view of a workflow. A workflow is a group of appliance commands, which can be scheduled to automate a business process, for example, a Test and Development process by leveraging various appliance data protection features like liveclone, prep-mount and mount operations.

Rights

User must have 'WorkFlow Manage' or 'WorkFlow View' right to be able to view workflows.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-filtervalue <i>attrib=value</i>	Optional. Specifies that you want your report to display any or all of the list of valid filter attributes. The valid filter attributes for the udsinfo lsworkflow command are: <ul style="list-style-type: none">• appid• scheduletype [On-Demand Hourly Daily Weekly Monthly] For string type of filters, the only operator allowed is '='. You can also use wildcard character '*'. For example, to match template (SLT) with name begins with 'foo', use -filtervalue appid=foo* .
-nohdr	Optional. By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed style view. The -nohdr parameter suppresses the display of these headings. If there is no data to be displayed, headings are not displayed.
<i>object_id </i> <i>object_name</i>	Optional. Specifies the name or ID of an object. When you use this parameter, the detailed view of the specific object is returned and any value that is specified by the -filtervalue parameter is ignored. If you do not specify the <i>object_id object_name</i> , the concise view of all objects matching the filter criteria is displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsworkflow -- ----->
>--+-----+-----+--+-----+----->
  '- -filtervalue -- attrib=value -'      '- -nohdr -'
```

```

>--+-----+--+-----+-----><
  '- -delim -- delimiter -'      +- object_id ---+
                                   '- object_name -'

```

CLI Example

```
$ udsinfo lsworkflow
```

```

idmodifydate    scheduletimescheduletypename appidschedule
day workflowid disabled
2038792013-07-19 10:26:59.96802:00      20tndme2 1546466
203878 false
2120272013-07-19 19:07:59.67603:00AM    20tndme22 2033580
212026 false

```

```
$ udsinfo lsworkflow 212027
```

```

id 212027
modifydate 2013-07-19 19:07:59.676
scheduletime 03:00 AM
scheduletype 20
name tndme22
appid 203358
tasks<workflowname="tndme22"appid="203358"policy="snap"><liveclonelabel="tn
dm22"diskpool="73"id="212021"/><prepmounthost="203359"script="phase=PRE:na
me=pre.sh:timeout=60;phase=POST:name=post.sh:timeout=100"id="212022"/><mountp
hysicalRDM="false"id="212023"><hosthostid="203363"id="212024"/><hosthostid=
"203365" id="212025" /></mount></workflow>
scheduleday 0
workflowid 212026
disabled false

```

chworkflow

[About chworkflow Command on page 390](#)

[Employing this Command through the CLI on page 391](#)

About chworkflow Command

Description

Use this command to modify the attributes of an existing workflow. Use `udsinfo lsworkflow` to obtain the ID. Use `"-disable"` to de-schedule and reschedule a workflow. When changing a data flow schedule, all schedule parameters, day, time and frequency, should be specified.

Rights

User must have 'WorkFlow Manage' right to be able to change any workflow.

Parameters

Parameter	Description
-day <i>day</i>	[Deprecated] Use when instead, Optional. Specifies the day of the frequency, 0-based. For weekly frequency, 0 indicates Sunday, and 1 is Monday, etc. For monthly, 1 is first day of the month, and so on.
-type <i>liveclone</i> <i> directmount</i>	Optional. Specifies whether the workflow type: liveclone or directmount (default). <ul style="list-style-type: none">liveclone: Creates a LiveClone, which allows you to use a script to perform an operation on the image before presenting it to the host. LiveClone workflows are commonly used for data masking: a database that contains sensitive data is mounted to a data masking server, where the sensitive data is scrubbed. Then the scrubbed database is mounted to the host.directmount: Mounts a selected snapshot image to a selected host exactly as it was snapped.
-source <i>snap policyid</i>	Specifies the source image or the policy ID of the source image. If nothing is specified here, the latest snap image is used by default. Valid values are: <ul style="list-style-type: none">snap (default): use any image from snapshot policy.policyid - use images from the specified policy. Supported image types are snap, streamsnap and DAR.
-members <i>appid appname[,appid</i> <i> appname][,...]</i>	Optional. Specifies the applications to be included when the source is a group.
-disable <i>true false</i>	Optional. Disables the workflow from being scheduled.
-frequency <i>hourly </i> <i>daily weekly </i> <i>monthly</i>	Required. Specifies the frequency of the schedule.

chflowtask

[About chflowtask Command on page 393](#)

[Employing this Command through the CLI on page 397](#)

About chflowtask Command

Description

Use this command to update or set attributes for a workflow. Use `udsinfo lsflowtask` to obtain the flowtask ID.

You will typically use `mkworkflow` to create a workflow and then use `chflowtask` to update each step in the workflow (based on the type flag during workflow creation). The `chflowtask` command will help you configure the actual settings to use for the step for scheduled workflows. Using the `runworkflow` command, you can override a subset of these items as necessary.

Rights

User must have 'Workflow Run' or 'WorkFlow Manage' right to be able to change any flowtask.

Parameters

Parameter	Description
<i>workflow_id</i>	Required. Specifies the workflow object to modify by ID. Use <code>udsinfo lsworkflow</code> to obtain the ID.
-type <i>liveclone</i> <i>mount</i>	Optional. Specifies type of the flowtask you are modifying. Use <code>liveclone</code> to specify pre-processing parameters. Otherwise use <code>mount</code> (default).

The following parameters are applicable when the **type** is **liveclone**.

<i>-appaware</i>	Optional. Set this parameter to true to perform an application aware mount. This can only be specified for Oracle and SQL applications.
<i>-label</i>	Optional, but required if no value was set previously. The label applied to the images.
<i>-diskpool</i>	Optional, but required if no value was set previously. Specifies the diskpool name or ID used for the operation.
<i>-prepmount</i>	Optional. Specifies whether to prep-mount a LiveClone image to a host.
<i>-clearsensitiveflag</i>	Optional. Specifies whether to mark data as non-sensitive. Not allowed if <code>prepmount</code> is specified.
<i>-host</i> <i>host_name</i> <i>host_id</i>	Required if <code>prepmount</code> is specified. Specifies the ID or name of a single host to which the backup image is to be prep-mounted.

Parameter	Description
rdmmode	<p>(Optional) Specifies Raw Device Mapping (RDM) mode for VM. Valid values are:</p> <ul style="list-style-type: none"> • dependentvirtual • independentvirtual (default) • physical <p>Specify dependentvirtual if mounted volume(s) are to be included in VMware snapshots</p> <hr/> <p>Note: <i>dependentvirtual is rarely used.</i></p> <hr/> <p>If there is an SLA assigned to the VM to which these volumes are mounted, they will be captured and will be counted towards MDL usage.</p>
-maptoallESX	Optional. Valid when the target host is a VMware VM. If there are multiple hosts, at least one must be VMware VM.
-maptoallclusternodes	Optional. Valid only for cluster applications. Map backup image to all the nodes in the cluster.
-mountlocation	Optional. Specifies a mountpoint for the volume on host. For example, /mnt/home
-script	<p>Optional. Specifies a script during different phases of the operation. Five phases are supported, INIT, PRE, POST, FINAL, and ABORT. For each phase, a timeout, name of the script, and argument list can be specified. Name of the script is required, timeout and args are optional.</p> <p>Syntax for each phase is:</p> <pre>name=<name>;phase={INIT PRE POST FINAL ABORT};[timeout=<timeout>]:[args=arg1,arg2]</pre> <p>Multiple phases can be specified, separated by semi-colon (;), for example:</p> <pre>name=setup.sh;phase=INIT;name=freeze.sh;phase=PRE</pre>
-members appid[appname[,appid appname][,...]]	Optional. Specifies the applications to be included when the source is a group.

Parameter	Description
<code>-provisioningoptions</code>	<p>Optional. Required if appaware is specified.</p> <p>A comma delimited list of restore options where each option is a name=value pair. Use <code>udsinfo lsrestoreoptions</code> to obtain a list of applicable restore options.</p> <p>To perform app-aware mount to a new application, additional options can be provided through an XML content, which needs to adhere to the rules of the appclass of the application. In addition, the app-aware mounted new application can also be optionally protected, with a new, or existing SLT and SLP, if so desired. The existence of the provisioningoptions indicates that this is an app-aware mount, regardless of -appaware flag.</p> <p>For example,</p> <pre>-provisioningoptions "<databasesid>foodb1</databasesid> <orahome>/u01/app/oracle/product/11.2.0/db_1</orahome> <utlfiledirectory>/home/oracle</utlfiledirectory> <username>oracle</username>".</pre> <p>Use <code>udsinfo lsappclass</code> to obtain a list of available appclass, and provisioning options for each appclass.</p>

The following parameters are applicable when the **type** is **mount**.

<code>-label</code>	Optional. The label applied to the images.
<code>-diskpool</code>	Optional. Specifies the diskpool name or ID used for the operation.
<code>-host host_name host_id</code>	<p>Optional. Specified comma-separated list of host IDs where the image is to be mounted.</p> <p>Only one host can be specified if appaware is true.</p>
<code>-rdmmode</code>	<p>(Optional) Specifies Raw Device Mapping (RDM) mode for VM. Valid values are:</p> <ul style="list-style-type: none"> • dependentvirtual • independentvirtual (default) • physical <p>Specify dependentvirtual if mounted volume(s) are to be included in VMware snapshots</p> <hr/> <p>Note: <i>dependentvirtual is rarely used.</i></p> <hr/> <p>If there is an SLA assigned to the VM to which these volumes are mounted, they will be captured and will be counted towards MDL usage.</p>
<code>-maptoallESX</code>	Optional. Valid when the target host is a VMware VM. If there are multiple hosts, at least one must be VMware VM.
<code>-maptoallclusternodes</code>	Optional. Valid only for cluster applications. Map backup image to all the nodes in the cluster.

Parameter	Description
<i>-mountlocation</i>	Optional. Specifies a mountpoint for the volume on host. For example, /mnt/home.
<i>-appaware</i>	Optional. Set this parameter to true to perform an application aware mount. This can only be specified for Oracle and SQL Server applications.
<i>-script</i>	<p>Optional. Specifies a script during different phases of the operation. Five phases are supported, INIT, PRE, POST, FINAL, and ABORT. For each phase, a timeout, name of the script, and argument list can be specified. Name of the script is required, timeout and args are optional.</p> <p>Syntax for each phase is:</p> <pre>name=<name>;phase={INIT PRE POST FINAL ABORT};[timeout=<timeout>]:[args=arg1,arg2]</pre> <p>Multiple phases can be specified, separated by semi-colon (;), for example:</p> <pre>name=setup.sh;phase=INIT;name=freeze.sh;phase=PRE</pre>
<i>-provisioningoptions</i>	<p>Optional. Required if appaware is specified.</p> <p>A comma delimited list of restore options where each option is a name=value pair. Use <code>udsinfo lsrestoreoptions</code> to obtain a list of applicable restore options.</p> <p>To perform app-aware mount to a new application, additional options can be provided through an XML content, which needs to adhere to the rules of the appclass of the application. In addition, the app-aware mounted new application can also be optionally protected, with a new, or existing SLT and SLP, if so desired. The existence of the provisioningoptions indicates that this is an app-aware mount, regardless of <code>-appaware</code> flag.</p> <p>For example,</p> <pre>-provisioningoptions "<databasesid>foodb1</databasesid> <orahome>/u01/app/oracle/product/11.2.0/db_1</orahome> <utlfiledirectory>/home/oracle</utlfiledirectory> <username>oracle</username>".</pre> <p>Use <code>udsinfo lsappclass</code> to obtain a list of available appclass, and provisioning options for each appclass.</p>
<i>-immediateunmount</i>	<p>Optional. Use it to unmount the image from target server, delete the snapshot of the selected image after the mount operation and the script execution have been successfully completed.</p> <p>Cannot be specified if <code>-reprotect</code> is specified.</p>
<i>-reprotect</i>	<p>Optional. Specifies a new application to protect.</p> <p>Cannot be specified if <code>-immediateunmount</code> is specified.</p>
<i>-reprotectslt</i>	Required if reprotect is true. Specifies the template for the new application to protect.
<i>-reprotectslp</i>	Required if reprotect is true. Specifies the profile for the new application to protect.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- chflowtask -- +-----+----->
                                   '- -appaware --+ true --+-- -'
                                   '- false -'

>--+-----+-----+-----+----->
'- -diskpool --+ name +--- -'      '- -host --+ host_name +--- -'
      '- id ---'                      '- host_id ---'

>--+-----+-----+----->
'- -clearsensitiveflag --+ true --+-- -'
      '- false -'

>--+-----+-----+-----+----->
'- -immediateunmount --+ true --+-- -'      '- -label -- label -'
      '- false -'

>--+-----+-----+-----+----->
'- -maptoallESX --+ true --+-- -'      '- -script -- script -'
      '- false -'

>--+-----+-----+-----+----->
'- -maptoallclusternodes --+ true --+-- -'
      '- false -'

>--+-----+-----+-----+----->
'- -mountlocation -- location -'      '- -prepmount --+ true --+-- -'
                                          '- false -'

>--+-----+-----+-----+----->
'- -reprotect --+ true --+-- -'      '- -reprotectslt -- slt_id -'
      '- false -'

>--+-----+-----+-----+----->
'- -reprotectslp -- slp_id -'      '- -provisioningoptions -- option -'

>--+-----+-----+-----+----->
'- -rdmnode --+ dependentvirtual +---+ -'
      +- independentvirtual +-
      '- physical -----'

>--+-----+-----+-----+-----><
'-type --+ mount +---+-- -'      workflow_id ----->
      '- liveclone -'
```

CLI Example

```
$ udstask chflowtask -type mount -host 5150 -appaware true -provisioningoptions
'ConsistencyGroupName=groupname&sqlinstance=myinst&username=sqlserver\Administrator&password=p
assword&recover=false&userlogins=false' 7248

$ udstask chflowtask -type liveclone -host 5150 -label mycloneapp -script
"phase=PRE:name=freeze.sh;phase=POST:name=setup.sh" -appaware true -provisioningoptions
'ConsistencyGroupName=groupname&dbnameprefix=prepclide&sqlinstance=myinst&username=sqlserver\A
dministrator&password=password&recover=false&userlogins=false' 7248
```


lsflowtask

[About lsflowtask Command on page 399](#)

[Employing this Command through the CLI on page 399](#)

About lsflowtask Command

Description

Use this command to retrieve details of a list of flowtasks, or a detailed view of a flowtask. A flowtask is a step/task in a workflow.

Rights

User must have 'Workflow View' right to be able to view any flowtask.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-type <i>liveclone mount</i>	Optional. Specifies type of the flowtask. Use liveclone to specify pre-processing parameters. Otherwise use mount (default).
<i>object_id object_name</i>	Optional. Specifies the name or ID of a flowtask object. When you use this parameter, the detailed view of the specific object is returned and any value that is specified by the -filtervalue parameter is ignored. If you do not specify the <i>object_id object_name</i> , the concise view of all objects matching the filter criteria is displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsflowtask -- ----->
```

```
>--+-----+--+-----+-----><
  '- -delim -- delimiter -'    +- object_id ---+
                               '- object_name -'
```

CLI Example

```
$ udsinfo lsflowtask
id workflowid workflowname      type    prepmount clearsensitiveflag label
host appaware reprotect
6137 6136      SQLdev           mount    false
4326 true      false
6858 6857      oracleDev           liveclone true    false    productiondemo
4326 true      false
```

```
6858 6857      oracleDev      mount    true    false
4326 true      true
```

```
$ udsinfo lsflowtask 6857
```

id	workflowid	workflowname	type	prepmount	clearsensitiveflag	label
host	appaware	reprotect				
6137	6136	SQLdev	mount	false		
4326	true	false				
6858	6857	oracleDev	liveclone	true	false	productiondemo
4326	true	false				
6858	6857	oracleDev	mount	true	false	
4326	true	true				

runworkflow

[About runworkflow Command on page 401](#)

[Employing this Command through the CLI on page 402](#)

About runworkflow Command

Description

Use this command to trigger an on-demand execution of the workflow.

Rights

User must have 'WorkFlow Run' or 'WorkFlow Manage' right to be able to run a workflow.

Parameters

Parameter	Description
<i>workflow_id</i>	Required. Specifies the ID workflow object to be executed. Use udsinfo 1sworkflow to display detailed workflow information.
-norefreshliveclone	Optional. When set, the LiveClone workflow will skip the LiveClone refresh operation.
-nocreatevirtualclone n	Optional. When set, the LiveClone workflow will skip the LiveClone mount operation.
-sourceimage <i>imageid</i> <i> image_name</i>	Optional. Specifies the name of the id of the source image. If no image is specified, automatically selected the newest image available.
-waitwait	Optional. Specifies whether to wait for the completion of the command.
-ondemand	(Optional) Specifies whether to run the workflow as on demand or scheduled. By default, the workflow is run as scheduled.

The following parameters are applicable only for mount operation (for LiveClone and Direct Mount workflows).

-host <i>host_id host_name</i>	Optional. Specifies a comma-separated list of hosts on which to mount. Use the 1shost command to retrieve a list of all hosts and their IDs. Note: Only one host is supported for appaware mounts.
-maptoallESX <i>true false</i>	Optional. Valid when the target host is a VMware VM. If there are multiple hosts, at least one must be VMware VM.
-maptoallclusternodes <i>true false</i>	Optional. Valid when target host is cluster node or cluster host.

Parameter	Description
-appaware <i>true false</i>	Optional. Set this parameter to true to perform an application aware mount. When set to true, you must either provide all required provisioning options, or specify -refreshexisting .
The following parameters are applicable only for appaware mount.	
-recoverytime	[Applicable only for appaware mount] Valid only for database applications. Specify the point-in-time for recovery, by applying log backups to roll forward to the specified time of the host. The time should be within the range set by hostbeginpit and hostendpit when displayed using 'udsinfo lsbackup <image>' for that image. The format should be either: "yyyy-MM-dd HH:mm:ss" or "yyyy-MM-dd HH:mm:ss.SSS".
-refreshexisting	[Applicable only for appaware mount] Specify the appname to be refreshed. Cannot be specified if -provisioningoptions is also specified.
-provisioningoptions	[Applicable only for application aware mount] (Optional) A comma delimited list of restore options where each option is a name=value pair. For a list of available options, use udsinfo lsrestoreoptions . To perform app-aware mount to a new application, additional options can be provided through an XML content, which needs to adhere to the rules of the appclass of the application. In addition, the app-aware mounted new application can also be protected, with a new or existing SLT and SLP. To find available appclass and provisioning options for each appclass use udsinfo .

Employing this Command through the CLI

```
>>- udstask -- -- runworkflow -- -- workflow_id ----->
--+-+-----+-- +-+-----+-- -->
  '- -norefreshliveclone -'      '- -nocreatevirtualclone -'

>--+-+-----+-- +-+-----+-- ----->
  '- -appaware -'              '- -host -- host_name -'

>--+-+-----+-- +-+-----+-- ----->
  '- -maptoallESX -'           '- -maptoallclusternodes -'

>--+-+-----+-- +-+-----+-- -->
  '- -ondemand -'              '- -provisioningoptions -- option -'

>--+-+-----+-- +- ----->
  '- recoverytime -- recoverytime -'

>--+-+-----+-- +-+-----+-- -----><
  '-refreshexisting -'          '- -wait -
```

CLI Example

Run a workflow identified by the ID.

```
$udstask runworkflow 212027
```

Run an on-demand DirectMount workflow to create a new Oracle virtual database from the most recent snap.

```
$udstask runworkflow -host 9182 -appaware true -recoverytime "2017-02-09 21:25:06" -  
provisioningoptionsxml "<provisioning-options><databasesid>maskeddb</  
databasesid><username>oracle</username><orahome>/home/oracle/app/oracle/product/11.2.0/  
dbhome_1</orahome><tnsadminidir>/home/oracle/app/oracle/product/11.2.0/dbhome_1/network/admin</  
tnsadminidir><totalmemory>500</totalmemory><rrecovery>true</rrecovery><standalone>false</  
standalone></provisioning-options>" 212027
```

Run an on-demand DirectMount workflow to refresh an existing virtual database.

```
$udstask runworkflow -host 9182 -appaware true -refreshexisting maskeddb 212027
```

Run an on-demand LiveClone workflow to refresh the LiveClone to a specific source but not perform any mount.

```
$udstask runworkflow -nocreatevirtualclone -sourceimage Image_031236 212027
```

rmworkflow

[About rmworkflow Command on page 404](#)

[Employing this Command through the CLI on page 404](#)

About rmworkflow Command

Description

Use this command to remove an existing workflow object. Use **udsinfo lsworkflow** to obtain the ID. If the specified workflow is running, it will continue until it is completed

Rights

User must have 'WorkFlow Manage' right to be able to remove a workflow.

Parameters

Parameter	Description
<i>workflow_id</i>	Required. Specifies the ID of the workflow object to be removed. Use udsinfo lsworkflow to obtain the ID.
-force	Optional. Specifies whether to ignore errors when deleting the workflow.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmworkflow ----->
>---+-----+-- -- workflow_id -----><
    '- -force -'
```

CLI Example

```
$ udstask rmworkflow 212027
```

Other Command

mksideband

[About mksideband Command](#) on page 405
[Employing this Command through the CLI](#) on page 405

About mksideband Command

Description

Use this command to mark an Mdisk to be used for a sideband group.

Note: The **mksideband** command is supported by appliances only.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Manager	-

Rights

You must have 'System Manage' right to invoke this operation.

Parameters

Parameter	Description
-mdisk <i>mdisk_name</i>	Required. Specifies the name of the MDisk.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- mksideband -- -mdisk -- mdisk_name ---><
```

CLI Example

```
$ udstask mksideband -name mdisk5
```


8 Policy and Schedule Commands

Use these commands for managing policies and schedules in your Service Level Agreements (SLAs). The GUI interface for these commands can be found in the AGM under the SLA Architect. For detailed information, refer to the AGM Online Help.

This chapter details the commands used to manage policies, policy application, and schedules:

Managing Policies	Managing Schedules
SLT Commands <ul style="list-style-type: none">mkslt on page 408lsslt on page 410chslt on page 412rmslt on page 413 SLA Commands <ul style="list-style-type: none">mksla on page 414lssla on page 416chsla on page 418rmsla on page 423 Policy Commands <ul style="list-style-type: none">mkpolicy on page 424lspolicy on page 430chpolicy on page 433lssettableoption on page 437mkpolicyoption on page 439lspolicyoption on page 441chpolicyoption on page 443rmpolicyoption on page 445rmpolicy on page 446	Bandwidth Commands <ul style="list-style-type: none">mkbandwidthschedule on page 463lsbandwidthschedule on page 465chbandwidthschedule on page 467rmbandwidthschedule on page 468 Other Commands <ul style="list-style-type: none">lsinterface on page 447lsconfiguredinterface on page 449configoutboundpolicy on page 452lsoutboundpolicy on page 454configntp on page 455lsntp on page 456testconnection on page 457showroute on page 459showrouting on page 460showtracepath on page 462export on page 469import on page 470

SLT Commands

mkslt

[About mkslt Command on page 408](#)

[Employing this Command through the CLI on page 408](#)

About mkslt Command

Description

Use this command to create a new policy template.

Rights

You must have the 'SLA Manage' right to create a policy template.

Parameters

Parameter	Description
-description <i>desc</i>	Optional. Specifies description of the SLA template.
-name <i>name</i>	Required. Specifies name of the SLA template; the name has to be unique within the appliance
-org <i>org_id</i> <i>org_name</i>	Optional. Specifies a default organization to which the template is to be added after creation. Use the udsinfolorg command to locate the ID or name of the organization. Note: To use this option user needs to have 'System Manage' right.
-override <i>true</i> <i>false</i>	Optional. Specifies whether policy option can be overridden. The default is true.
id <i>slt_id</i>	(Optional) For AGM, it specifies the ID or name of an existing template to push to the target VDP appliances. Use udsinfolslt to retrieve the SLA ID.
cluster <i>cluster</i>	Optional. Specifies the name or ID of the target VDP Appliance to execute this command where the template should be pushed to. Note: AGM only.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- mkslt -- --+-----+----->
                                '- -description -- desc -'
>-- -name -- slt_name -- --+-----+----->
                                '- -org +- org_id ----+'
                                '- org_name -'
>--+-----+----->
```



```

    '- -override -- true --+'
        '- false -'
>---+-----+----->
    '- -id -- slt_id -'
>---+-----+-----><
    '- -appliance -- appliance -'

```

CLI Example

```

$ udstask mkslt -name sla_template1 1234 -appliance Appliance_C1
41111234

```

lssl

[About lssl Command on page 410](#)

[Employing this Command through the CLI on page 410](#)

About lssl Command

Description

Use this command to retrieve the details of SLTs. A template (SLT) is made up of one or more policies that describe the data protection schedules.

Rights

You must have the 'SLA Manage', 'SLA View' or 'SLA Assign' right to view a list of SLTs.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target VDP Appliance to retrieve all objects in a list view. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-filtervalue <i>attrib=value</i>	Optional. Specifies that you want your report to display any or all of the list of valid filter attributes. The valid filter attribute for the udsinfo lssl command is: name For string type of filters, the only operator allowed is '='. You can also use wild-card character '*'. For example, to match template (SLT) with name begins with 'foo', use -filtervalue name=foo* .
-nohdr	Optional. By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed style view. The -nohdr parameter suppresses the display of these headings. If there is no data to be displayed, headings are not displayed.
<i>object_id object_name</i>	Optional. Specifies the name or ID of an object. When you use this parameter, a detailed view of the object is returned and any value specified by the -filtervalue parameter is ignored. If you do not specify the ID or name, a concise view of all objects matching the filters is displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lssl -- ----->
>--+-----+----->
```

```

'- -appliance -- appliance -'
>---+-----+---+-----+----->
'- -filtervalue -- attrib=value -'      '- -nohdr -'
>---+-----+---+-----+-----><
'- -delim -- delimiter -'                +- object_id ---+
                                           '- object_name -'

```

CLI Example

```

$ udsinfo lssl
  id override description      name
  101 true      Basic Protection Local Basic
  102 true      Standard Protection Local Standard
  103 true      Enterprise Protection Local Enterprise

```

```

$ udsinfo lssl 101 -delim =
id=101
override=true
description=Basic Protection
name=Local Basic

```

chslt

[About chslt Command](#) on page 412

[Employing this Command through the CLI](#) on page 412

About chslt Command

Description

Use this command to change the attributes of a template (SLT). Use the `udsinfo lsslt` command to obtain the ID or name of the template (SLT).

Rights

You must have the 'SLA Manage' right to change a template.

Parameters

Parameter	Description
-description <i>description</i>	Optional. Specifies a description for the template.
-name <i>slt_name</i>	Optional. Specifies a name for the template.
-override <i>true</i> <i>false</i>	Optional. Specifies whether policy option can be overridden.
-promote	Optional. Promotes a replicated appliance template to an -level template.
<i>slt_id</i> <i>slt_name</i>	Required. Specifies the ID or name of the template to be modified.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- chslt -- --+-----+----->
                                '- -description -- desc-'
>--+-----+--+-----+----->
  '- -name -- slt_name -'      '- -override +- true --+-'
                                '- false -'
>--+-----+----->
  '- -promote -'
>--+ slt_name +-+-----><
  '- slt_id ---'
```

CLI Example

```
$ udstask chslt -description "template description" template1 12301
```

rmslt

[About rmslt Command](#) on page 413

[Employing this Command through the CLI](#) on page 413

About rmslt Command

Description

Use this command to delete a template.

Rights

You must have the 'SLA Manage' right to delete a template.

Syntax

Parameter	Description
<i>slt_id</i> <i>slt_name</i>	Required. Specifies the ID or name of the template to be deleted. Use udsinfo lssl to retrieve the SLT information.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmslt -- --+ slt_name -+-----><
                               '- slt_id ---'
```

CLI Example

```
$ udstask rmslt template1
```

SLA Commands

mksla

[About mksla Command](#) on page 414

[Employing this Command through the CLI](#) on page 415

About mksla Command

Description

Use this command to create new SLA objects. An SLA protects an application by combining a template (SLT) and a profile (SLP) to an application, a consistency group, or all applications/consistency groups in a group.

An SLA ID is returned when the command successfully completed, in protecting an application or a consistency group. To protect multiple applications in a group, use **-group** to specify the name or ID of the group. The group ID is returned when the command succeeds, as there are multiple SLAs created.

Rights

You must have the 'SLA Assign' right to create an SLA.

Parameters

Parameter	Description
-appid <i>app_id consistgrp_id</i>	Required when protecting an application or consistency group. Specifies the application ID or the consistency group ID for the new SLA. Use udsinfo lsapplication or udsinfo lsconsistgrp to retrieve the application or consistency group ID.
-description <i>desc</i>	Optional. Specifies the description for the new SLA.
-group <i>name id</i>	Optional, required when protecting applications in the group. Specifies the ID or name of a group. Use udsinfo lsgroup to retrieve the group ID.
-optionname <i>name</i>	Optional. Specifies policy option name for the SLA. For policy option that can not be changed, it should be specified when SLA is created. See Appendix E, List of Policy Options for a complete list of supported policy options.
-optionvalue <i>value</i>	Optional. Specifies policy option value for the SLA.
-scheduleoff	Optional. Specifies if the schedule should be turned off to start with when creating a new SLA for VDP appliance.
-sourceuds <i>sourceuds</i>	Optional. Optional source cluster ID, to apply to remote replicate policy to a remote application for VDP appliance.
-slp <i>slp_name slp_id</i>	Required. Specifies the profile (SLP) ID or name for the new SLA. Use udsinfo lsslp to retrieve the SLA ID.
-slt <i>slt_name slt_id</i>	Required. Specifies the template (SLT) ID or name for the new SLA. Use udsinfo lsslt to retrieve the SLA ID.

Employing this Command through the CLI

CLI Syntax

For VDP appliance:

```
>>- udstask -- -- mksla -- ---- -appid --+- app_id -----+---->
                                     '- consistgrp_id -'
>--+-----+-----+-----+-----+-----+-----+----->
'- -description -- desc -'      '- -optionname -- name -'
>--+-----+-----+-----+-----+-----+-----+----->
'- -optionvalue -- value -'      '- -group --+- name --+-'
                                     '- id ---'
>--+-----+-----+-----+-----+-----+-----+----->
'- -scheduleoff -'      '- -sourceuds -- sourceuds -'
>-- -slp --+- slp_name +--- -- -slt --+- slt_name +-----><
                                     '- slp_id ---'      '- slt_id ---'
```

For AGM:

```
>>- udstask -- -- mksla -- ---- -appid --+- app_id -----+---->
                                     '- consistgrp_id -'
>--+-----+-----+-----+-----+-----+-----+----->
'- -optionname -- name -'      '- -optionvalue -- value -'
>--+-----+-----+-----+-----+-----+-----+----->
'- -group --+- group_name +---'      '- slp_id ---'
                                     '- group_id ---'
>-- -slt --+- slt_name +-----+-----+-----+-----><
                                     '- slt_id ---'      '- -description -- desc -'
```

CLI Example

```
$ udstask mksla -appid 1020 -slp 1022 -slt 1024
```

lssla

[About lssla Command](#) on page 416

[Employing this Command through the CLI](#) on page 417

About lssla Command

Description

Use this command to retrieve a concise list of SLAs or a detailed view of an SLA. An SLA describes a template and a profile used to protect an application.

Rights

You must have the 'SLA Manage', 'SLA View', or 'SLA Assign' right to view SLAs. '

Parameters

Parameter	Description
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target VDP Appliance to retrieve all objects in a list view. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the appliance argument.
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-filtervalue <i>attrib=value</i>	<p>Optional. Specifies that you want your report to display any or the entire list of valid filter attributes. The valid filter attributes for the udsinfo lssla command are:</p> <ul style="list-style-type: none">• appid• dedupasyncoff [true false]• expirationoff [true false]• scheduleoff [true false]• slpid• sltid <p>The filter is formed with an attribute and a value. When you specify more than one filter, they must be combined with '&' character (which should be escaped with '\').</p>
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.

Parameter	Description
<i>object_id</i>	Optional. Specifies the ID of an object. When you use this parameter, a detailed view of the object is returned and any value that is specified by the filtervalue parameter is ignored. If you do not specify the ID or name, a concise view of all objects matching the filters is displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lssla -- ----->
>--+-----+----->
  '- -appliance -- appliance -'
>--+-----+---+-----+--->
  '- -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+---+-----+---><
  '- -delim -- delimiter -'              +- object_id ---+
```

CLI Example

```
$ udsinfo lssla
id modifydate expirationoff slpid description createdate dedupasyncoff appid scheduleoff sltid
8998 false      8947 protect app1 2011-06-21 05:47:05.933 false      8991 false      8987
```

chsla

[About chsla Command](#) on page 418

[Employing this Command through the CLI](#) on page 421

About chsla Command

Description

Use this command to change the attributes of an SLA.

Rights

You must have the 'SLA Assign' right to change the attributes of an SLA.

Parameters

Parameter	Description
- complianceerrorthresh old <i>error_threshold</i>	<p>Optional. The error threshold to use for SLA compliance settings for VDP appliances. Valid values are whole numbers (greater than 0) followed by units (m for minutes, h for hours, d for days) and the strings 'default' and 'no analysis' (quotes required).</p> <ul style="list-style-type: none">'default' specifies that the error threshold is calculated based on the characteristics of the policy.'no analysis' specifies that there will be no alerting for these SLA compliance settings. <hr/> <p>Note: The compliance error threshold must be higher than the warning threshold.</p> <hr/>
- compliancewarthres hold <i>warning_threshold</i>	<p>Optional. The warning threshold to use for SLA compliance settings for VDP appliance. Valid values are whole numbers (greater than 0) followed by units (m for minutes, h for hours, d for days) and the string 'no warning' (quotes required). 'no warn' means that there will be no early warning before the warning threshold is reached.</p> <hr/> <p>Note: The compliance warning threshold must be lower than the error threshold.</p> <hr/>
-dedupasyncoff <i>true false</i>	<p>Optional. Specifies whether asynchronous deduplication of this SLA should be turned off.</p>
-description <i>desc</i>	<p>Optional. Specifies the new description for the SLA.</p>
-expirationoff <i>true false</i>	<p>Optional. Specifies whether the expiration of this SLA should be turned off.</p>

Parameter	Description
-policyid <i>policyid</i>	Optional. When creating an SLA compliance override for VDP appliance using either the complianceerrorthreshold or compliancewarnthreshold parameter, the policy ID specifies the policy whose compliance settings you wish to override. Only one policy can be overridden in a single chs1a command.
-scheduleoff <i>true false</i>	Optional. Specifies whether scheduling of the SLA should be turned off.
-slpid <i>slp_id</i>	Optional. Specifies the ID of the profile (SLP). Use udsinfo lsslp to display a list of profiles (SLPs).
-sltId <i>slt_id</i>	Optional. Specifies the ID of the SLA template. Use udsinfo lsslt to display a list of policy templates (SLTs).
<i>sla_id</i>	Required. Specifies ID of the SLA to be changed. Use udsinfo lssla to retrieve the SLA ID.

Parameter	Description
-flag <i>setting:value</i>	<p>Optional. Configures the -flag setting and associated value to disable/enable specific SLA operations on a single application, such as disabling image preservation of snapshots or dedup images on an application basis. You can also disable individual jobs for an application (snapshot, local dedup, remote dedup, StreamSnap, OnVault, or DAR jobs). This parameter is for VDP Appliances.</p> <hr/> <p>Note: For background on image preservation, including modifying settings, see Configuring Image Preservation on page 527.</p> <hr/> <p>Image preservation flag settings on a per-application basis: Settings include:</p> <ul style="list-style-type: none"> • OnVaultLatestSnap:<true false> • ProcessLatestSnap:<true false> — Instructs the appliance if it should change its default behavior and resume processing the most recent snapshot images and discard all of the preserved images for the application. By default, the system-wide PreserveSnapsOfPriority parameter in the setparameter command is set to all applications (low, medium, and high priority), which means that the ProcessLatestSnap flag is automatically disabled (set to ProcessLatestSnap:false). You can specify ProcessLatestSnap:true to disable catch-up mode for a specific application. • ProcessLatestDedup:<true false> — Instructs the appliance if it should change its default behavior and resume processing the most recent dedup images and discard all of the preserved images for the application. By default, the system-wide PreserveLdedupsOfPriority parameter in the setparameter is set to all applications (low, medium, and high priority), which means that the ProcessLatestDedup flag is automatically disabled (set to ProcessLatestSnap:false). You can specify ProcessLatestDedup:true to disable catch-up mode for a specific application. <hr/> <p>Note: Once you set the flag ProcessLatestSnap or ProcessLatestDedup to true, the -flag option will remain set to true until the system is in process. The parameters will be reset back to the default state (false), once the process is completed.</p> <hr/>

Parameter	Description
	<p>Disable jobs flag settings:</p> <ul style="list-style-type: none"> • DisableSnapshot:<true false> — Disables or enables snapshot jobs performed on an application basis. Default is false (snapshot jobs enabled). • DisableLocalDedup:<true false> — Disables or enables local dedup jobs performed on an application basis. Default is false (local dedup jobs enabled). • DisableRemoteDedup:<true false> — Disables or enables remote dedup jobs performed on an application basis. Default is false (remote dedup jobs enabled). • DisableStreamSnap:<true false> — Disables or enables StreamSnap jobs performed on an application basis. Default is false (StreamSnap jobs enabled). • DisableOnVault:<true false> — Disables or enables OnVault jobs performed on an application basis. Default is false (OnVault jobs enabled). • DisableDar:<true false> — Disables or enables Dedup-Async Replication (DAR) jobs performed on an application basis. Default is false (DAR jobs enabled).

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- chsla -- ----->
>--+-----+----->
'- -complianceerrorthreshold error -'
>--+-----+----->
'- -compliancewarnthreshold warn -' - -dedupasyncoff --+ true --+
                                     '- false -'
>--+-----+----->
'- -description -- desc -'
>--+-----+----->
'- -expirationoff --+ true --+ -'
                                     '- false -'
>--+-----+----->
'- -flags --+ DisableSnapshot:true ---+-- -'
      +- DisableSnapshot:false --+
      +- DisableLocalDedup:true --+
      +- DisableLocalDedup:false --+
      +- DisableRemoteDedup:true -----+
      +- DisableRemoteDedup:false -----+
      +- DisableStreamSnap:true ---+
      +- DisableStreamSnap:false --+
      +- DisableOnVault:true --+
      +- DisableOnVault:false --+
      +- DisableDar:true ---+
      +- DisableDar:false --+
      +- OnVaultLatestSnap:true -----+
      +- OnVaultLatestSnap:false -----+
      +- ProcessLatestSnap:true ---+
      +- ProcessLatestSnap:false --+
```

```

+- ProcessLatestDedup:true --+
'- ProcessLatestDedup:false -'
>--+-----+-----+-----+----->
'- -policyid policyid -'      '- -scheduleoff --+- true --+- -'
                                   '- false -'
>--+-----+-----+-----+----->
'- -slpid -- slp_id -'        '- -sltid -- slt_id -'
>-- -- sla_id ----->

```

CLI Example

```

$ udstask chsla -expirationoff true 4111
$ udstask chsla -sltid 101 4111

```

rmsla

About rmsla Command on page 423
Employing this Command through the CLI on page 423

About rmsla Command

Description

Use this command to remove application protection by removing the SLA that protects the application(s), group, or consistency groups.

Rights

You must have the 'SLA Assign' right to delete the protection applied to applications.

Parameters

Parameter	Description
<i>sla_id group_name group_id</i>	Required. Specifies the ID of the SLA to be removed or the ID or name of the group to be unprotected. Use <code>udsinfo lssla</code> to retrieve SLA information. Use <code>udsinfo lsgroup</code> to retrieve group information.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmsla -- --+- sla_id -----+-----><
                                     +- group_id ---+
                                     '- group_name -'
```

CLI Example

Note: \$ udstask rmsla mygroup

Policy Commands

mkpolicy

[About mkpolicy Command on page 424](#)

[Employing this Command through the CLI on page 427](#)

About mkpolicy Command

Description

Use this command to create a new policy.

Both the selection and the exclusion of a schedule are similar.

Four different types of selection or exclusion are supported:

- Months (months): jan | feb | mar | apr | may | jun | jul | aug | sep | oct | nov | dec
- Weeks (weeks): 1, 2, .. last
- Days of Month (daysofmonth): 1, 2, ... last
- Days Of Week (daysofweek): sun | mon | tue | wed | thu | fri | sat

For verification policies, only weekly and monthly schedules are allowed, and the start time is used to start the verification.

Rights

You must have the 'SLA Manage' right to create a policy.

Parameters

Parameter	Description
-complianceerrorthreshold <i>error</i>	<p>Optional. The error threshold to use for SLA compliance settings for VDP appliance. Valid values are whole numbers (greater than 0) followed by units (m for minutes, h for hours, d for days) and the strings 'default' and 'no analysis' (quotes required).</p> <ul style="list-style-type: none">• 'default' specifies that the error threshold is calculated based on the characteristics of the policy.• 'no analysis' specifies that there will be no alerting for these SLA compliance settings. <hr/> <p>Note: The compliance error threshold must be higher than the warning threshold.</p> <hr/>

Parameter	Description
-compliancewarnthreshold <i>warn</i>	<p>Optional. The error threshold to use for SLA compliance settings for VDP appliance. Valid values are whole numbers (greater than 0) followed by units (m for minutes, h for hours, d for days) and the string 'no warning' (quotes required). 'no warn' means that there will be no early warning before the error threshold is reached.</p> <hr/> <p>Note: <i>The compliance warning threshold must be lower than the error threshold.</i></p> <hr/>
-continuous <i>true false</i>	<p>Optional. Defines a continuous image capture schedule for VDP appliance (for example, perform a capture job every 8 hours, starting the first job at 1 am). If value is set to true, the first job will be run at start time (default 00:00) and subsequent jobs will run based on last successful job start time and RPO value. Default is false.</p> <hr/> <p>Note: <i>When this flag is set, specifying the -endtime, -exclusion, -repeatinterval, or -scheduletype options will result in an error.</i></p> <hr/>
-description <i>desc</i>	Optional. Specifies the description of the policy.
-endtime <i>time</i>	Optional. Specifies the end time for the policy. End time of the day that this policy applies. The format is in 24-hour format, "hh:mm", For example, "17:00". This parameter cannot be used if -continuous is set to true for VDP appliance.
-exclusion <i>exclusion</i>	Optional. Specifies the exclusion (calendar) for the policy.
-exclusioninterval <i>interval</i>	Required when the exclusion parameter is specified. Specifies the exclusion interval for the policy. An exclusion interval of 2 for weekly, means every two weeks.
-exclusiontype <i>daily weekly monthly yearly</i>	Required when the exclusion parameter is specified. Specifies the exclusion type for the policy.
-name <i>name</i>	Required. Specifies the name of the policy. Name should be unique within the same template.
-opsnap <i> cloud dedup directdedup replicate remotereplicate</i>	<p>Specifies the operation type of the policy. The op argument is required when you do not specify the -policytype parameter.</p> <hr/> <p>Note: <i>A direct-dedup policy conflicts with the snap, dedup, sync, async, dedup_async and stream_snap policy types.</i></p> <hr/> <p>In the op argument, the replicate option is for remote dedup and the remotereplicate option is for multi-hop. <i>You cannot add a remotereplicate policy to a template that has any other policies.</i></p> <p><i>If you are defining a remote-to-mirror policy, do not specify a value for op.</i></p>

Parameter	Description
-predecessor <i>id</i>	Optional. Specifies the predecessor policy ID for CDS/Sky. For example, a <i>stream_snap</i> policy requires a snap policy as a predecessor to work properly. In this case, you would specify the snap policy ID. Note: Required for policies where <i>-policytype stream_snap</i> is specified.
-priority <i>low</i> <i>medium</i> <i>high</i>	Optional. Specifies a new priority for the policy. Applies only to the dedup, replicate, and dedup_async policies. Default is medium if not specified.
-remoteretention <i>custom</i> <i>last</i> <i>snap</i>	remoteretention parameter configures StreamSnap remote retention for VDP appliance. It is required when <i>policytype stream_snap</i> is specified. Valid options include: <ul style="list-style-type: none"> custom - Retain the remote snapshot image for a specific period of time (minutes, hours, days, weeks, months, or years). You define the time period to retain the image using the retention and retentionm parameters. last - Retain only the latest remote StreamSnap image. This is the default setting. snap - Use the same retention as the local (base) snapshot policy associated with this StreamSnap policy.
-policytype <i>sync</i> <i>async</i> <i>dedup_async</i> <i>stream_snap</i> <i>normal</i> <i>verification</i>	Defines the type of Production to Mirror policy or a dedup verification policy. -policytype specifies which type of replication will be used or if this is to be a verify policy. If not specified, or if the default of normal is used, then a value for -op parameter must be provided. -policytype is required when you do not specify the -op parameter. The default value for -policytype is normal , which includes the <i>snap</i> , <i>dedup</i> , and <i>replicate</i> policies.
-retention <i>retention</i>	Specifies the retention period for the policy. It is required when you specify a <i>snap</i> , <i>directdedup</i> , <i>dedup</i> , <i>replicate</i> , or <i>cloud</i> policy. It is also required for a <i>stream_snap</i> policy if -remoteretention is set to custom for CDS/Sky.
-retentionm <i>minutes</i> <i>hours</i> <i>days</i> <i>weeks</i> <i>months</i> <i>years</i>	Specifies the retention measurement type for the policy. It is required when retention is specified.
-rpo <i>rpo</i>	Optional. Specifies the sets the frequency of jobs for the policy.
-rpm <i>minutes</i> <i>hours</i>	Specifies the measurement type for the policy. It is required when rpo is specified.
-scheduletype <i>daily</i> <i>weekly</i> <i>monthly</i> <i>yearly</i>	Required when the -selection parameter is specified. Specifies the schedule type for the policy.

Parameter	Description
-selection <i>selection</i>	Optional. Specifies the selection (calendar) for the policy. -selection is relevant for the <i>snap</i> , <i>directdedup</i> , <i>dedup</i> , <i>replicate</i> , and <i>cloud</i> policies.
-repeatinterval <i>interval</i>	Only valid when - CDS/Sky is specified. Specifies the repeat interval for the policy. A repeat interval of 2 in a week means repeating policy execution once in every two weeks.
-slt <i>slt_name</i> <i>slt_id</i>	Required. Specifies the template id or name (VDP appliance) for the policy.
-starttime <i>time</i>	Required for the <i>snap</i> , <i>directdedup</i> , <i>dedup</i> , <i>dedup_async</i> , <i>replicate</i> , and <i>cloud</i> policies. Specifies the start time for the policy. Starting time of the day that this policy applies. The format is "hh:mm", For example, "09:00".
-truncatelog <i>true</i> <i>false</i>	Optional. Specifies that the logs should be truncated. The default value is false. This is applied to applications that support log truncation.
-verifychoice <i>newest</i> <i>oldest</i> <i>random</i>	Optional. Specifies the choice of an image to verify. This is (only for verification policies).
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the appliance argument.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- mkpolicy -- --+----->
>--+-----+----->
  '- -continuous --+ true --+-- -'
                        '- false -'

>--+-----+----->
  '- -complianceerrorthreshold -- threshold -'
>--+-----+----->
  '- -compliancewarnthreshold -- threshold -'
>--+-----+-----+>
  '- -description -- desc -'      >--+-----+-- --+-----+--
--->
  '- -endtime -- time -'      '- -exclusion -- exclusion -'
>--+-----+----->
  '- -exclusioninterval -- interval -'
>--+-----+-----+-- -name -- name ----->
  '- -exclusiontype --+ daily --+-- -'
                        +- weekly --+
                        +- monthly --+
                        '- yearly --'

>--+-----+-----+>
  '- -op --+ snap -----+-- -'
                +- cloud -----+
                +- dedup -----+
                +- directdedup -----+
```

```

        +- replicate -----+
        '- remotereplicate ---'
>---+-----+-----+-----+----->
    '- -policytype --+ sync -----+-- -'
        +- async -----+
        +- dedup_async --+
        +- stream_snap --+
        +- normal -----+
        '- verification -'
>---+-----+-----+-----+----->
    '- priority --+ low ----+-- -'    '- predecessor -- id -'
        +- medium --+
        '- high ---'
>---+-----+-----+-----+----->
    '- -remoteretention --+ custom --+-- -'
        +- last ---+
        '- snap ---'
>---+-----+-----+-----+----->
    '- -repeatinterval -- interval -'
>---+-----+-----+-----+----->
    '- -retention -- retention -'
>---+-----+-----+-----+----->
    '- -retentionm --+ minutes --+-- -'
        +- hours ----+
        +- days ----+
        +- weeks ----+
        +- months ---+
        '- years ----'
>---+-----+-----+-----+----->
    '- -rpo -- rpo -'    '- -rpm --+ minutes --+-- -'
                           '- hours ----'
>---+-----+-----+-----+----->
    '- -scheduletype --+ daily ----+-- -'
        +- weekly ---+
        +- monthly --+
        '- yearly ---'
>---+-----+-----+-----+----->
    '- -selection -- selection -'    '- -starttime -- time -'
>---+-----+-----+-----+----->
    '- -slt --+ slt_name --+-- -'
        '- slt_id ---'
>---+-----+-----+-----+----->
    '- -truncatelog --+ true --+-- -'
        '- false -'
>---+-----+-----+-----+----->
    '- -verifychoice --+ newest --+-- -'
        +- oldest --+
        '- random -'
>---+-----+-----+-----+----->
    '- -appliance -- appliance -'

```

CLI Example

To create a window policy for VDP appliance or a policy for AGM:

```

$ udstask mkpolicy -endtime "18:00" -rpo 10 -scheduletype weekly \
-description 'my new policy' -name 'Jupiter Snap Policy' -retention 20 \
-starttime "08:00" -slt 101 -retentionm minutes -rpm minutes \
-selection daysofweek:mon,tue,wed,thu,fri -exclusiontype weekly \
-exclusion daysofweek:sat,sun -op snap

```

For VDP appliance:

To create a continuous policy:

```
$ udstask mkpolicy -rpo 60 -description 'my new policy' -name 'Jupiter Snap Policy' -  
starttime 08:15 -retention 120 -sltid 104 -retentionm minutes -rpom minutes -op snap -  
continuous true
```

Ispolicy

[About Ispolicy Command](#) on page 430

[Employing this Command through the CLI](#) on page 431

About Ispolicy Command

Description

Use this command to display a concise list of policies or the detailed view of a policy. A template (SLT) is made up of one or more policies.

Rights

You must have the 'SLA Manage', 'SLA View' or 'SLA Assign' right to view a list of policies.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target VDP Appliance to retrieve all objects in a list view. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the appliance argument.
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.

Parameter	Description
-filtervalue <i>attrib=value</i>	<p>Optional. Specifies that you want your report to display any or the entire list of valid filter attributes. The valid filter attributes for the udsinfo lspolicy command are:</p> <ul style="list-style-type: none"> • <code>endtime</code> [hh: mm] • <code>exclusiontype</code> [daily weekly monthly yearly] • <code>exclusioninterval</code> • <code>name</code> • <code>op</code> [snap cloud dedup backup replicate rehydrate mirror] • <code>policytype</code> [sync async async_dedup stream_snap] • <code>repeatinterval</code> • <code>retention</code> • <code>retentionm</code> [minutes hours days weeks months years] • <code>rpo</code> • <code>rpom</code> [minutes hours days weeks months years] • <code>schedulertype</code> [daily weekly monthly yearly] • <code>sltid</code> • <code>starttime</code> [hh: mm] <p>The filter is formed with an attribute and a value. When you specify more than one filter, they must be combined with '&' character (which should be escaped with '\'). For string type of filters, the only operator allowed is '='. You can also use wild card character '*'. For example, to list policies with name begins with 'foo', use *-filtervalue name=foo*.</p> <p>Some filters allow only predefined constants. For example, <code>exclusiontype</code> allows only daily, weekly, monthly, or yearly. To match policies with <code>exclusiontype</code> of weekly, use -filtervalue exclusiontype=weekly.</p> <p>For number and date types, allowed operators are: =, >, >=, <, <=. To use <, <=, >, or >=, they should be escaped with '\' or enclosed in '"' or "'", as required by the shell. For example, <code>-filtervalue rpo\>10</code> <code>-filtervalue "rpo>10"</code> <code>-filtervalue 'rpo>10'</code></p> <p>The <code>starttime</code> and <code>endtime</code> parameters can also use these operators. For example: -filtervalue starttime\>"09:00".</p> <p>To get a list of all policies for a template (SLT), use udsinfo lspolicy -filtertype sltid=ID.</p>
-nohdr	<p>Optional. By default, headings are displayed for each column of data in a concise view, and for each item of data in a detailed view. The -nohdr parameter suppresses the display of these headings. If there is no data to display, headings are not displayed.</p>
<i>object_id</i>	<p>Optional. Specifies the name or ID of an object. When you use this parameter, a detailed view of the object is returned and any value specified by the filtervalue parameter is ignored. If you do not specify the <i>object_id</i> parameter, a concise view of all objects matching the filter criteria is displayed.</p>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lspolicy -- ----->
>--+-----+----->
  '- -appliance -- appliance -'
>--+-----+-----+-----+----->
  '- -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+-----+-----+-----><
```

```
'- -delim -- delimiter -'      +- object_id ---+
```

CLI Example

```
$ udsinfo lspolicy -delim = 12111
id=12111
endtime=23:55
rpo=24
scheduletype=weekly
description=
encrypt=
name=DailySnap
retention=1
starttime=18:00
exclusion=
exclusioninterval=1
policytype dedup_async
repeatinterval=1
retentionm=weeks
selection=daysofweek:mon,tue,wed,thu,fri
sltid=102
rpom=hours
exclusiontype=none
op=snap
truncatelog=true
compliancewarnthreshold 1 day
complianceerrorthreshold 2 days
```


chpolicy

[About chpolicy Command](#) on page 433

[Employing this Command through the CLI](#) on page 435

About chpolicy Command

Description

Use this command to change the attributes of a policy. Use `udsinfo lspolicy` command to obtain the ID of the policy. For both selection and exclusion, they are similar to a multiple selection of a calendar.

Four different types of selection or exclusion are supported:

- Months (months): jan | feb | mar | apr | may | jun | jul | aug | sep | oct | nov | dec
- Weeks (weeks):
- Days of month (daysofmonth):
- Days of week (daysofweek): sun | mon | tue | wed | thu | fri | sat

For verification type policies, only weekly and monthly schedules are allowed, and the start time is used to specify the time to start the verification.

Rights

You must have the 'SLA Manage' right to change the attributes of a policy.

Parameters

The following table describes the attributes of a policy.

Parameter	Description
-complianceerrorthreshold <i>threshold</i>	<p>Optional. The error threshold to use for SLA compliance settings for VDP appliance. Valid values are whole numbers (greater than 0) followed by units (m for minutes, h for hours, d for days) and the strings 'default' and 'no analysis' (quotes required).</p> <ul style="list-style-type: none">• 'default' specifies that the error threshold is calculated based on the characteristics of the policy.• 'no analysis' specifies that there will be no alerting for these SLA compliance settings. <hr/> <p>Note: The compliance error threshold must be higher than the warning threshold.</p> <hr/>
-compliancewarnthreshold <i>threshold</i>	<p>Optional. The warning threshold to use for SLA compliance settings for VDP appliance. Valid values are whole numbers (greater than 0) followed by units (m for minutes, h for hours, d for days) and the string 'no warning' (quotes required). 'no warn' means that there will be no early warning before the warning threshold is reached.</p> <hr/> <p>Note: The compliance warning threshold must be lower than the error threshold.</p> <hr/>

Parameter	Description
-continuous <i>true false</i>	Optional. Defines a continuous image capture schedule for VDP appliance (for example, perform a capture job every 8 hours, starting the first job at 1 am). If value is set to true , first job will be run at start time (default 00:00) and subsequent jobs will run based on last successful job start time and RPO value. Default is false . <p>Note: When this flag is set, specifying the <i>endtime</i>, <i>exclusion</i>, <i>repeatinterval</i>, or <i>scheduletype</i> options will result in an error.</p>
-description <i>desc</i>	Optional. Specifies the description for the policy.
-endtime <i>time</i>	Optional. Specifies the end time for the policy. The format is "hh:mm". For example, "17:00". This cannot be used if -continuous is set to true .
-encrypt <i>true false</i>	Optional. Specifies the encryption for the policy
-exclusion <i>exclusion</i>	Optional. Specifies the exclusion (calendar) for the policy.
-exclusioninterval <i>interval</i>	Required when the -exclusion parameter is specified. Specifies the exclusion interval for the policy. An exclusion interval of 2 for weekly, means every two weeks.
-exclusiontype <i>daily weekly monthly yearly</i>	Required when the -exclusion parameter is specified. Specifies the exclusion type for the policy.
-name <i>name</i>	Optional. Specifies the name for the policy. Name should be unique within the same template.
-repeatinterval <i>interval</i>	Optional. Specifies the repeat interval for the policy. A repeat interval of 2 for weekly, means every two weeks.
-priority <i>low medium high</i>	Optional. Specifies a new priority for the policy. -priority only applies to dedup, replicate, and dedup_async policies. Default is medium if not specified.
-remoteretention <i>custom last snap</i>	-remoteretention parameter configures StreamSnap remote retention for VDP appliance. It is required when -policytype stream_snap is specified. Valid options include: <ul style="list-style-type: none"> custom - Retain the remote snapshot image for a specific period of time (minutes, hours, days, weeks, months, or years). You define the time period to retain the image using the -retention and -retentionm parameters. last - Retain only the latest remote StreamSnap image. This is the default setting. snap - Use the same retention as the local (base) snapshot policy associated with this StreamSnap policy.

Parameter	Description
-retention <i>retention</i>	Specifies the retention period for the policy. -retention is required when you specify a <i>snap</i> , <i>directdedup</i> , <i>dedup</i> , <i>replicate</i> , or <i>cloud</i> policy. It is also required for a <i>stream_snap</i> policy if -remoteretention is set to <i>custom</i> for CDS/Sky.
-retentionm <i>minutes hours days weeks months years</i>	Specifies the retention measurement type for the policy. -retentionm is required when -retention is specified.
-rpo <i>rpo</i>	Optional. Specifies the sets the frequency of jobs for the policy.
-rpm <i>minutes hours</i>	Specifies the measurement type for the policy. rpm is required when rpo is specified.
-scheduletype <i>daily weekly monthly yearly</i>	Required when the selection parameter is specified. Specifies the schedule type for the policy.
-selection <i>selection</i>	Optional. Specifies the selection (calendar) for the policy. selection is relevant for the <i>snap</i> , <i>directdedup</i> , <i>dedup</i> , <i>replicate</i> , and <i>cloud</i> policies.
-starttime <i>time</i>	Required for the <i>snap</i> , <i>directdedup</i> , <i>dedup</i> , <i>dedup_async</i> , <i>replicate</i> , and <i>cloud</i> policies. Specifies the start time for the policy. Starting time of the day that this policy applies. The format is "hh:mm", For example, "09:00".
-verifychoice <i>newest oldest random</i>	Optional. Specifies selection choices of images to verify (only for verification policies).
<i>policy_id</i>	Required. Specifies the ID of the policy to be changed. Use udsinfo lspolicy to retrieve the ID.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- chpolicy -- --+-----+-- ----->
>--+-----+-- ----->
' - -continuous --+ true --+-- -'
      '- false -'

>--+-----+-- ----->
' - -complianceerrorthreshold -- threshold -'
>--+-----+-- ----->
' - -compliancewarnthreshold -- threshold -'
>--+-----+-- ----->
' - -description -- desc -'      '- -encrypt --+ false --+ -'
                                   +- true --+

>--+-----+-- --+-----+-- -->
' - -endtime -- time -'      '- -exclusion -- exclusion -'
>--+-----+-- ----->
' - -exclusioninterval -- interval -'
>--+-----+-- ----->
' - -exclusiontype --+ daily ----+ -'
                    +- weekly --+
```

```

        +- monthly --+
        '- yearly --'
>---+-----+-----+-----+-----+----->
    '- -name -- name -'      '- -repeatinterval -- interval -'
>---+-----+-----+-----+-----+----->
    '- priority --+ low ----+-- -'
        +- medium --+
        '- high ---'
>---+-----+-----+-----+-----+----->
    '- -remoteretention --+ custom -+-- -'
        +- last ----+
        '- snap ----'
>---+-----+-----+-----+-----+----->
    '- -retention -- retention -'
>---+-----+-----+-----+-----+----->
    '- -retentionm --+ minutes -+-- -'
        +- hours ----+
        +- days ----+
        +- weeks ----+
        +- months --+
        '- years ---'
>---+-----+-----+-----+-----+----->
    '- -rpo -- rpo -'      '- -rpom --+ minutes -+-- -'
                                '- hours ----'
>---+-----+-----+-----+-----+----->
    '- -scheduletype --+ daily ----+-- -'
        +- weekly ----+
        +- monthly --+
        '- yearly ---'
>---+-----+-----+-----+-----+----->
    '- -selection -- selection -'      '- -starttime -- time -'
>---+-----+-----+-----+-----+----->
    '- -verifychoice --+ newest -+-- -'
        +- oldest --+
        '- random -'

```

CLI Example

```
$ udstask chpolicy -description 'policy description' 4111
```

lssettableoption

[About lssettableoption Command](#) on page 437

[Employing this Command through the CLI](#) on page 438

About lssettableoption Command

Description

Use this command to display a concise list of policy options that can be set. See [Appendix E, List of Policy Options](#) for a complete list of supported policy options.

Rights

You must have the 'SLA Assign' or 'SLA Manage', or 'SLA View' right to list settable policy options.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance-specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.
-appid <i>app_id</i>	Optional. Specifies the application ID or consistency group ID that the options can be set. Use udsinfo lsapplication or udsinfo lsconsistgrp to retrieve the ID.
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-nohdr	Optional. By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed style view. The -nohdr parameter suppresses the display of these headings. If there is no data to be displayed, headings are not displayed.
-policyid <i>policy_id</i>	Optional. Specifies the policy ID that the options can be set. Use udsinfo lspolicy to retrieve the policy ID.
<i>option_name</i>	Optional. For VDP appliances, it specifies the name of the option to retrieve the specific details, including the valid values.
-slt <i>slt_id</i> <i>slt_name</i>	Optional. Specifies the SLT ID or name that the options can be set. For protected application that has an SLA, use the SLT ID or SLT name that protects the application to show the settable options. Use udsinfo lssl to retrieve SLA information.

Employing this Command through the CLI

CLI Syntax

For VDP appliance:

```
>>- udsinfo -- -- lssettableoption -- ----->
>--+-----+-----+-----+-----+----->
>  '- -appid -- app_id -'      '- -delim -- delimiter -'
>--+-----+-----+-----+-----+----->
>  '- -nohdr -'      '- -policyid -- policy_id -'
>--+-----+-----+-----+-----+----->
>  '- -slt --+ slt_id ---'      '- option_name -'
>--+-----+-----+-----+-----+----->
>  '- slt_name -'
```

For AGM:

```
>>- udsinfo -- -- lssettableoption -- ---+-----+----->
>                                     '- -appid -- app_id -'
>-- -appliance -- appliance ----->
>--+-----+-----+-----+-----+----->
>  '- -nohdr -'
>--+-----+-----+-----+-----+----->
>  '- -policyid -- policy_id -'      '- -delim -- delimiter -'
```

CLI Example

```
$ udsinfo lssettableoption
```

```
id name          value slaid policyid sltid
4411 appconsistency no      0      0 4111
```

```
$ udsinfo lssettableoption -appid 4394 -appliance Appliance_C1
```

name	type	multi	select	required	constant	apptype
stagingdisksize	range	false	false	false	false	Oracle,FileSystem,CIFS,NFS,SharePoint Services Writer,SqlServerWriter,Microsoft Exchange Writer,SharePoint Services Writer,ConsistGrp
stagingdiskgranularity	range	false	false	false	false	Oracle,FileSystem,CIFS,NFS,SharePoint Services Writer,SqlServerWriter,Microsoft Exchange Writer,SharePoint Services Writer,ConsistGrp
minlaststagingdisksize	range	false	false	false	false	Oracle,FileSystem,CIFS,NFS,SharePoint Services Writer,SqlServerWriter,Microsoft Exchange Writer,SharePoint Services Writer,ConsistGrp
stagingdiskmountpoint	string	false	false	false	false	Oracle,FileSystem,CIFS,NFS,SharePoint Services Writer,SqlServerWriter,Microsoft Exchange Writer,SharePoint Services Writer,ConsistGrp
startpaths	string	true	false	false	false	FileSystem,CIFS,NFS,nas
prunepaths	string	true	false	false	false	FileSystem,CIFS,NFS,nas
excludepatterns	string	true	false	false	false	FileSystem,CIFS,NFS,nas
nounmap	string	false	true	false	false	FileSystem,SqlServerWriter,Microsoft Exchange Writer,SharePoint Services Writer,ConsistGrp
maptoallexincluster	string	false	true	false	false	FileSystem,SqlServerWriter,Microsoft Exchange Writer,SharePoint Services Writer,ConsistGrp
serviceip	string	false	false	false	false	FileSystem,SqlServerWriter,SharePoint Services Writer,ConsistGrp
connectoroptions	string	false	false	false	false	FileSystem,SqlServerWriter,Microsoft Exchange Writer,SharePoint Services Writer,ConsistGrp
forceoobbackup	boolean	false	false	false	false	FileSystem,SqlServerWriter,Microsoft Exchange Writer,SharePoint Services Writer,ConsistGrp
failonmissingstartpath	boolean	false	false	false	false	FileSystem,CIFS,NFS,ConsistGrp

mkpolicyoption

[About mkpolicyoption Command](#) on page 439

[Employing this Command through the CLI](#) on page 439

About mkpolicyoption Command

Description

Use this command to create an option that changes the default behavior when performing backup operations. Use **udsinfo lssettableoption** to retrieve a list of options that are allowed. See [Appendix E, List of Policy Options](#) for a complete list of supported policy options.

At least one of SLA ID, SLP ID, or SLT ID parameters must be a valid ID.

After protecting an application or a file system, you can configure certain advanced protection settings with the **mkpolicyoption** command. See [Appendix A, Advanced Protection Settings with mkpolicyoption Command](#).

Rights

You must have the 'SLA Assign' or 'SLA Manage' right to create the options for a policy.

Parameters

Parameter	Description
-appid <i>app_id</i>	Optional. Specifies the application or consistency group ID for VDP appliance. A non-zero value specifies that this option applies to this application or consistency group. Use udsinfo lsapplication or udsinfo lsconsistgrp to retrieve the application or consistency group ID.
-name <i>name</i>	Required. Specifies name of the policy option. See Appendix E, List of Policy Options for a complete list of supported policy options.
-policyid <i>policy_id</i>	Optional. Specifies the ID of the policy. A non-zero value specifies that this option applies to this specific policy. Use udsinfo lspolicy to retrieve the policy ID.
-slaid <i>sla_id</i>	Optional. Specifies an SLA ID. A non-zero value specifies that this option applies to this specific SLA. Use udsinfo lssla to retrieve the SLA ID.
-sltid <i>slt_id</i>	Optional. Specifies an SLT ID. A non-zero value specifies that this option applies to this specific SLT. Use udsinfo lsslt to retrieve the SLT ID.
-value <i>value</i>	Required. Specifies the value of the policy option identified by the -name parameter. Multiple values need to be separated by comma. For example, ','. (comma character), ',', needs to be escaped with two commas,",".

Employing this Command through the CLI

CLI Syntax

For VDP appliance:

```
>>- udstask -- -- mkpolicyoption -- ----->
>--+-----+-- -- -name -- name -- ----->
  '- -appid -- app_id -'
```

```

>---+-----+-----+-----+----->
' - -policyid -- policy_id -'      '- -slaid -- sla_id -'
>---+-----+-----+-----+----->
' - -slaid -- sla_id -'      '- -sltid -- slt_id -'
>--- -value -- value -----><

```

For AGM:

```

>>- udstask -- -- mkpolicyoption -- ---- -name -- name ----->
>---+-----+-----+-----+----->
' - -policyid -- policy_id -'      '- -slaid -- sla_id -'
>---+-----+-----+-----+----->
' - -sltid -- slt_id -'

```

CLI Example

```
$ udstask mkpolicyoption -sltid 4111 -policyid 78456 -name appconsistency -value no
```

```
$ udstask mkpolicyoption -sltid 4222 -policyid 46756 -name truncatelog -value yes
```

Create immutabilitydays policy option:

```
$ udstask mkpolicyoption -policyid 4567 -sltid 4222 -name immutabilitydays -value <days,0-36525>
```


lspolicyoption

[About lspolicyoption Command](#) on page 441

[Employing this Command through the CLI](#) on page 442

About lspolicyoption Command

Description

Use this command to retrieve a concise list of configured policy options or the detailed view of a policy option. See [Appendix E, List of Policy Options](#) for a complete list of supported policy options.

Rights

You must have the 'SLA Manage', 'SLA View', or 'SLA Assign' right to view a list of policies.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target VDP Appliance to retrieve all objects in a list view. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the appliance argument.
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-filtervalue <i>attrib=value</i>	<p>Valid input for the -delim parameter is a one- byte character. To display the data, recommended delimiter to use is comma (',') for list view, and equal ('=') for detail view.</p> <p>Optional. Specifies that you want your report to display any or the entire list of valid filter attributes. The valid filter attributes for the udsinfo lspolicyoption command are:</p> <ul style="list-style-type: none">• name• appid• policyid• slaid• sltid• value <p>The filter is formed with an attribute and a value. When you specify more than one filter, they must be combined with '&' character(which should be escaped with '\').</p>
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.

Parameter	Description
<i>object_id</i>	Optional. Specifies the ID of a policy. When you use this parameter, a detailed view of the object is returned and any value that is specified by the filtervalue parameter is ignored. If you do not specify the parameter, a concise view of all objects matching the filter criteria is displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lspolicyoption -- ----->
>--+-----+-----+-----+-----+----->
>  '- -appliance -- appliance -'
>--+-----+-----+-----+-----+----->
>  '- -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+-----+-----+-----+-----><
>  '- -delim -- delimiter -'              '- object_id ---'
```

CLI Example

```
$ udsinfo lspolicyoption -appliance Appliance_C1
id  name          value slaid policyid sltid
4411 appconsistency no    0    0        4111
```

chpolicyoption

[About chpolicyoption Command on page 443](#)

[Employing this Command through the CLI on page 443](#)

About chpolicyoption Command

Description

Use this command to change a policy option.

Rights

You must have the 'SLA Assign' or 'SLA Manage' right to change the options of a policy.

Parameters

Parameter	Description
appid <i>app_id</i>	Optional. Specifies the name of the option for . See Appendix E, List of Policy Options for a complete list of supported policy options.
-policyid <i>policy_id</i>	Optional. Specifies the policy ID for the policy option for . A non-zero value specifies that this option applies to this specific policy. Use udsinfo lspolicy to retrieve the policy ID.
-slaid <i>sla_id</i>	Optional. Specifies the SLA ID for the policy option for . A non-zero value specifies that this option applies to this specific SLA. Use udsinfo lssla to retrieve the SLA ID.
-slt_id <i>slt_id</i>	Optional. Specifies the SLT ID for the policy option for . A non-zero value specifies that this option applies to this specific SLT. Use udsinfo lsslt to retrieve the SLT ID.
<i>policyoption_id</i>	Required. Specifies the ID of the policy option to be changed. If multiple values are allowed, they need to be separated by a colon, ':'. Use udsinfo lspolicyoption command to obtain the ID of the policy option.
-value <i>value</i>	Optional. Specifies value of the option. If multiple values are allowed, they need to be separated by a comma. Comma character, ',', needs to be escaped with two commas, ','. See List of Policy Options on page 559 for a complete list of policy options.

Employing this Command through the CLI

CLI Syntax

```
>>>- udstask -- -- chpolicyoption -- ----->
>--+-----+-- -- policyoption_id -----><
' - -value -- value - '
>>- udstask -- -- chpolicyoption -- --+-----+----->
                                     ' - -name -- name - '
>--+-----+-- --+-----+----->
' - -policyid -- policy_id - '      ' - -slaid -- sla_id - '
>--+-----+-- --+-----+----->
```

```
'- -sltid -- slt_id -'
```

CLI Example

```
$ udstask chpolicyoption -value no 4111
```

Update an existing immutabilitydays policy option:

```
$ udstask chpolicyoption -value 100 46080
```

where **46080** is the policy option ID and the value is being changed to **100**. You cannot shorten an existing retention period, only extend it.

rmpolicyoption

[About rmpolicyoption Command](#) on page 445

[Employing this Command through the CLI](#) on page 445

About rmpolicyoption Command

Description

Use this command to delete an option associated with a policy.

Rights

You must have the 'SLA Assign' or 'SLA Manage' right to remove the options of a policy.

Parameters

Parameter	Description
<i>policyoption_id</i>	Required. Specifies the ID of the policy option to be removed. Use <code>udsinfo lspolicy</code> to retrieve the policy ID.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmpolicyoption -- -- policyoption_id -----><
```

CLI Example

```
$ udstask rmpolicyoption 4111
```

rmpolicy

About rmpolicy Command on page 446
Employing this Command through the CLI on page 446

About rmpolicy Command

Description

Use this command to delete a policy.

Rights

You must have the 'SLA Manage' right to delete a policy.

Parameters

Parameter	Description
<i>policy_id</i>	Required. Specifies the ID of the policy to be removed. Use <code>udsinfo lspolicy</code> to retrieve the policy ID.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmpolicy -- -- policy_id -----><
```

CLI Example

```
$ udstask rmpolicy policy1
```

lsinterface

[About lsinterface Command on page 447](#)

[Employing this Command through the CLI on page 447](#)

About lsinterface Command

Description

Use this command to display all ethernet ports and some information about each one, including hardware state and supported IP types. Interfaces are listed whether configured with an IP address or not.

Note: This command does not display non-ethernet devices, such as but not limited to, the loopback.

Rights

You must have the 'System View' or 'System Manage' right to run this command.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. All columns of data are space-separated. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur.
-nohdr	Optional. By default, headings are displayed for each column of data. The -nohdr parameter suppresses the display of these headings. <hr/> Note: If there is no data to be displayed, headings are not displayed <hr/>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsinterface -- ----->
>--+-----+--+-----+-----><
  '- -delim -- delimiter -'      '- -nohdr -'
```

CLI Example

\$ udsinfo lsinterface

node	interface	supportnode	supportcluster	supportiscsi	macaddress	speed	mtu
linkstate							
KQ9M9Y	eth0	yes	yes	yes	6c:ae:8b:66:f7:bc	1000Mb/s	1500 UP
KQ9M9Y	eth1	yes	yes	yes	6c:ae:8b:66:f7:be	1000Mb/s	1500 UP
KQ9M9Y	eth2	yes	no	yes	00:90:fa:07:05:38	10000Mb/s	9000 UP
KQ9M9Y	eth3	yes	no	yes	00:90:fa:07:05:36	10000Mb/s	9000 UP
KQ6L0P	eth0	yes	yes	yes	6c:ae:8b:66:87:bc	1000Mb/s	1500 UP
KQ6L0P	eth1	yes	yes	yes	6c:ae:8b:66:87:be	1000Mb/s	1500 UP
KQ6L0P	eth2	yes	no	yes	00:00:c9:f4:a2:d2	Unknown!	1500 DOWN
KQ6L0P	eth3	yes	no	yes	00:00:c9:f4:a2:d4	Unknown!	1500 DOWN

lsconfiguredinterface

[About lsconfiguredinterface Command on page 449](#)

[Employing this Command through the CLI on page 449](#)

About lsconfiguredinterface Command

Description

Use this command to retrieve all configured IPv4 addresses, including node, iscsi, and cluster.

Rights

You must have the 'System View' or 'System Manage' right to display outbound policies.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. All columns of data are space-separated. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur.
-nohdr	Optional. By default, headings are displayed for each column of data. The -nohdr parameter suppresses the display of these headings. <i>Note: If there is no data to be displayed, headings are not displayed</i>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsconfiguredinterface -- ----->
>--+-----+--+--+-----+-----><
  '- -delim -- delimiter -'      '- -nohdr -'
```

CLI Example

```
$ udsinfo lsconfiguredinterface
nodename interface type   ipaddress      netmask        gateway        mtu
KQ9M9Y   eth0      node   172.17.134.50  255.255.0.0    172.17.1.1
KQ9M9Y   eth1      node   10.20.30.44   255.255.255.0  10.20.30.1
KQ9M9Y   eth3      iscsi   192.168.51.23 255.255.255.0  192.168.51.1 9000
KQ6L0P   eth0      node   172.17.134.51 255.255.0.0    172.17.1.1
KQ6L0P   eth1      node   10.20.30.45   255.255.255.0  10.20.30.1
cluster  eth0      cluster 172.17.134.52 255.255.0.0    172.17.1.1
```

lsnetworkcapability

[About lsnetworkcapability Command on page 450](#)

[Employing this Command through the CLI on page 450](#)

About lsnetworkcapability Command

Description

Use this command to display all network capabilities that the appliance supports.

Applicability of this Command

This command can be used on:

CDS	✓
Sky appliance	✓
NAS Director	-
Actifio Global Manager	-

Rights

You must have the 'System Manage', or 'System View' rights to display outbound policies.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one byte character. To display the data, use a comma (',') for list view, and equal ('=') for detail view. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-nohdr	Optional. By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed style view. The -nohdr parameter suppresses the display of these headings. If there is no data to be displayed, headings are not displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsnetworkcapability -- ----->
```

```
>--+-+-----+-+-- +-+-----+-+-----><
   '- -delim -- delimiter -'   '- -nohdr -'
```

CLI Example

```
$ udsinfo lsnetworkcapability
name      value
isInCloud no
```

configoutboundpolicy

[About configoutboundpolicy Command](#) on page 452

[Employing this Command through the CLI](#) on page 453

About configoutboundpolicy Command

Description

Use this command to add/delete/update an outbound policy. This is used to direct traffic to originate from a specified port. All outbound traffic being directed by an outbound policy will originate from the 'node' IP on the specified interface. It can also be used to specify the system-wide outgoing default interface. Must specify one of -add, -delete, or -default.

Rights

You must have the 'System Manage' right to add/delete an outbound policy.

Parameters

Parameter	Description
-add	Optional. To add an outbound policy. Requires -target and -from to also be specified. If specified target already exists, that policy will be updated.
-default	Optional. To set the system-wide outgoing default policy. Requires -from to also be specified.
-delete	Optional. To delete an outgoing policy. Requires -target to also be specified
-target	Required. Specifies an IP, with or without a prefix or netmask. For example, 1.2.3.4, 1.2.3.4/32 (equivalent).
-from	Required (except when -delete specified). Specifies the port to use in the form of an "ethN" specifier. The specified port must have a node IP assigned .
-gateway	Optional. Specifies the gateway this traffic should go through. For multiple gateways, separate them with comma (,), for example 192.168.2.3,192.168.3.4. If modifying an existing outbound policy with -add, gateway does not need to be specified (previous value will be retained).
-netmask	Optional. Specifies the subnet mask to be used in conjunction with the specified target. Ignored if target specifies bit size.
-prio	Optional. Specifies the priority of the outbound policy. Allowed values are 1 - 91. Default is 76. Outbound policies are evaluated in order by priority, allowing overlapping target ranges while providing granular control. If modifying an existing outbound policy with -add, priority must be specified or it will reset to the default of 76.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- configoutboundpolicy -- ----->
>--+- -add -----+- -+-----+-----+----->
      +- -default +-      '- -target -- target-specifier -'
      '- -delete  -'
>-- -from -- from-specifier -- -+-----+-----+----->
                                   '- -gateway -- gateway -'
>--+-+-----+-----+-----+-----+-----><
      '- -netmask -- netmask -'      '- -prio -- priority -'
```

CLI Example

To set the default outbound interface:

```
$ udstask configoutboundpolicy -default -from eth1
```

To add an outbound policy:

```
$ udstask configoutboundpolicy -add -from eth1 -target 192.168.20.0/24 -prio 25 -gateway
172.24.1.10
```

or

```
$ udstask configoutboundpolicy -add -from eth1 -target 192.168.20.0 -netmask 255.255.0.0 -prio
25 -gateway 172.24.1.10
```

To delete an outbound policy:

```
$ udstask configoutboundpolicy -delete -target 192.168.20.0/24
```

lsoutboundpolicy

[About lsoutboundpolicy Command](#) on page 454

[Employing this Command through the CLI](#) on page 454

About lsoutboundpolicy Command

Description

Use this command to retrieve all outbound policies that have been configured on the system, including default outbound policies, if configured. It will have targetnetwork of '0.0.0.0/0' and will specify the default interface.

Rights

You must have the 'System Manage' or 'System View' right to display outbound policies.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. All columns of data are space-separated. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur.
-nohdr	Optional. By default, headings are displayed for each column of data. The -nohdr parameter suppresses the display of these headings. <i>Note: If there is no data to be displayed, headings are not displayed</i>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsoutboundpolicy -- ----->
>--+-----+--+-----+>
  '- -delim -- delimiter -'      '- -nohdr -'
```

CLI Example

```
$ udsinfo lsoutboundpolicy
targetnetwork interface prio gateway
10.24.35.9/32 eth0      1    172.17.1.2
10.0.0.0/16  eth1      2
0.0.0.0/0    eth3     199
```

configntp

[About configntp Command](#) on page 455

[Employing this Command through the CLI](#) on page 455

About configntp Command

Description

Use this command to configure NTP settings.

Rights

You must have the 'System Manage' right to configure NTP settings.

Parameters

Parameter	Description
-server <i>server_list</i>	Required. Specifies server names or IPs. Separated with comma (,) if more than one is needed. Only one supported on CDS, additional servers will be ignored.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- configntp -- -server -- server_list ---><
```

CLI Example

To set a single NTP server by IP

```
$ udstask configntp -server 192.168.1.1
```

To set multiple NTP servers by name (not valid on CDS)

```
$ udstask configntp -server 0.us.pool.ntp.org,1.us.pool.ntp.org
```

lsntp

[About lsntp Command](#) on page 456
[Employing this Command through the CLI](#) on page 456

About lsntp Command

Description

Use this command to retrieve a concise list of NTP settings.

Rights

You must have the 'System Manage' or 'System View' right to view NTP settings.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. All columns of data are space-separated. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur.
-nohdr	Optional. By default, headings are displayed for each column of data. The -nohdr parameter suppresses the display of these headings. <div>Note: <i>If there is no data to be displayed, headings are not displayed</i></div>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsntp -- --+-----+-- ----->
                                '- -delim -- delimiter -'
>--+-----+-----+-----><
  '- -nohdr -'
```

CLI Example

```
$ udsinfo lsntp
```


testconnection

[About testconnection Command on page 457](#)

[Employing this Command through the CLI on page 457](#)

About testconnection Command

Description

Use this command to test network connectivity via TCP or ICMP to a specified target.

Type 'ping' runs a ping and returns the output as a plain text stream. Sends 4 pings.

Type 'tcptest' attempts a TCP connection to the given target IP and port and returns success or failure status.

Rights

You must have the 'System Manage' right to test network connection.

Parameters

Parameter	Description
-type <i>ping</i>	Optional. Specifies type of test, ping or tcptest, default to ping.
-targetip <i>target-ip</i>	Required. Specifies the target IP address.
-targetport <i>port</i>	Optional (required for tcptest). Specifies the target port, as to be between 1 and 65534, inclusive
-sourceip <i>source-ip</i>	Optional. Specifies the originating IP address. If specified, must be an IP assigned to an interface on the appliance. If not specified, outbound policies are used to select the source.

Employing this Command through the CLI

CLI Syntax

```
>>> udstask -- -- testconnection -- ----->
>-- -- -targetip -- target-ip -- --+-----+-- ->
                                   '- -targetport -- port -'
>--+-----+-- --+-----+--><
  '- -type --+ ping ----+'      '- -sourceip -- source-ip -'
      '- tcptest -'
```

CLI Example

To perform a ping test

```
$ udstask testconnection -targetip 192.168.10.10
PING 192.168.10.10 (192.168.10.10) 56(84) bytes of data.
64 bytes from 192.168.10.10: icmp_seq=1 ttl=128 time=0.650 ms
64 bytes from 192.168.10.10: icmp_seq=2 ttl=128 time=0.439 ms
64 bytes from 192.168.10.10: icmp_seq=3 ttl=128 time=0.299 ms
64 bytes from 192.168.10.10: icmp_seq=3 ttl=128 time=0.285 ms

--- 192.168.10.10 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3000ms
```

rtt min/avg/max/mdev = 0.285/0.418/0.650/0.149 ms

TCP connection test examples

```
$ udstask testconnection -type tcptest -targetip 192.168.10.10 -targetport 80
```

Connection to 172.24.1.180:80 succeeded!

```
$ udstask testconnection -type tcptest -targetip 192.168.10.10 -targetport 81
```

Connection to 172.24.1.180:81 failed: Connection timed out.

showroute

[About showroute Command](#) on page 459

[Employing this Command through the CLI](#) on page 459

About showroute Command

Description

Use this command to get the route to a particular IP address.

Rights

You must have the 'System Manage' right to get the route.

Parameters

Parameter	Description
-sourceip <i>source-ip</i>	Optional. Specifies the originating IP address. Must be one of the IP addresses defined on the appliance.
-targetip <i>target-ip</i>	Required. Specifies the target IP address.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- showroute -- -- ----->
>--+-----+----->
>  '- -sourceip -- source-ip -'
>-- -- -targetip -- target-ip -----><
```

CLI Example

```
$ udsinfo showroute -targetip 172.19.35.10
172.19.35.10 via 172.19.32.1 dev eth1  src 172.19.32.130
      cache  mtu 1500 advmss 1460 hoplimit 64
```

showrouting

[About showrouting Command](#) on page 460

[Employing this Command through the CLI](#) on page 460

About showrouting Command

Description

Use this command to display all the currently installed routing tables and policy rules and advanced network troubleshooting. This command displays the combined output of ip rule show, and ip route show on all known tables, plus headers and whitespace that were added to identify each section.

Note: Use this command only when instructed to by Customer Support.

Rights

You must have the 'System View' or 'System Manage' right to display routing information.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- showrouting -----><
```

CLI Example

```
$ udsinfo showrouting
RULES:
0:from all lookup local
100:from 172.19.2.132 lookup eth0_1
100:from all to 172.19.2.132 lookup eth0_1
100:from 172.19.32.132 lookup eth1_1
100:from all to 172.19.32.132 lookup eth1_1
100:from 172.19.33.132 lookup eth2_1
100:from all to 172.19.33.132 lookup eth2_1
100:from 172.19.34.132 lookup eth3_1
100:from all to 172.19.34.132 lookup eth3_1
100:from 172.19.2.131 lookup eth0
100:from all to 172.19.2.131 lookup eth0
101:from 172.19.2.130 lookup eth0_n
101:from all to 172.19.2.130 lookup eth0_n
101:from 172.19.32.130 lookup eth1_n
101:from all to 172.19.32.130 lookup eth1_n
101:from 172.19.33.130 lookup eth2_n
101:from all to 172.19.33.130 lookup eth2_n
101:from 172.19.34.130 lookup eth3_n
101:from all to 172.19.34.130 lookup eth3_n
180:from all to 172.19.37.0/24 lookup eth2_n
180:from all to 172.19.35.0/24 lookup eth1_n
180:from all to 172.19.39.0/24 lookup eth2_n
180:from all to 173.19.37.0/24 lookup eth2_n
198:from all to 172.19.2.0/24 lookup eth0_n
198:from all to 172.19.32.0/24 lookup eth1_n
198:from all to 172.19.33.0/24 lookup eth2_n
198:from all to 172.19.34.0/24 lookup eth3_n
200:from all lookup eth0
32766:from all lookup main
```

32767:from all lookup default

TABLE main:

```
172.19.2.0/24 dev eth0 proto kernel scope link src 172.19.2.130
172.19.34.0/24 dev eth3 proto kernel scope link src 172.19.34.130
172.19.33.0/24 dev eth2 proto kernel scope link src 172.19.33.130
172.19.32.0/24 dev eth1 proto kernel scope link src 172.19.32.130
default via 172.19.34.1 dev eth3 proto static src 172.19.34.130
```

TABLE eth0_1:

```
172.19.2.0/24 dev eth0 proto static scope link src 172.19.2.132
default via 172.19.2.1 dev eth0 proto static
```

showtracepath

[About showtracepath Command on page 462](#)

[Employing this Command through the CLI on page 462](#)

About showtracepath Command

Description

Use this command to trace the path to a given IP, and return the output as a plain text stream.

Note: This command can take 90 or more seconds to run.

Rights

You must have the 'System View' or 'System Manage' right to display tracepath information.

Parameters

Parameter	Description
-port <i>port</i>	Optional. Specifies the target port, has to be between 1 and 65534, inclusive.
-targetip <i>target-ip</i>	Required. Specifies the target IP address.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- showtracepath -- -- ----->
>--+-----+-- -- -targetip -- target-ip ----->
  '- -port -- port -'
```

CLI Example

```
$ udsinfo showtracepath -targetip 172.19.2.10
1: 172.19.2.130 (172.19.2.130)          0.088ms pmtu 1500
1: 172.19.2.10 (172.19.2.10)         0.344ms reached
1: 172.19.2.10 (172.19.2.10)         0.245ms reached
Resume: pmtu 1500 hops 1 back 128
```

Bandwidth Commands

mkbandwidthschedule

[About mkbandwidthschedule Command](#) on page 463

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About mkbandwidthschedule Command

Description

Use this command to create a new bandwidth schedule object. Which in effect sets the bandwidth limit for the specified appliance, at the designated scheduled time, which will limit the amount of network traffic to that appliance used by dedup.

Rights

You must have the 'System Manage' right to create a bandwidth schedule.

Parameters

Parameter	Description
-appliance appliance	Required. Specifies the name or ID of the target VDP Appliance to execute this command. All other parameters should use appliance specific values. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.
-bandwidth bandwidth	Optional. Specifies the maximum bandwidth allowed by dedup for the specified cluster (as indicated by the ID of the cluster object), in Mb. Default to 0; if not specified, bandwidth is unlimited.
-clusterid	Required. Specifies the ID of the appliance for outgoing bandwidth to be enforced. Use udsinfo lscluster to retrieve the appliance ID.
-replicationtype DEDUP SNAP	Optional. Specifies the type of the replication that the bandwidth schedule is assigned to for CDS/Sky. Valid values are DEDUP (default) and SNAP.
-scheduleday day	Optional. Specifies the day of the schedule to run. For 'monthly' schedule: valid values are 1-31, or 'last' (last day of month). For 'weekly' schedule: valid values are 'mon', 'tue', 'wed', 'thu', 'fri', 'sat', 'sun', 'weekday', or 'weekend'. This is not allowed for 'daily' or 'hourly' schedule.
-scheduletype monthly weekly daily hourly	Optional. Specifies the type of schedule.
-schedulestime time	Optional. Specifies the time of the schedule to run. The format is 'hh:mm', for 'monthly', 'weekly', or 'daily' schedules. For 'hourly' schedule, the format is 0-59.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- mkbandwidthschedule -- ----->
>-- -appliance -- appliance ----->
>--+-----+----->
  '- -replicationtype --+- DEDUP --+'
    '- SNAP --'
>--+-----+-----+-- -- -clusterid -- clusterid -->
  '- -bandwidth -- bandwidth -'
>--+-----+-----+-- -- -scheduletype --+- monthly -->
  '- -scheduleday -- day -'                               +- weekly --+
                                                            +- daily ---+
                                                            '- hourly --'
>-- -scheduletime -- time -----><
```

CLI Example

```
$ udstask mkbandwidthschedule -scheduletype weekly -scheduleday weekday \
-clusterid 4169 -scheduletime '08:00' -bandwidth 10 -replicationtype SNAP -appliance
Appliance_C1
```


lsbandwidthschedule

[About lsbandwidthschedule Command](#) on page 465

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About lsbandwidthschedule Command

Description

Use this command to retrieve details of bandwidth schedules. A bandwidth schedule schedules changing of outgoing bandwidth value for the specified cluster, which is the maximum bandwidth (in Mb/s) allowed to that cluster for VDP appliance.

There are two types of replications that the bandwidth schedule can be assigned to for VDP appliances: DEDUP and SNAP.

Rights

You must have the 'System View' or 'System Manage' rights to retrieve details of bandwidth schedules.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Optional. Specifies the name or ID of the target VDP Appliance to retrieve all objects in a list view. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-filtervalue <i>attrib=value</i>	Optional. Specifies that you want your report to display any or all of the list of valid filter attributes. The valid filter attributes for the udsinfo lsbandwidthschedule command are: * clusterid The filter will be formed with an attribute and a value. When user specifies more than one filter, they must be combined with '&' character (escaped with '\'). For string type of filters, the only operator allowed is '='. You can also use wild-card character '*'. For example, to match profile (SLP) with name begins with 'foo', use -filtervalue name=foo* .
-nohdr	Optional. By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed style view. The -nohdr parameter suppresses the display of these headings. If there is no data to be displayed, headings are not displayed.

Parameter	Description
<i>object_id</i>	Optional. Specifies the ID of the bandwidth schedule. When you use this parameter, the detailed view of the specific object is returned and any value that is specified by the -filtervalue parameter is ignored. If you do not specify the <i>object_id</i> , the concise view of all objects matching the filter criteria is displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsbandwidthschedule -- ----->
>--+-----+----->
  '- -appliance -- appliance -'
>--+-----+-- --+-----+-- ----->
  '- -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+-- --+-----+-----><
  '- -delim -- delimiter -'              +- object_id ---+
```

Example

```
$ udsinfo lsbandwidthschedule -filtervalue clusterid=4169
  id scheduletime scheduletype clusterid scheduleday bandwidth replicationtype
13314 17:00          weekly      4169 weekday           0 DEDUP
13315 08:00          weekly      4169 weekday          20 SNAP
```

chbandwidthschedule

[About chbandwidthschedule Command](#) on page 467

[Employing this Command through the CLI](#) on page 467

About chbandwidthschedule Command

Description

Use this command to change bandwidth value for a bandwidth schedule.

Rights

You must have the 'System Manage' right to change a bandwidth schedule.

Parameters

Parameter	Description
-bandwidth <i>bandwidth</i>	Required. Specifies the bandwidth used by dedup for the appliance (in Megabytes).
<i>bandwidthschedule</i> <i>_id</i>	Required. Specifies ID of the bandwidth schedule to be modified.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- chbandwidthschedule -- ----->
>-- -bandwidth -- bandwidth -- -- bandwidthschedule_id -----><
```

CLI Example

```
$ udstask chbandwidthschedule -bandwidth 10 4111
```

rmbandwidthschedule

[About rmbandwidthschedule Command on page 468](#)
[Employing this Command through the CLI on page 468](#)

About rmbandwidthschedule Command

Description

Use this command to delete a bandwidth schedule.

Rights

You must have the 'System Manage' right to delete a bandwidth schedule.

Parameters

Parameter	Description
<i>id</i>	Required. Specifies the ID of the bandwidth schedule to be removed. Use <code>udsinfo lsbandwidthschedule</code> to retrieve a bandwidth schedules.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmbandwidthschedule -- id -----><
```

CLI Example

```
$ udstask rmbandwidthschedule 4441
```

Request

Other Commands

export

[About export Command](#) on page 469

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About export Command

Description

Use this command to export all templates into a file. This file can be used to import templates using the **udstask import** command. The exported templates for AGM will be stored on the target VDP appliance specified in **-appliance**.

Rights

You must have the 'System View,' 'System Manage,' or 'SLA View' right to export templates.

Parameters

Parameter	Description
-filename <i>filename</i>	Required. Specifies the file name to export the templates to. The file path can be relative or absolute. Filename should always be under a subdirectory of the user's home directory, which is a subdirectory under /home.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP Appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- export -- +- -filename -- filename +------>
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udsinfo export -filename templates.xml -appliance Appliance_C1
```

Note:

import

The **import** command imports templates from a file.

[About import Command](#) on page 470

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About import Command

Description

Use this command to import policy templates. The file should be exported using **udsinfo export** command.

Rights

You must have the 'Application Manage' or 'Host Manage' or 'SLA Manage' right to import templates.

Parameters

Parameter	Description
-duplication <i>add ignore replace</i>	Optional. Indicates the course of action when the name of an imported template matches that of an existing template of the appliance. The option 'ignore' ignores the new templates, 'add' adds the templates with a new name, and 'replace' replaces the existing templates with the new templates. The default value is 'add'.
-filename <i>filename</i>	Required. Specifies the name of the file to be imported. The file should be under /home or a subdirectory of /home.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the -appliance argument.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- import -- +- -filename -- filename -+----->
>--+-----+-----><
    '- -duplication --+- add -----'
                        +- ignore --+
                        '- replace -'
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udstask import -filename templates.txt -duplication replace -appliance Appliance_C1
```

9 Job Event and Notification Commands

These commands are for the tools used in monitoring job events and notifications. The GUI interface for these commands is in the AGM under System Monitor. For detailed information, refer to the AGM Online Help.

This chapter details the commands used to manage email and SNMP servers and perform archiving.

Managing Job Event and Notifications

SNMP Commands

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Monitored Device Commands

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Email Server Commands

[configemailserver](#) on page 491
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SNMP Commands

mksnmpconfig

About mksnmpconfig Command on page 472

Employing this Command through the CLI on page 472

About mksnmpconfig Command

Description

Use this command to create a new SNMP server configuration.

Note: appliance supports SNMP v2 traps only.

Rights

You must have the 'System Manage' right to configure an SNMP server.

Parameters

Employing this Command through the CLI

Parameter	Description
-erroron off	Optional. Enables or disables receiving 'error' traps.
-infoon off	Optional. Enables or disables receiving 'info' traps.
-ipaddress ipaddress	Required. Specifies the IP address of the SNMP server.
-name name	Required. Specifies the name of the SNMP server.
-port port	Optional. Specifies the port of the SNMP server. The default value is 162.
-warningon off	Optional. Enables or disables receiving 'warning' traps.
-appliance appliance	Required. Specifies the name or ID of the target VDP Appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include.

CLI Syntax

```
>>- udstask -- -- mksnmpconfig -- --+-----+-->
                                     '- -error --+ on --+-- -'
                                     '- off -'
>--+-----+-- -- -ipaddress -- ipaddress ----->
  '- -info --+ on --+-- -'
    '- off -'
>-- -name -- name -- --+-----+----->
                        '- -port -- port -'
>--+-----+-----><
  '- -warning --+ on --+-- -'
    '- off -'
```



```
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udstask mksnmpconfig -name "server1" -ipaddress 192.168.0.70 -appliance Appliance_C1
```

configsnpagent

[About configsnpagent Command on page 474](#)

[Employing this Command through the CLI on page 476](#)

About configsnpagent Command

Description

Use this command to enable the SNMP agent in the appliance and to set the community string for SNMPv2 authentication by the SNMP agent and the management system. The appliance extends SNMPv2 support to the SNMP GET request process through the activation of an SNMP agent in the appliance to register all corresponding MIB classes to support the PULL/GET mechanism. The management system (the client) “pulls” data from the SNMP agent in the appliance. The SNMP agent service in the appliance is started as part of the PSRV service on port UDP-161 for SNMP messages.

The SNMP agent runs on the appliance as part of the PSRV service, and the SNMP agent serves all requests sent by any SNMP client or management system to monitor and manage appliance configurations, system statistics and performance, and so on. The SNMP agent integrates monitoring and management extensions into the appliance, and uses SNMPv2 GET requests to allow data to be pulled on-demand. You can integrate the SNMP GET operations with your existing management system.

Note: We recommend that you check if your management system is SNMP enabled. If the SNMP service does not exist, be sure to install SNMP. The VDP appliance does not support SNMP SET operations.

An SNMP GET request reads the value of SNMP objects and performs network monitoring through a set of predefined Object Identifiers (OIDs). OIDs uniquely identify managed objects in the MIB hierarchy. By using the MIBs, SNMP pulls specific objects to monitor and appliance configurations, system statistics and performance, and so on.

You can use the **setparameter** CLI command to limit the number of records sent by the SNMP agent in the appliance to the management system (the client). When you set the **snmptablesizesize** parameter, the SNMP agent retrieves only the specified number of records and send those records to the respective SNMP clients. The range is 100 to 5000 records (default of 500). See [setparameter](#) on page 177.

The **configsnpagent** command enables the SNMP agent in VDP appliances and specifies a community string for SNMPv2 authentication by the SNMP agent and the management system.

Supported CLI commands for SNMP GET Requests

Included below is a summary of the **udsinfo** and **usvcinfo** CLI commands supported for SNMP GET requests:

- **usvcinfo lssystemstats**
- **udsinfo lsversion**
- **udsinfo lscluster**
- **udsinfo lssnmpevent**
- **udsinfo lssnmpconfig**
- **udsinfo lsdiskpoolstat**
- **udsinfo lspolicy**
- **udsinfo lsavailableconnector**
- **udsinfo lsuser**
- **udsinfo lsjob**
- **udsinfo getsysteminfo**

Base OID: 1.3.6.1.4.1.35795

TRAPS OID: 1.3.6.1.4.1.35795.1

CDS OID: 1.3.6.1.4.1.35795.2

UDSINFO commands: 1.3.6.1.4.1.35795.2.2

USVCINFO commands: 1.3.6.1.4.1.35795.2.1

Mapped OIDs

Included below is a summary of the mapped OID assignments the supported **udsinfo** and **usvcinfo** CLI commands:

- **usvcinfo lssystemstats** 1.3.6.1.4.1.35795.2.1.1
- **udsinfo lsversion** 1.3.6.1.4.1.35795.2.2.2
- **udsinfo lscluster** 1.3.6.1.4.1.35795.2.2.3
- **udsinfo lssnmpevent** 1.3.6.1.4.1.35795.2.2.4
- **udsinfo lssnmpconfig** 1.3.6.1.4.1.35795.2.2.5
- **udsinfo lsdiskpoolstat** 1.3.6.1.4.1.35795.2.2.6
- **udsinfo lspolicy** 1.3.6.1.4.1.35795.2.2.7
- **udsinfo lsavailableconnector** 1.3.6.1.4.1.35795.2.2.8
- **udsinfo lsuser** 1.3.6.1.4.1.35795.2.2.9
- **udsinfo lsjob** 1.3.6.1.4.1.35795.2.2.10
- **udsinfo getsysteminfo** 1.3.6.1.4.1.35795.2.2.11
- **udsinfo lsdiskpool** 1.3.6.1.4.1.35795.2.2.12

System MIB Variables

Included below is a summary of the System MIB variables and their mapped OIDs:

- sysDescr(1.3.6.1.2.1.1.1)
- sysObjectID(1.3.6.1.2.1.1.2)
- sysUpTime(1.3.6.1.2.1.1.3)
- sysContact(1.3.6.1.2.1.1.4)
- sysName(1.3.6.1.2.1.1.5)
- sysLocation(1.3.6.1.2.1.1.6)
- sysServices(1.3.6.1.2.1.1.7)
- sysORLastChange(1.3.6.1.2.1.1.8)

Values for sysDescr, sysName, sysObjectID and sysUptime system OIDs are defined by the SNMP agent.

Note: The SysUptime value will be the time at which the SNMP agent was started.

You define the system parameter values for the sysContact and sysLocation OIDs using the **setparameter** command.

- You set the sysContact OID value using the **systemcontact** parameter.
- You set the sysLocation OID value using the **systemlocation** parameter.

For example:

```
$ udstask setparameter -param systemcontact -value admin
$ udstask setparameter -param systemlocation -value Boston
```

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Manager	-

Rights

You must have the 'System Manage' right to activate the SNMP agent on the appliance to perform SNMP GET requests.

Parameters

Parameter	Description
-communitystring <i>key</i>	Optional. Sets the SNMPV2 community string for performing SNMP GET requests by the appliance. Enter an authentication pass phrase for connecting to the SNMP agent as the <i>key</i> .
-enable <i>true false</i>	Optional. This value enables or disables the SNMP agent residing in the appliance. Value are: <ul style="list-style-type: none">true—Enables the SNMP agent in the appliancefalse—Disables the SNMP agent in the appliance

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- configsnmpagent -- ----->
>--+-----+--+-----+-----+>
  '- -communitystring -- key -'          '- -enable --+ true --+ -'
                                           +- false --
```

CLI Example

```
$ udstask configsnmpagent -communitystring password -enable true
$ udstask configsnmpagent -enable false
$ udstask configsnmpagent -enable true
```

lssnmpconfig

[About lssnmpconfig Command on page 477](#)

[Employing this Command through the CLI on page 477](#)

About lssnmpconfig Command

Description

Use this command to display the concise view of the SNMP server configuration.

Note: The VDP appliance supports SNMP v2 traps only.

Rights

You must have the 'System View' or 'System Manage' to view the configuration of an SNMP server.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP Appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include.
-delim <i>delimiter</i>	Optional. By default, all columns of data are separated by a tab in the concise view. In the detailed view, each column of data is displayed in a separate row and if the headers are displayed, the header is separated from the data by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one- byte character. To display the data, recommended delimiter to use is comma (',') for list view, and equal ('=') for detail view.
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lssnmpconfig -- ----->
>-- -appliance -- appliance ----->
>--+-----+--+-----+-----+----->
  '- -nohdr -'      '- -delim -- delimiter -'
```

CLI Example

```
$ udsinfo lssnmpconfig -appliance Appliance_C1
port error ipaddress servername warning info
162 on 192.168.0.70 server1 on off
162 on 192.168.0.71 server2 on off
```

chsnmpconfig

[About chsnmpconfig Command](#) on page 478

[Employing this Command through the CLI](#) on page 478

About chsnmpconfig Command

Description

Use this command to change the attributes of an SNMP trap receiver configuration that receives the SNMP traps sent by the appliance.

Note: The VDP appliance supports SNMP v2 traps only.

Rights

You must have the 'System Manage' right to modify the configuration of an SNMP server.

Parameters

Parameter	Description
-ipaddress <i>ipaddress</i>	Optional. Specifies new IP address for the SNMP server.
-port <i>port</i>	Optional. Specifies the remote port number for the SNMP server. It defaults to 162. This should be a value from 1 through 65535.
-info <i>on off</i>	Optional. Specifies whether the server receives the 'information' notifications.
-warning <i>on off</i>	Optional. Specifies whether the server receives the 'warning' notifications. When set to 'on', warning notifications are sent to the SNMP server. When set to 'off', warning notifications are not sent to the SNMP server.
-error <i>on off</i>	Optional. Specifies whether the server receives the 'error' notifications. When set to 'on', error notifications are sent to the SNMP server. When set to 'off', error notifications are not sent to the SNMP server.
<i>name</i>	Required. Specifies the SNMP configuration to be modified.
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target VDP Appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include.

Employing this Command through the CLI

CLI Syntax

```
>>> udstask -- -- chsnmpconfig -- --+-----+-->
                                     '- -error --+- on --+- -'
                                     +- off -+
>--+-----+--+-----+--+-----+-->
  '- -info --+- on --+- -'    '- -ipaddress -- ipaddress -'
    +- off -+
                                     +-+-----+-->
```

```

>--+-----+--+-----+----->
  '- -port -- port -'      '- -warning --- on --- -'
                                +- off -+
>-- -appliance -- appliance ----->
>-- name -----><

```

CLI Example

```

udstask chsnmpconfig -info on -appliance Appliance_C1 server1

```

lssnmpevent

[About lssnmpevent Command on page 480](#)

[Employing this Command through the CLI on page 481](#)

About lssnmpevent Command

Description

Use this command to display a concise list of SNMP events or a detailed view of an SNMP event.

Rights

You must have the 'System View' or 'System Manage' to view the SNMP events.

Parameters

Parameter	Description
-delim <i>delimiter</i>	<p>Optional. By default, all columns of data are separated by a tab in the concise view. In the detailed view, each column of data is displayed in a separate row and if the headers are displayed, the header is separated from the data by a space. The -delim parameter overrides this behavior.</p> <p>Valid input for the -delim parameter is a one byte character. To display the data, recommended delimiter to use is comma (',') for list view, and equal ('=') for detail view.</p>

Parameter	Description
-filtervalue <i>attrib=value</i>	<p>Optional. Specifies that you want your report to display any or the entire list of valid filter attributes. The valid filter attributes for the udsinfo lssnmpevent command are:</p> <ul style="list-style-type: none"> • <code>clustername</code> • <code>eventdate</code> • <code>errorcode</code> • <code>eventid</code> • <code>messagetext</code> • <code>notificationtype</code> [<code>error</code> <code>warning</code> <code>info</code>] • <code>objecttype</code> [<code>adhd</code> <code>omd</code> <code>psrv</code> <code>udp</code>] <p>The filter is formed with an attribute and a value. When you specify more than one filter, they must be combined with '&' character (which should be escaped with '\').</p> <p>For string type of filters, the only operator allowed is '='. You can also use wild card character '*'. For example, to list all appliances with appliance name that begins with 'foo', use '- filtervalue clustername=foo*'. </p> <p>Some filters allow only predefined constants. For example, <code>notificationtype</code> allows only <code>error</code>, <code>warning</code>, or <code>info</code>. To match events that indicate an error, use '-filtervalue notificationtype=error'.</p> <p>For number and date types, allowed operators are: <code>=</code>, <code>></code>, <code>>=</code>, <code><</code>, <code><=</code>. To use <code><</code>, <code><=</code>, <code>></code>, or <code>>=</code>, they should be escaped with '\ ' or enclosed in '" or "', as required by the shell. For example,</p> <pre>-filtervalue errorcode\>0 -filtervalue "errorcode>0" -filtervalue 'errorcode>0'</pre> <p>The <code>eventdate</code> parameter can also use these operators. For example:</p> <pre>-filtervalue 'eventdate>2010-09-28' -filtervalue 'eventdate>2010-09-28 6:50:00'</pre>
-nohdr	Optional. By default, headings are displayed for each column of data in the concise view, and for each item of data in the detailed view. The -nohdr parameter suppresses the display of headings. If there is no data to display, headings are not displayed.
<i>object_id</i>	Optional. Specifies the ID of an object. When you use this parameter, a detailed view of the object is returned and any value that is specified by the filtervalue parameter is ignored. If you do not specify the <i>object_id</i> parameter, a concise view of all objects matching the filter criteria is displayed.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lssnmpevent -- ----->

>--+-----+-- --+-----+-- ----->
```

```
'- -filtervalue -- attrib=value -'      '- -nohdr -'

>--+-----+-- -- --+-----+-----><
'- -delim -- delimiter -'      +- object_id ---+
```

CLI Example

\$ udsinfo lssnmpevent

id	notificationtype	messagetext	component	clustername	objecttype
errorcode	eventdate	objectid	eventid		
9745	error	a suitable managed disk for use as a quorum disk was not found	1	cluster9	
cluster 1330	2010-08-12 02:05:43.000 0	10026			
9780	error	a suitable managed disk for use as a quorum disk was not found	1	cluster9	
cluster 1330	2010-08-12 02:12:43.000 0	10026			
9892	error	a suitable managed disk for use as a quorum disk was not found	1	cluster9	
cluster 1330	2010-08-12 02:35:33.000 0	10026			
9897	error	a suitable managed disk for use as a quorum disk was not found	1	cluster9	
cluster 1330	2010-08-12 02:35:58.000 0	10026			
11006	error	remote port excluded for a specific managed disk and node	1	cluster9	
mdisk 1220	2010-08-09 06:38:19.000 7	10011			

rmsnmpconfig

[About rmsnmpconfig Command on page 483](#)

[Employing this Command through the CLI on page 483](#)

About rmsnmpconfig Command

Description

Use this command to delete an SNMP server configuration.

Rights

You must have the 'System Manage' right to delete the configuration.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Specifies the name or ID of the target VDP Appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include.
<i>snmpconfig_name</i>	Required. Specifies the name of the SNMP server to be deleted.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmsnmpconfig -- -- snmpconfig_name -----><
>-- -appliance -- appliance ----->
>-- snmpconfig_name -- -----><
```

CLI Example

```
$ udstask rmsnmpconfig -appliance Appliance_C1 server1
```

Monitored Device Commands

mkmonitoreddevice

[About mkmonitoreddevice Command on page 484](#)

[Employing this Command through the CLI on page 484](#)

About mkmonitoreddevice Command

Description

Use this command to add a new device to monitor for connectivity. At regular intervals, the appliance pings the IP address to make sure that the device is still connected. A trap is sent if the ping fails.

Rights

You must have the 'System Manage' rights to add a new device to monitor for connectivity.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Required. Specifies the name or ID of the target appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include. <i>Note: AGM only.</i>
-ipaddress <i>ipaddress</i>	Required. Specifies the IP address for the host. The monitoring process does not rely on DNS lookups so names are not allowed.
-name <i>name</i>	Required. Specifies a name to identify the device. The name must be unique within the device type.
-password <i>password</i>	Optional. The password to use to connect to the device if required for the given device type for Sky appliance.
-readonly <i>true false</i>	Optional. Choices are true or false. True specifies that the device hardware is not shipped by Actifio; False specifies that the device hardware is provided by Actifio.
-typeswitch <i>storage</i>	Required. Specifies the type of device to monitor. Either a switch or a storage device.
-username <i>name</i>	Optional. The username to use to connect to the Sky appliance if required for the given device type.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- mkmonitoreddevice -- ----->
>--+-----+-- +-----+
  '- -username -- username -'      '- -password -- password -'
```

```

>---+-----+---+-----+-----><
  '- -readonly -'      '- type ---+ switch ---+ -'
                                +- storage ---+ -'
>-- -appliance -- appliance ----->
>---+-----+---+-----+----->
  '- -ipaddress -- ipaddress -'      '- -name -- name -'

```

CLI Example

For AGM:

```

$ udstask mkmonitoreddevice -type switch -ipaddress 192.168.1.1 -name switch01 \
-appliance Appliance_C1
$ udstask mkmonitoreddevice -type storage -ipaddress 192.168.1.2 -name stg02 \
-appliance Appliance_C1

```

Add a switch:

```

$ udstask mkmonitoreddevice -type switch -ipaddress 192.168.1.1 -name switch01

```

Add storage as readonly:

```

$ udstask mkmonitoreddevice -type storage -ipaddress 192.168.1.2 -name test1 -username someuser
-password supersecret -readonly

```

Add storage:

```

$ udstask mkmonitoreddevice -type storage -ipaddress 192.168.1.2 -name test1 -username someuer
-password supersecret

```

lsmonitoreddevice

About lsmonitoreddevice Command on page 486
Employing this Command through the CLI on page 486

About lsmonitoreddevice Command

Description

Use this command to return a concise list of monitored devices, or a detailed view of a monitored device.

Rights

You must have 'System View' or 'System Manage' rights to view devices.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Specifies the name or ID of the target appliance to execute this command. Use the <code>udsinfo lscluster</code> command to retrieve the appliance name or ID to help you identify the correct appliance to include. <div>Note: AGM only.</div>
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim : on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.
-nohdr	Optional. By default, headings are displayed for each column of data in a concise view, and for each item of data in a detailed view. The -nohdr parameter suppresses the display of these headings. If there is no data to be displayed, headings are not displayed.
-type <i>switch storage</i>	Optional. Specifies the type of device to monitor. The type of device is either a switch or a storage device. If the type is omitted, both switches and storage devices are listed. If the ID of the device is specified, this value is ignored.
<i>id</i>	Optional. Specifies the ID of the device to get detailed information.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsmonitoreddevice -- ----->
>-- -appliance -- appliance ----->
>--+-----+--+-----+----->
>' - -delim -- delimiter -'      '- -nohdr -'
>--+-----+--+-----+----->
>' - -type --+- switch --+- -'      '- id -'
```

+ - storage - +

CLI Example

```
$ udsinfo lsmonitoreddevice -appliance Appliance_C1
```

id	name	type	ip address
10003	switch01	switch	192.168.1.1
10004	stg02	storage	192.168.1.2

chmonitoreddevice

[About chmonitoreddevice Command on page 488](#)

[Employing this Command through the CLI on page 488](#)

About chmonitoreddevice Command

Description

Use this command to change the configured IP address or name of a monitored device. Once the IP address is configured, you cannot edit the device's type. An error is returned if the IP address is not valid or a device with the given id does not exist.

Rights

You must have the 'System Manage' right to edit the IP address of a monitored device.

Parameters

Parameter	Description
-ipaddress <i>ipaddress</i>	Optional. Specifies the new IP address to use for the given device. The monitoring process does not rely on DNS lookups so names are not allowed.
--name <i>name</i>	Optional. Specifies a name to identify the device. If id is not specified this value is required.
-username <i>name</i>	Optional. The name of the user who is to connect to the given device type for CDS/Sky.
-password <i>password</i>	Optional. The authentication password to connect to the given device type for CDS/Sky.
-readonly <i>true false</i>	Optional. Choices are True or False for CDS. True specifies that the device hardware is not shipped by Actifio; False specifies that the device hardware is provided by Actifio.
-id <i>id</i>	Required. Specifies the ID for an appliance or SRCID for AGM of the device. Use lsmonitoreddevice to get the ID/SRCID of the device.
appliance <i>appliance</i>	Required. Specifies the name or ID of the target appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include. <hr/> Note: AGM only. <hr/>

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- chmonitoreddevice -- ----->
>--+-----+--+-----+--+-----+----->
  '- -ipaddress -- ip -'      '- -name -- name -'
```



```
>---+-----+-- --+-----+-- -- id ----->
'- -username -- username -'      '- -password -- password -'
'- -readonly -- +- true --- -'
      '- false -'
>--- -appliance -- appliance -----><
```

CLI Example

For VDP appliance:

Update an IP address:

```
$ udstask chmonitoreddevice -ipaddress 192.168.1.3 4011
```

Update a storage device name:

```
$ udstask chmonitoreddevice -name stg02 12455
```

Make the device read-only:

```
$ udstask chmonitoreddevice -readonly true
```

Make the device read-write:

```
$ udstask chmonitoreddevice -readonly false
```

For AGM:

```
$ udstask chdevice -name stg02 -appliance Appliance_C1 12455
```

rmmonitoreddevice

[About rmmonitoreddevice Command](#) on page 490

[Employing this Command through the CLI](#) on page 490

About rmmonitoreddevice Command

Description

Use this command to stop monitoring connectivity to the device. An error is returned if a device with the given ID does not exist.

Rights

You must have the 'System Manage' rights to delete a monitored device.

Parameters

Parameter	Description
appliance <i>appliance</i>	Specifies the name or ID of the target VDP Appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include.
<i>device_id</i>	Required. Specifies the ID to identify the device.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmmonitoreddevice -- -- device_id -----><
>-- -appliance -- appliance ----->
```

CLI Example

```
$ udstask rmmonitoreddevice -appliance Appliance_C1 10022
```

Email Server Commands

configemailserver

[About configemailserver Command on page 491](#)

[Employing this Command through the CLI on page 492](#)

About configemailserver Command

Description

Use this command to configure the email server to allow the appliance to send emails.

Rights

You must have the 'System Manage' right to configure the email server.

Parameters

Parameter	Description
-emailserver <i>email_server</i>	Optional. Specifies the host name or IP address of the email server. This option is required when the email server is specified for the first time.
-emailuser <i>user_name</i>	Optional. Specifies the username to authenticate to the email server. This option is required when the email server is specified for the first time.
-messagelimit <i>message_limit</i>	Optional. Specifies the email size allowed by the email server. The email size should be suffixed with KB or MB. For example: \$ udstask configemailserver - messagelimit 5MB The default email size is 10MB. <hr/> Note: Space between the number and units is not allowed, only KB and MB are supported. <hr/>
-nopassword	Optional. Specifies that no authentication is required to send an email. Using this option deletes the password if it is configured already. You cannot use this option along with the -password option.
-password <i>password</i>	Optional. Specifies the password of the email user.
-port <i>port</i>	Optional. Specifies the email server port. The default value is 25 for an SMTP server and 465 for an SMTPS server.
-ssl <i>true false</i>	Optional. Indicates whether the email should be sent using the SSL protocol. For the -ssl parameter value, note the following conditions: <ul style="list-style-type: none"><i>true</i> must be added if the email server is smtp.gmail.com.<i>false</i> must be added if the email server is svn..com.
-test <i>email</i>	Optional. When set to true, sends out a test email.

Parameter	Description
-emailfrom <i>email</i>	Optional. Specifies the email address to use as the FROM address.
-appliance <i>appliance</i>	Specifies the name or ID of the target VDP Appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- configemailserver -- ----->
>--+-----+--+-----+--+-----+--+----->
' - -emailserver -- email_server-'      '- -port -- port -'
>--+-----+--+-----+--+-----+--+----->
' - -emailuser -- user_name -'          '- -ssl --+ true --+-- -'
                                         +- false +-
>--+-----+--+-----+--+-----+--+----->
' - -messagelimit -- message_limit-'
>--+-----+--+-----+--+-----+--+----->
' - -password -- password -'           '- -test -- email -'
>--+-----+--+-----+--+-----+--+-----><
' - emailfrom -- emailfrom -'          '- -nopassword -'
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udstask configemailserver -emailserver smtp.gmail.com -port 465 -emailuser foo@gmail.com -
password test -ssl true -test test@mycompany.com -appliance Appliance_C1
```

To set the email server value to null:

```
$ udstask configemailserver -emailserver ""
```

getemailserverconfig

[About getemailserverconfig Command on page 493](#)

[Employing this Command through the CLI on page 493](#)

About getemailserverconfig Command

Description

Use this command to retrieve the email server configuration.

Rights

You must have the 'System View' or 'System Manage' right to view the email server configuration.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. Specifies the delimiter to be used when displaying the results. The default delimiter is a space (' ').
-appliance <i>appliance</i>	Specifies the name or ID of the target VDP Appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- getemailserverconfig -- ----->
>--+-----+-----><
' - -delim -- delimiter - '
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udsinfo getemailserverconfig -delim = -appliance Appliance_C1
ssl=true
emailserver=smtp.gmail.com
port=465
emailuser=foo@gmail.com
password=*****
```

configserviceemail

About configserviceemail Command on page 494
Employing this Command through the CLI on page 494

About configserviceemail Command

Description

Use this command to configure service email to be sent.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Manager	-

Rights

You must have the 'System Manage' right to be able to configure email server.

Parameters

Parameter	Description
-customername <i>name</i>	Optional.Specifies customer name.
-disable <i>true false</i>	Optional. Specifies whether to enable or disable the service email.
-recipient <i>email</i>	Optional. Specifies the recipient(s) for the service email. If there are more than one recipients, use comma (,) to separate them. This will replace any existing recipient(s) previously configured.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- configserviceemail -- ----->
>--+-----+----->
' - -customername -- name - '
>--+-----+----->
' - -disable --+- true --+- - '
      +- false +-
>--+-----+-----><
' - -recipient -- recipient - '
```

CLI Example

```
$ udstask configserviceemail -customername foo -recipient foo@gmail.com
```


getserviceemailconfig

[About getserviceemailconfig Command on page 496](#)

[Employing this Command through the CLI on page 496](#)

About getserviceemailconfig Command

Description

Use this command to retrieve the email sever configuration.

Rights

You must have 'System View' or 'System Manage' right to view the configuration.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. Specifies the delimiter to be used when displaying the results. The default delimiter is a space (' ').
-appliance <i>appliance</i>	Specifies the name or ID of the target VDP Appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- getserviceemailconfig -- ----->
>--+-----+-----><
>  '- -delim -- delimiter -'
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udsinfo getserviceemailconfig -appliance Appliance_C1
disable false
customername Alewife_Engineering
recipient ghandi-bot@.com
```


configeventemail

[About configeventemail Command](#) on page 497

[Employing this Command through the CLI](#) on page 497

About configeventemail Command

Description

Use this command to forward SNMP events using email.

Prior to using this command, an email server should be configured using the **udstask** [configemailserver](#) command.

Rights

You must have the 'System Manage' right to configure event forwarding to an email server.

Parameters

Parameter	Description
-addemail <i>emailid</i>	Optional. Specifies an email address to be added to receive a notification from the SNMP server.
-deleteemail <i>emailid</i>	Optional. Specifies the email address that should no longer receive a notification from the SNMP server.
-eventtype <i>warning error warning, error</i>	Optional. Specifies the types of event (warning, error, or both) to begin event forwarding to the email address specified.
-interval <i>interval</i>	Optional. Specifies the minimum interval (minutes) before email is forwarded, when a qualifying event (trap) occurs. This is to avoid flooding the email server. Default to 30 (minutes). To send event immediately, set this value to 0.
-appliance <i>appliance</i>	Specifies the name or ID of the target VDP Appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- configeventemail -- ----->
>--+-----+--+-----+----->
>  '- -addemail -- email -'      '- -deleteemail -- email -'
>--+-----+--+----->
>  '- -eventtype --+- error -----+-- -'
>                        +- warning -----+
>                        '- warning,error -'
>--+-----+--+-----><
>  '- -interval -- interval -'
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udstask configeventemail -eventtype warning,error -addemail foo@company.com \
```

```
-interval 15 -appliance Appliance_C1
```

geteventemailconfig

[About geteventemailconfig Command on page 499](#)

[Employing this Command through the CLI on page 499](#)

About geteventemailconfig Command

Description

Use this command to display configuration for event (trap) forwarding to email.

Rights

You must have the 'System Manage' or 'System View' right to view the email server.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. Specifies the delimiter to be used when displaying the results. The default delimiter is a space (' ').
-appliance <i>appliance</i>	Specifies the name or ID of the target VDP Appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include in the appliance argument. Note: AGM only.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- geteventemailconfig -- ----->
>--+-----+-----><
>' -delim -- delimiter -'
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udsinfo geteventemailconfig -delim = -appliance Appliance_C1
eventtype=warning,error
email=foo@company.com
email=bar@company.com
interval=15
```

emaillogs

[About emaillogs Command](#) on page 500

[Employing this Command through the CLI](#) on page 500

About emaillogs Command

Description

Use this command to send various types of VDP appliance log files for further diagnosis.

To send the logs, the email server should be configured using the `udstask configemailserver` command.

Rights

You must have the 'System Manage' right to email the appliance logs.

Parameters

Parameter	Description
-logtype adhd database flasher install omd patch psrv udppm	Optional. Specifies the types of logs to be sent in email. Multiple types can be sent by separating each type with a colon, ':'. Specify 'all' if all logs should be sent. The following types can be sent by separating each type with a colon (':'). Specify 'all' to email all types of logs: adhd, database, flasher, install, omd, patch, psrv and udppm
-filelimit <i>limit</i>	Optional. Specifies the maximum number of log files to be sent for each log. '0' indicates all of the log files.
-appliance <i>appliance</i>	Specifies the name or ID of the target VDP Appliance to execute this command. Use the <code>udsinfo lscluster</code> command to retrieve the appliance name or ID to help you identify the correct appliance to include.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- emaillogs -- ----->
>--+-----+----->
  '- -logtype ---+ adhd ----- -'
                    +- database +-
                    +- flasher +-
                    +- install +-
                    +- omd -----+
                    +- patch -----+
                    +- psrv -----+
                    +- udppm -----+
>--+-----+-----><
  '- -filelimit -- limit -'
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udstask emaillogs -logtype adhd:udppm -filelimit 3 -appliance Appliance_C1
```

rmeventemail

[About rmeventemail Command](#) on page 501
[Employing this Command through the CLI](#) on page 501

About rmeventemail Command

Description

Use this command to delete the event (trap) forwarding to email configuration.

Rights

You must have the 'System Manage' right to delete the event (trap) forwarding to email configuration.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Specifies the name or ID of the target VDP Appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include. <div>Note: AGM only.</div>

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmeventemail -- -----><
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udstask rmeventemail -appliance Appliance_C1
```

rmemailserverconfig

[About rmemailserverconfig Command](#) on page 502

[Employing this Command through the CLI](#) on page 502

About rmemailserverconfig Command

Description

Use this command to delete the email server configuration. This command takes no switches .

Rights

You must have the 'System Manage' right to delete the email server configuration.

Parameters

Parameter	Description
-appliance <i>appliance</i>	Specifies the name or ID of the target VDP Appliance to execute this command. Use the udsinfo lscluster command to retrieve the appliance name or ID to help you identify the correct appliance to include.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmemailserverconfig -- -----><
>-- -appliance -- appliance -----><
```

CLI Example

```
$ udstask rmemailserverconfig -appliance Appliance_C1
```

configcallhome

[About configcallhome Command on page 503](#)

[Employing this Command through the CLI on page 503](#)

About configcallhome Command

Description

Use this command to configures Call Home functionality, with HTTP or email.

Rights

You must have the 'System Manage' right to be able to configure email server.

Parameters

Parameter	Description
-customername <i>name</i>	Optional. Specifies customer name.
-disable <i>true false</i>	Optional. Specifies whether to enable or disable Call Home functionality.
-mailfailback <i>true false</i>	Optional. Specifies whether to failback to using mail when http or https failed to send the message.
-mode <i>https mail</i>	Optional. Specifies one of mail, http, https, default to https.
-proxy-password	Optional. Specifies proxy password.
-proxy-server	Optional. Specifies proxy server to use.
-proxy-type	Optional. Specifies proxy type.
-proxy-username	Optional. Specifies proxy username.
-recipient	Specifies the recipient(s) for the call home feature. Use a comma (,) to separate multiple recipients. This will replace any existing recipient(s) previously configured.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- configcallhome -- ----->

>--+-----+--+-----+--+-----+--+-----+--+>
'- -customername -- name -'      '- -mode ---+ email -+- -'
                                   '- https -'

>--+-----+--+-----+--+-----+--+-----+--+>
'- -disable ---+ true ---+ -'
               '- false -'
```

```

>--+-----+----->
  '- -mailfailback --+ true --+-- -'
                        '- false -'

>--+-----+----->
  '- -proxy-password -- password -'

>--+-----+----->
  '- -proxy-server -- proxyserver -'

>--+-----+----->
  '- -proxy-type --+ http --+-- -'
                        '- socks -'

>--+-----+----->
  '- -proxy-username -- username -'

>--+-----+-----><
  '- -recipient -- recipient -'

```

CLI Example

```
$ udstask configcallhome -customername -Engineering -mode https
```


getconfigcallhome

[About getconfigcallhome Command on page 505](#)
[Employing this Command through the CLI on page 505](#)

About getconfigcallhome Command

Description

Use this command to get call home functionality, with HTTP or email.

Rights

You must have the 'System Manage' right to get Call Home functionality.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. Specifies the delimiter to be used when displaying the results, default to ' '.

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- getcallhomeconfig -- ----->

>--+-----+-----><
  '- -delim -- delimiter -'
```

CLI Example

```
$ udsinfo getcallhomeconfig
disable false
customername _Engineering
recipient support-bot@.com
```


10 Actifio Global Manager Connector

These commands are for Actifio Connector, specific to finding the available connectors and upgrading Actifio Connector. The GUI interface for these commands can be found in the AGM under System Monitor. For detailed information, refer to the AGM Online Help.

This chapter provides information related to following Actifio Connector commands.

Managing the Connector

Commands

[lsavailableconnector](#) on page 508

[upgradehostconnector](#) on page 511

[abortupgradehostconnector](#) on page 512

[rmavailableconnector](#) on page 513

[fetchconnectorlogs](#) on page 514

lsavailableconnector

[About lsavailableconnector Command](#) on page 508
[Employing this Command through the CLI](#) on page 509

About lsavailableconnector Command

Description

Use this command to return a concise list of available connectors, or a detailed view of an available connector.

Note: This command is supported only by VDP appliances and is currently not available in AGM.

Applicability of this Command

This command can be used on:

CDS	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Manager	-

Rights

You must have “System View” or ‘System Manage’ rights to view available connectors.

Parameters

Parameter	Description
-delim <i>delimiter</i>	Optional. By default in a concise view, all columns of data are space-separated. In a detailed view, each item of data has its own row, and if the headers are displayed the data is separated from the header by a space. The -delim parameter overrides this behavior. Valid input for the -delim parameter is a one-byte character. If you enter -delim: on the command line, the colon character (:) separates all items of data in a concise view; for example, the spacing of columns does not occur. In a detailed view, the data is separated from its header by the specified delimiter.

Parameter	Description
-filtervalue <i>attrib=value</i>	<p>Optional. Specifies that you want your report to display any or all of the list of valid filter attributes. The valid filter attributes for the <code>udsinfo lsavailableconnector</code> command are:</p> <ul style="list-style-type: none"> • name • componentversion • componentname • displayname • installtime ['installtime since 24 hours' for installtime started since last 24 hours, 'installtime before 7 days' for installtime started older than 7 days] • latest • ostype • size <p>The filter will be formed with an attribute and a value. When user specifies more than one filter, they must be combined with '&' character (which needs to be escaped with '\').</p> <p>For string type of filters, the only operator allowed is '='. You can also use wildcard character '*'. For example, to match disk pools with name begins with 'foo', use *-filtervalue name=foo*.</p> <p>For number and date types, allowed operators are: =, >, >=, <, <=. To use <, <=, >, or >=, they need to be escaped with '\' or enclosed in ' or ", as required by shell. For example,</p> <pre>-filtervalue size\>1280000000000 -filtervalue "size>1280000000000" -filtervalue 'size>1280000000000'</pre> <p>Date parameters installtime can also use these operators, for example,</p> <pre>-filtervalue 'installtime>2010-09-28' -filtervalue 'expiration>2010-09-28 6:50:00'</pre> <p>Multiple filtervalues are allowed, with an '&',</p> <pre>-filtervalue "installtime>2012-09-28&size>1280000000000"</pre>
-nohdr	<p>Optional. By default, headings are displayed for each column of data in a concise style view, and for each item of data in a detailed style view. The -nohdr parameter suppresses the display of these headings. If there is no data to be displayed, headings are not displayed.</p>
<i>object_id</i>	<p>Optional. Specifies the ID of an object. When you use this parameter, the detailed view of the specific object is returned and any value that is specified by the -filtervalue parameter is ignored. If you do not specify the parameter, the concise view of all objects matching the filter criteria is displayed.</p>

Employing this Command through the CLI

CLI Syntax

```
>>- udsinfo -- -- lsavailableconnector -- ----->
>--+-----+--+-----+----->
>  '- -filtervalue -- attrib=value -'      '- -nohdr -'
>--+-----+--+-----+-----><
```

```
'- -delim -- delimiter -'      +- object_id ---+
```

CLI Example

```
$ udsinfo lsavailableconnector
id ostype      name                                latest      size displayname componentname
componentversion installtime
4295 aix        connector-AIX-8.0.3.322.bff          true  224991232 8.0.3.322
2018-02-06 06:38:31.000
4296 win32      connector-Win32-8.0.3.322.exe        true   54216264 8.0.3.322
2018-02-06 06:35:12.000
4297 linux      connector-Linux-8.0.3.322.rpm         true  114346298 8.0.3.322
2018-02-06 06:37:45.000
4298 solaris_sparc connector-Solaris_SPARC-8.0.3.322.pkg true  122157056 8.0.3.322
2018-02-06 06:39:15.000
4299 solaris_x86 connector-Solaris_x86-8.0.3.322.pkg true  120108032 8.0.3.322
2018-02-06 06:36:58.000
4300 hpux        connector-HPUX-8.0.3.322.depot        true   268656640 8.0.3.322
2018-02-06 06:36:18.000
4301 linux_x86   connector-Linux_x86-8.0.3.322.rpm     true   74447017 8.0.3.322
2018-02-06 06:36:18.000
```

upgradehostconnector

[About upgradehostconnector Command](#) on page 511

[Employing this Command through the CLI](#) on page 511

About upgradehostconnector Command

Description

Use this command to upgrade the host with a specific version of the Actifio Connector the latest available connector from the appliance.

Applicability of this Command

This command can be used on:

CDS appliance	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Manager	-

Rights

You must be Admin or have 'Administrator' role to upgrade a connector on a host.

Parameters

Parameter	Description
-hosts <i>host_list</i>	Required. Specifies a colon (:) separated list of ID or name of the hosts for upgrade. Use <code>udsinfo lshost</code> to retrieve the ID or name.
-force	Optional. When set, it will cancel any running jobs on the host so it can be upgraded.
-version <i>version</i>	Optional. Specifies the upgrade version of the Actifio Connector.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- upgradehostconnector -- ----->
>--+-----+-- -- -hosts -- host_list -- ----->
' - -force - '
>--+-----+-----><
' - -version -- version - '
```

CLI Example

```
$ udstask upgradehostconnector -hosts haymarket:svc-host -version 5.2.0.45678
```

abortupgradehostconnector

[About abortupgradehostconnector Command](#) on page 512
[Employing this Command through the CLI](#) on page 512

About abortupgradehostconnector Command

Description

Use this command to abort an ongoing Actifio Connector upgrade.

Note: This command is supported only by VDP appliances and is currently not available in AGM.

Applicability of this Command

This command can be used on:

CDS	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Manager	-

Rights

You must be Admin or have 'Administrator' role to abort the connector upgrade on a host.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- abortupgradehostconnector -- -----><
```

CLI Example

```
$ udstask abortupgradehostconnector
```


rmavailableconnector

About rmavailableconnector Command on page 513
Employing this Command through the CLI on page 513

About rmavailableconnector Command

Description

Use this command to delete an available connector from the appliance.

Note: This command is supported only by VDP appliances and is currently not available in AGM.

Applicability of this Command

This command can be used on:

CDS	✓
Sky appliance	✓
NAS Director	✓
Actifio Global Manager	-

Rights

You must be Admin or have 'Administrator' role to delete a connector.

Parameters

Parameter	Description
<code>object_id object_name</code>	Required. Specifies the ID or name of the Actifio Connector to be removed. Use udsinfo lsavailableconnector for retrieving connector information.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- rmavailableconnector -- ---+ object_name -+--><
                                     '- object_id ---'
```

CLI Example

```
$ udstask rmavailableconnector 4111
```

fetchconnectorlogs

[About fetchconnectorlogs Command](#) on page 514

[Employing this Command through the CLI](#) on page 515

About fetchconnectorlogs Command

Description

Use this command to fetch log files from the host managed by the appliance. This command downloads connector logs, syslog, diagnostic and core files from the host into the appliance log directory (**/dumps/tmp**). Apart from Connector logs, for a Window host, the **fetchconnectorlogs** command will also fetch event logs and dump files. For a Linux host, this command downloads syslog and core files.

The fetchconnectorlogs command fetches diagnostic details from UNIX hosts by default. If it times out due to some blocking commands that are hung, use the option "-type nonblocking" to fetch diagnostic command output of nonblocking commands only.

You can also use this command to help facilitate troubleshooting issues when working with a support representative by directly downloading logs from your appliance to your computer.

Note: This command is supported only by VDP appliances and is currently not available in AGM.

Applicability of this Command

This command can be used on:

CDS	✓
Sky	✓
NAS Director	✓
Actifio Global Manager	-

Rights

You must have 'Administrator' role to run this command.

Parameters

Parameter	Description
-all	Optional. Specifying this flag will fetch all log types based on the limit specified.
-host <i>host_name</i> <i>host_id</i>	Required. Specifies the host from which the logs are to be retrieved. Either the ID or name of the host is needed. Use udsinfo lshost to locate the ID or name of the host.
-limit <i>limit</i>	Optional. Specifies the number of log files to be downloaded from the host. Default value is set to '1'.

Parameter	Description
-type <i>syslog core nonblocking</i>	Optional. Specifies the additional file types to be downloaded apart from connector logs. Specifying more than one type should be delimited with ':'. Use nonblocking to fetch diagnostic output of commands that would not block on errors.
-startdate <i>startdate</i>	Optional. By default, the appliance downloads logs from the last three (3) days (starting with the current date). To specify a particular date range from which you want to download logs for Sky appliance, use -startdate to specify the start date of the time window to download the log files. The date format must be in 'yyyy-mm-dd'. If -startdate is not specified, then the start date will automatically be set to the date that is three (3) days from the current date.
-enddate <i>enddate</i>	Optional. Specifies the end date of the time window to download the log files. The date format must be in 'yyyy-mm-dd'. If -startdate is specified but not an -enddate , then the end date is automatically set to the current date.

Employing this Command through the CLI

CLI Syntax

```
>>- udstask -- -- fetchconnectorlogs -- ----->

>--+-----+-- -- -- -host ---+ host_name +-+ ----->
  '- -all-'                '- host_id ---'

>--+-----+--+-----+-----+-- ---->
  '- -limit -- limit -'    '- -type ---+ syslog -----+ -'
                           +- applog -----+
                           +- nonblocking +-
                           '- core -----'

>--+-----+--+-----+-----+-----><
  '- -startdate -- date -'    '- -enddate -- date -'
```

Example

```
$ udstask fetchconnectorlogs -host 4142
```


A Advanced Protection Settings with mkpolicyoption Command

This appendix describes the certain advanced protection settings by using the `udtask mkpolicyoption` command:

[Advanced Settings for Out-of-Band File Systems](#) on page 517

[Advanced Settings for Oracle Databases](#) on page 518

[Advanced Settings for VM in an ESX Datastore](#) on page 520

[Overriding Script Timeout Settings for the Connector](#) on page 521

Note: See [List of Policy Options](#) for a complete list of supported policy options that can be used with the **mkpolicyoption** command.

Advanced Settings for Out-of-Band File Systems

To configure the advanced protection settings for out-of-band file systems, use the `udtask mkpolicyoption` command as follows:

1. Provide the start paths (case-sensitive). This specifies the point in the file system where backup starts. If this path is not specified, backup starts at the root directory of the file system to be backed up.

Example:

```
$ udstask mkpolicyoption -slaid 3198 -sltid 86086 -name startpaths -value "c:\Program Files"
```

2. Provide the prune paths (case-sensitive). This specifies a point in the file system where directory traversal will stop. When protecting a Linux application, a value of `/usr/local/lib` will ensure that nothing below `/usr/local/lib` is copied, but all other directories and files in `/usr/local` are copied. If this field is left blank, the directory traversal descends into every subdirectory of the file system being backed-up.

Example:

```
$ udstask mkpolicyoption -slaid 3198 -sltid 86086 -name prunepaths -value "g:\d1\d2"
```

3. Provide the file extension to be excluded from backup using the `excludepatterns` option. The appliance offers the ability to exclude certain file types from the backup. Using this option, only the most crucial data is backed-up leaving aside the non-critical files.

Example:

```
$ udstask mkpolicyoption -slaid 3198 -sltid 86086 -name excludepatterns -value "*.sys"
```

Guidelines for Exclude Patterns:

- o Using this option, only files are excluded, directories are not excluded.
 - o A pattern can include wild-card characters, For example, an asterisk (*) or a question mark (?). To exclude all the files that contain .sys as extension, enter *.sys in EXCLUDEPATTERNS field.
 - o In a Windows environment, files named pagefile.sys and hiberfil.sys that appear in the root directory of a drive are automatically ignored.
4. Choose the **nounmap** option if required. When this option is set, temporary staging disks mapped to the host and used during data movement remain mapped to the host. LUNs are mapped during the first job and all the subsequent jobs reuse the mapped LUN. By default, the **nounmap** option is set to 'true'. You can configure this setting only through the CLI. This does not have any effect for Windows based out-of band applications. Use the following command to set this policy option.

```
$ udstask mkpolicyoption -sltid <SLTID> -name nounmap -value yes
```

5. If the protected application is within the appliance setup, then provide the appliance service IP Address.

```
$ udstask mkpolicyoption -sltid <SLTID> -name serviceip -value <IP Address>
```

Advanced Settings for Oracle Databases

To configure the advanced protection settings for an Oracle database, use the **udtask mkpolicyoption** command.

1. Enter the number of RMAN channels. The number of channels should be configured based on # of cores available on the server, taking into account of other database backups configured to run in parallel. If the **numberofchannels** parameter is not defined, then the default number of channels will be one.

Example:

```
$ udstask mkpolicyoption -sltid 31986 -slaid 32135 -name numberofchannels -value 4
```

2. Enter the staging disk size. By default, the Actifio Connector calculates the max size of the database as configured. The **STAGINGDISKSIZE** option allows you to allocate a staging disk to hold backup and to allow future growth of the database.

Example: Adding more table space, data files while the backup still maintains incremental behavior. This staging disk is thin provisioned. Another use case of this is staging disk size, after you have restored the whole database from a backup and when you open the database with reset log, you need to take a level '0' backup again. This is not done automatically by the Actifio Connector. To force a new level '0', you need to change the staging disk size and then save. The next backup will perform a new level '0'. The unit is in GB.

Example:

```
$ udstask mkpolicyoption -sltid 31986 -slaid 32135 -name stagingdisksize -value 5
```

3. Enter the RMAN log path in the **RMAN LOG LOCATION** field. This is the custom location (full path along with RMAN filename) where RMAN writes the logs while taking the backup. By default, the log file is located at /act/log/rman.log. If you want to change the default path, the option value must be in the form of /act/log/test/custom_rman.log.

Example:

```
$ udstask mkpolicyoption -sltid 31986 -slaid 32135 -name rmanloglocation -value "/act/log/rmantest.log"
```

4. Validate each backup before restoring it. RMAN provides restore validation for the backups. When this option is provided (true), the Actifio Connector invokes RMAN restore validate command for each backup.

Example:

```
$ udstask mkpolicyoption -sltid 31986 -slaid 32135 -name restorevalidate -value true
```

5. Enter the Oracle catalog database name if one is used. This field is used only when you are using a catalog database for an RMAN repository. By default, a control file is used.

Example:

```
$ udstask mkpolicyoption -sltid 31986 -slaid 32135 -name catalogdb -value oraprod
```

6. Enter the Oracle catalog database user name. This field is used only when you are using a catalog database for RMAN repository. By default, a control file is used.

Example:

```
$ udstask mkpolicyoption -sltid 31986 -slaid 32135 -name cataloguser -value catalog1
```

7. Enter the Oracle catalog database login password. This field is used only when you are using a catalog database for an RMAN repository. By default, a control file is used.

Example:

```
$ udstask mkpolicyoption -sltid 31986 -slaid 32135 -name catalogpassword -value *****
```

8. To set whether or not skip backup of off line and inaccessible table space.

Example: not skip inaccessible table space:

```
$ udstask mkpolicyoption -sltid 31986 -slaid 32135 -name notskip -value inaccessible
```

Example: not skip offline table space:

```
$ udstask mkpolicyoption -sltid 31986 -slaid 32135 -name notskip -value offline
```

9. Oracle Service Name: Provides the ability to specify a new service name in tnsnames.ora file to be used by backup. If not specified then by default will use the Oracle sid name as the service name. Either new service name or default sid name must have an entry in tnsnames.ora file for to connect:

Example:

```
$ udstask udstask mkpolicyoption -sltid 31986 -slaid 32135 -name servicename -value <name of the service>
```

10. Specify the fail-over node choice in a Oracle RAC environment only.

Example:

```
$ udstask udstask mkpolicyoption -sltid 31986 -slaid 32135 -name clusternodes -value <Failover node IP:servicename:role>
```

11. Choose the "nounmap" option if required. When this option is set, temporary staging disks mapped to the host and used during data movement remain mapped to the host. LUNs are mapped during the first job and all the subsequent jobs reuse the mapped LUN. By default, "nounmap" is set to 'true'. You can configure this setting only through the CLI. This does not have any effect for Windows-based out-of band applications. Use the following command to set this policy option.

Example:

```
$ udstask mkpolicyoption -sltid 31986 -slaid 32135 -name nounmap -value yes
```

12. Enter the Connector option information.

Example:

```
$ udstask mkpolicyoption -sltid 31986 -slaid 32135 -name connectoroptions -value <Connector name>
```

Advanced Settings for VM in an ESX Datastore

The appliance provides an option to perform enhanced asynchronous replication to 'VM in ESX datastore'. 'VM in ESX datastore' is an advanced asynchronous replication mechanism in which the data is directly replicated onto the datastore volumes that are configured for the remote virtual machine. This process allows you to use an existing or a new virtual machine as the replication target. When the source VM geometry is changed due to addition, deletion and resize of the VMDK volumes, then the remote VM configuration is automatically changed.

All enhanced asynchronous replication features such as forward replication, failover, syncback, failback and further rounds of replication POST failback are supported. When using the 'VM in ESX datastore' option to protect a VM, the data transfer happens on the network.

The 'VM in ESX datastore' introduces the following policy options:

```
$ udstask mkpolicyoption -sltid <sltid> -name readyvm -value yes
$ udstask mkpolicyoption -sltid <sltid> -name remotevcenter -value <vcenter hostname>
$ udstask mkpolicyoption -sltid <sltid> -name remoteesx -value <target ESX hostname>
$ udstask mkpolicyoption -sltid <sltid> -name remotedatastores -value <comma-separated list of datastores>
```

Follow these guidelines when using the 'VM in ESX datastore' option:

- When unprotecting a VM in ESX datastore, wait for dar-delete to clean up all the images, you must delete the remote VM manually from vCenter after unprotecting the application.
- Do not Power ON the remote VM manually. During the failover, the remote VM is automatically powered on and failback automatically does a power OFF. In order to validate the data integrity of the VM in the ESX datastore at the remote site without failover, you may need to perform a clone from the vCenter.
- When using the 'VM in ESX datastore' option, a remote VM named DR-<sourcevm> is created at the remote site.
- During the initial replication and the first replication after failback, the appliance performs a full ingest from the source VM to the remote VM. This can take several minutes to complete.
- Do not change the remote VM configuration after a failover; this leads to sync-back failures.

To access this feature for a specific appliance in the AGM, open the Application Manager to Appliances. Right-click the desired appliance and select Configure Appliance. At System > Configuration > Appliance Settings, go to the Storage tab and check the **VM override** checkbox.

Overriding Script Timeout Settings for the Connector

To override the default script timeout values for the Connector, use the **udstask mkpolicyoption** command with these switches:

Scriptinittimeout

This policy option specifies the timeout value (in seconds) for the init script completion. The init script is invoked with an init parameter when the backup is about to start.

Example:
`udstask mkpolicyoption -slaid 3198 -sltid 86086 -name scriptinittimeout -value 200`

Scriptfreezetimeout

This policy option specifies the timeout value (in seconds) for freeze script completion. The freeze script is invoked with a freeze parameter when the backup operation is just about to freeze the application.

Example:
`udstask mkpolicyoption -slaid 3198 -sltid 86086 -name Scriptfreezetimeout -value 100`

Scriptunfreezetimeout

This policy option specifies the timeout value (in seconds) for thaw script completion. The thaw script is invoked with a thaw parameter when the backup operation is just finished unreeling the application.

Example:
`udstask mkpolicyoption -slaid 3198 -sltid 86086 -name Scriptunfreezetimeout -value 110`

Scriptfinishtimeout

This policy option specifies the timeout value (in seconds) for finish script completion. The fini script is invoked with a fini parameter when the backup operation is about to complete.

Example:
`udstask mkpolicyoption -slaid 3198 -sltid 86086 -name Scriptfinishtimeout -value 300`

B Managing Jobs and Job Slots

This appendix describes the list of jobs executed when creating the policies:

- [On-demand Jobs](#) on page 523
- [Queuing of On-Demand Backup Jobs](#) on page 525
- [Relaunching Jobs](#) on page 526

Applying policies to applications results in the creation of jobs. These jobs are executed as per the schedules configured when creating policies. The appliance reserves pools of slots for running the following types of jobs:

- Scheduled snapshot jobs
- Scheduled local dedup jobs
- Scheduled remote dedup jobs
- Scheduled dedup-async jobs
- Scheduled StreamSnap jobs
- Scheduled OnVault jobs
- Scheduled log replication jobs
- Scheduled expiration of jobs

On-demand Jobs

There may be times when you require on-demand job start functionality, such as for upcoming maintenance windows, software upgrades, and so on, and you want to ensure that you have a successful copy of the data created before you start your scheduled maintenance task. The on-demand jobs category includes all types of restore, clone, and mount jobs and jobs created when policies are applied on-demand. The appliance reserves a pool of slots for all the six categories of jobs. Also, there is an unreserved pool of slots. You can modify the number of slots allotted for each category as well as the unreserved pool of slots using the `setparameter` command.

Before starting a job, the appliance checks whether a slot corresponding to the job's category is available to run the job. When a reserved slot is not available because all the slots of that category are running jobs, the appliance checks whether an unreserved slot is available. If an unreserved slot is available, the job is started. However, you can reserve the maximum number of slots that the jobs of a particular category can use from the unreserved pool. This measure limits the number of slots that jobs from a category can make use of from the unreserved pool.

Note: All restore operations such as mount, clone, failover, test failover, prep-mount, and restore do not depend on the availability of job slots, but they will consume an "On-demand Slot".

The table below indicates the default, minimum, and maximum number of slots allotted to each category of jobs and the unreserved pool:

Parameter	Description	Default no. of slots allotted	Min. no. of slots	Max. no. of slots
maxsnapslots	Maximum number of scheduled snapshots.	6	0	1000
maxstreamsnapslot	Maximum number of scheduled stream snaps.	6	0	1000
maxldedupslots	Maximum number of scheduled local dedups.	8	0	1000
maxrdedupslots	Maximum number of scheduled remote dedups.	3	0	1000
maxdarslots	Maximum number of scheduled dedup async.	3	0	1000
maxdataaccessslots	Maximum number of mount, clone and restore jobs.	12	0	1000
maxvaultslots	Maximum number of scheduled vault jobs.	4*	0	1000
maxconcurrentvaultsubjobs	Maximum number of concurrent vault subjobs ingesting into the vault. Subjobs are flow-controlled such that at least one subjob per vault job is always allowed without throttling.	12*	4	1000
maxlogreplicateslots	Maximum number of scheduled stream snaps.	6	0	1000
maxexpirationlots	Maximum number of scheduled expirations.	10	0	1000
maxondemandslots	Maximum number of all types of on demand jobs.	6	0	1000
unreservedslots	Number of additional slots available for any job type.	12	0	100

Note: *The default for **maxconcurrentvaultsubjobs** is 12 and the default for **maxvaultslots** is 4. In this case, there can be at any time a total of 4 top-level OnVault jobs running. To prevent starving OnVault jobs, a minimum of 1 slot each has been reserved for every OnVault job. Note that the first job cannot use all 12 slots; it can only use up to 9 slots, and will reserve 3 of the remaining slots for new OnVault jobs to ensure that all OnVault jobs can make progress.

The default, minimum, and maximum number of slots from the unreserved pool that can be allotted to each job category are:

Parameter	Description	Default no. of slots allotted	Min. no. of slots	Max. no. of slots
reservedsnapslots	Number of slots reserved for scheduled snapshots.	3	0	1000
reservedstreamsnapslots	Number of slots reserved for scheduled stream snapshots.	2	0	1000
reservedldedupslots	Number of slots reserved for scheduled local dedups.	3	0	1000
reservedrdedupslots	Number of slots reserved for scheduled remote dedups.	3	0	1000
reserveddarslots	Number of slots reserved for scheduled dedup async.	3	0	1000
reserveddataaccessslots	Number of slots reserved for mount, clone and restore jobs	6	0	1000
reservedvaultslots	Number of slots reserved for scheduled vault jobs.	4	0	1000
reservedlogreplicateslots	Number of slots reserved for scheduled stream snapshots.	2	0	1000
reservedexpirationslots	Number of slots reserved for scheduled expirations.	3	0	1000
reservedondemandslots	Number of slots reserved for all types of on demand jobs	3	0	1000

The maximum slots allowed for running a snapshot job is 1000 (indicated by *maxsnapslots*). In addition, a maximum of 1000 slots of the unreserved pool can be used by snapshot jobs (indicated by *reservedsnapslots*).

You can set the value of the *reservedsnapslots* parameter as shown below:

```
$ udstask setparameter -param reservedsnapslots -value 10 -appliance Appliance_C1
```

With the default configuration of 3 dedup-async slots and 12 unreserved slots, up to 15 dedup-async jobs can be started. Until these 15 jobs complete, no more than 3 jobs of any other type can be started. If, in this configuration, **maxdarslots** is set to 5, no more than 5 dedup-async jobs can be started. While these 5 jobs run, 10 unreserved slots are still available for other jobs.

Queuing of On-Demand Backup Jobs

The appliance supports queuing of on-demand jobs to provide you with the flexibility to create your backup images without concern for the number of on-demand job slots available to start the job. The queued on-demand job remains in the queued state until an on-demand job slot is available. When an on-demand slot opens, the job will progress to the running state. This occurs in the order that the job was submitted. However, if a particular on-demand job fails due to some reason and could not be completed, the appliance will attempt to run the next job in the . On-demand jobs use different job slots than scheduled jobs, so scheduled jobs may run before queued jobs.

While an on-demand job is in a queued state you can cancel the job or cancel protection for the application. The on-demand job will then appear in the job history table as a canceled job. The start time of the job and the end time of the job will be the time that the cancel request or the cancellation of application protection was acknowledged.

For example, if you attempt to initiate an on-demand backup and there are no available slots, the appliance will automatically the on-demand backup job:

```
$ udstask backup -app 18414 -policy 201304  
ACTERR-043023 No available slots to run job
```

Using the appliance Desktop, you can view the queued jobs from **System Monitor > Jobs**.

Relaunching Jobs

All scheduled jobs are automatically re-launched when they fail. The number of retries depends on the configuration value that is set in the appliance. Use the `udsinfo getparameter` command to know the default parameters. The default parameters are as follows:

- **retriesonfailure**: This parameter indicates the number of times the job must be retried in the event of a failed job. Example: **retriesonfailure 3**, this indicates the job retries 3 times after original attempt.
- **retrydelay**: This parameter indicates the number of seconds that the job should wait to retry after the original attempt. Example: **retrydelay 240**, this indicates, the first job retry happens after 240 seconds.
- **retrydecay**: This parameter indicates the % of delay to attempt further retries.

Using the AGM, you can view the relaunched jobs from System Monitor Jobs tab with the job status as 'retry'. To view the details of a relaunched job, double-click the job. See the AGM Online Help.

C Configuring Image Preservation

This appendix describes the Image Preservation function and its configuration:

- [Image Preservation Overview](#) on page 527
- [Modifying Image Preservation Settings On a System-wide Application Level](#) on page 528
- [Disabling Image Preservation Mode On A Per Application Basis](#) on page 531

Use Image Preservation to preserve snapshot and local dedup images beyond their expiration dates to ensure that those images are properly processed.

Image Preservation Overview

Your appliance may encounter resource challenges that result in snapshot or local dedup jobs failing to execute in a timely manner. To enhance the success rate in which the appliance is able to complete snapshot and local dedup jobs, the appliance operates in an Image Preservation mode. Image Preservation enhances the scheduling features of the SLA policy manager to be able to ride through periods of high change rates, reduced dedup or replication throughput, and other transient or abnormal situations. Image Preservation delays snapshot and local dedup expirations in order to catch up with the transient system resource constraints. Images due for expiration will be held until they have been processed by the appliance as long as there is capacity to do so by the appliance.

Image Preservation operates on two types of images:

- **Preserve Snapshots:** When enabled, all dedupable snapshot images will be preserved until the local dedup system can process them. Older snapshot images will be processed first until images are caught up by the appliance. If VDisk counts or performance pool capacity thresholds are reached, then image expiration may occur prior to processing to ensure system stability.
- **Preserve Dedup Images:** When enabled, all local dedup images that are eligible for remote deduplication will be preserved until the remote deduplication system can process them. Older local dedup images will be processed first until images are caught up by the appliance. If capacity in the local dedup pool has reached the warning level, then image expiration may occur prior to processing to ensure system stability.

When the appliance attempts to preserve snapshot images or local dedup images, the appliance will run snapshot and local dedup jobs (images beyond their expiration date) continuously within the allowed window in an attempt to catchup on all image processing. In this case, the appliance will process the oldest unprocessed snapshot or local dedup images ahead of the latest images. Once a backlogged image is processed, the image is expired per the SLA schedule.

Preserved images will automatically be expired when pool space or VDisk count reaches the warning threshold levels. When the appliance reaches a warning threshold level, images will be expired based on application priority and age. Images for applications with lower priority will be expired ahead of applications with higher priority. Within a priority level, older images will be expired ahead of newer images. However, the last snapshot (or local dedup) image of any application will not be expired this way. Rather than expiring the most recent snapshot (or local dedup) of any application, an older snapshot of a different application or a snapshot (or local dedup) of a higher priority application will be expired.

If you find that you need to limit the scope of image preservation to exclude lower priority applications, you can:

- Change preserved snapshot settings through the **PreserveSnapsOfPriority** parameter in the **setparameter** CLI command (see [Modifying Preserve Snapshots Settings](#) on page 528).
- Change preserved local dedup settings through the **PreserveLdedupsOfPriority** parameter in the **setparameter** CLI command (see [Modifying Preserve Local Dedup Mode](#) on page 529).

In addition, if over a period of time you find that the appliance is unable to “catch-up” with backlogged local or remote dedup jobs, you can disable the ability to preserve snapshot and/or preserve local dedup images as follows:

- For all applications:
 - o You can disable the Preserve Snapshot setting through the **PreserveSnapsOfPriority** parameter in the **setparameter** CLI command (see [Modifying Preserve Snapshots Settings](#) on page 528).
 - o You can disable the Preserve Local Dedup setting through the **PreserveLdedupsOfPriority** parameter in the **setparameter** CLI command (see [Modifying Preserve Local Dedup Mode](#) on page 529).
- For a specific application, you can disable Image Preservation for a specific application using the **-flags ProcessLatestSnap** and **ProcessLatestDedup** options of the **udtask chsla** CLI command. When you enable a flag (set it to **true**), the appliance processes the most recent snapshot or dedup image for an application and allows the older images to expire.

Modifying Image Preservation Settings On a System-wide Application Level

You can modify Image Preservation priority settings for preserved snapshots jobs and/or local dedup jobs through the system-level **setparameter** CLI command. Modifying the preserved snapshot and/or local dedup settings may be necessary when you need to:

- Change the global application priority of Preserve Snapshots or Preserve Dedup Images settings to limit the scope exclude applications of a certain priority setting. You can instruct the appliance to preserve images for only Medium and High Priority applications or to preserve images for only High Priority applications.
- Disable the Image Preservation function if the appliance is unable to “catch-up” with backlogged snapshot or local dedup images.

Note: If necessary, you can disable Image Preservation for a specific application using the **-flags ProcessLatestSnap** and **ProcessLatestDedup** options of the **udtask chsla** CLI command. When you enable a flag (set it to **true**), the appliance processes the most recent snapshot or dedup image for an application and allows the older images to expire. See [Disabling Image Preservation Mode On A Per Application Basis](#) on page 531 for details.

This section includes the following procedures:

- [Modifying Preserve Snapshots Settings](#) on page 528
- [Modifying Preserve Local Dedup Mode](#) on page 529

Modifying Preserve Snapshots Settings

A dedupable snapshot is a snapshot image that would normally be deduped by the appliance based on the frequency, retention, start time, end time specified in the policy template for an application. At times, the appliance may start to lag behind in the snapshot to dedup jobs due to resource constraints. When this lag occurs, the setting of the **PreserveSnapsOfPriority** parameter in the **setparameter** CLI command defines to the appliance how to preserve snapshot images that are due for expiration but not yet successfully deduped.

If necessary, you can change the application priority of the **PreserveSnapsOfPriority** parameter from low (the default setting) to high or medium. If you find that the appliance is unable to “catch-up” with backlogged local jobs, you can disable the function by setting the **PreserveSnapsOfPriority** parameter to **none**.

Options for the **PreserveSnapsOfPriority** parameter include:

- **low**: All applications (low, medium, and high priority) will have their snapshot images preserved. This is the default setting.
- **medium**: High and medium priority applications will have their snapshot images preserved.
- **high**: High priority applications will have their snapshot images preserved.
- **none**: No local snapshot images will be preserved even if the local dedup job has not run on those images. When the snapshot image reaches its expiration time, barring other dependencies, it will be expired.

The following example illustrates modifying the **PreserveSnapsOfPriority** parameter to preserve only high priority applications:

```
$ udstask setparameter -param PreserveSnapsOfPriority -value high
```

The following example illustrates disabling the Preserve Snapshot function:

```
$ udstask setparameter -param PreserveSnapsOfPriority -value none
```

Modifying Preserve Local Dedup Mode

Similar to dedupable snapshots, there are local dedup images that are candidates for remote deduplication based on the remote dedup policy template. At times, the appliance may start to lag behind in the local to remote deduplication jobs due to resource constraints. When this lag occurs, the setting of the **PreserveLdedupsOfPriority** parameter in the **setparameter** CLI command defines to the appliance how to preserve local dedup images that are due for expiration but not yet successfully processed.

If necessary, you can change the application priority of Preserve Dedup Images from low (the default setting) to high or medium. If you find that the appliance is unable to “catch-up” with backlogged remote dedup jobs, you can disable the function by setting the **PreserveLdedupsOfPriority** parameter to **none**.

Options for the **PreserveLdedupsOfPriority** parameter include:

- **low**: All applications (low, medium, and high priority) will have their local dedup images preserved. This is the default setting.
- **medium**: High and medium priority applications will have their local dedup images preserved.
- **high**: High priority applications will have their local dedup images preserved.
- **none**: No local dedup images will be preserved. When the local dedup image reaches its expiration time, barring other dependencies, it will be expired.

The following example illustrates modifying the **PreserveLdedupsOfPriority** parameter to preserve only high priority applications:

```
$ udstask setparameter -param PreserveLdedupsOfPriority -value high
```

The following example illustrates disabling the Preserve Local Dedup function:

```
$ udstask setparameter -param PreserveLdedupsOfPriority -value none
```

The following commands set the **PreserveLdedupsOfPriority** parameter to medium so that no low priority application will have its images preserved:

```
$ udstask setparameter -param PreserveLdedupsOfPriority -value medium
```

```
$ udstask setparameter -param PreserveSnapsOfPriority -value medium
```

Disabling Image Preservation Mode On A Per Application Basis

If necessary, you can disable the preservation of specific applications as part of image preservation if the appliance is unable to “catch-up” with backlogged snapshot or dedup jobs for that application. When disabled, the appliance resumes processing the most recent snapshot or dedup image and discards all of the preserved images for the application.

Use the **-flags ProcessLatestSnap:true** and **ProcessLatestDedup:true** options of the **udtask chsla** CLI command to modify the attributes of an SLA to disable image preservation of snapshots or dedup images on an application basis for current in-process snapshot or dedup jobs.

Included below is the syntax for the **udtask chsla** CLI command.

```
>>- udstask -- -- chsla -- --+-----+-->
                                '- -dedupasyncoff --+- true --+
                                                '- false -'
>--+-----+-->
  '- -description -- desc -'
>--+-----+-->
  '- -expirationoff --+- true --+- -'
                                '- false -'
>--+-----+-->
  '- -flags --+- ProcessLatestSnap:true ---- -'
      +- ProcessLatestSnap:false --+
      +- ProcessLatestDedup:true --+
      +- ProcessLatestDedup:false --+
      +- DisableSnapshot:true -----+
      +- DisableSnapshot:false -----+
      +- DisableLocalDedup:true ----+
      +- DisableLocalDedup:false --+
      +- DisableRemoteDedup:true --+
      +- DisableRemoteDedup:false --+
      +- DisableStreamSnap:true --+
      +- DisableStreamSnap:false --+
      +- DisableOnVault:true -----+
      +- DisableOnVault:false -----+
      +- DisableDar:true -----+
      '- DisableDar:false -----'
>--+-----+-->
  '- -scheduleoff --+- true --+- -'
                                '- false -'
>--+-----+-->
  '- -slpid -- slp_id -'      '- -sltid -- slt_id -'
>-- -- sla_id -----><
```

The **-flags** keyword of the **udstask chsla** CLI command modifies the image preservation behavior for an application as described below.

Note: For details on the other parameters used in **udstask chsla**, see the **udstask chsla** CLI command discussion in this document.

Parameter	Description
-flags <i>setting:value</i>	<p>Optional. Configures the -flag setting to disable/enable the catch-up of snapshot or local dedup jobs for a specific application.</p> <hr/> <p>Note: Use udsinfo lssla to retrieve the SLA ID of the SLA to be modified.</p> <hr/> <p>Settings include:</p> <ul style="list-style-type: none">• ProcessLatestSnap:<true false>: Instructs the appliance if it should change its default behavior and resume processing the most recent snapshot images and discard all of the preserved images for the application. By default, the system-wide PreserveSnapsOfPriority parameter in the setparameter command is set to all applications (low, medium, and high priority), which means that the ProcessLatestSnap flag is automatically disabled (set to ProcessLatestSnap:false). You can specify ProcessLatestSnap:true to disable catch-up mode for a specific application.• ProcessLatestDedup:<true false>: Instructs the appliance if it should change its default behavior and resume processing the most recent dedup images and discard all of the preserved images for the application. By default, the system-wide PreserveLdedupsOfPriority parameter in the setparameter is set to all applications (low, medium, and high priority), which means that the ProcessLatestDedup flag is automatically disabled (set to ProcessLatestSnap:false). You can specify ProcessLatestDedup:true to disable catch-up mode for a specific application. <hr/> <p>Note: Once you set the -flags ProcessLatestSnap or ProcessLatestDedup to true, the -flags option will remain set to true until the system is in process. The parameters will be reset back to the default state (false), once the process is completed.</p> <hr/>

The following example illustrates resuming processing the most recent dedup images and discarding the preserved images for SLA ID 205677:

```
$ udstask chsla -flags ProcessLatestDedup:true 205677
```

The following example illustrates resuming processing the most recent snapshot images and discarding the preserved images for SLA ID 205677:

```
$ udstask chsla -flags ProcessLatestSnapshot:true 205677
```

This example illustrates re-enabling image preservation for local dedup jobs for SLA ID 205677 to address backlogged local dedup jobs.

```
$ udstask chsla -flags ProcessLatestDedup:false 205677
```

Alerts and Warnings

Use the **udsinfo lssnmpevent** CLI command to monitor the various SNMP events that may appear when the appliance preserves snapshot and/or local dedup images. This section outlines the various alerts and warnings related to image preservation.

Warning Level Alert—First Time the Snapshot Expiration Window is Reached

A Warning level alert is generated (and posted to the event log) the first time the snapshot expiration window is reached for an application and the image is held by the appliance. A similar Warning level Alert also occurs for remote deduplication of local dedup images.

This Warning level alert is generated for the first snapshot for each application that has its expiration deferred. When the count of deferred expirations for an application goes to zero, the Warning alert trigger is reset. The next time there is a dedupable snapshot image that is held by the appliance an alert will be posted again. An example of this particular Warning alert message is shown below:

The snapshot image Image_0998496 for application mgm-win-1 hostname mgm-win-1 (appid 5577) was not expired even though expiration was due, since it has not been deduplicated. This is the first image that has not been expired in this manner for this application.

Warning Level Alert—Snapshot Image Expired Because Threshold Limit Exceeded

When an application has preserved snapshots, and a dedupable snapshot is expired because the appliance has exceeded the threshold limits (such as VDisk count or pool capacity), a Warning level alert indicating this condition is posted. This warning will be logged only for the first snapshot expired due to this situation. The same requirement applies to local dedup images with regard to remote dedup replication.

Included below is a summary of the Warning thresholds for VDisk and storage pools as specified through the **udtask chdiskpool**, **udtask configresourcewarning**, **udtask mkdiskpool**, and **udsinfo getresourcewarning** commands:

- The default Warning threshold for VDIs usage is 90%. The VDisk limit for the CDS appliance is 2048, and for the Sky appliance, the VDisk limit varies with the installed capacity license (1000, 3000, or 5000 VDIs).
- The default Warning level is 80% for the snapshot and primary pools and 75% for the deduplication pool. You set Safe Mode to an appropriate level of usage; the default value is 90% for the snapshot and primary pools.

Daily Warning Level Event—Deferred Expirations for Snapshots

A daily warning level event is generated when there are deferred expirations for snapshots. This daily warning includes a count of images for which expiration was deferred because these images are all candidates for deduplication. An example of such a daily warning level event is shown below:

The number of images not expired awaiting further processing is 2 images (2 snapshots, 0 dedups) from 1 unique applications. 2 snapshots and 0 dedups were added in the last period of 24 hours.

Daily Warning Level Event—Deferred Expirations Because Threshold Limit Exceeded

A daily warning level event is posted when a number of images that had deferred expirations were expired because the appliance has exceeded the threshold limits (such as VDisk count or pool capacity). The message includes a count of images expired in this fashion. An example of such an event is shown below:

The number of images awaiting further processing that had to be discarded is 5 images (3 snapshots, 2 dedups) from 3 unique applications in the last period of 24 hours.

Warning Level Alert—All Preserved Images Have Been Processed

When the number of preserved images drops to zero, the following alert will be generated similar to the example shown below:

All images that had been held from expiration for further processing now have been process or expired.

Weekly Error Level Event—Images Deduplicated or Remotely Replicated After 7 Days

When there are images that have not been deduplicated or remotely replicated for a period of 7 days, a weekly error level event of severity Error is raised. When the 7th day is reached an alert will be generated similar to the example shown below to inform you that the appliance has been in Preserve Mode for 7 days.

Still in preserved image mode after 7 days. The number of images not expired awaiting further processing is 486 images (486 snapshots, 0 dedups) from 1 unique applications. 0 snapshots and 0 dedups were added in the last 2555 seconds (0 hours 42 minutes).

D List of Parameters Used With getparameter and setparameter

This appendix describes the list of system parameters associated with the following commands:

- [getparameter](#) on page 178
- [setparameter](#) on page 177

You specify these parameters using the **-param** keyword in these commands.

Parameter	Description	Default	Value Range
appminshrinksizefornewstagingdisk	String value for the minimum application shrink size threshold for creating new staging disks (defaults to 32GB).	34359738368	-----
auditage	Number of days an audit is kept.	90	1-365
auditchanges	Audit of old and new values for privileged commands.	true	true or false
authentication.method	Determines which authentication method to use for UI login (database or LDAP authentication).	database	database or ldap
autoconfigsanports	If set to 1, support auto configuration is enabled.	1	0 and 1
backupjobsperhost	The maximum number of snap, direct-dedup and dedup-async jobs to run at a time on a single host.	1	1 to 1000
bdd.ip.test.timeout	The time (in seconds) for the BDD server to wait before restoring the network configuration.	30	0 to 300
changeratedb	Change rate for DB application for Guardrails calculations.	6	0 to 100
changeratenondb	Change rate for non-database application .	3	0 to 100

Parameter	Description	Default	Value Range
checkpoolspace	Check pool space for rehydration.	0	0 or 1
ChildLimit	Specifies the default database descendant level limit (children and the grandchildren) for all types of child database applications. The application-specific level limit (OracleChildLimit or SQLServerChildLimit), if specified, overrides the limit for that specific database application.	5	Maximum value varies by environment and infrastructure
copywarninglimit	Modifies the default limit of 14 snapshot copies that will generate a warning if this limit is reached or exceeded based on SLA policy settings. The supported value range is from 2 to 1000.	14	2 to 1000
createmultiplestagingdisks	Create multiple staging disks for out of band applications: <ul style="list-style-type: none"> • 0—Create a single staging disk for each application from now. • 1—Create multiple staging disks where applicable, based on threshold parameters and connector capabilities. 	1	0 to 1
critical.events.exclude	The error level events to exclude from critical events.	10011,10013,10023,10025,10039	Critical event ID
critical.events.include	The warning level events to include as critical events.	9052,999999999	Event IDs
dailystateexpirationindays	Number of days the daily statistics are to be kept in the database.	60	30 to 360
daronrampslots	The number of slots reserved for dedup-async of new applications.	0	0 to 100
datastoreutilizationpollfreqinmins	The frequency at which datastore space utilization is checked during VM data-movement operation.	15	1 to 7200
DBAuthentication	Instructs the host to use DB Authentication for Oracle applications.	false	true and false

Parameter	Description	Default	Value Range
deduprehydratedimageexpirationinhours	Controls the expiration duration for a rehydrated dedup image. The expiration duration is set in hours with a default of 24 hours.	24	0 to 100000
default.v3700.ssh.session.timeout	Default session timeout for SSH connections for the v3700.	60	0 to 3000
delegatingpoolstatecachesize	Delegating service poolstate cache size.	30	10 to 200
delegatingpoolstatecachetimeout	Delegating service poolstate cache timeout (in minutes).	5	1 to 20
disable.TLSv1.0	<div> <p>Note: The <i>disable.TLSv1.0</i> parameter has been deprecated. Instead, we recommend that you use the <i>webserver.TLS.protocols</i> parameter if it is necessary to define the allowed TLS versions. Please refer to the discussion of the <i>webserver.TLS.protocols</i> parameter later in this table for inclusive protocol control information.</p> <p>An advanced setting that disables Transport Layer Security (TLS) version 1.0 for backwards incompatibility with older operating systems, browsers, and Adobe Air clients. This feature should not be enabled without a complete understanding of the cryptographic capability of all management clients.</p> <ul style="list-style-type: none"> • true disables the TLSv1.0 protocol on the tomcat server in the appliance. This setting automatically restarts the tomcat server on the appliance. • false re-enables the TLSv1.0 protocol on the tomcat server in the appliance. This setting automatically restarts the tomcat server on the appliance. </div>	false	true and false

Parameter	Description	Default	Value Range
disableguardrails	Turns off the “guardrails” function which is used to warn the user about possible impact on system resources when creating an SLA policy in SLA Architect and when assigning that SLA policy in Application Manager. Valid entries are ‘true’ and ‘false’. By default, this value is ‘false’ (the guardrails function is enabled).	false	true and false
disablenbdvmbackups	Fail VM backups if SAN mode data movement cannot be performed.	0	0 and 1
DiscoveryAvoidEsxUuid	Do not use ESX UUID for resolution of ESX host during VM discovery.	false	true and false
dontexpirededupsduringgc	If 1, do not expire dedup objects if GC job is less than 30% complete.	1	0 and 1
dontfullingestdedupsduringgc	If set to 1, it will disable scheduling of jobs that are known to be full ingests while GC is running.	1	0 and 1
dosnapshotonreplicationfailure	Continue with snapshot processing even if StreamSnap replication fails.	1	0 and 1
enable.password.complexity	<p>Enforces the specification of complex local user or admin password that is to be used when a user logs into an appliance.</p> <p>A complex password can be composed of any combination of upper and lower case letters, numbers, and the following special characters:</p> <p>“!”, “@”, “#”, “\$”, “%”, “^”, “&”, “*”, “(”, “)”</p> <ul style="list-style-type: none"> • true enforces the requirement to specify a complex local user or admin password. • false disables the requirement to specify a complex local user or admin password. 	false	true and false

Parameter	Description	Default	Value Range
enablecompressedreplication	<p>If 1, implements compression for StreamSnap replication to the second appliance. Compression is required to increase efficiency of the StreamSnap replication to the second appliance when transferring data over the network.</p> <p>If compression is not a requirement for StreamSnap replication to the second appliance (for example, when replicating images and videos), specify 0.</p> <p>These settings may be overridden by the compressions settings in the StreamSnap policy option.</p> <hr/> <p>Note: Enabling compression may not always provide the best results. Compression uses additional CPU cycles at the cost of saving network bandwidth. If the available network bandwidth is better than the system resources such as CPUs, it is advised to disable compression.</p> <hr/>	1	0 and 1
enablededupasync	<p>If 1, scheduling of dedup-async jobs is enabled.</p>	1	0 and 1

Parameter	Description	Default	Value Range
enableencryptedreplication	<p>If 1, implements SSL encryption for StreamSnap replication to the second appliance. StreamSnap encryption occurs on an external SSL port (port 5107) for all outward communication.</p> <p>If encryption is not a requirement (for example, you are replicating an Oracle database that is already encrypted) specify 0. The data transmission then occurs in a plain-text communication. All unencrypted communication occurs over an external plain-text port 5108 and rest of the control flow is similar to the encrypted job.</p> <hr/> <p>Note: Only disable the <i>enableencryptedreplication</i> system-level parameter under strict guidance of Support.</p> <hr/> <p>When running StreamSnap jobs with encryption disabled, you will also need to perform the following on the remote appliance:</p> <ul style="list-style-type: none"> Start the remote streamsnapd in nossl mode (the streamsnapdnossl system-level parameter) so that it listens on both SSL and plain-text mode. By default, the appliance does not start streamsnapd in plain-text mode. To let plain-text replication run successfully, enter the following commands: <pre># udstask setparameter -param streamsnapdnossl -value 1 # monit restart streamsnapd</pre>	1	0 and 1
enableesxmount	Enable mounting of generic backup to an ESX host.	false	true and false
enableexpiration	If 1 , scheduled expirations is enabled. Set to 0 to disable scheduled expirations.	1	0 and 1

Parameter	Description	Default	Value Range
EnableGenericLVM	Enable the generic Logical Volume Management (LVM) functionality.	false	true and false
enableindexing	Set to 'true' to enable global indexing and search.	false	true and false
enablelocaldedups	If 1 , scheduling of local dedup and direct-to-dedup jobs is enabled. Set to 0 to disable scheduling.	1	0 and 1
EnableMountToVirtualSqlCluster	Enable mount to virtual SQL cluster.	false	true and false
enablenasserversnapexpiration	Set to 0 to disable setting the expiration of NAS server snapshots. This system parameter allows the appliance to expire snapshots off the NAS server itself.	1	0 and 1
enableremotededups	If 1 , scheduling of remote dedup jobs is enabled. Set to 0 to disable scheduling.	1	0 and 1
enablereplicationscripts	If 1 , enable invoking user-defined scripts post replication.	1	0 and 1
enablescheduler	If 1 , the global scheduler is enabled. Set to 0 to disable scheduling.	1	0 and 1
enablesnapshots	If 1 , scheduling of snapshot jobs is enabled. Set to 0 to disable scheduling.	1	0 and 1
enablestreamingreplication	If 1 , enables parallel replication with snapshot processing for VMware replication jobs. Set to 0 to disable parallel replication (only disable this function under direct guidance of Support).	1	0 and 1
enablestreamsnap	If 1 , enables the scheduling of StreamSnap jobs. Set to 0 to disable scheduling (only disable this function under direct guidance of Support).	1	0 and 1

Parameter	Description	Default	Value Range
enablevaults	If 1 , enables the scheduling of OnVault jobs. Set to 0 to disable scheduling (only disable this function under direct guidance of Support).	1	0 and 1
ExpirerEventLogFrequency	The frequency of the event log expire in seconds.	86400	3600 to 86400
expirerinterval	The frequency of the expiration loop in seconds.	5	1 to 120
expirerjobspercycle	The maximum number of jobs to start in a expiration loop.	10	1 to 20
expirerloadcount	Minimum number of images the expire should consider for each pass.	2500	100 to 10000
expirerreloadinterval	The frequency of reloading the expiration in seconds.	900	20 to 3600
expirerreailure	Retry for expiration on a failure in seconds.	3600	900 to 86400
expirerretrydependent	Retry for expiration deferred because of a unexpired dependent backup in seconds.	900	60 to 3600
expirerretrylocked	Retry for expiration deferred because of a lock in seconds.	60	30 to 900
firewall.icmp.redirect.drop.threshold	Our firewall drops ICMP redirect packets. This parameter defines a threshold. If today's drop count is beyond the threshold, an event is generated to warn about the potential network issue.	5000	1 to 1000000
firstbackupwholevm	If 1 , change block tracking is ignored for first VM backup.	1	0 and 1
GC_ZTR_PARALLEL_ACTIVE_WORKERS	The number of active (high-priority transaction) workers on zero-token resolution, must be a power of 2.	-1	1, 2, 4, 8, and 16
GC_ZTR_PARALLEL_HI_PRIO	The transaction priority to associate with high priority for zero-token resolution.	10	1 to 10

Parameter	Description	Default	Value Range
GC_ZTR_PARALLEL_MAX_WORKERS	Total number of workers on zero-token resolution (both active and inactive), must be a power of 2.	-1	1, 2, 4, 8, and 16
gcminthreshold	Minimum usage threshold (percentage) for dedup pool before gc schedule is enabled.	65	1 to 100
gcsafethreshold	The safe mode threshold (percentage) for dedup pool	85	1 to 100
genericappfailonconnecterror	Fail the backup job for a generic application if the Connector cannot be reached.	0	0 or 1
hostheartbeattimeoutinmins	Host heartbeat timeout in minutes.	60	0 to 43,200
hourlystatexpirationindays	Number of days the hourly stats has to be kept in DB	14	0 to 360
http.concurrentsession.allow	Allow concurrent HTTP sessions for the same user.	true	true, false
https.request.timeout	Request timeout for https connections in milliseconds. The default value is 7 minutes, min 0, and max 30 minutes.	420000	0 to 1800000
https.socket.timeout	Socket timeout for https connections in milliseconds. default 7 minutes min 0, max 30 minutes.	420000	0 to 1800000
ignore.schedule.off.violation	When set to 1, specifies to ignore SLA violations when the scheduler is off.	0	0 and 1
ignoredtraps	Identifies traps to be ignored (colon ':', separated). You can customize the traps to ignore by event ID or by event ID associated with a specific component. <ul style="list-style-type: none"> <i>eventid</i> (for example, ignoredtraps -value 43918) <i>componentname-eventid</i> (for example, ignoredtraps -value CDS-43918) 	0	<i>eventid</i> or <i>componentname-eventid</i>

Parameter	Description	Default	Value Range
ldap.referral.support	This is to specify whether to support LDAP referral.	false	true, false
ldap.user.autocreate	Automatically create LDAP users if they don't exist.	false	true, false
ldeduponrampslots	The number of slots reserved for local dedups and direct-to-dedup of new applications.	0	0 to 100
licensedcapacity	Configured licensed capacity, in TB.	0	0 to 10240
limiteddedupexpirations	The maximum number of scheduled dedup expirations.	2	0 to 25
liveclonerefreshcreatereference	When set to 1, create a reference object during a LiveClone refresh to revert back to in the case of a refresh failure.	0	0 and 1
maptoallexincluster	Map staging disk to all ESX hosts in a cluster.	1	0 or 1
maxconcurrentvaultsubjobs	<p>Maximum number of concurrent OnVault subjobs ingested into the OnVault. Subjobs are flow-controlled such that at least one subjob per OnVault job is always allowed without throttling. Use this parameter when you need to limit the maximum number of OnVault subjobs.</p> <hr/> <p>Note: The default for <code>maxconcurrentvaultsubjobs</code> is 12 and the default for <code>maxvaultslots</code> is 4. In this case, there can be at any time a total of 4 top-level OnVault jobs running. To prevent starving OnVault jobs, a minimum of 1 slot each has been reserved for every OnVault job. Note that the first job cannot use all 12 slots; it can only use up to 9 slots, and will reserve 3 of the remaining slots for new OnVault jobs to ensure that all OnVault jobs can make progress.</p> <hr/>	12	4 to 1000

Parameter	Description	Default	Value Range
maxconnectorupgradetimeout	Maximum connector upgrade Task timeout in minutes (default to 10 minutes).	10	5 to 60
maxdarslots	The maximum number of slots for enhanced asynchronous deduplication.	3	0 to 1000
maxdataaccessslots	The maximum number of data access slots for mount, clone and restore jobs.	12	0 to 1000
maxesxscans	The maximum number of ESX host parallel scans per job while mapping to an ESX cluster.	10	1 to 50
maxexpirationlots	The maximum number of expiration slots.	10	0 to 1000
maxiscsisessionspertarget	[Deprecated] Maximum active iSCSI sessions per target interface.	15	15 to 100
maxldapresults	The maximum number of objects processed from an LDAP query.	50000	-----
maxldedupslots	The maximum number of local dedup slots allowed.	8	0 to 1000
maxlogreplicateslots	The maximum number of log replication slots allowed.	6	0 to 1000
maxondemandslots	The maximum number of slots for all types of on demand jobs.	6	0 to 1000
maxoutofbandappsize	String value for maximum supported out-of-band application size, specified in bytes. This is a configuration parameter that is used to tune the maximum out-of-band application supported size (in bytes).	140737488355328	-----
MaxPrvThreads	The maximum number of psrv threads allowed.	800	400 to 1200
maxrdedupslots	The maximum number of remote dedup slots allowed.	6	0 to 1000

Parameter	Description	Default	Value Range
maxskyjoins	The maximum number of appliance pairings allowed for an Sky appliance.	50	-----
maxsnapslots	The maximum number of snapshots slots.	6	0 to 1000
maxstreamsnapslot	The maximum number of scheduled StreamSnap slots.	6	0 to 1000
maxvaultslots	The maximum number of scheduled OnVault jobs. Use this parameter when you need to control the maximum slots for OnVault jobs.	4	0 to 1000
maxvmtaskretrycount	The maximum VM task retry count.	10	1 to 100
maxvmtasktimeout	Maximum VM task timeout, in seconds.	600	60
minlaststagingdisksize	String value for minimum size of last staging disk for an application with multiple staging disks.	27487790694 4	-----
missed.cluster.ping.threshold	Threshold value for the number of missed cluster pings before raising a trap. -1 indicates never to alert.	-1	-----
nasserversnapexpirationindays	Expiration for NAS server snapshots, specified in days. This system parameter allows the appliance to expire snapshots off the NAS server, based on the specified number of days.	3	0 to 365
netapp.enable	Set to 1 to enable NetApp as a NAS server type.	0	0 and 1
networkinterfacecheck	Specifies the network interface (Ethernet port) to monitor and sends the SNMP trap if it is down. Multiple interfaces are allowed; use a comma to separate them.	none	none, eth0, and eth1
onejobperhostoverride	Override the one-job-per-host limit on an HP-UX or AIX host.	none	none, aix-only, hpux-only, and aix-and-hpux

Parameter	Description	Default	Value Range
operatingwindowintonextday	When set to 1 , operating windows extend into the next day even if they were excluded.	0	0 and 1
OracleChildLimit	<p>Changes the app-aware mount Oracle database descendant level limit (children and grandchildren). By default (when set to 0), the ChildLimit parameter specifies the default database descendant level limit for all types of child database applications. The OracleChildLimit parameter allows you to override this default child level limit for Oracle databases.</p> <hr/> <p>Note: Only change this under guidance of Support.</p> <hr/>	0	Maximum value varies by environment and infrastructure
password.minlength	Specifies a minimum password length for the local user or admin when they log into an appliance.	6	6 to 1024
prefernbdssl	<p>When set to 1, specifies to use NBD mode VM backups over SSL instead using plain (plaintext) NBD mode VM backups.</p> <p>The use of NBDSSL results in the data being encrypted in flight while performing the data transfer from the VMDK files into the appliance.</p>	0	0 and 1
preflight.default.timeout	Default timeout for the appliance preflight check (in minutes). You can run a preflight check for available update file on the appliance to check if the system is in a good state to apply the update.	5 minutes	5 to 30 minutes
preservelastimage	If 1 , do not expire the last image of each type for any protected application.	1	0 and 1

Parameter	Description	Default	Value Range
PreserveLdedupsOfPriority	<p>Defines how to preserve local dedup images that are due for expiration but not yet successfully processed</p> <p>By default, all local dedup images are preserved until the remote deduplication system can catch up with the preserved local dedup images, or until the capacity in the local dedup pool has reached the warning level.</p> <hr/> <p>Note: For background on image preservation, including modifying settings, see Configuring Image Preservation on page 527.</p> <hr/>	low	none, high, medium, and low
PreserveSnapsOfPriority	<p>Defines how to preserve snapshot images that are due for expiration but not yet successfully deduped.</p> <p>By default, all applications (low, medium, and high priority) will have their snapshot images preserved until the local dedup system can catch up with the preserved snapshot images, or until VDisk counts or performance pool capacity thresholds are reached.</p> <hr/> <p>Note: For background on image preservation, including modifying settings, see Configuring Image Preservation on page 527.</p> <hr/>	low	none, high, medium, and low
rdeduponrampslots	The number of slots reserved for remote dedups of new applications.	0	0 to 100
readyvmtargetlowsplash	Set to 1 to avoid writing zero blocks on target VMDK using low splash comparison by reading target VMDK.	1	0 or 1
remotepsrvrequesttimeout	Timeout for remote psrv requests.	5	5 to 30
removeduplicateevents	Attempt to removed duplicate events from event emails.	false	true and false

Parameter	Description	Default	Value Range
reserveddarslots	The number of slots reserved for enhanced asynchronous deduplication.	3	0 to 25
reserveddataaccessslots	The number of slots reserved for mount, clone and restore jobs.	6	0 to 1000
reservedexpirationslots	The number of slots reserved for scheduled expirations.	10	0 to 25
reservedlodedupslots	The number of slots reserved for scheduled remote local deduplication jobs.	4	0 to 25
reservedlogreplicateslots	The number of slots reserved for log replication.	2	0 to 25
reservedondemandslots	The number of slots reserved for all types of on-demand jobs.	3	1 to 1000
reservedrddedupslots	The number of slots reserved for scheduled remote dedup jobs.	6	0 to 25
reservedsnapslots	The number of slots reserved for scheduled snapshots.	2	0 to 25
reservedstreamsnapslots	The number of slots reserved for scheduled StreamSnap slots.	2	0 to 25
reservedvaultslots	The number of slots reserved for scheduled OnVault jobs. Use this parameter when you need to limit the reserved slots for OnVault jobs.	4	0 to 25
retriesonfailure	The maximum number of times a failed scheduled job is retried. This parameter specifies the number of times the job must be retried in the event of a failed job. For example, retriesonfailure 3 specifies that the job retries three times after original attempt.	3	0 to 20
retrydecay	The delay for each subsequent retry in percent. This parameter specifies the % of delay to attempt further retries.	400	100 to 10000

Parameter	Description	Default	Value Range
retrydelay	The delay before the first retry of a failed job in seconds. This parameter specifies the number of seconds that the job should wait to retry after the original attempt. For example, retrydelay 240 specifies that the first job retry happens after 240 seconds.	240	30 to 3600
rfcsnappooloverallocationpercent	When doing an inband restore via RFC we check that the snap pool(s) will not be overfilled via RFC. Pad the calculated space required by this percent to assure other concurrently running jobs will not exhaust the pool(s).	20	0 to 1000
schedule.watchdog.interval	Time interval in hours for Quartz hourly schedule watchdog. Set to 0 to disable.	3	1 to 24 (0 to disable)
schedulinterval	The frequency of the scheduler in seconds.	10	1 to 120
scheduljobspercycycle	The maximum number of jobs to start in a scheduler loop.	4	1 to 20
schedulerrdedupperiodpercentage	The percentage of Dedup policy RPO as the minimum separation of source snapshot images.	90	0 to 100
scheduleroptimizations	If 1, use optimizations to speed up scheduling.	1	0 and 1
schedulerrdedupperiodpercentage	The percentage of remote dedup policy RPO as the minimum separation of source local dedup images.	90	0 to 100
scriptexectimeout	Timeout waiting for pre and post scripts called using the Connector.	60	1 to 120
scriptinittimeout	This policy option specifies the timeout value for the init script completion.	300	1 to 600
secureconnect.local	Local IP address for secureconnect to bind to.	-----	-----
secureconnect.port	Port to use for SecureConnect.	1194	1 to 65536

Parameter	Description	Default	Value Range
secureconnect.proto	Protocol to use for SecureConnect.	udp	udp and tcp
secureconnect.proxy_port	Port for SecureConnect proxy.	0	0 to 65536
secureconnect.proxy_server	Proxy server for SecureConnect	-----	-----
secureconnect.server	Server for SecureConnect.	secureconnect2..com	-----
session-timeout-minutes	UI session timeout in minutes.	60	0 to 60
sla.tolerance	The maximum number of times that the scheduler can fail to meet the SLA criteria before considering a failure as SLA violation. By default, this setting is 0, indicating a failure to meet the SLA criteria will be considered an SLA violation.	0	0 and 1
slaAnalysis.analysisType	Specifies which SLA analysis method the appliance is to use: <ul style="list-style-type: none"> basic - Analyze the SLA based on counting the number of jobs (default behavior). advanced - Analyze the SLA based on time-based threshold values. 	basic	basic and advanced
slaAnalysis.enable	The setting to enable/disable SLA analysis. By default, this value is 'true'.	true	true and false
slaAnalysis.notificationtype	The notification type for SLA violation traps.	warning	warning, error, info
snapshotonrampslots	The number of slots reserved for snapshots of new applications.	0	0 to 100
snmp.community.string	The community string for sending SNMP traps.	-----	-----

Parameter	Description	Default	Value Range
snmptablesizesize	Limits the number of records sent by the SNMP agent in the appliance to the management system (the client). Whenever this parameter is set, the SNMP agent will retrieve only the specified number of records and send those records to the respective SNMP clients.	500	100 to 5000
SQLServerChildLimit	<p>Changes the app-aware mount SQL server database descendant level limit (children and grandchildren). By default (when set to 0), the ChildLimit parameter specifies the default database descendant level limit for all types of child database applications. The SQLServerChildLimit parameter allows you to override this default child level limit for SQLServer databases.</p> <hr/> <p>Note: Only change the SQLServerChildLimit system-level parameter under guidance of Support.</p> <hr/>	0	Maximum value varies by environment and infrastructure
stagingdiskgranularity	A string value indicating the size of each staging disk when multiple staging disks are used for an application.	-----	1099511627776
streamsnapdconnectiontimeout	Connection timeout in seconds for the streamsnapd daemon.	60	1 to 1200
streamsnapdheartbeattimeout	Time interval between heartbeat messages for the streamsnapd daemon.	60	1 to 1800
streamsnapdinternaltimeout	Internal connect/disconnect timeout for the streamsnapd daemon.	10	1 to 1800
streamsnapdmaxmemorysize	Maximum memory usage (in GB) for the streamsnapd daemon.	4	1 to 1024
streamsnapdmaxreservedconnections	Maximum number of simultaneous reserved SSL connections for a streamsnapd daemon reconnect.	10	5 to 256

Parameter	Description	Default	Value Range
streamsnapdmaxrunningjobs	Maximum number of jobs initiated and received by the streamsnapd daemon (both the source and target appliance).	90	1 to 1024
streamsnapdmaxserverconnections	Maximum number of simultaneous non-SSL connections for all internal communication by the streamsnapd daemon. The streamsnapd daemon listens on an internal port (7445).	150	5 to 1024
streamsnapdmaxsslconnections	Maximum number of simultaneous SSL connections for all inward and outward communication by the streamsnapd daemon. The streamsnapd daemon listens on an external SSL port (5107).	160	1 to 256
streamsnapdmaxtunnelconnections	Maximum number of simultaneous SSL tunnel connections for the streamsnapd daemon.	50	5 to 256
streamsnapdmaxwindowsize	Maximum number of outstanding packets in the streamsnapd pipe for each session.	64	8 to 1024
streamsnapdmillispertick	Number of milliseconds per tick for updating streamsnapd statistics.	1000	100 to 10000
streamsnapdnetaalerttime	Network off detection timeout for the streamsnapd daemon.	900	1 to 10000
streamsnapdnetworkretries	Maximum number of network retries for the streamsnapd daemon.	5	1 to 1000
streamsnapdnossl	Start the streamsnapd server in non-SSL mode (plain-text mode). By default, the appliance does not start streamsnapd in plain-text mode. When the nossl option is enabled, the target server listens on plaintext port 5108.	0	0 and 1
streamsnapdprogressupdateinterval	streamsnapd job progress update interval in seconds.	5	1 to 600
streamsnapdreconnectdelay	Minimum delay in milliseconds for reconnect in the streamsnapd daemon	100	1 to 10000

Parameter	Description	Default	Value Range
streamsnaponrampslots	Number of slots reserved for StreamSnap replication of new applications.	0	0 to 100
sweepthreshold	Determines how aggressive the sweep process will be in reclaiming space from expired backups.	50	1 to 100
systemcontact	A string value that sets the sysContact Object Identifiers (OID) value as part of the SNMP system information for an appliance.	-----	-----
systemlocation	A string value that sets the sysLocation OID value as part of the SNMP system information for the appliance.	-----	-----
template.agm.lock	When a template is managed by AGM, it is locked, so you cannot change the template on the appliance. This is a backdoor to allow you to modify it, but will cause discrepancy. So it affects the objects on the appliance, not AGM. Set to false to allow local modification for AGM managed templates and associated objects.	true	true or false
truepathdefaultdriveletter	Assign a drive letter to mounted volumes even if user did not specify a drive letter.	1	0 and 1
unreservedslots	The number of additional slots available for any job type.	9	0 to 100
usegcjob	missed gc/sweep jobs to be rerun.	false	true and false
usegcjobqueue	Queue missed gc/sweep jobs to be rerun.	false	true and false
v3700.pwd	The admin password for v3700 storage devices.	Contact your rep for the admin password.	-----

Parameter	Description	Default	Value Range
vaultrehydratedimageexpirationinhours	Default expiration for the rehydrated OnVault image in hours (default to 24).	24	0 to 100000
vdisklimit	The maximum number of VDIs that can be used for the pool supported by a Sky appliance.	0	0 to 10000
vixdisklibdebuglevel	The debug level for the vixdisklib.	4	0 to 7
vmconsolidatedisks	Configure job behavior when target VM needs snapshot consolidation. If the VM requires consolidation: fail - Fail the job: backup/DAR/direct-dedup jobs fail. yes - Perform consolidation at the beginning of the job: Backup/direct-dedup/DAR jobs try to perform consolidation at the beginning of the job. If consolidation fails, the job fails with an error message. no - Run the job without performing consolidation: All jobs run normally even if consolidation is pending.	fail	fail, yes, no
vmdatastorefullcriticalthreshold	Critical threshold (percentage) for virtual machine's datastore space usage, above which the virtual machine backup job is aborted and a critical event is logged.	95	80 to 100
vmdatastorefullwarnthreshold	Warning threshold (percentage) for virtual machine's datastore space usage, above which a critical event is logged.	80	50 to 100
vmexistingsnapshotwarning	Set to 1 to log a warning for existing snapshots for the VM being backed up.	0	0 and 1
vmfilesthreshold	Threshold for number of files inside a VM home directory, above which a warning event is logged.	32	5 to 100

Parameter	Description	Default	Value Range
vmloWSplashwithcbt	<p>Uses the following parameters:</p> <ul style="list-style-type: none"> never - No low splash when CBT exists threshold - Low splash when CBT crosses vmloWSplashwithcbtthreshold percentage full - Always use low splash on full vmdk when CBT exists 	never	never, threshold, and full
vmloWSplashwithcbtthreshold	Percentage of bytes in CBT when low splash is used. Applicable when vmloWSplashwithcbt = threshold .	50	0 to 100
vmnoCbtdoCompare	Set to 1 to avoid overwriting blocks with same data from VMware snapshot to staging disk, when no changed extent list exists.	1	0 and 1
vmorgenericBackupmountpvidchange	<p>Mount of VM/Generic backup to host without connector:</p> <ul style="list-style-type: none"> 0 - Do not change LVM PV IDs. 1 - Change LVM PV IDs if VMware believes the OS is Linux. 2 - Always change the LVM PV IDs. 	1	0 to 2
vmTaskcompletiontimeout	VM Task completion timeout (in minutes). The VM Task completion timeout (default of 60 minutes) is used as timeout for task completion. All tasks except clone and recreatedisks honor this setting. This system parameter would be ineffective for clone task and recreatedisks tasks.	60	1 to 43200

Parameter	Description	Default	Value Range
webserver.TLS.protocols	<p>This enables you to explicitly define all allowed TLS protocol versions in the format of a comma-separated TLS version list. The default setting is to support all three TLS versions. Changing this setting automatically restarts the Tomcat server on the appliance.</p> <hr/> <p>Note: A client machine using Microsoft Windows will require a Microsoft Internet Explorer configuration change for supported TLS protocol versions. Open Internet Explorer to the Internet Options ->Advanced tab and verify the corresponding TLS protocol versions. Make the necessary TLS version changes.</p> <hr/> <p>The TLS versions allowed by the Tomcat web server are determined by the following rules:</p> <ul style="list-style-type: none"> • If <code>disable.TLSv1.0</code> is set to false, TLS versions are the same as defined in <code>webserver.TLS.protocols</code>. • If <code>disable.TLSv1.0</code> is set to true, TLS versions are those defined in <code>webserver.TLS.protocols</code> but excluding the TLSv1 protocol. <p>When configuring either the <code>webserver.TLS.protocols</code> or <code>disable.TLSv1.0</code> system parameter by the <code>udtask setparameter</code> command, the TLS versions will be calculated. If the TLS versions are different than the Tomcat configuration, the Tomcat configuration will be modified and the Tomcat server will be restarted for the new settings to take effect.</p>	TLSv1, TLSv1.1, TLSv1.2	TLSv1, TLSv1.1, TLSv1.2
zpoolcompression	Enables the Zpool compression property.	on	on or off

E List of Policy Options

This appendix is a complete list of policy options associated with the following commands:

- **chpolicyoption** ([chpolicyoption](#) on page 443)
- **lspolicyoption** ([lspolicyoption](#) on page 441)
- **mkpolicyoption** ([mkpolicyoption](#) on page 439)
- **rmpolicyoption** ([rmpolicyoption](#) on page 445)
- **lssettableoption** ([lssettableoption](#) on page 437)

Policy Option	Description	Value	Policy Type	AppType
appconsistency	Takes an application consistent snapshot for a backup.	<p>yes - Takes application-consistent backup; notifies the application to prepare for a backup. This option loses no data. It pauses application data I/O, completes in-flight transactions, and flushes memory to disk. On recovery, data is easily accessible.</p> <p>no - Takes crash consistent backup. Crash-consistent backup is a fast backup of application data in storage as if power were lost at that moment. It does not pause application data I/O. All data on disk are saved, and data in memory is lost. Incomplete transactions may be saved.</p> <p>last - Takes application consistent backups, but takes a crash consistent backup if an application consistent backup fails for any reason. Setting appconsistency to last is only honored for scheduled jobs. For example, when appconsistency=last for scheduled jobs:</p> <ul style="list-style-type: none"> • Job_1234567 will be appconsistent. • Job_1234567a (1st retry) will be appconsistent. • Job_1234567b (2st retry) will be appconsistent. • Job_1234567c (last retry) will be crash consistent. <p>These values are on a per job basis; any internal retries inside Job_1234567 will use same value for appconsistency.</p>	snap, directdedup, dedup_async	VMBackup, Microsoft Hyper-V, VSS Writer

Policy Option	Description	Value	Policy Type	App Type
archivebackuptime	Instructs the appliance to backup the archivelog if it has not been backed up the specified number of times.	1 to 5	_____	Oracle, ConsistGrp
archivetnsservice	Specifies the TNS service name for archivelog backup.	String	_____	Oracle
asmraclist	IP addresses of the member nodes of a RAC database for ASM backup.	String	_____	Oracle
ausize	Configures the ASM Diskgroup AU size, in MB	1, 2, 4, 8, 16, 32, or 64 MB	_____	Oracle, ConsistGrp
autodiscoverrac	Specifies to auto discover all members of a RAC database for ASM backup	false (default) or true	_____	Oracle
bootvolumesnapshot	<p>Specifies to back up only the boot volume of the VM.</p> <hr/> <p>Note: When protecting VMs, if the application binaries are spread over multiple VMware VMDKs or the boot volume is not the first drive on the bus, then the entire boot volume may not be captured.</p> <hr/>	<p>no - Backup all the volumes of the VM (default).</p> <p>yes - Backup only boot volume of the VM.</p>	snap, directdedup, dedup_async	VMBackup, Microsoft Hyper-V VSS Writer
catalogdb	Specifies the Oracle catalog database SID name. This is for the user environment where RMAN CATALOG DATABASE is set up for RMAN backup.	String	_____	Oracle, ConsistGrp
catalogpassword	Specifies the Oracle catalog database user login password.	String	_____	Oracle, ConsistGrp

Policy Option	Description	Value	Policy Type	AppType
cataloguser	Specifies the Oracle catalog database user name for RMAN backup.	String	_____	Oracle, ConsistGrp
changerate	Daily change rate for the database, used to estimate staging disk size. The value must be between 0 and 100 percent.	0 to 100 percent (default is 10 percent)	snap	Oracle, SqlInstance, SqlServerWriter, ConsistGrp
clusternodes	<p>Enter the IP addresses of appliance nodes for fail-over choice in this format:</p> <p>1:172.16.16.21:svc_orarac2_act:F [failover rank]:[failover node ip]:[servicename on failover node]:[role of member node]</p> <p>The role of member node by default should be F (failover). It can also be M (maintenance). When an appliance member role is specified as M, the Actifio Connector appliance uses it as the primary backup node instead of using the original protected node. (Oracle, Exchange).</p>	<p>Specify the failover node choice in a Oracle RAC environment in this way:</p> <p>Failover choice:Node IP:Servicename:Role</p> <p>Failover Choice - The order of node in which user wants to try the failover.</p> <p>Node IP - IP address of the node where you want the backup to run.</p> <p>Servicename - The name of the service created and specified in the tnsnames.ora for Actifio Connector RMAN backup. This can be a new dedicated service created for Actifio Connector backup or the SID name (instance name) of the database on that node.</p> <p>Role - Role can be either F (failover node) or M (maintenance node)</p>	_____	Oracle, Microsoft Exchange Writer, ConsistGrp
compressdblog	Flag to enable log backup compression. If selected, the database server performs the compression during the log backup.	true (default) or false	snap	SqlInstance, SqlServerWriter, Oracle, ConsistGrp
compressedreplication	Use compression for StreamSnap replication	<p>yes - Use compression for StreamSnap replication (default)</p> <p>no - Do not use compression</p>	stream_snap	_____

Policy Option	Description	Value	Policy Type	App Type
connectoroptions	Leave connectoroptions blank unless you are working with Support.	String	————	FileSystem, SqlInstance, SqlServerWriter Microsoft Exchange Writer, SharePoint Services Writer, Oracle, CIFS, NFS, NAS, Microsoft Hyper-V VSS Writer, ConsistGrp
consolidatevmdisks	Specifies the appropriate job behavior when target VM needs snapshot disk consolidation.	Fail the job if VM needs consolidation - Backup/DAR/direct-dedup jobs fail (default). Run the job without performing consolidation - All jobs run normally even if consolidation is pending. Perform consolidation at the beginning of the job - Backup/direct-dedup/DAR jobs try to perform consolidation at the beginning of the job. If consolidation fails, the job fails with an error message.	————	VMBackup
crosscheckarchivelog	Performs a crosscheck of the archivelog before performing a backup.	false (default) or true	————	Oracle, ConsistGrp
crosscheckbackupofarchivelog	Performs a crosscheck of the backup of archivelog before performing an archivelog backup.	false (default) or true		Oracle, ConsistGrp

Policy Option	Description	Value	Policy Type	AppType
datasetsize	NAS dataset size (in GB). enter a staging disk size of 1.2 times the size of the protected dataset. An initial size for the staging disk that will be used to back up this application. The Actifio Connector appliance will allocate an initial disk (or multiple disks if larger than the system max staging vDisk setting) to equal this size. If the space in this disk is insufficient to backup the NAS Dataset, the staging disk will be expanded to accommodate the backup.	1 to 256000 (default = 1024)	_____	NAS
dbbackupfreq	Performs a database backup every specified number of hours for log protection.	2 to 24 (hours)	dedup_async	_____
dumpschedule	Performs a database dump every specified weekday.	String The string must be seven characters - either an 'F' or an 'I'. Each position within the string represents a weekday, starting with Sunday. 'F' = a full db dump 'I' = an incremental db dump For example, FFFIII.	_____	SAP HANA
donotshowrecoveryrange	Indicates that log backup should not have recovery range.	true (default) or false	_____	Oracle, ConsistGrp
donotuncatalog	To keep RMAN backup cataloged after each backup. By default Actifio Connector appliance backup will be un-cataloged at the end of the backup and will be cataloged at the start of backup.	false (default) or true	_____	Oracle, ConsistGrp
enableindexing	Flag to control indexing	false (default) or true	_____	NAS

Policy Option	Description	Value	Policy Type	App Type
encryptedreplication	Use encryption for StreamSnap replication	yes - Use encryption for StreamSnap replication (default) no - Do not encrypt	stream_snap	_____
excludepatterns	<p>Enter the file name pattern to be excluded from backup. The appliance offers the ability to exclude certain file types from the backup. Using this policy option, only the most crucial data is backed-up leaving a side the non-critical files. Guidelines for exclude patterns:</p> <p>Using excludepatterns, only files are excluded, directories are not excluded.</p> <p>A pattern can include wild-card characters, for example, an asterisk (*) or a question mark (?). To exclude all the files that contains .sys as extension, enter *.sys.</p> <p>On Windows, files named pagefile.sys and hiberfil.sys that appear in the root directory of a drive are automatically ignored.</p>	String	_____	FileSystem, CIFS, NFS, NAS
failonmissingstartpath	The SmartCopy job will fail if a start path does not exist.	false (default) or true	snap, directdedup, dedup_async	FileSystem, CIFS, NFS, ConsistGrp
filesperset	Specifies the number of archive logs in a backups during archive log backup.	1 to 64 (default = 64) Default depends on the number of channels provisioned during the backup and archive logs present in the database.	_____	Oracle

Policy Option	Description	Value	Policy Type	AppType
forceasm	If 'Yes' is selected and the source database is stored in filesystem format, the database copy stored on VDP will be in ASM format. This option requires ASM to be installed on the Oracle server.	false (default) or true	_____	Oracle, ConsistGrp
forcelevel0	Start a new level0 RMAN backup when the database is protected out-of-band.	false (default) or true	_____	Oracle, ConsistGrp
forceoobbackup	Forces the out-of-band backup when database datafiles are in-band.	false (default) or true	snap, directdedup, dedup_async	FileSystem, SqlInstance, SqlServerWriter, Microsoft Exchange Writer, SharePoint Services Writer, Oracle, ConsistGrp
fsfreeze timeout	Timeout of a file system freeze in seconds for in-band backup jobs.	3 to 300 seconds (default = 30)	_____	FileSystem, ConsistGrp
genericlvmscriptname	Freeze and thaw script name for Linux CBT filter driver	String	_____	LVM Volume

Policy Option	Description	Value	Policy Type	App Type
immutabilitydays	<p>Specifies the enforced retention period during which can an image cannot be expired. An image created by a policy using this option will have an retention period calculated during image creation. It is always equal to or less than the retention period defined for the policy. Images with enforced retention cannot be expired before they reach the immutability date. You can create immutabilitydays policy option using the mkpolicyoption command. You can update an existing immutabilitydays policy using the chpolicyoption or remove an existing immutabilitydays policy option. You cannot shorten an existing retention period, only extend it.</p>	0 to 36525 days	<p>snap, directdedup, dedup, remotededup, stream_snap (for remote snapshot images), onvault,</p> <hr/> <p>Note: Not supported on Dedup-Async Replication (DAR) policies</p> <hr/>	_____

Policy Option	Description	Value	Policy Type	AppType
includepatterns	<p>Enter the file name pattern to be included in the backup. The Actifio Connector appliance offers the ability to include certain file types in the backup. Using this policy option, only the most crucial data is backed-up leaving a side the non-critical files. Guidelines for include patterns:</p> <p>Using includepatterns, only files are included, directories are not included.</p> <p>A pattern can include wild-card characters, for example, an asterisk (*) or a question mark (?). To include all the files that contains .sys as extension, enter *.sys.</p> <p>On Windows, files named pagefile.sys and hiberfil.sys that appear in the root directory of a drive are automatically ignored.</p>	String	_____	FileSystem, CIFS, NFS, NAS
logalterloc	Customized application log location.	String	_____	*
logbackupfreq	This Log Protection option defines the frequency for database transaction log backup. Frequency is set in minutes and must not exceed the database backup interval. This value must not exceed the database backup interval.	15 to 1440	snap	_____
logbackupretention	Retain database log backup for the specified period. Retention period must be between 1 and 90 days.	1 to 90 days (the default is 2 days)	snap	_____
logbackupunit	Log backup interval unit.	minute - Log backup in number of minutes hour - Log backup in number of hours	snap, dedup_async	_____

Policy Option	Description	Value	Policy Type	App Type
logpurgeretention	Log retention in hours before log purging.	1 to 720 (hours)	_____	Oracle, ConsistGrp
logpurgeretentionnum	Number of successful backups before log purging.	1 to 30	_____	Oracle, ConsistGrp
logpurgeretentunit	Retention period unit for log purging.	day - Log retention in days. hour - Log retention in hours.	snap, dedup_async	Oracle, ConsistGrp
logreplication	<p>Replicate Oracle or Microsoft® SQL Server database transaction logs to a remote Actifio Connector appliance. You can use the logs at the remote site for any database image within the retention range of the replicated logs.</p> <p>For a log replication job to run, there must be a replication policy (StreamSnap, Dedup-Async, or Remote Dedup) included in the template along with a resource profile that specifies a remote Actifio Connector appliance.</p> <hr/> <p>Note: Log replication does not occur until an Oracle or SQL Server database has been protected and the image replicated to the remote Actifio Connector appliance.</p> <hr/>	true (default) or false	snap	_____
logretention	Retention percentage of log backup with regard to database backup.	0 to 100%	snap, dedup_async	_____
logsizebuffer	Buffer space for log backups. The value must be between 1 and 10 days.	1 to 10 days (the default is 2 days)	snap	_____

Policy Option	Description	Value	Policy Type	AppType
logsizepercent	Grow the log staging disk by a specified percentage if needed. The value must be between 5 and 100 percent.	5 to 100 percent (the default is 50 percent)	snap	_____
logsmart	Flag indicating that Log Protection is enabled.	false (default) or true	snap	_____
logstagingdisksize	Enter a log staging disk size (in GB) to override the space automatically defined for database log backups.	1 to 4000	_____	Oracle, SqlInstance, SQLServerAvail abilityGroup SqlServerWriter, ConsistGrp
maptoallesxincluster	If your ESX servers are in a cluster, you can select this to ensure that the VMs are protected in case of failover during backup.	no - Do not map staging disk to all ESX hosts (default). yes - Map staging disk to all ESX hosts.	snap, directdedup, dedup_async	FileSystem, SqlInstance, SqlServerWriter, Microsoft Exchange Writer, SharePoint Services Writer, CIFS, NFS, ConsistGrp
maxcorrupt	Maximum block corruption allowed during an RMAN backup.	0 (default) to 1000	_____	Oracle, ConsistGrp
minlaststagingdisksize	If an application requires multiple staging disks, enter the minimum size to be allocated for the staging disk used for the last part of that application	1 to 128000	_____	Oracle, FileSystem, NFS, ConsistGrp
namedlistener	Oracle named listener. For more then one listener running on the database server specify the listener name.	String	_____	Oracle, ConsistGrp
notskip	By default, an Oracle backup skips offline tablespace and inaccessible (not physically existed) datafiles.	skip - Skip offline and inaccessible tablespace/ datafiles (default). inaccessible - Do not skip inaccessible tablespace/ datafiles. offline - Do not skip offline tablespace/datafiles.	_____	Oracle, ConsistGrp

Policy Option	Description	Value	Policy Type	App Type
nounmap	Specifies if you want to keep staging disks mapped to the host and used during data movement for backup to remain mapped to the host.	yes - Keep staging disks mapped between jobs (default). no - Unmap staging disks after each job.	snap, directdedup, dedup_async	FileSystem, SqlServerWriter, Microsoft Exchange Writer, SharePoint Services Writer, Microsoft Hyper-V VSS Writer, Oracle, CIFS, NFS, NAS, ConsistGrp
numberofchannels	Configures RMAN channels based on specifics of the host computing power. Number of channels should be configured based on the # of cores available on the server, taking into account other database backups configured to run in parallel.	1 to 255	—————	Oracle, ConsistGrp
oraclechildbackup	Indicates this is a Oracle child backup	true (default) or false	—————	Oracle, ConsistGrp
password	Specifies the authentication password as part of the user credentials.	String	—————	Oracle, CIFS, SqlInstance, SqlServerWriter VMBackup, NAS, Microsoft Hyper-V VSS Writer, ConsistGrp
primarynodeservicename	Specifies the servicename configured on the Data Guard node that connects to the primary Actifio Connector node. This is required only when you are protecting data from Oracle Data Guard.	String	—————	Oracle
proxyhostid	Proxy host used during NAS backup.	String	—————	NAS

Policy Option	Description	Value	Policy Type	AppType
prunepaths	Specifies a point where the directory traversal will stop. When protecting a Windows application, a value of \\SERVERNAME\SHARENAME\abc will ensure that nothing below\\SERVERNAME\SHARENAME\abc is copied, but all other directories and files in \\<SERVERNAME\SHARENAME are copied. If prunepath is left blank, the directory traversal descends into every subdirectory of the start paths being backed-up.	String	_____	FileSystem, CIFS, NFS, NAS
readyvm	VM in ESX datastore dedup async replication.	no - VM in Performance pool snapshot (default) yes - VM in ESX datastore	_____	VMBackup
remotedatastores	Remote datastores details for VM in ESX datastore dedup async replication.	String	_____	VMBackup
remoteesx	Remote ESX server details for VM in ESX datastore dedup async replication.	String	_____	VMBackup
remotemetastore	Remote metadata store details for VM in ESX datastore dedup async replication	String	_____	VMBackup
remotevcenter	Remote vCenter details for VM in ESX datastore dedup async replication.	String	_____	VMBackup
restorevalidate	Provides restore validate for the Oracle backup. When this option is set to true the Actifio Connector will invoke RMAN restore validate for each backup. This validation will add time to the backup.	true or false (default)	_____	Oracle, ConsistGrp

Policy Option	Description	Value	Policy Type	App Type
rmanloglocation	<p>RMAN log path name. Enter the RMAN log path in the RMAN Log Location field. This is the custom location (full path along with RMAN filename) where RMAN writes the logs while taking the backup.</p> <p>For Linux - the default log location is: /act/log/<sid>_rman.log. If you change the path, the value must be in the form /act/log/test/custom_rman.log</p> <p>For Windows - the default log location is: c:\act_tmp\log\<sid>_rman.log. If you change the path, be sure there are no spaces in the path.</p>	String	_____	Oracle, ConsistGrp
root	Root path of the NAS dataset. Browse through the directories of selected NAS Share to select a Root Path. Directories and files outside of this path will not be traversed for this dataset. You can leave this field blank to use the top level of the NAS share as the starting point.	String	_____	NAS
schedulerrdedupperiodpercentage	Percentage of Dedup policy RPO as the minimum separation of source snapshot images.	0 to 100	_____	_____
schedulerrdedupperiodpercentage	Percentage of remote dedup policy RPO as the minimum separation of source local dedup images.	0 to 100	_____	_____
scriptfinishtimeout	Sets the script finish timeout setting (in seconds) for Actifio Connector.	1 to 86400	_____	_____

Policy Option	Description	Value	Policy Type	AppType
scriptfreezetimeout	Sets the script freeze timeout setting (in seconds) for Actifio Connector.	1 to 86400	_____	_____
scriptinittimeout	Sets the script initialization timeout setting (in seconds) for Actifio Connector.	1 to 86400	_____	_____
scriptpostreplicationtimeout	Sets the user-defined script post replication timeout (in seconds).	1 to 86400	_____	_____
scriptunfreezetimeout	Sets the script unfreeze timeout setting (in seconds) for Actifio Connector.	1 to 86400	_____	_____
serviceip	Enter a service access point IP address to back up from an SQL availability cluster. Specify the IP address of the cluster node you want the database to be backed up from. This option is not required if you want the database to be backed up from the active node and it is not required for a failover cluster.	String	_____	FileSystem, SqlInstance, SqlServerWriter, SharePoint Services Writer, ConsistGrp
servicename	Specifies the Oracle database service name. This is optional for a standalone instance but required for a RAC setup. (Oracle only).	String	_____	Oracle, ConsistGrp
shareid	ID address of the NAS share corresponding to the NAS application. Select one of the shares from the NAS server.	String	_____	NAS

Policy Option	Description	Value	Policy Type	App Type
sharetype	Select either CIFS or NFS for the NAS dataset. If CIFS is selected, enter the username and password of the user that will mount the NAS share on the BDD and perform the backup.	NFS (default) or CIFS	_____	NAS
skipofflineappsincongrp	Specifies how to handle offline applications in a consistency group.	no - Fail backup when offline applications are found (default). yes - Skip offline applications during backup.	snap, directdedup, dedup_async	ConsistGrp
sqlbackuppath	Defines a location for a temporary SQL backup. If the Actifio Connector takes a full, native backup of the SQL Server database, the backup will be saved in this directory. Ensure that there is enough free space in the volume hosting this directory to hold a full database backup.	String	_____	SqlServerWriter, VMBBackup, Microsoft Hyper-V VSS Writer, ConsistGrp
stagingdiskgranularity	If an application requires multiple staging disks, you can keep a small portion of an application from using a large staging disk. Enter the largest size of staging disks to be used.	1 to 128000	_____	Oracle, FileSystem, NFS, ConsistGrp
stagingdiskmountpoint	Enter a staging disk mount point if you need the staging disk mounted to a particular location (Oracle, local filesystems, CIFS, NFS, SharePoint, SQL Server, Exchange)	String	_____	Oracle,FileSystem, m, CIFS, NFS, SharePoint Services Writer, SqlServerWriter, Microsoft Exchange Writer, ConsistGrp

Policy Option	Description	Value	Policy Type	AppType
stagingdiskoverheadallocationpercentage	Staging vDisk desired size overhead allocation percentage. Used if the initial staging disk is too small to accommodate the data or if the amount of data increases beyond the staging disk capacity.	0 to 1000	_____	_____
stagingdisksize	Staging vDisk size for image copy backup (in GB). Enter a staging disk size of 1.2 times the size of the protected application. By default, the Actifio Connector uses the size of the protected application as the size of the staging disk. This setting allows the administrator to override this value if necessary, for example to allow for growth.	1 to 256000	_____	Oracle,FileSystem, CIFS, NFS, SharePoint Services Writer, SqlInstance, SqlServerWriter Microsoft Exchange Writer, Microsoft Hyper-V VSS Writer, ConsistGrp
stagingdisksizeincr	Enter a staging disk size of 1.2 times the size of the protected dataset. An initial size for the staging disk that will be used to back up this application. The appliance will allocate an initial disk (or multiple disks if larger than the system max staging vDisk setting) to equal this size. If the space in this disk is insufficient to backup the NAS Dataset, the staging disk will be expanded to accommodate the backup.	String	_____	NAS

Policy Option	Description	Value	Policy Type	App Type
startpaths	Provides the start path names. startpath specifies the directory where backup starts. If startpath is left blank, backup starts at the root directory of the dataset to be backed-up. For example, a value of \\SERVERNAME\SHARENAME\abc will back up the abc directory.	String	_____	FileSystem, CIFS, NFS, NAS
streamingreplication	Stream snapshot data to the target appliance in parallel to data movement to the staging disks	yes - Stream snapshot data to the target VDP appliance (default) no - Do not stream snapshot data to the target VDP appliance	stream_snap	VMBackup
tnsadminidir	Specifies the TNS_ADMIN network path.	String	_____	Oracle, ConsistGrp
truncatelog	Specifies whether to truncate the logs after every backup for Microsoft SQL Server or Exchange, or to purge logs after every backup for Oracle. When this is selected, application-related logs are truncated until the recent or current backup. The client cannot roll forward/back with logs because SQL opens the database in multi-user mode.	no - Do not truncate/purge log after backup (default) yes - Truncate/purge log after backup	snap, directdedup, dedup_async	SqlInstance, SqlServerWriter Microsoft Exchange Writer, SharePoint Services Writer, VMBackup, Microsoft Hyper-V VSS Writer, ConsistGrp
useasm	If Yes, the database copy stored on the appliance will be in filesystem format, even if the source was in ASM format.	true (default) or false	_____	Oracle
usegpfs	Select to enable GPFS staging disk for performing a GPFS file system backup.	false (default) and true	_____	FileSystem, ConsistGrp, Oracle

Policy Option	Description	Value	Policy Type	AppType
username	Specifies the authentication user name as part of the user credentials.	String	_____	Oracle, CIFS, SqlInstance, SqlServerWriter VMBBackup, NAS, Microsoft Hyper-V VSS Writer, ConsistGrp
userrole	Database user account for VDP RMAN backup. By default, userrole will use sysdba . For 12c sysbackup role please select the role using sysbackup .	sysdba - Role sysdba (default) sysbackup - Role sysbackup, applicable to 12c	_____	Oracle, ConsistGrp
usezpool	Use Zpool on the proxy host.	false (default) or true	_____	NAS
vgsnapreservespace	Amount of space to reserve in the Volume Group as a percentage of Logical Volume size to hold snapshot data.	1 to 100. Default of 20.	_____	LVM Volume
wallet	To backup any Oracle configuration files with Oracle OOB backup such as wallet for encryption support. This will need a full path name. If the folder name is specified then all files under that folder will be backed up. If a file name is specified then only the specified file will be backed up.	String	_____	Oracle, ConsistGrp
zfscompression	Use ZFS compression on the proxy host.	off - Disable ZFS compression (default) on - Enable ZFS compression lzjb - lzjb compression algorithm gzip - gzip compression algorithm zle - zle compression algorithm lz4 - lz4 compression algorithm	_____	NAS

Policy Option	Description	Value	Policy Type	AppType
zfsdedup	Use in-line dedup on the proxy host. Enable in-line dedup for datasets where there are large numbers of duplicated blocks among the files and directories being protected, so the savings in storage make up for the extra processing required to deduplicate.	off - Disable in-line dedup (default) on - Enable in-line dedup	_____	NAS

F List of Restore Options

This appendix is a complete list of restore options that you can specify when using the following commands:

- [failover](#) on page 300
- [testfailover](#) on page 305
- [lsappclass](#) on page 311
- [mountimage](#) on page 328
- [cloneimage](#) on page 337
- [lsrestoreoptions](#) on page 349
- [restoreimage](#) on page 351

You specify these options using the `-restoreoption` keyword in these commands.

Restore Option	Description	Value	Restore Operation	AppType
asmracodelist	Colon separated list of ASM RAC node IP addresses.	String	scrubmount, mount, clone, failover, failovertest	Oracle, ConsistGrp
compressstreamsnap	Use compression for StreamSnap replication.	true or false	syncback	_____
encryptstreamsnap	Use encryption for StreamSnap replication. <i>Note: Only disable the encryptstreamsnap restore option under strict guidance of Support.</i>	true or false	syncback	_____

Restore Option	Description	Value	Restore Operation	AppType
mapdiskstoallclusternodes	Maps disks to all Actifio Resource Center appliance nodes Only maps disks to all cluster nodes in a Microsoft cluster. The command does not map to ESX hosts when mounting to a VMware VM. To mount to a VMware VM, use mapdiskstoallesxhosts .	true or false (default)	scrubmount, mount, restore, clone, failover, failovertest	_____
mapdiskstoallesxhosts	Map disks to all ESX hosts	true or false (default)	mount, restore, clone, failover, failovertest, scrubmount	_____
maponly	Map only, do not mount	true or false	mount, clone	LVM Volume
mountdriveperimage	Specify drive letter for the first mount volume; consecutive free drive letters are assigned for other volumes	String	scrubmount, mount, clone, failover, failovertest	_____

Restore Option	Description	Value	Restore Operation	AppType
mountdriveperdisk	<p>Specifies the drive letter for a specific volume. The mountdriveperdisk option requires the following format:</p> <p>option-<unique volume id>=value</p> <p>To properly specify the mountdriveperdisk restore option:</p> <ol style="list-style-type: none"> 1. Use the udsinfo lsbackup command to locate the volume uuid. Every volume in the backup image has a unique volume identifier. 2. Specify mountdriveperdisk in the format: <p>restoreoptionname-volumeuniqueid=restoreoptionvalue</p> <p>For example:</p> <pre>\$ udstask mountimage -image Image_0007344 -host oel65 -restoreoption mountdriveperdisk-dasvol:172.16.201.216:/myNFS=/mnt/test123</pre>	String	scrubmount, mount, clone, failover, failovertest	_____

Restore Option	Description	Value	Restore Operation	AppType
mountpointperdisk	<p>Specifies a mount point for a specific volume. The mountpointperdisk option requires the following format:</p> <p>option-<unique volume id>=value</p> <p>To properly specify the mountpointperdisk restore option:</p> <ol style="list-style-type: none"> 1. Use the udsinfo lsbackup command to locate the volume uuid. Every volume in the backup image has a unique volume identifier. 2. Specify mountpointperdisk in the format: <p>restoreoptionname-volumeuniqueid=restoreoptionvalue</p> <p>For example:</p> <pre>\$ udstask mountimage - image Image_0007344 - host oel65 - restoreoption mountpointperdisk- dasvol:172.16.201.216:/ myNFS=/mnt/test123</pre>	String	scrubmount, mount, clone, failover, failovertest	_____
mountpointperimage	<p>Specifies the root directory for all mount points.</p>	String	scrubmount, mount, clone, failover, failovertest	_____
provisioningoptions	<p>Specifies a path to a app-aware mount provisioning options. The provisioningoptions property indicates that this is an app-aware mount, regardless of the -appaware flag.</p> <p>Use the udsinfo lsappclass command to retrieve the supported appclass and its associated properties to include as the defined provisioning options.</p>	String	restore	_____

Restore Option	Description	Value	Restore Operation	AppType
recover	Recovery option for SQL Server to bring the database online. The appliance restores/ copies mdf/ldf files from the backup image and brings the SQL Server database online. Once the SQL Server database is online, Transaction logs can not be applied to the database.	String	restore	SQLServer Writer
reprotect	Directive in the provisioning options XML file to reprotect the application. Use the udsinfo lsappclass command to retrieve the supported appclass and its associated properties to include as the defined provisioning options.	Boolean	mount, mountstack	_____
restoremacaddr	Restore the MAC address of the network card.	Boolean	mount,clone, failover	VMBackup

Restore Option	Description	Value	Restore Operation	AppType
restoretype	<p>Recovery option for Oracle ASM instance to allow a restore image to be ASM-rebalance capable. When performing a restore using an ASM switch, the backup image will be mounted using an ASM switch. After the job completes, the image will be mounted and locked with the rebalance capable flag set. This image will be displayed under the Active Image tab in the AGM.</p> <p>The restoretype option requires the following format: restoretype=asmswitch,volgroupname=<diskgroup name>,asmracodelist=<node ip list> For example: <pre>\$ udstask mountimage -image Image_3350783 -restoreoption restoretype=asmswitch,volgroupname=ASMFSDG,asmracodelist=172.16.16.20 -host orac1</pre></p>	String	mount	Oracle, ConsistGroup
slpid	Specifies the SLP ID to use for the mount operation.	String	mount, mountstack	_____
sltid	Specifies the SLT ID to use for the mount operation.	String	mount, mountstack	_____
vmdkprovisionformatperdisk	Specifies the disk provisioning format for a specific volume	sourcevmdkformat - Use same data format as the source vmdk. thinprovisioned thickeagerzero provisioned thicklazyzero provisioned	restore and clone	VMBackup

Restore Option	Description	Value	Restore Operation	AppType
vmdkprovisionformatperimage	Specifies the disk provisioning strategy for all volumes	sourcevmdkformat - Use same data format as the source vmdk. thinprovisioned thickeagerzero provisioned thicklazyzero provisioned	restore and clone	VMBackup
volgroupname	Name of the volume group or storage pool to be used for discovered disks.	String	scrubmount, mount, clone, failover, failovertest	Oracle, ConsistGroup

