SARG (Simple Actifio Report Generator) User Guide

Actifio VDP 10.0

Contents

Preface

About this Guide

This guide provides detailed descriptions and syntax for Actifio's Simple Actifio Report Generator (SARG) commands. Also explains how to use each of the SARG command.

Intended Audience

This guide is intended for Actifio administrators. This guide assumes basic familiarity with the Actifio CLI, with data storage concepts, and with knowledge of VDP Appliances.

Actifio Appliances

Unless otherwise specified, all features and functions described in this document apply to all Actifio appliances.

Organization of This Guide

This guide includes the following chapters:

- **Chapter 1**, Getting Started with SARG on page 1.
- **Chapter 2**, Using SARG Commands on page 3.

Related Documentation

- ***Actifio CLI Reference Guide***: This guide provides detailed descriptions and syntax for Actifio's Command Line Interface (CLI). It also describes how to access the command-line interface using SSH.

Actifio Support and Service

Access these locations for help with your Actifio product suite:

Customer Support Numbers	**U.S. Toll-Free Number**: 1.855.392.6810 **From Anywhere**: +1.315.261.7501 **Australia**: 0011 800-16165656 **Germany**: 00 800-16165656 **New Zealand**: 00 800-16165656 **UK**: 0 800-0155019
Customer Support Email	support@actifio.com
Customer Support Portal	http://support.actifio.com/ When prompted, enter the user name and password provided by your Actifio representative.
General Information	http://www.actifio.com

1 Getting Started with SARG

The SARG tool uses the Actifio Command Line Interface (CLI) to provide on-demand reports. SARG combines useful Actifio CLI commands in scripts that are invoked by SARG commands. SARG requires Administrator user access to the Actifio CLI interface, but it does not require a deep understanding of how the Actifio CLI operates.

SARG command output is provided in text format, easily read on a wide screen in a single line, or placed in a CSV file for easy reporting. Available reports depend on software version and type of Actifio appliance.

This chapter introduces Simple Actifio Report Generator (SARG) tool. It includes:

Accessing the Command-Line Interface

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

1. Installing an SSH client on the host computer that you will use to access the Actifio appliance CLI. We recommend that you use PuTTY with the default installation options.
2. Generating an SSH public/private key pair on the host using either PuTTYgen or SSH-Keygen.
3. Uploading the SSH public key file to the Actifio appliance.
4. Configuring the SSH session on the host.

Details for these steps and more information about the Actifio CLI are in the ***Actifio CLI Reference***.

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

Using CLI Commands and SARG Commands

On Unix systems, you can send CLI commands using the SSH command like this:

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

On a Windows host, you might use **plink**. For example:

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

SARG commands are executed directly from the appliance command line:

```
reportorgusage
```

You can use reportlist to display all available SARG commands.

SARG commands are usually used with parameters. Parameters for each command are listed with the command description in Chapter 2, Using SARG Commands. Some of the most common parameters are introduced in Parameters on page 2.

Note: *SARG commands do not support applications or hosts that have a } in their name (a right hand curly bracket). The AGM does not allow you to create applications and hosts with this special character and VMware does not recommend you use it in VM names.*

Parameters

For each SARG command there are number of valid parameters. All the valid parameters are described within this document. Not every parameter works in every report. The meaning of a letter may change based on the report. The help message for each command shows which parameters are valid for that report. Parameter usage is case-sensitive and always lower case. These are common SARG parameters:

Table 1: Common SARG Report Parameters

Parameter	Description
-a <number>	To display information about a specific application using the application ID. To learn an application's appid, see Learning an Application's Appid.
-c	To display the report output in CSV format.
-d <number>	To display the backward-data, specify the number of days (last 5 days, last 10 days etc.). You can also specify decimal intervals such as 0.5 for half a day (12 hours). Example: `-d 5` displays the last five days data.
-l <number>	Change the length of the application name from the default value. The default value is specified for each report in its own section. The -w option is often a better choice.
-n	Exclude the header information.
-o	To print only orphan applications (protected or unprotected)
-p	To print only protected applications (no orphans or unprotected)
-s	To sort the data based on hostname/application name. The default sort order is based on application type/hostname/application name.
-t	To sort the data based on template/profile followed by hostname/application name.
-u	To print only unprotected applications (no orphans or protected applications).
-w	Change column width to exactly match the output data with no truncation.
-x	To print extra stats, this prints the totals of certain columns.
-z	To force an update of the statistics.

Learning an Application's Appid

To learn the appid for an application, open the AGM App Manager to the Applications list. From the upper right corner, select the Columns tool and add ID to the display. ID is the application's AppID used in SARG.

2 Using SARG Commands

This chapter details the following commands:

Non-admin users can execute the following SARG command at the appliance command line:

- reportsnaps
- reportdedups
- reportstats
- reportstreamsnaps
- reportjobs
- reportliveclones
- reportdarusage
- reportdedupasyncs
- reportmounts
- reportonvaults
- reportcanceledjobs
- reportfailedjobs
- reportexpires
- reportrestores
- reportremotededups
- reportclones
- reportdirectdedups
- reportrpo
- reportrunningjobs
- reportunprotected

Note: *All commands except reportiostats and reportperfstats will show double quote for all fields when printed in CSV mode.*

---

reportadvancedsettings

Use this command to show all the advanced policy options that are set for each SLA type:

- These are normally set using the Advanced Settings section for each application in the GUI.
- They can be displayed using udsinfo lspolicyoption

Note: *Only consistency groups are shown since applications inside a consistency group do not have an SLA.*

The following options are available (invalid parameters will be ignored):

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by AppID or SLAID or AppName. Names with spaces or special characters will need to be encased in single quotes.
-o <name>	Display just one policy option.
-s <sltid>	Display an example command to recreate that policy option with a different SLT ID.
-w	Print using fixed width columns This is best used with **-a** or **-o** or **-t** to limit option quantity.
	Optionally, one (and only one) of the following application types can be entered: **-tb** Actifio NAS Director **-tc** CIFS **-tcg** ConsistGrp **-tcg** ConsistGrp **-td** DB2 or DBInstance **-te** Microsoft Exchange **-tf** FileSystem **-tg** Consistency Group **-th** Microsoft Hyper-V **-tl** LVM Volume **-tn** NFS **-to** Oracle **-ts** Microsoft SQL Application Types **-tsh** SAPHANA **-tss** SystemState **-tsy** SYBASE or SYBASEInstance **-tv** VMBackup **Note:** *If your App Type is not listed as an option, you can search for it using the friendlytype listed by reportapps.*

Note: *Blank fields will always print a dash in CSV mode as well as Wide mode. This prevents header mismatch in restful API mode.*

Default Sort Order

The default sort order is by **application type**, followed by **host name** and then **application name**.

- It is very important to note that only used policy options are shown.
- If an application has a policy option set, then it will be listed.
- If an application is not using any policy options then it will not be listed.

reportappcount

Use this command to count the number of applications of each type.

> ***Note:*** *SQLServer apps will be counted as protected if they are in a protected Consistency Group or if they are in a protected instance where they are not excluded. This means that if you have 5 protected SQL instances where each instance has 5 SQL DBs, then you will see 5 protected instances and 25 protected SQL DBs even though the SQL DBs are not discreetely protected.*

Valid Parameters

The following are the valid parameters:

Parameter	Use this Parameter to:
-c	Display the report output in Comma Separated Value (CSV) format.
-n	Exclude header information.
-x	Include the header information in the output, use this to print the total columns.

Example CLI Commands

Use the ***udsinfo lsapplication*** command to find out specific application types.

Example: *udsinfo lsapplication -filtervalue friendlytype=CIFS*

The `friendlytype` field is case sensitive, so FileSystem produces results, while filesystem does not produce any result. An example to display VMs is shown:

```
udsinfo lsapplication -filtervalue friendlytype=VMBackup
```

Valid application types are:

VMBackup **`udsinfo lsapplication -filtervalue friendlytype=VMBackup`**

Oracle **`udsinfo lsapplication -filtervalue friendlytype=Oracle`**

NFS **`udsinfo lsapplication -filtervalue friendlytype=NFS`**

CIFS **`udsinfo lsapplication -filtervalue friendlytype=CIFS`**

SQL Server **`udsinfo lsapplication -filtervalue friendlytype=SQLServer`**

Exchange **`udsinfo lsapplication -filtervalue friendlytype=Exchange`**

Hyper-V VSS Writer **`udsinfo lsapplication -filtervalue friendlytype="Microsoft Hyper-V VSS Writer"`**

Mapped FileSystem **`udsinfo lsapplication -filtervalue friendlytype=FileSystem`**

Generic **`udsinfo lsapplication -filtervalue friendlytype=Generic`**

NAS **`udsinfo lsapplication -filtervalue friendlytype=xxx`**

LVM **`udsinfo lsapplication -filtervalue friendlytype=xxx`**

Other Apps **`udsinfo lsapplication -filtervalue friendlytype=xxx`**

Typical Output

The following is sample output from the **reportappcount** command:

```
Actifio:sa-hq:admin> reportappcount
App Type              Protected Unprotected     Total Protected(%)
CIFS Shares                   0           0         0          0%
Exchange Databases            2           0         2        100%
FileSystems                   5          73        78          6%
Generic Apps                  1           0         1        100%
Hyper-V VMs                   3           0         3        100%
LVM Volumes                   0           0         0          0%
NAS                           2           2         4         50%
NFS Shares                    0           0         0          0%
Oracle Databases              6           5        11         55%
SQL Databases                13          99       112         12%
VMWare VMs                   24          30        54         44%
Other Apps                    0           0         0          0%
```

Related Commands

Command	Use this Parameter to:
reportlist	Displays the full list of available reports.

reportapps

Use this command to list all applications that are or should be consuming MDL. If an application is NOT consuming MDL then it will not be listed regardless of search options.

The ignored column displays the applications that are marked as ignored. If ignored is set to true then this shows a protected application is being ignored, which should be corrected as the expected value for a protected application is false.

To appear in this report, the VDP Appliance needs to have created at least one image of the app. All stats are only updated once every 24 hours at 3am. You can run with -z to force an update.

Statistics

The following statistics are provided for each application:

Statistic	Description
Virtual Size (GB)	Actual size of the disks that make up the application.
MDL Consumption	Consumption is based on used data or device size depending on the application type.
Stage (GB)	Amount of snapshot pool used by staging disks.
Snaps (GB)	Amount of snapshot pool used by snaps of the staging disks.
Total (GB)	Total sum of the staging disks and snapshots.
DedupImages	Deduplication images created for the application.
PostCompress (GB)	Amount of new data written to the Dedup pool in last 30 days.
LastExpiration	The expiration date of the last image to be expired for this application.
StatDate	Date that MDL and Snapshot pool usage was last calculated at (shown only in CSV mode).

Note: *Any value lower than 0.05 GB is rounded to zero. Use* ***-c*** *to get more decimal places.*

Valid Parameters

The following are the valid parameters:

Parameter	Use this Parameter to:
-a <ID/Name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes. ***Note:*** *If a host ID is used, then all protected and/or MDL consuming apps from that host will be displayed.*
-c	Display the report output in CSV format.
-d <number>	Display a different number of days of post compress data (instead of 30).
-e	Exclude reprotected apps (apps created from mounts). Orphan apps will appear if the depth value of this apps images is 0 indicating this app did not come from a mount.
-f	Display the parent child family relationships. This output is formatted differently. You can use this with **-a** and **-p**. ***Note:*** *This currently does not work with Consistency Groups.*
-i	Print any database instance if present. For example, it prints SQL Instance information for SQLServer apps and MySQL instance for MySQL apps.
-k <SLT ID/ Name>	Only show protected applications using a specified SLT/SLP ID or SLT/SLP name. Use reportpolicies to get SLT IDs or reportprofiles to get SLP IDs. Names with spaces need to be encased in quotes. Case is ignored, so if you have two SLTs with names Gold and gold, both will be shown.
-l <number>	Change the length of the application name from the default value of 26 characters.
-n	Exclude the header information.
-o	Print only orphan applications (no protected or unprotected).
-p	Print only protected applications (no orphans or unprotected). If used with **-f** it shows only top parent apps. If used with **-f** and **-a** it shows the family if the specified app is a top parent.
-r	Print hosts with repeat protection where data could be being protected twice.
-s	Sort the data based on hostname/application name. The default sort order is based on application type/hostname/application name.
-t	Sort the data based on template/profile followed by hostname/application name.
-u	Print only unprotected applications (no orphans or protected applications).
-w	Change column width to exactly match output data with no truncation.
-x	Print extra stats, this prints the totals of certain columns.

Parameter	Use this Parameter to:
-y	Display remote applications that have images on this appliance.
-z	Force an update of the statistics.

Default Sort Order

The default sort order is by **application type**, followed by **host name**, and **application name**.

- Use **–s** option to sort the data by host name followed by application name.
- Use **–t** option to sort the data by policy template first followed by host name and application name.

Example CLI Commands

The **`reportapps`** command uses the output of various ***`udsinfo`*** commands as mentioned below:

- **`udsinfo lssla`** to find the protected applications using the application ID.
- **`udsinfo lsslt`** to get the policy template name.
- **`udsinfo lsslp`** to get the profile name.
- **`udsinfo lsapplication`** to get the application name.
- **`udsinfo lshost`** to get the host name.
- **`udsinfo lsmdlstat`** to get the MDL statistics.
- **`udsinfo lssnappoolstat`** to get snapshot pool usage.

Typical Output

The following is sample output from the **`reportapps`** command:

```
Actifio:sa-hq:admin> reportapps
```

AppType	HostName	AppName	AppID	Template	Profile	Ignored	VirtSize(GB)	MDL(GB)	VDisks	Stage(GB)	Snaps(GB)	Total(GB)	Dedups	PostCompress(GB)	LastExpirationDate
ConsistGrp	demo-sql-4	AV_CG	23385555	Gold	Remote Profile	false	71.9	0.0	5	0.1	0.0	0.1	33	0.006	2016-11-24 19:00
ConsistGrp	hq-sql	smalldbCG	25983008	Silver	Local Profile	false	557.4	18.0	5	0.2	0.0	0.2	12	0.002	2016-12-03 11:28
Exchange	hq-exchange	In-Band	106713	Silver	Local Profile	false	100.0	3.4	4	0.0	0.0	0.0	12	0.005	2016-12-03 11:02
Exchange	hq-exchange	Mailbox Database 011315687	10012	Platinum	Remote Profile	false	557.4	1.0	4	1.5	0.0	1.5	26	0.006	2100-01-01 00:00
FileSystem	hq-sql	C:\	20941151	Silver	Local Profile	false	557.4	73.5	5	43.8	6.1	49.9	12	1.256	2016-12-03 11:26
FileSystem	hyper-v-sql	C:\	25960582	Silver	Local Profile	false	47.9	16.9	5	17.6	2.2	19.8	12	0.867	2016-12-03 11:14
FileSystem	Oracle-Prod	/	20975829	StreamSnap	Remote Profile	false	60.0	4.3	4	7.4	0.2	7.5	0	0.000	2100-01-01 00:00
FileSystem	Oracle-Prod	/boot	20975830	Vault	Google NearLine	false	0.6	0.1	3	0.1	0.0	0.1	0	0.000	2016-11-27 23:01
FileSystem	Oracle-Prod	/home	20975831	Silver	Local Profile	false	54.7	16.0	5	18.8	12.3	31.1	11	1.730	2100-01-01 00:00
Generic	hq-sql	inbandb	22197596	Silver	Local Profile	false	2048.0	2048.0	0	0.0	0.0	0.0	11	0.000	2016-11-05 12:01
Microsoft Hyper-V	hyper-v-linux	Hyper-V-Linux	22589607	Gold	Remote Profile	false	32.0	3.3	5	2.8	0.6	3.4	31	1.155	2016-12-03 11:05
Microsoft Hyper-V	hyper-v-sql	Hyper-V-SQL	25909050	Silver	Local Profile	false	80.0	22.5	5	25.0	2.0	27.0	12	20.059	2016-12-03 11:18
Microsoft Hyper-V	scvmm-prod	SCVMM-Prod	22589642	Silver	Local Profile	false	72.0	55.8	5	52.0	2.3	54.3	12	1.460	2016-12-03 11:06
nas	isilon-cluster	NFS-Large	22535916	Snap Only	Local Profile	false	100.0	81.5	7	82.7	0.1	82.7	0	0.000	2016-11-03 16:25
nas	isilon-cluster	NFS-Small	22522086	Snap Only	Local Profile	false	100.0	11.8	7	14.1	0.0	14.2	0	0.000	2016-11-03 16:23
Oracle	Oracle-Mask-Prd	dmdb	17433999	Snap Only	Local Profile	false	50.0	1.5	9	1.7	4.2	5.9	0	0.000	2100-01-01 00:00
Oracle	Oracle-Prod	bigdb	20837997	Silver	Local Profile	false	1653.7	1102.5	12	1103.5	3.6	1107.0	12	1.289	2100-01-01 00:00
Oracle	Oracle-Prod	localdb	25178160	Cloud	AWS Profile	false	50.0	1.6	6	1.8	0.9	2.7	1	1.357	2100-01-01 00:00
Oracle	Oracle-Prod	smalldb	27095220	Silver LogSmart	Local Profile	false	50.0	1.5	7	2.4	0.6	3.0	10	0.815	2016-11-27 11:30
Oracle	oracle-rac-1	racbigdb	21681349	Silver LogSmart	Local Profile	false	2000.0	1330.0	16	1332.3	4.3	1336.6	11	2.420	2016-11-27 11:17
Oracle	oracle-rac-1	tmpdb	27641203	Vault	Amazon S3	false	50.0	2.4	3	2.7	0.5	3.2	2	0.642	2016-11-27 23:01
SQLServer	hq-sql	bigdb	20941152	Silver	Local Profile	false	2457.4	1972.2	9	1022.2	0.0	1022.2	12	0.003	2100-01-01 00:00
SQLServer	hq-sql	localdb	25178171	Cloud	AWS Profile	false	2457.4	6.0	6	0.2	0.0	0.2	1	0.003	2100-01-01 00:00
SQLServer	hq-sql	smalldb	20941648	Silver LogSmart	Local Profile	false	557.4	6.0	15	0.6	0.1	0.6	11	0.001	2016-12-03 11:30
SQLServer	hq-sql	tdedb	26697505	Snap Only	Local Profile	false	2457.4	0.2	7	0.3	0.0	0.3	0	0.000	2016-11-03 16:38
SQLServer	SQL-AAG-CLUSTER	aagdb	21907405	Silver	Local Profile	false	168.0	0.2	5	0.3	0.0	0.3	12	0.001	2016-12-03 11:08
SQLServer	SQL-AAG-CLUSTER	aagdb2014	22642347	Silver	Local Profile	false	71.9	0.2	5	0.3	0.0	0.3	12	0.001	2016-12-03 11:03
SQLServer	SQL-CLUSTER	clusterdb	23827689	Silver	Local Profile	false	48.0	0.0	5	0.1	0.0	0.1	12	0.001	2016-12-03 11:04
SQLServer	sql-masking-prod	unmasked	20990406	Gold	Remote Profile	false	48.0	0.0	14	0.1	0.2	0.3	33	0.003	2100-01-01 00:00
VMBackup	ansible	Ansible	22672364	Vault	Amazon S3	false	32.0	32.0	4	10.0	0.6	10.6	0	0.000	2016-11-27 23:01
VMBackup	demo-mgmt-10	Demo-Mgmt-10	20929541	Daily Dedup Async	Remote Profile	true	60.0	60.0	4	53.4	0.1	53.5	1	0.499	2100-01-01 00:00

Related Commands

Command	Description
reportgroups	Displays a report on all applications in protected groups.
reportlist	Displays the full list of all available reports.
reportunprotected	Displays a list of applications that are not protected.

reportcloneconsumption

Use this command to report on list space consumption by parent and child applications.

If you specify no parameters, you will get all applications and the space they consume.

There are three possible 'Types':

- **Parent**: This is a source production app. If the parent app ID is 0, it is not a child of another app. Parent apps only report space consumption for their own images, but not the space consumed by any mounts of those images.

  If a parent image should have expired, but it is held by a mount, the space consumed by that snapshot will be reported against the child app or apps (the mounts).

  If a unexpired snap is consuming 2 GB and has two mounts, each mount will report 1 GB of consumption with a max consumption of 2 GB.

  The max consumption is reported because if one mount is deleted, the other mounted child app will now report 2 GB even though it did not change anything.
- **Child**: This is an app created by a mount of a parent image. Space consumed by the mount and by any snapshots of the mount, or re-protected mounts of this mount will appear here. Space consumed by unexpired snapshots of a parent app will also be reported against the child app.
- **Image**: If a mount is not app-aware, then the space consumed by the mount and a portion of the source snapshot (if it has missed expiration) will be reported against the mount image.
- **Orphan**: This is an app that has been deleted but still has unexpired images.

Statistics

The following statistics are provided for each application:

Statistic	Description
SnapData(GB)	Shows the space consumed in the snapshot pool for staging and snapshots of data.
MaxSnapData(GB)	Applies only to unexpired snaps, held in place by a mount.
SnapLogs(GB)	Shows the space consumed in the snapshot pool for staging and snapshots of logs.
Dedup(GB)	Shows the space consumed in the dedup pool for all retained images.

Dedup data is calculated using the overall data reduction ratio for the appliance, not the rate for each individual application. Individual application change rate is taken into consideration.

If the Type is not an Image, then the UniqueID is an Application ID. If the Type is Image, then the UniqueID is an Image ID.

Default Sort Order

The default sort order is by Parent App, followed by host name, and application name.

Valid Parameters

The following are the valid parameters:

Parameter	Use this Parameter to:
-a <ID/Name>	Display a specific application by ID or Name. **Note:** *The AppName needs to be unique.*
-c	Display the report output in CSV format.
-k	Display only child and Image application.
-l <number>	Change the length of the application name from the default value of 25 characters.
-m	Show mounted space consumption of child apps separately. This uses different headers to show the split.
-n	Exclude the header information.
-s	Sort the data based on hostname/application name only.
-t	Sort the data based on template/profile followed by hostname/application name.
-w	Change column width to exactly match output data with no truncation.

Typical Output

The following is sample output from the **`reportcloneconsumption`** command:

```
  ParentAppID        AppID     UniqueID ParentAppName             Type                HostName                     AppName                     S
napData(GB)  MaxSnapData(GB)      SnapLogs(GB)          Dedup(GB)
      6548426            0      6073858 /stand                    Host                hpvm16.sqa.actifio.com       NonAppAwareMount
       0.002            0.002                0.000          0.000
      6546320      6550473      6550473 cdbpqa                    Child               asmdev02                     satdb
      11.965           11.965                0.000          0.000
     17024036     17379570     17379570 CG-lin24-OracFS           Child               lin1qa116-24.sqa.actifio.    CG-lin24-inband
       4.235            4.235                0.000          0.000
     17024036     17732176     17732176 CG-lin24-OracFS           Child               lin1qa116-24.sqa.actifio.    HeyItWorks
       4.023            4.023                0.000          0.000
       195429            0       195105 datastore1                Host                nala.sqa.actifio.com         NonAppAwareMount
       0.001            0.001                0.000          0.000
     12307374            0     13424561 fsdb                      Host                172.16.157.135               NonAppAwareMount
       1.910            1.910                0.000          0.000
```

Related Commands

Command	Description
reportlist	Displays the full list of all available reports.

reportaudit

This report allows you to search the audit log. It is not recommended to just run the report without parameters as the audit log is very deep and verbose. Instead use it to search for audit entries against a particular application ID (with -a), username (with -u), job search needed (with -j), job is more than two days old (-d) Or use it to search for on demand jobs (with -o).

Valid Parameters

The following are the valid parameters:

Parameter	Use this Parameter to:
-a <ID/Name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-c	Display the report output in CSV format.
-d <number>	Display a different number of days backwards from now (default is 1).
-f	Display workflow run commands.
-i <ipaddr>	Display audit entries from a specific source IP.
-j <jobname>	Display audit details about a job name.
-l <number>	Manage the no. of lines of output when no other filter is used.
-m <command>	Search for entries that have the specified command. Use single quotes if your search contains spaces.
-n	Exclude the header information.
-o	Show On-demand jobs.
-t	Show top users of VDP Appliance. This counts on-demand jobs run by user. Default is day 1 of job history.
-u <username>	Search by user ID.
-w	Change column width to exactly match the output data with no truncation.

Note: *The* ***-j*** *and* ***-t*** *options cannot be combined with other options.*

reportcanceledjobs

Use this command to see all canceled jobs. If you do not specify any parameters, this command lists the canceled jobs for the last two days.

Valid Parameters

The following are the valid parameters:

Parameter	Use this Parameter to:
-a <ID/Name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-c	Display the report output in CSV format.
-d <number>	Display a different number of days backwards from now.
-l <number>	Change the length of the application name from its default 20 characters.
-n	Exclude the header information.
-s	Sort the data by hostname/appname rather than by start date.
-w	Change column width to exactly match the output data with no truncation.

Example CLI commands

The following commands shows the canceled jobs in last two days:

```
udsinfo lsjobhistory -filtervalue status=canceled\&"jobhistory since 2 days"
```

To cancel a job:

Use the command **reportrunningjobs** to find a running job. Then use **udstask chjob -changerequest cancel < job ID >**

Example: **udstask chjob -changerequest cancel Job_1234567**

Related Commands

Command	Description
reportlist	Displays all the full list available reports.

reportclonedisks

This report lists the clone disks that are created by non-VMware related clone jobs. VMware clones are created in the VMware data store and do not consume Snapshot pool space so they are not listed here. These are also not Live Clones (that are tracked like snapshots).

> ***Note:*** *To remove clones, the disks need to be unmapped from any hosts and then deleted. Contact Actifio support before proceeding.*

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <ID/Name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-c	Change the output to comma separated variable (CSV).
-n	Exclude the header information.
-s	Sort the data on Host name/App Name rather than on VDisk name.
-w	Change column width to exactly match output data with no truncation.

reportclones

Use this command to list clone type jobs. If no parameter is specified, the last two days clone type jobs are reported.

Valid Parameters

The following are the valid parameters:

Parameter	Use this Parameter to:
-a <ID/Name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-c	Display the report output in CSV format.
-d <number>	Display a different number of days backwards from now.
-e	Display every job regardless of status. This lets you see failed and canceled jobs.
-j <jobname>	To display all mount and migrate jobs that had the same source ID as the specified Job. You must use jobname, like Job_1234. Note that option also automatically sets the days search to maximum unless you override this with -d xx.
-n	Exclude the header information.
-s	Sort the data by hostname/application name. The default sort order is by date and then hostname/application name.
-S <imageID>	Display all mount and migrate jobs that had a specified source ID like Image_10812770. This option will also show the mount job that is being cloned. Note that option also automatically sets the days search to maximum unless you override this with -d xx.
-w	Change column width to exactly match the output data with no truncation.

Note: *If the user who issued this command is an AGM User, they will be reported as AGMUser. You may see also see this refered to as momuser, which is the same thing.*

The options -j and -S are used to learn all the jobs that were part of one mount and migrate operation.

In either case you may want to also consider using -e since this shows any job that failed or was canceled.

With option -j you start with a jobname and the report will show any job that used the same source ID, since all mount and migrates start with a mount, which creates the source for the operation.

With option -S you specify the actual source ID, like Image_5678. You can learn the source ID by running reportclones without any options.

Example CLI commands

The following command shows all the successful clone jobs:

```
udsinfo lsjobhistory -filtervalue jobclass=clone\&status=succeeded
```

Typical output

The following is sample output from the command:

```
[10:08:59] atlantic:~ # reportclones -d 40
StartDate StartTime  JobName      JobClass  HostName       AppName        AppID TargetHost     Duration  VirtSize(GB)  AppSize(GB) DedupRestored(GB) DataCopied(GB)
2018-02-15 06:42:00  Job_0116446   clone     sql2012vm06    SQL2012VM06    93947 sql2012vm06    00:01:21          96.0         0.0             0.0            0.0
2018-03-05 02:26:34  Job_0393023   clone     mrvm2          MRVM2         340720 CloneVM        00:07:02           1.2         0.0             0.0            0.0
2018-03-07 05:00:14  Job_0474620   clone     dd1            DD1           471610 dd-cloned      00:11:42           1.2         0.0             0.0            0.0
2018-03-16 03:13:49  Job_0876350   clone     workflowvm     workflowvm    734892 newvmhv        00:07:21           1.2         0.0             0.0            0.0
```

reportcompliance

This command reports on compliance status using the compliance feature.

For each job class, an application can either be Compliant, Pending, Non-Compliant or have an Unknown compliance status. If an application has multiple policies in a job-class, then the least compliant result will be shown, so if an application is protected by two snapshot policies and one is Compliant but one is Non-Compliant, then the application shows as non-compliant for that job class.

There are four possible compliance status messages:

- **Compliant**: All policies in the job class are compliant.
- **Non-Compliant**: At least one policy in the job class is not compliant.
- **Pending**: At least one policy is waiting for a job to run within the compliance period.
- **NotStarted**: All policies in that job class have not entered their compliance measurement period.

Note: *Not Started might be shown as undefined when displayed using: udsinfo lscompliancestatus.*

Note: *The reportcompliance command only returns output when version2 of SLA analysis is in use.*

To validate which version of SLA analysis the Appliance is using, use the following command (expected results are version1 or version2):

```
udsinfo getparameter -param slaAnalysis.analysisType
```

If you are using version2, then you will see the output in the reportcompliance command.

To toggle between versions, use either:

```
udstask setparameter -param slaAnalysis.analysisType -value version1
udstask setparameter -param slaAnalysis.analysisType -value version2
```

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <ID/Name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-c	Change the output to comma separated variable (CSV).
-l <number>	Change the length of the application name from the default of 20 characters.
-m	Only print apps where at least one policy shows as Non-Compliant. If no policies show as Non-Compliant, that app won't be printed.
-n	Exclude the header information.
-s	Sort the data on Host name/Application Name rather than apptype/hostname/appname.
-t	Sort the data on template/profile first and then followed by host/application name.

Parameter	Use this Parameter to:
-w	Change column width to exactly match output data with no truncation.

Default Sort Order

The default sort order is by **Application Type**, followed by host name and then application name. If you wish to sort by template use the **-t** option, this makes it easier to spot SLA misses.

Consistency groups are always shown by default. Individual applications inside a Consistency Groups are not listed.

- To get a detailed view of compliance, use this command: *udsinfo lscompliancestatus*
- To get a detailed view of all policies, use this command: *udsinfo lspolicystatus*

reportconnectoroptions

Use this command to list the options set for Actifio Connector based snapshots. You can set these options using the Advanced Settings tab of each application and also using the **`udstask mkpolicyoption`** command.

Examples of policy options include *startpaths*, *prunepaths* and *excludepatterns*.

Valid Parameters

The following are the valid parameters:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by AppID or SLAID or AppName. Names with spaces or special characters will need to be encased in single quotes.
-o <name>	Display just one policy option.
-s <sltid>	Display an example command to recreate that policy option with a different SLT ID
-w	Print using fixed width columns. This is best used with **-a** or **-o** or **-tx** to limit option quantity.

Example CLI commands

These options are also displayed with the command **`udsinfo lspolicyoption`**.

Related Commands

Command	Description
reportlist	Displays all the full list available reports.

reportconnectors

Use this command to see the Actifio Connector versions installed on your hosts. Using this command, you can detect the hosts with down level connectors. If the host is not listed, then you have not installed the connector or not performed the Application Discovery to discover applications. To check a specific host for an updated connector, run the below mentioned command, changing XX for the host ID:

```
udstask appdiscovery -versiononly -host xx
```

If you do not know the host ID, use the **-e** option as described in the parameter section. The version check column shows the comparison between the installed version and the latest version available with the Actifio appliance:

- **Current Release**: Means no action is required.
- **Upgrade Needed**: Means the Connector running on the host must be upgraded.
- **Newer Version**: Means the Connector running on the host has a version higher than that available on the Actifio Appliance.

To upgrade your connector, use the below mentioned syntax where xxxx and yyyy and zzzz are host IDs separated by colons. You can specify just one host ID or multiple host IDs but ensure that they are separated by colons:

```
udstask upgradehostconnector -hosts xxxx:yyyy:zzzz
```

Note: *with* ***-u*** *option, you will get one command per host, but you cannot issue two upgrade commands at the same time. so either upgrade one host at a time or merge the host IDs into one command, separating the host IDs with full colons.*

Default Sort Order

The default sort order is by platform and then host name. Use the **-e** option to sort the data by host name. The **-e** option will be ignored if also specified with **-s** or **-u**.

Valid Parameters

The following are the valid parameters:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by AppID or SLAID or AppName. Names with spaces or special characters will need to be encased in single quotes.
-b	Only shows hosts that are set to created Block format staging disks.
-c	Display the report output in CSV format.
-e	List every host regardless of whether it has a connector installed.
-f	Only shows hosts that are set to created NFS format staging disks.
-n	Exclude the header information.
-s	Display a simple numerical count of up level and down level connectors.
-u	Display the hosts where the connector version does not match with the Actifio Appliance version.

Parameter	Use this Parameter to:
-w	Change column width to exactly match the output data with no truncation.

Disk Pref is used to determine whether images created by this host are formatted for NFS or for block IO (iSCSI or FC). If guestvmiscsi is enabled, this will be shown under disk preference.

Example CLI commands

The following command shows the hosts with an installed connector:

```
udsinfo lshost -filtervalue hasagent=true
```

The following command shows all the available connectors:

```
udsinfo lsavailableconnector
```

Typical output

The following is sample output from the command:

```
[06:48:18] atlantic:~ # reportconnectors
Platform  Hostname              OSType                                          HostID IPAddress       DBAuth  InstalledVersion          AvailableVersion  VersionCheck     DiskPref
Physical  172.27.7.151          Linux (Red Hat Enterprise Linux Server release 6.5)  872971 172.27.7.151    Host    7.1.9.901                 8.1.0.938         Upgrade Needed   Block
Physical  78-sles11             Linux (3.0.101-63-default)                      216478 172.29.11.78    Host    7.0.7.867 HotFix 1317     8.1.0.938         Upgrade Needed   Block
Physical  clu05                 Win32 (Microsoft Windows Server 2012 R2)        643523 172.16.107.212  DB      8.1.0.904                 8.1.0.938         Upgrade Needed   Block
Physical  clu06                 Win32 (Microsoft Windows Server 2012 R2)        644254 172.16.107.213  DB      8.1.0.904                 8.1.0.938         Upgrade Needed   Block
Physical  hyperv1               Win32 (Microsoft Windows Server 2016)           339113 192.168.16.209  DB      8.1.0.798                 8.1.0.938         Upgrade Needed   Block
Physical  OracleVM              Linux (Red Hat Enterprise Linux Server release 6.5)  268674 172.22.3.210    Host    8.0.3.420                 8.1.0.938         Upgrade Needed   Block
Physical  parasccm01.paradise.loc Win32 (Microsoft Windows Server 2012 R2)      256334 172.16.9.174    DB      7.1.1.766                 8.1.0.938         Upgrade Needed   Block
Physical  rhone.sqa.actifio.com Win32 (Microsoft Windows Server 2008 R2)         61313 172.16.9.28     DB      7.1.1.766                 8.1.0.938         Upgrade Needed   Block
Physical  sql2008phy04.paradise.l Win32 (Microsoft Windows Server 2008 R2)      44473 172.16.158.34    DB      8.0.3.286                 8.1.0.938         Upgrade Needed   Block
```

Related Commands

Command	Description
reportlist	Displays all the full list available reports.

reportcons

Run the reportrpo command to get the required information.

reportconsumption

Use this command to list the space consumption by application, If you do not specify any parameters it displays the details of all applications and the space they consume.

Log data is not broken out in space consumed by mounts, and children applications are not reported individually. Dedup data is calculated using the overall data reduction ratio for the appliance, not the rate for each individual application. Individual application change rate is taken into account.

Statistics

The following statistics are provided for each application:

Statistic	Description
SnapData(GB)	Shows the space consumed in the snapshot pool for staging and snapshots of data.
SnapLogs(GB)	Shows the space consumed in the snapshot pool for staging and snapshots of logs (if applicable).
SnapMounts(GB)	Shows the space consumed in the snapshot pool for mounts, including all children applications.
Dedup(GB)	Shows the space consumed in the dedup pool for all retained images, including space consumed by children apps and protection of those apps (of applicable).

Additional information for Dedup(GB):

This is the proportion of dedup pool usage attributed to this application based on active images.

Note: *The value shown may not be clear since dedup is a shared pool meaning exact usage cannot be calculated.*

For instance, if you expire all dedup images for an app, you will not necessary recover anywhere near the value shown (due to shared blocks). Also, the first app to write a block effectively owns the space usage for that block, meaning images for other apps that use this block effectively get the space for free.

Note: *The apps that have recently made full ingests into the dedup pool will appear to own more of the pool until the images that did the full ingest expire.*

Valid Parameters

The following are the valid parameters:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or appname. The AppName needs to be unique. ***Note:*** *If the application is not a local app, then you should search with App ID and not with name.*
-c	Display the report output in CSV format.
-l <number>	Change the length of the app name from the default of 20 characters.

Parameter	Use this Parameter to:
-n	Exclude the header information.
-w	Change column width to exactly match the output data with no truncation.
-x	when used with **-c** or **-w**, it will sum the columns.

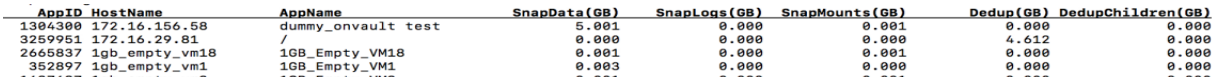
Example CLI Commands

The following command shows the specific application by ID:

reportconsumption -a 1845105

Typical output

The following is sample output from the command:



AppID	HostName	AppName	SnapData(GB)	SnapLogs(GB)	SnapMounts(GB)	Dedup(GB)	DedupChildren(GB)
1304300	172.16.156.58	dummy_onvault test	5.001	0.000	0.001	0.000	0.000
3259951	172.16.29.81	/	0.000	0.000	0.000	4.612	0.000
2665837	1gb_empty_vm18	1GB_Empty_VM18	0.001	0.000	0.001	0.000	0.000
352897	1gb_empty_vm1	1GB_Empty_VM1	0.003	0.000	0.000	0.000	0.000

reportdaily

Use this command to list the daily status. It shows the successful jobs count for each class in the last 24 hours (or longer if desired). If Production Mirroring (Dedup Async or StreamSnap) is in use, it also shows the consistency date of the last replicated image. Applications in consistency groups are not listed. You can use **reportgroups** to list them.

This report now ignores applications where the scheduler is disabled unless you also use the **-o** parameter.

Statistics

The following statistics are provided for each job:

Statistic	Description
AppSize (GB)	The size of the data being used by the application.
DataCopiedMB (GB)	The new data found by the snapshot for the particular job.

Valid Parameters

The following are the valid parameters:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-b	Only display any DB type app that has an SLT that requests log backup but didn't perform at least one log backup in the examined period.
-c	Display the report output in CSV format.
-d <number>	Display a different number of days backwards from now.
-f <fields>	Decide which fields you want displayed and in which order. Field names must be comma separated and must be valid. Case is not important. Valid fields are any mix of the following: Logs,Snaps,D2D,Dedup,RemDup,ProdMirror,OnVault,Failed,ProdMirrorDate,NotRun,Canceled,Running,Mounts
-n	Exclude the header information.
-o	Display applications where the scheduler is disabled.
-s	Sort the data on hostname/appname rather than apptype/hostname/appname.
-t	Sort the data by template/profile first and then followed by type/host/app name.
-x <hours>	Display a different number of hours backwards from now (will override days selection)

Parameter	Use this Parameter to:
-z <number>	Display apps that did not complete at least the specified number of Snaps+Log jobs.

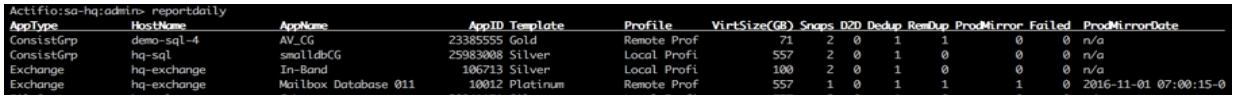
Example CLI Commands

The following command shows all successful jobs for the application ID 1234567 in the last two days.

```
udsinfo lsjobhistory -filtervalue appid=1234567\&"jobhistory since 2 days"\&status=succeeded
```

Typical Output

The following is sample output from the command:



```
Actifio:sa-hq:admin> reportdaily
AppType      HostName      AppName              AppID Template  Profile      VirtSize(GB) Snaps D2D Dedup RemDup ProdMirror Failed  ProdMirrorDate
ConsistGrp   demo-sql-4    AV_CG             23385555 Gold      Remote Prof          71     2   0     1      1          0      0 n/a
ConsistGrp   hq-sql        smalldbCG         25983008 Silver    Local Profi         557     2   0     1      0          0      0 n/a
Exchange     hq-exchange   In-Band             106713 Silver    Local Profi         100     2   0     1      0          0      0 n/a
Exchange     hq-exchange   Mailbox Database 011  10012 Platinum  Remote Prof         557     1   0     1      1          1      0 2016-11-01 07:00:15-0
```

Related Commands

Command	Description
reportlist	Displays the full list of available reports.

reportdailyfailures

Use this command to assess the failure jobs status on daily basis. It shows the failed jobs count in each listed job class in the last 24 hours (or longer if desired). If the total jobs are non-zero, but no other failures are listed, look for job types like failed mounts, clones, or restores. Applications within the consistency groups are not listed (only the group name is displayed). You may use the reportgroups command to see the contents of a group.

Default Sort Order

The default sort order is by Application Type, followed by hostname, and application name. Use the **-t** option to sort the data by template.

Statistics

The following statistics are provided for each job:

Statistics	Description
AppSize (GB)	Size of the data being used by the application.

Valid Parameters

The following are the valid parameters:

Parameter	Use this Parameter to:
-a <appid>	Display information about a specific application using the application ID.
-c	Display the report output in CSV format.
-d <number>	Display a different number of days backwards from now.
-l <number>	Change the length of the application name from its default value of 20 characters.
-n	Exclude the header information.
-s	Sort the data by hostname/application name rather by application type/hostname.
-t	Sort the data by template/profile first (then type/host/application name)

Example CLI commands

The following command shows the failed jobs for application ID 1234567 in the last day:

```
udsinfo lsjobhistory -delim , -nohdr -filtervalue appid=1234567\&"jobhistory since 1
days"\&status=failed
```

Typical Output

The following is sample output from the command:

```
[06:33:36] juicy:~ # reportdailyfailures
AppType      HostName               AppName              AppID  Template         Profile        Size(GB)  Snaps  D2D  Dedup  RemDup  ProdMirror  Expires  Mounts  Total
ConsistGrp   BB5AIX1                AIX_InBand_CG        760629 Snap-DAR         Remote_SVT            4      0    0      0       0           0        0       0      0
ConsistGrp   BB5AIX1                AIX_OOB_CG           760963 Snap-12          LocalProfi           84      0    0      0       0           0        0       0      0
ConsistGrp   CLU09.paradise.local   Con_Grp_master       261104 Snap-12          LocalProfi          164      0    0      0       0           0        0       0      0
ConsistGrp   hpux24                 hpux24_CG            839523 Enterprise       LocalProfi          111      0    0      0       0           0        0       0      0
ConsistGrp   sun07                  gv                   916767 gv_log           LocalProfi            2      0    0      0       0           0        0       0      0
FileSystem   172.17.204.23          /mnt/hf999           731996 NEW_STREAM_TEST  Remote_SVT           23      0    0      0       0           0        0       0      0
FileSystem   172.17.204.23          /mnt/sdb             731995 NEW_STREAM_TEST  Remote_SVT            0      0    0      0       0           0        0       0      0
FileSystem   rhel6.5                /moon                764331 Snap 15          LocalProfi           29      0    0      0       0           0        0       0      0
FileSystem   spsql2008vm01          I:\                  146606 Enterprise       LocalProfi         1024      0    0      0       0           0        0       0      0
FileSystem   sun07                  /export/home/brad    356923 BUG_28136        LocalProfi          333      0    0      0       0           0        0       0      0
FileSystem   sun07                  /mnt/hf1002          819893 Snap-12          LocalProfi            2      0    0      0       0           0        0       0      0
FileSystem   sun07                  /var/share           356926 Snap-DAR         New Profil          333      0    0      0       0           0        0       0      0
FileSystem   WIN-O5DP8TSPAG1        I:\                  233586 Enterprise       New Profil            2      0    0      0       0           0        0       0      0
Generic      BB5AIX1                conftest             283655 Snap-24bk        LocalProfi            3      0    0      0       0           0        0       0      0
Generic      hpqavm06               Generic-app          326487 Enterprise       LocalProfi                   0    0      0       0           0        0       0      0
```

reportdarusage

Use this command to list the Dedup Async Replication (DAR) jobs. If no parameter is specified, it shows the last two days jobs. The listed job classes are: failovertest, deletetest, failover, syncback, and failback.

Valid Parameters

The following are the valid parameters:

Parameter	Use this Parameter to:
-a <ID/Name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-c	Display the report output in CSV format.
-d <number>	Display a different number of days backwards from now.
-l <number>	Change the length of the application name from the default value of 20 characters.
-n	Exclude the header information.
-s	Sort the data by hostname/appname rather application type/hostname/appname.
-w	Change column width to exactly match the output data with no truncation.

Example CLI commands

The following command shows the Dedup Async related job types:

```
udsinfo lsjobhistory -filtervalue jobclass=failovertest
udsinfo lsjobhistory -filtervalue jobclass=deletetest
udsinfo lsjobhistory -filtervalue jobclass=failover
udsinfo lsjobhistory -filtervalue jobclass=syncback
udsinfo lsjobhistory -filtervalue jobclass=failback
```

Typical Output

The following is sample output from the command:

```
[06:39:33] juicy:~ # reportdarusage
StartDate StartTime  JobName       JobClass      HostName  AppName    AppID TargetHost   Duration  VirtSize(GB)   AppSize(G
2016-08-22 01:31:44  Job_1000481    failover      AGM_SVT   E:\       953651 kt_2008vm2_e 00:01:20           0.0          5
2016-08-22 01:34:57  Job_1000731    syncback      AGM_SVT   E:\       463638 AGM_SVT      00:00:30          60.0          5
```

reportdedupasyncs

Use this command to list Dedup Async jobs. If no parameter is specified, it lists all the successful Dedup Async jobs in last two days. This report lists the jobs that created Dedup Async images, not the Dedup Async images themselves. The images that are created by these jobs may already have expired. To find all images, use reportimages or reportimagecount.

Statistics

The following statistics are provided for each job:

Statistic	Description
VirtSize	Shows the size of the Applications Disks. For VMs this is the full size of the VMDKs.
AppSize	Shows the size of the data being used by the application.
DataCopiedMB	Shows the new data found by the snapshot for the particular job.
WroteLocalMB	Shows the new data written to the local dedup pool for this particular job.
TotalSentMB	Shows the total amount of data sent to the remote site for this particular job.
LocalSaving%	Shows the savings% of DataCopied to WroteLocal.
WANReduction%	Shows the savings% of data copied to total sent. ***Note:*** *TotalSent may in some rare cases exceed WroteLocal due to the metadata that is sent with each image.*

Valid Parameters

The following are the valid parameters:

Parameter	Use this Parameter to:
-a <ID/Name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-c	Display the report output in CSV format.
-d <number>	Display a different number of days backwards from now.
-l <number>	Change the length of the application name from the default value of 20 characters.
-n	Exclude the header information.
-o	Display only on-demand jobs.
-s	Sort the data by hostname/appname rather by apptype/hostname/appname.
-w	Change column width to exactly match the output data with no truncation.

Example CLI Commands

The following command shows all the successful Dedup Async jobs in the last three days:

```
udsinfo lsjobhistory -filtervalue jobclass=dedupasync\&status=succeeded\&"jobhistory
since 3 days"
```

Typical Output

The following is sample output from the command:

```
Actifio:sa-hq:admin> reportdedupasyncs
```

StartDate	StartTime	JobName	JobClass	PolicyName	HostName	AppName	AppID	Duration	VirtSize(GB)	AppSize(GB)	DataCopied(MB)	WroteLocal(MB)	TotalSent(MB)	LocalSaving%	WANReduction%
2016-10-30	21:42:55	Job_27798139	dedupasync	Production to	demo-mgmt-8	Demo-Mgmt-8	20929560	00:01:52	60.0	60.0	33.125	6.075	3.011	81.66	90.91
2016-10-30	21:42:57	Job_27798140	dedupasync	Production to	demo-mgmt-3	Demo-Mgmt-3	20929545	00:02:11	60.0	60.0	30.188	5.804	2.350	80.77	92.21
2016-10-30	22:28:39	Job_27798208	dedupasync	Production to	windows-prod	Windows-Prod	21388278	00:02:12	100.0	12.8	28.875	4.444	2.939	84.61	89.82
2016-10-30	22:28:57	Job_27798214	dedupasync	Production to	sharepoint-prod	SharePoint-Prod	17172	00:12:02	60.0	59.9	1955.750	438.593	366.726	77.57	81.25
2016-10-30	22:31:27	Job_27798242	dedupasync	Production to	demo-mgmt-2	Demo-Mgmt-2	20929543	00:04:14	60.0	60.0	260.812	84.514	73.429	67.60	71.85
2016-10-30	22:33:56	Job_27798257	dedupasync	Production to	demo-mgmt-10	Demo-Mgmt-10	20929541	00:02:01	60.0	60.0	34.312	6.018	2.913	82.46	91.51
2016-10-30	22:42:56	Job_27798327	dedupasync	Production to	demo-mgmt-1	Demo-Mgmt-1	20771743	00:02:01	60.0	60.0	60.500	6.096	2.194	89.92	96.37
2016-10-31	06:15:16	Job_27799954	dedupasync	Production to	hq-sql	localdb	25178171	00:02:21	2457.4	6.0	0.023	0.053	0.019	-125.93	16.91
2016-10-31	06:23:51	Job_27799970	dedupasync	Production to	demo-mgmt-9	Demo-Mgmt-9	20929563	00:01:44	60.0	60.0	23.062	4.568	1.903	80.19	91.75
2016-10-31	06:32:03	Job_27800000	dedupasync	Production to	Oracle-Prod	localdb	25178160	00:04:01	50.0	1.6	42.355	32.811	33.617	22.53	20.63
2016-10-31	06:58:36	Job_27800034	dedupasync	Production to	hq-exchange	Mailbox Database 011	10012	00:02:52	557.4	1.0	2.562	0.068	0.054	97.36	97.89
2016-10-31	07:01:09	Job_27800048	dedupasync	Production to	Linux-Prod	Linux-Prod	17169	00:01:41	16.0	6.9	21.250	1.576	4.673	92.58	78.01
2016-10-31	16:52:07	Job_27806081	dedupasync	Production to	demo-mgmt-5	Demo-Mgmt-5	20929551	00:02:12	60.0	60.0	30.250	5.718	2.809	81.10	90.71

reportdedupratio

This command provides the efficiency of the dedup pool. It first shows the full size of all images in the dedup pool. Images in the remote-dedup class are not counted as they are stored in a remote dedup pool. While Actifio performs incremental image creation when ever possible, each image is always stored as a full copy. This means the summed full size of all images is usually a very large number. Then it reports the size of the actual data written to the dedup pool (after deduplication and compression). Finally, it shows the ratio between the two numbers.

Valid Parameters

The following are the valid parameters:

Parameter	Use this Parameter to:
-c	Display the report output in CSV format.
-n	Exclude the header information.
-t	Print the output data in tabular form.
-u	Display size values using specified units, either g for GB or t for TB.

Note: *For instance to get output in TB use this command: reportdedupratio -u t.*

Example CLI commands

The following command shows the current space usage in the dedup pool. Check the Used column for the most recent space usage in the pool by using the below mentioned command:

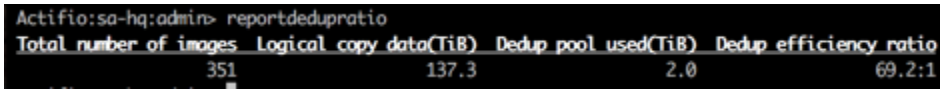
```
udsinfo lsdedupstat
```

The following command shows the images in the dedup pool. The VirtSize column shows the virtual size (or full size) of the image:

```
udsinfo lsbackup -nohdr -filtervalue "jobclass=dedup"
udsinfo lsbackup -nohdr -filtervalue "jobclass=directdedup"
udsinfo lsbackup -nohdr -filtervalue "jobclass=dedupasync"
```

Typical Output

The following is sample output from the command:



reportdedups

Use this command to list the dedup job history. If you specify no parameters, the report displays all dedup jobs performed in the last two days.

The capture type reflects whether the dedup job examined a single snapshot or the delta between two snapshots (full vs incremental). A full dedup reads every block of the application, so the bytes read number is normally by the same value as the application used data size. This means the savings and ratio numbers look better than the actual numbers. If the capture type is full then the bytes read field actually contains the application size value from that first initial snapshot. This is to ensure the savings% and dedup ratio values are more accurate.

Statistics

The following statistics are provided for each job:

Statistic	Description
VirtSizeGB	Shows the size of the Applications Disks. For VMs this is the full size of the VMDKs.
AppSizeGB	Shows the size of the data being used by the Application.
BytesRead (MB)	New data produced by the snapshot job.
PostDedup (MB)	Shows the results of deduplicating the BytesRead.
Compressed (MB)	New data written to the dedup pool for the job.
Saving%	Shows the savings of Compressed(MB) versus BytesRead(MB).
Ratio	Ratio of BytesRead to Compressed (X to 1).

Note: *If the ratio exceeds 99999 to 1 it is capped at 100000 to make it easier to print. If the Compressed value is 0 but BytesRead is non zero, then we report 100000 to reflect total data reduction, since a printed ratio is not possible by simple division.*

Valid Parameters

The following are the valid parameters:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name.Names with spaces or special characters will need to be encased in single quotes.
-c	Display the report output in CSV format.
-d <number>	Display a different number of days backwards from now.
-f	Show only full copy dedups.
-l <number>	Change the length of the application name from the default value of 20 characters.

Parameter	Use this Parameter to:
-n	Exclude the header information.
-o	Show only on-demand jobs.
-p <number>	Search for dedup jobs created by a specific policy ID.
-s	Sort the data by hostname/appname rather than apptype/hostname/appname.
-w	Change column width to exactly match the output data with no truncation.

Note: *The image expiry date is also printed when CSV output is selected.*

Example CLI Commands

The following commands shows all the dedup images in the dedup pool

```
udsinfo lsbackup -nohdr -filtervalue "jobclass=dedup"
```

Typical Output

The following is sample output from the command:

```
Actifio:sa-hq:admin> reportdedups
StartDate StartTime JobName      Class PolicyName   HostName          AppName                 AppID  Duration CaptureType  VirtSize(GB)  AppSize(GB) BytesRead(MB) PostDedup(MB) Compressed(MB) Saving%  Ratio
2016-10-31 00:18:30 Job_27799150 Dedup Daily Dedup  Linux-Prod        Linux-Prod              17169  00:00:10 Incremental          16.0          6.9            84            35              3   96.05   25.3
2016-10-31 00:20:13 Job_27799208 Dedup Daily Dedup  windows-prod      Windows-Prod         21388278  00:00:10 Incremental         100.0         12.8            62             4              1   97.61   41.9
2016-10-31 00:21:31 Job_27799242 Dedup Daily Dedup  hq-exchange       Mailbox Database 011    10012  00:00:10 Incremental         557.4          1.0            11             1              0   99.18  122.2
2016-10-31 00:22:22 Job_27799283 Dedup Daily Dedup  sharepoint-prod   SharePoint-Prod         17172  00:02:11 Incremental          60.0         59.9          4084           338            109   97.34   37.6
2016-10-31 12:16:58 Job_27803473 Dedup Daily Dedup  oracle-rac-1      racbigdb             21681349  00:00:52 Incremental        2000.0          0.0           780           299             76   90.27   10.3
2016-10-31 12:27:57 Job_27803697 Dedup Daily Dedup  hq-sql            smalldb              20941648  00:00:09 Incremental         557.4          0.0             3             0              0   97.83   46.2
2016-10-31 12:28:10 Job_27803702 Dedup Daily Dedup  Oracle-Prod       smalldb              27095220  00:00:10 Incremental          50.0          0.0           240            99             26   89.19    9.2
2016-10-31 20:00:01 Job_27806601 Dedup Daily Dedup  demo-sql-4        AV_CG                23385555  00:00:10 Incremental          71.9          0.0            14             1              0   98.61   71.8
2016-10-31 20:00:03 Job_27806603 Dedup Daily Dedup  sql-masking-prod  unmasked             20990406  00:00:10 Incremental          48.0          0.0             6             1              0   98.43   63.8
2016-10-31 20:00:03 Job_27806605 Dedup Daily Dedup  demo-mgmt-11      Demo-Mgmt-11         23628872  00:00:30 Incremental          60.0         51.0           102            65             14   86.60    7.5
2016-10-31 20:00:04 Job_27806607 Dedup Daily Dedup  hq-exchange       In-Band                106713  00:00:12 Incremental         100.0          3.4             6             0              0   98.15   54.2
2016-10-31 20:00:17 Job_27806625 Dedup Daily Dedup  SQL-AAG-CLUSTER   aagdb2014            22642347  00:00:10 Incremental          71.9          0.2             3             0              0   98.63   73.2
2016-10-31 20:00:18 Job_27806629 Dedup Daily Dedup  scvmm-prod        SCVMM-Prod           22589642  00:01:50 Incremental          72.0         55.8          1180           246             48   95.91   24.4
2016-10-31 20:00:33 Job_27806646 Dedup Daily Dedup  SQL-CLUSTER       clusterdb            23827689  00:00:09 Incremental          48.0          0.0             4             0              0   98.75   80.0
2016-10-31 20:00:33 Job_27806647 Dedup Daily Dedup  hyper-v-sql       C:\                  25960582  00:00:50 Incremental          47.9         16.5           746            75             15   97.93   48.4
2016-10-31 20:00:34 Job_27806649 Dedup Daily Dedup  hyper-v-sql       Hyper-V-SQL          25909050  00:01:51 Incremental          80.0         22.5          1312          1021            821   37.42    1.6
2016-10-31 20:00:35 Job_27806652 Dedup Daily Dedup  Oracle-Prod       bigdb                20837997  00:01:02 Incremental        1653.7       1102.5           366            89             26   93.02   14.3
```

reportdedupstorage

Use this command to count the number of applications of each type.

Statistics

The following statistics are provided for each job:

Statistic	Description
WriteIOPs	Write operations per second during the sample interval.
ReadIOPS	Read operations per second during the sample interval.
WritesKBps	Write KiB per second during the sample interval.
ReadKBps	Read KiB per second during the sample interval.
WriteQueueDepth	Write time per second during the sample interval (equivalent to queue depth).
ReadQueueDepth	Read time per second during the sample interval (equivalent to queue depth).

Valid Parameters

The following are the valid parameters:

Parameter	Use this Parameter to:
-c	Display the report output in CSV format.
-d <number>	Display more than one day's worth of history.
-l <number>	Limit number of recent lines of data to this number.
-n	Exclude the header information.

Example CLI Commands

The following commands shows the count of number of applications of each type:

```
reportdedupstorage
```

Typical Output

The following is sample output from the command:

```
[08:37:33] wta29u29:~ # reportdedupstorage
StartDate            WriteIOPs  ReadIOPS  WritesKBps  ReadKBps WriteQueueDepth ReadQueueDepth
2018-03-19 00:02:16          3         2        0.20      0.18           0.001          0.011
2018-03-19 00:03:16          0         2        0.04      0.16           0.000          0.005
2018-03-19 00:04:16          0         0        0.01      0.02           0.000          0.000
2018-03-19 00:08:16          0         1        0.01      0.08           0.001          0.002
2018-03-19 00:10:16          0         0        0.01      0.02           0.000          0.000
2018-03-19 00:16:16       1298         0       81.15      0.00           0.844          0.000
2018-03-19 00:17:16        774         0       48.40      0.00           0.953          0.000
2018-03-19 00:34:17          0         0        0.00      0.00           0.000          0.000
2018-03-19 00:35:17          0       156        0.00      9.79           0.000          0.989
```

reportdirectdedups

Use this command to see direct-to-dedup jobs. If you specify no parameter, it displays the jobs in last two days.

Note: *This report lists jobs that created directdedup images, not the directdedup images themselves. The images created by these jobs may already have expired. To find all the images, use the commands* reportimages *or* reportimagecount.

The capture type reflects whether the job is able to use a previous image as a base. A full backup indicates there is no previous image available. An incremental backup indicates that there is an option to compare the delta with a previous image. There may be situations, where a full backup occur however, such as when VMware loses CBT information, forcing a full ingest.

Statistics

The following statistics are provided for each job:

Statistic	Description
VirtSize (GB)	Size of the application disks. For VMs that are the full size of the VMDKs.
AppSize (GB)	Size of the data used by the application.
BytesRead (MB)	New application data found by the job.
PostDedup (MB)	Results of deduplicating the BytesRead.
PostCompress(MB)	New data written to the dedup pool for the job after dedup and compression.
Saving%	Represents the savings of Compressed(MB) versus BytesRead(MB).
Ratio	The ratio of BytesRead(MB) to PostCompress(MB) (X to 1).
ChangeRatio%	The BytesRead (MB) as a percentage of AppSize (GB).

Note: *If the ratio exceeds 99999 to 1 it is capped at 100000. If the Compressed value is 0 but BytesRead is non zero, then we also report 100000 to reflect total data reduction, since a printed ratio is not possible by simple division.*

Valid Parameters

The following are the valid parameters:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-c	Display the report output in CSV format.

Parameter	Use this Parameter to:
-d <number>	Display a different number of days backwards from now.
-g	Show all stats in GiB (rather than MiB).
-l <number>	Change the length of the application name from the default of 20 characters
-n	Exclude the header information.
-o	Show only on-demand jobs.
-p	Search for dedup jobs created by a specific policy.
-s	Sort the data by hostname/appname rather than apptype/hostname/appname.
-w	Change column width to exactly match output data with no truncation.

Note: *The image expiry date is also printed when CSV output is selected.*

Example CLI commands

The following command shows all dedup images in the dedup pool:

```
udsinfo lsbackup -nohdr -filtervalue "jobclass=directdedup"
```

reportdisables

Use this command to list any disabled schedules, expiration, or dedupasyncs. The time and date shown is when the relevant schedule is disabled. You can enable these functions using the GUI or CLI command offered.

This report also lists any applications where application consistency is disabled using the Advanced Settings tab. You can enable application consistency using the GUI.

Default Sort Order

The default sort order is by hostname/appname.

Valid Parameters

The following are the valid parameters:

Parameter	Use this Parameter to:
-c	Display the report output in CSV format.
-f	Sort the data by function first and followed by hostname/appname.
-n	Exclude the header information.
-u	Print the username where available. **Note:** *This option will always print in CSV mode.*

Typical Output

In this example there are three disable settings. One application, 296150, has both scheduling and expiration disabled. The following is sample output from the command:

```
Actifio:sa-hq:admin> reportdisables
     SLAID Function       Date       Time          AppID HostName                AppName
  22197610 expirationoff  2016-09-20 14:01:20   22197596 hq-sql                  inbandb
  22197610 scheduleoff    2016-09-20 14:01:20   22197596 hq-sql                  inbandb
  25897995 appconsistency 2016-07-19 08:31:27      17172 sharepoint-prod         SharePoint-Prod
```

Example CLI Commands

The following command shows all the disabled SLAs:

```
udsinfo lssla -nohdr -delim , -filtervalue expirationoff =true
udsinfo lssla -nohdr -delim , -filtervalue scheduleoff =true
udsinfo lssla -nohdr -delim , -filtervalue dedupasyncoff =true
```

To enable an SLA, use the SLA ID (the first column of output) and change the state using a command like this (where the SLA ID in this example is 64755):

```
udstask chsla –scheduleoff false 64575
```

reporteverything

Use this command to list all the available information for each application.

> ***Note:*** *This report only produces CSV output. There is no need to use* **-c** *option to get CSV output.*

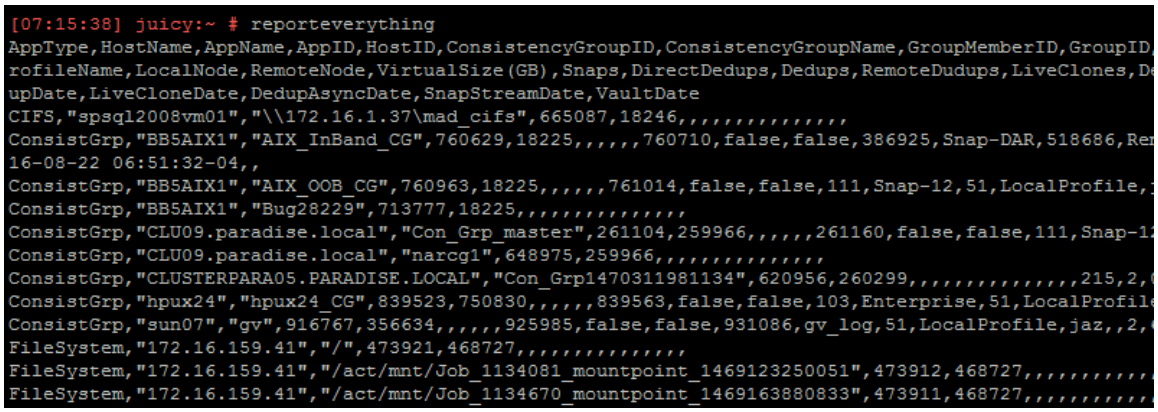
Valid Parameters

The following are the valid parameters:

Parameter	Use this Parameter to:
-a <ID/Name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-n	Exclude the header information.

Typical Output

The following is sample output from the command:



Related Commands

Command	Description
reportlist	Displays all available reports.

reportexpires

Use this command to see the expiration jobs occurred. If no parameter is specified, it list the expiration jobs occurred in last two days.

Valid Parameters

The following are the valid parameters:

Parameter	Use this Parameter to:
-a <ID/Name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-c	Display the report output in CSV format.
-d <number>	Display a different number of days backwards from now.
-l <number>	Change the length of the application name from the default of 20 characters.
-n	Exclude the header information.
-o	Show only on-demand jobs.
-s	Sort the data by hostname/appname rather than apptype/hostname/appname.
-w	Change column width to exactly match output data with no truncation.

Example CLI Commands

The following command shows expiration jobs.

```
udsinfo lsjobhistory -filtervalue jobclass=expiration
```

Typical Output

The following is sample output from the command:

```
Actifio:sa-hq:admin> reportexpires
StartDate StartTime  JobName       JobClass    OriginalJobClass  PolicyName        HostName          AppName              AppID    Duration
2016-10-30 20:00:46  Job_27798060   expiration  remote-dedup      Dedup to Dedup    sql-masking-prod  unmasked          20990406    00:00:11
2016-10-30 20:00:47  Job_27798061   expiration  remote-dedup      Dedup to Dedup    demo-sql-4        AV_CG             23385555    00:00:10
2016-10-30 22:29:42  Job_27798221   expiration  snapshot          12hr Snap         hq-exchange       In-Band             106713    00:00:10
2016-10-30 22:32:59  Job_27798246   expiration  snapshot          Daily Snap        Linux-Prod        Linux-Prod           17169    00:00:10
2016-10-30 22:33:27  Job_27798250   expiration  snapshot          Production to S   demo-mgmt-10      Demo-Mgmt-10      20929541    00:00:10
2016-10-30 22:34:12  Job_27798262   expiration  snapshot          Daily Snap        hq-exchange       Mailbox Database 011    10012    00:00:10
2016-10-30 22:34:58  Job_27798273   expiration  snapshot          Daily Snap        windows-prod      Windows-Prod      21388278    00:00:10
2016-10-30 22:35:17  Job_27798279   expiration  snapshot          Production to S   demo-mgmt-2       Demo-Mgmt-2       20929543    00:00:10
2016-10-30 22:36:41  Job_27798293   expiration  snapshot          Daily Snap        sharepoint-prod   SharePoint-Prod      17172    00:00:10
```

reportfabric

Use this command to display information about the iSCSI connectivity. This report reformats the output of usvcinfo lsfabric into a more user friendly output while adding some additional information.

Valid Parameters

The following are the valid parameters:

Parameter	Use this Parameter to:
-c	Display the report output in CSV format.
-n	Exclude the header information.
-p	Print appliance port information instead of connection information.
-w	Change column width to exactly match output data with no truncation.

Note that for virtual appliances in some hypervisors, the port speed shown with **-p** will be 'paravirt' rather than a number. This is because the interface is a virtual IO adapter and does not report a speed.

Example CLI commands

The following usvcinfo command shows fabric information:

```
usvcinfo lsfabric
```

reportfailedjobs

Use this command to list jobs that either failed or optionally that went into retry. A retry job effectively failed, but will be tried again. Normally, three retry jobs are attempted. If the last retry job fails it will be in failed status. If you specify no parameters, it displays the failed jobs for last two days. either failed or optionally that went into retry.

Default Sort Order

The default sort order is by date. You can also sort by hostname/appname.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-c	Display the report output in CSV format.
-C	Display canceled jobs (note this is Capital C, not lower case c).
-d <number>	Display a different number of days backwards from now. Job history is retained for 12 weeks.
-e <errorcode>	Display only jobs with a specific error code.
-d <number>	Display a different number of days backwards from now.
-f	Used instead of **-x** to exclude applications that are no longer failing in that class. The count shown will the number of jobs in the considered period that have failed since the last successful job. The date shown will be the start date of the first failed job in the considered period (by default 2 days).
-i <number>	Used with or instead of **-f** to only display apps whose failed job count equalled or exceeded the number used with **-i**.
-j <job class>	Display failed jobs of a particular job-class.
-l <number>	Change the length of the application name from the default value of 20 characters.
-m <number>	Change the error message length, from its default cutoff value of 42 characters.
-n	Exclude the header information.
-o	Show only failed on-demand jobs (does not apply to **-f** and **-x**).
-p	Show template name rather than policy name.
-q	Only show failed full copy jobs (does not apply to **-f** and **-x**).
-r	Show retry jobs and failed jobs (when used with **-f** and **-x** the status will still show as failed although the count will include retry jobs).

Parameter	Use this Parameter to:
-s	Sort the data by hostname/appname rather than by date and then hostname/appname (this is already the default with **-f** and **-x**)
-t <hours>	Display a different number of hours backwards from now.
-u	Not display failed jobs for any applications that are either unprotected or have their scheduler disabled or where the policy was deleted (error code 1114).
-w	Change column width to exactly match output data with no truncation except for message field, whose width can be controlled with **-m**.
-x	Instead print the total occurrences of each error code. Start date shown will be the start date of the period being examined (by default 2 days).
-z	Also displays cleanup jobs. By default, these are not shown.

If the CSV output is selected, then for backup jobs where the application is still protected, and the udstask backup command syntax will be printed. This will help you rerun that job.

Example

For example: **`reportfailedjobs -d 9 -a 57 -l 40 -m 100`**

This displays 9 days for application ID 57 lengthening the application name from 20 to 40 characters and the message field from 50 to 100 characters.

Example CLI Commands

The following command shows the failed jobs:

```
udsinfo lsjobhistory -filtervalue status=failed
```

reportfctree

This report prints the snapshot tree.

Please note the following:

- Label field - will show a dash by default, meaning a blank label will show a dash.
- VDiskType - If the VDisk is a child of staging disk then its name will start with an underscore. If the VDisk is a child of a snapshot, it's name will start with at least two underscores. Parent/child relationships can be determined by the number of underscores.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-c	Change the output to comma separated variable (CSV).
-e <ID>	Display the fctree for an external array (needs array ID).
-i <ImageName>	Show only images that are dependent on the image name that is used.
-n	Exclude header information.
-w	Change column width to exactly match output data with no truncation.

There are several kinds of vDiskType:

- **Clone**: This is a disk created by a 'Clone' job.
- **DedupRehydrate**: This is a disk created to access a dedup image that had no snapshot image to use as a base.
- **DARStagingDisk**: This is a staging disk created by an incoming DedupAsync job from a remote appliance.
- **ImageMode**: This is a disk that has been created in Image Mode, meaning it is backed by an Image Mode MDisk.
- **LiveClone**: This is an exact copy of a staging disk created by a LiveClone job.
- **LogMount**: This is a mounted snapshot of a snapshot of a log disk.
- **LogSnapshot**: This is a snapshot of a log staging disk.
- **LogStagingDisk**: This is staging disk created to hold log data for databases.
- **Mount:** This is a mounted snapshot of a snapshot.
- **Snapshot**: This is a snapshot of a StagingDisk of any type.
- **StagingDisk**: This is a regular Staging Disk created to hold the Golden Copy in the snapshot pool.
- **StreamSnapStagingDisk**: This is a staging disk created by an incoming StreamSnap job from a remote appliance.
- **StripedMode:** This is a manually created VDisk that is in striped mode, meaning it is not in Image Mode.

There are two types of space consumption:

- **UsedCapacity(GB)** - This is the how much pool space this disk is consuming.
- **TotalCapacity(GB)** - This is the reported Size of this disk.

reportgroups

This command is used to list all the protected applications in groups and instances. A Group or Logical Group is a group of unrelated applications that share the same Policy Template. Data for each application in a Logical Group is not captured at the same point in time.

A Consistency Group or CG is a group of applications from a single host. The Appliance will always attempt to snapshot all Applications in a CG at the same time.

If a SQL DB is protected by a CG rather than in its instance, it will be listed twice:

- Firstly as protected by the CG
- Secondly in its Instance marked as <ProtectedbyCG>

Default Sort Order

The default sort order is within this is hostname, CG number, and app name.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-c	Display the report output in CSV format.
-g	Only show consistency groups.
-i	Sort the data based on "instance name" followed by "group name".
-l <number>	Change the length of the application name from the default of 25 characters.
-n	Exclude the header information.
-p	Only print apps in protected groups.
-s	Only show SQL Instances.
-t	Sort the data by template/profile first rather than hostname/CG number/appname.
-w	Change column width to exactly match output data with no truncation.

Example CLI Commands

The **reportgroups** command uses the output of various udsinfo commands as mentioned below:

udsinfo lsconsistgrp to find the consistency groups.
udsinfo lsgroup to find the regular groups.
udsinfo lsgroupmember to find applications in regular groups.
udsinfo lsconsistgrpmember to find applications in consistency groups.
udsinfo lssla to find protected applications by application ID.

reporthealth

This report gives a fast overview of the health of an appliance. The report runs a series of tests and gives each test a result. It also validates if any remote appliances can be contacted and if so, what appliance type they are and what version they are running. The appliance check will time out after 3 seconds, but this can be tuned with the -t option if your network is slow. It also checks for and reports all processes that are not running.

The following tests are performed:

Table 1: reporthealth Tests

Test	What It Does
ApplianceName/ Type	Shows the VDP appliance name and VDP appliance type.
System Date/Version	Shows the system time/timezone and the current installed software version.
Appliances (multiple)	Shows the version reported by a connection test to port 443 on the Operative IP of that appliance. Passed: Successfully connected to port 443 and learned appliance type and version. Failed: Did not connect to port 443 after 3 seconds. Consider using -t xx to increase timeout if you get false failures.
VDP License check	Only appears if your VDP Appliance is still using an evaluation license. Passed: VDP Appliance has more than 5 evaluation days remaining. Warning: VDP Appliance has between 0 and 5 evaluation days remaining. Failed: VDP Appliance has no more evaluation days remaining.
Primary FS Usage	Shows the usage of the Primary File system. Usage and capacity in GiB is shown as well as usage %. Note that the usage % may differ slightly from used/capacity. This is a quirk of the df command and not a bug. Passed: Usage % is less than 75%. Warning: Usage % is 75% to 85%. Contact Actifio Support. Failed: Usage % is over 85%. Contact Actifio Support.
Process check	Checks internal processes. This test result will only appear if it is not successful Warning: At least one internal process is not running as per 'udstask debug monitsummary'.
Scheduler Check	Checks to see if the global scheduler or global expiration is disabled. Passed: Both are enabled. Warning: At least one is disabled. Enable using Control Panel in Domain Manager.
Protected apps	Count of all applications that are protected by an SLA. A ConsistencyGroup counts as one application. Passed: No applications that are protected have a disabled scheduler Warning: At least one application has its scheduler disabled.

Table 1: reporthealth Tests

Test	What It Does
SLA Violation apps	Count of all applications that had an SLA Violation in the last 24 hours. Passed: No applications show an SLA Violation in the last 24 hours. Warning: At least one application shows an SLA Violation in the last 24 hours. Failed: Every protected application shows an SLA Violation in the last 24 hours.
Successful capture apps	Count of all applications that had successful Snapshot, DirectDedup and DedupAsync jobs in the last 24 hours exactly. Passed: More than 1 capture job occurred or there are no protected apps or no protected and scheduler enabled apps. Warning: No capture jobs occurred for any protected applications.
Failed capture apps	Count of all applications that had failed Snapshot, DirectDedup and DedupAsync jobs in the last 24 hours and no successful jobs in that period Passed: No applications had capture jobs failed in the last 24 hours Warning: At least one app had a job that failed. Investigate failed jobs with reportfailedjobs
Running/Queued jobs	Count of all running and queued applications in both capture and non-capture types. Capture type are Snapshot, DirectDedup and DedupAsync jobs. Non-Capture is every other job class.
Long running captures	Count of all Snapshot, DirectDedup and DedupAsync jobs that have been running for more than 3 hours. Passed: No currently running capture job has exceeded 3 hours. Warning: At least one currently running capture job has exceeded 3 hours.
Apps with forced full capture	Count of Oracle DBs are set to use Force Level Zero or Apps set to Ignore CBT. Passed: No apps were found with these settings. Warning: Some apps were found with these settings. Use reportadvancedsettings to determine which apps.
Preserved Images	Count of all Snapshot and Dedup images that have been preserved Passed: No images have been preserved Warning: At least one image has been preserved
Online Nodes	(CDS only) Confirms both CDS nodes are online. Passed: Both nodes are online. Failed: Only one is online. Contact Actifio Support to investigate.

Table 1: reporthealth Tests

Test	What It Does
MDisk/VDisk Check	(CDS only) Shows the number of MDisks per pool. If more than 80% of the MDisks are used, for example, say 100 of 128, a warning will get posted. Also checks for any MDisks or VDisks that are not online (they are either offline or degraded). Passed: No degraded or offline MDisks or VDisks were detected. Warning: At least one degraded or offline disk was found. Investigate with usvcinfo lsmdisk or usvcinfo lsvdisk.
VDisks	Counts the number of VDisks in use and a usage %. Passed: Usage % is below the warning % set in Domain Manager. Warning: Usage % exceeds warning % set in Domain Manager. You may need to change your templates. Failed: Usage is 100% Contact Actifio Support.
Snapshot memory	(CDS only) Shows snapshot bitmap memory usage and a usage %. Passed: Usage % is below the warning % set in Domain Manager. Warning: Usage % exceeds warning % set in Domain Manager. Increase snapshot memory if possible. Failed: Usage is 100%. Increase snapshot memory if possible. Contact Actifio Support.
Dedup Status Check	Checks if Dedup is enabled and if SSDs are installed, if any have failed. Passed: Dedup process is running and if installed, both SSDs are enabled. Warning: The dedup process is disabled or an SSD has failed. Contact Actifio Support. Failed: The dedup process is not running at all. Contact Actifio Support.
Pools (multiple)	Shows consumption of each pool. Usage and capacity in TiB is shown as well as usage %. OnVaults only show usage. Passed: Usage is below the warning % set in Domain Manager Warning: Usage is above the warning % set in Domain Manager. Consider increasing the size of the pool Failed: Usage is above the safe % set in Domain Manager. Consider increasing the size of the pool
DiskPool MDisk qty check	CDS Only - checks for disk pools that have more than 100 MDisks (out of a max of 128). This test is not printed if it passes. Warning: The number of affected pools is printed. Affected pools may soon hit the 128 MDisk limit.
Unused MDisk check	(CDS only) Checks for free MDisks that can be added to pools. Passed: There is at least one free MDisk. Warning: There are no free MDisks. For some Appliances this may be normal.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-c	Display the report output in CSV format.
-d	Count only database type apps rather than all apps.
-f	Failed only print mode, which prints only health check results that did not get a Passed message.
-i	Instead report on the memory consumption and uptime of important internal processes.
-l	Run an additional test for leaked VDisks. This test is not run by default
-m	Override MDisk warnings if there are no free MDisks.
-n	Do not run network check for attached Appliances.
-p	Show additional platform information. **Note:** *For virtual appliance, this will show platform information such as Cloud region where appropriate.*
-r	Report the Local Appliance Name first. This option will not apply in CSV output.
-s	Force the Protected Apps test to always report as Passed, even if disabled apps discovered.
-t <seconds>	Timeout in seconds when testing remote cluster availability. Default is 3 seconds.
-u	Show node uptime (not shown by default and not shown if -f is also selected)
-w	Check the output of `reportfabric` command for host or controller ports thats are not shown in the online status. (CDS only).
-z	Do not check on SSD health.

If the **-d** option is chosen then all tests that examines apps will show the count of all Oracle, MS SQL or ConsistencyGroups that are protected by an SLA.

A ConsistencyGroup counts as one app, databases inside a ConsistencyGroup are not counted.

A ConsistencyGroup will be counted as a database even if it contains no databases.

reportimagecount

This command is used to count the number of images created on an Actifio appliance. With **-r** option, this report counts the images that are sent to this Actifio appliance from a different Actifio appliance. With **-e**, this reports counts only images that are created by applications local to this particular Actifio appliance. With **-o**, this reports only count orphan images from applications that have been deleted.

Not all image types are counted, only the most common types are counted.

For remote images, the SourceAppID and SourceAppName are not found on the local appliance using reportapps. If the source cluster name is numeric, then the definition for the remote cluster is deleted.

Statistics

The following statistics are provided:

Statistic	Description
Vols	Shows the number of volumes in the most recent image, not including log disks.
AppSize (GB)	Shows the size of the data being used by the application.
Total	Shows the total number of images in any job class.

Note: *If the value shown in Total is not equal to the sum of the other columns, then there are images in other classes, such as failover or syncback. Use the command* **`reportimages -a xxxxx`** *to find them. If a production mirror date/time is shown then a production mirror image is also one of the images counted in the total column. Production mirror images are either dedup async or Streamsnap. Since there can only be one production mirror image, a separate count column is not shown.*

Default Sort Order

The default sort order is SourceCluster/AppType/HostName/AppName.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-c	Display the report output in CSV format.
-e	Counts local, remote, and orphan images.
-i	Sort the data only by Host Name/ App Name.
-l <number>	Change the length of the app name from the default value of 20 characters.
-n	Exclude the header information.

Parameter	Use this Parameter to:
-o	Count only orphan images
-r	Count only images on this VDP Appliance that were sent to this VDP Appliance by a remote VDP Appliance.
-s	Sort the data by SourceCluster/HostName/AppName
-t	Sort on template/profile first and then hostname/appname second.
-w	Change column width to exactly match output data with no truncation.
-x	Print extra stats. This will print totals for certain columns.

Example CLI Commands

The following command shows the snapshot images for application ID 1885855:

```
udsinfo lsbackup -delim , -nohdr -filtervalue appid=1885855\&jobclass=snapshot
```

reportimages

This report is used to list all available images for each application. This reports shows the actual images that are available in each job class. There is also an option using -a0 to list all images for every application. If an image is a Database dump then the word (dump) will appear in the Jobclass column.

Default Sort Order

The default sort order is by hostname, then application name.

Statistics

The following statistics are provided for each job:

Statistic	Description
Vols	The number of VDisks that make up the staging disk for this image (-s only).
VirtualSize (GB)	The virtual size of the Applications Disks. These disks are thin provisioned (-s only).
AppSize (GB)	The size of the data being used by the application.
StageUsed (GB)	The utilized size of the Staging Disk data created to hold the Golden Copy in snapshot pools (-s only).
SharedUsed (GB)	Snapshot consumed size that is shared between multiple images (-s only). This does not apply to CDS appliance.
SnapUsed (GB)	The size of the data being used by the snapshot (-s only).
ConsistencyDate	The actual point in time (PIT) when the host side image is created.
EndPIT	Most recent point in time (PIT) for which logs are available.
ExpirationDate	Date on which the image expires.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.s
-c	Display the report output in CSV format.
-d <number>	Display a different number of days backwards from now.
-e <number>	Print a command to change expiration by a set number of days (CSV only).
-f	Display only images that were capture using NFS staging disk format (cannot be used with -s).

Parameter	Use this Parameter to:
-i	Show images with an expiraton date past 16:53 Dec 4, 2099 UTC. This will not show mounts, liveclones or mirror images. Use **-j** to see specific classes that have expiration dates set to the distant future.
-j <job class>	Display images specific to a particular job class.
-l <number>	Change the length of the app name from the default of 20 characters.
-m <ID>	Print replicateimage command for dedup images. Creates CSV output only. Needs ID of target cluster. Uses dedup replication.
-M <ID>	Print replicateimage command for Snapshot images. Creates CSV output only. Needs ID of the target Appliance. Uses StreamSnap.
-n	Exclude the header information.
-o	Show only images that are created by on-demand jobs.
-p	Show only orphan images (those created by deleted applications).
-q	Show preserved images (that are waiting to be processed by dedup or replication).
-r	Show only images that are created by a remote cluster.
-R	Used with -m and -M to specify retention of the remote image in days.
-s	Display the snapshot tree. This will ignore other filter options apart from app id. ***Note:*** *Clone images may not be listed by this option.*
-v <policy>	Only shows images created by the specified policy ID or policy Name. If the policy name has spaces, enclose it in single quotes.
-w	Change column width to exactly match output data with no truncation.
-x	Limit number of fields shown when using -s in regular print mode (only applies to **-s** and doesn't apply when using **-c** or **-w**).
-y	Show images that have missed their expiration date. A reason should be printed in the image status column.
-z	Use this parameter only when advised by Actifio Customer Support Engineering.
-0	Used with **-s** to print volumes that were not found in local storage pools. Size and consumed space for these may be misreported as zero.
-1	Show only log images (componenttype=1).
-2	Does not show ENDPIT date for apps that have logs. This will make the report run faster.

Parameter	Use this Parameter to:
-3 <poolid>	Used with **-s** to lookup volumes on a specific external snapshot pool as well as all internal pools.
-4	Used with **-s** to lookup volumes on all external snapshot pools as well as all internal pools.
-6	Show only DB Dump images.
-7	Show cloud snapshot disks. This is like -s output but for cloud snapshots instead. Space consumption is not shown.

The use of reportimages with -a 0 has two limitations:

1. All images will be shown but database log expiration dates will not be examined
2. If using -c to get the RestoreableObjects, they will not be shown.

To work around both situations, use a specific App ID.

The valid job classes are:

- Clone
- Dedup
- Dedupasync
- Directdedup
- Failovertest
- LiveClone
- Mount
- Remote-dedup
- Snapshot
- Streamsnap
- Vault

The **-m** option will print an example of the replicateimage command. Policynames will have all spaces removed. It uses the -inheritexpiration option to set the expiration of the replicated image to the same date and time as the source image. If the expiration date of the source image is in the past, no replicateimage command will be printed. This is because the image should already have expired, so it is unclear if it should be replicated.

The **-e** option will print an example of the chbackup command. It takes the current expiration date and then calculates a new one based on the value put against the **-e** command. **-e 2** will print a command that can be used to increase the expiration date by two days (the image will exist for 2 extra days). -e -2 will print a command that can be used to reduce the expiration date by two days (the images will exist for 2 less days). The command must be run with the **-c** option and cannot be run with the -m option.

If you use **-y** to display images that have missed expiration then the possible image statuses are explained below:

- **GlobalExpirationDisabled**: Expiration is disabled for the entire Appliance, so no images are being expired. When you enable expiration then provided no other reasons exist, images will start to be expired.
- **AppExpirationDisabled**: Expiration is disabled for this specific application, so no images for this app are being expired. When you enable expiration then provided no other reasons exist, images will start to be expired.
- **BackupLockSet**: The backup lock is set. Normally a backup is in progress. If not contact Support. If the lock is removed then provided no other reasons exist, the image will expire.
- **RestoreLockSet**: The restore lock is set. Normally a restore is in progress. If not contact Support. If the lock is removed then provided no other reasons exist, the image will expire.
- **LastSnap**: This image is or would be the last snapshot for this app, and the app is still protected. A protected app should always have at least one image in each relevant class.
- **LastDedup**: This image is or would be the last dedup for this app, and the app is still protected. A protected app should always have at least one image in each relevant class.
- **LastRemoteDedup**: This image is or would be the last remote-dedup for this app, and the app is still protected. A protected app should always have at least one image in each relevant class.
- **NeededForNextDedup**: This snapshot was used to create the last dedup image and is thus needed to help create the next dedup image. If you expire this snapshot then the next dedup will take much longer.
- **NeededForNextRemoteDedup**: This dedup was used to create the last remote-dedup image and is thus needed to help create the next remote-dedup image. If you expire this dedup then the next remote-dedup will take much longer.
- **PreservedImage**: This image is preserved because catchup is running to ensure downstream images are not lost. If you expire this image then downstream images (like a dedup of a snapshot) will not be created.
- **1 mount (or more)**: This image cannot be expired till all mounts based on it are unmounted and deleted. Refreshing older mounts with newer images will allow older images to expire and the space they consume to be released.

Example CLI Commands

If you wish to get more information about one image, learn the Image ID from reportimages (the first column of output) and then issue a command like this (where in this example is Image ID 1234567):

```
udsinfo lsbackup 1234567
```

The following command shows only snapshot images for the application ID 1885855:

```
udsinfo lsbackup -delim , -nohdr -filtervalue appid=1885855\&jobclass=snapshot
```

reportinband

Use this command to list all In-band Disks that are in Image Mode plus striped mode disks that have been manually created.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-c	Display the report output in CSV format.
-n	Exclude the header information.
-s	Sort the data by Hostname/AppName rather than with VDisk name.
-w	Change column width to exactly match output data with no truncation.

Typical Output

The following is sample output from the **`reportinband`** command:

```
Actifio:sa-hq:admin> reportinband
VDiskName                VDiskSize(GB)  OSType  AppType    MappedHostName  HostName     AppName  AppID     SLAID  SnapQty  UUID
Exchange_Datastore               100.0  Win32   Exchange   hq-exchange     hq-exchange  In-Band    106713   7124283        4  638A95F225801C590000
inband_hq_sql                   2048.0  Win32   Generic    hq-sql          hq-sql       inbandb  22197596  22197610        2  638A95F225801C590000
```

reportiostats

Use this command to see the historical input/output statistics.

The following SAR data is shown:

- **tps**: The number of transfers per second that were issued to the device. Multiple logical requests can be combined into a single I/O request to the device. A transfer is of indeterminate size.
- **rd_sec/s**: The number of sectors read from the device. The size of a sector is 512 bytes.
- **wr_sec/s**: The number of sectors written to the device. The size of a sector is 512 bytes.
- **avgrq-sz**: The average size (in sectors) of the requests that were issued to the device.
- **avgqu-sz**: The average queue length of the requests that were issued to the device.
- **await**: The average time (in milliseconds) for I/O requests issued to the device to be served. This includes the time spent by the requests in queue and the time spent servicing them.
- **svctm**: The average service time (in milliseconds) for I/O requests that were issued to the device.
- **%util**: The percentage of CPU time during which I/O requests were issued to the device (bandwidth utilization for the device). Device saturation occurs when this value is close to 100%.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-n	Exclude the header information.
-o <object>	Print a certain object, either one VDisk starting with vm- or rs- or all the VDisks in one image starting with Image_.

reportjobcount

Use this command to count the number of completed jobs in each job class, some job types are combined as shown below:

- **Clone** - Includes both clone and remote-clone jobs
- **DARusage** - Includes failovertest, failback, syncback, failback, deletetest and deletefailover jobs.
- **LiveClone** - Includes LiveClone, LiveClone-refresh, rollbackliveclone and reprovision jobs.
- **Mount** - Includes both mount, remote-mount, and prep-mount jobs.
- **Restore** - Includes restore and remote-restore jobs.
- **Unmount** - Include both unmount, unmount-delete, and prep-unmount jobs.s

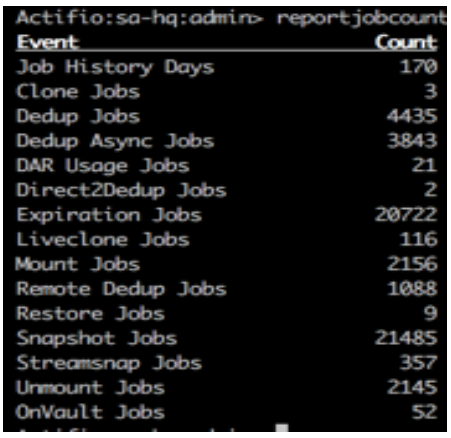
Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-c	Display the report output in CSV format.
-d xx	Change the number of days of history, the default is maximum.
-n	Exclude the header information.
-x	Print extra stats. This prints totals for certain columns.

Typical Output

The following is sample output from the command:



Example CLI commands

The following commands shows the successful jobs in each class:

```
udsinfo lsjobhistory -filtervalue jobclass=clone\&status=succeeded
udsinfo lsjobhistory -filtervalue jobclass=dedup\&status=succeeded
udsinfo lsjobhistory -filtervalue jobclass=dedupasync\&status=succeeded
```

reportjobs

Use this command to list the jobs for protected applications. If you specify no parameters, it displays last two days jobs. This information is useful to know all the events occurred to an application for a fixed number of days and the order in which those events occurred.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes. ***Note:*** *If a host ID is used, then snapshots for all apps on that host will be reported.*
-b	Not show log only jobs. DB and Log+DB will be shown.
-c	Display the report output in CSV format.
-d <number>	Display a different number of days backwards from now.
-e	Display jobs regardless of status, instead of showing only successful jobs.
-f	Used with **-r** to exclude applications where the most recent snapshot job was successful. This only examines the snapshot job class.
-j <job class>	Display failed jobs for a particular jobclass. This is case insensitive. You can use any mix of lower and upper case.
-l <number>	Change the length of the application name from its default value of 20 characters.
-n	Exclude the header information.
-o	Display only on-demand jobs. This will also show the username of the user that ran the job.
-p <number>	Search for jobs created by a specific policy ID.
-s	Sort the data by hostname/appname rather than by date and then hostname/appname.
-t	Shows transport as a separate column.
-w	Change column width to exactly match output data with no truncation.
-x	Does not show expiration jobs. This overrides **-z** if also specified.
-z	Also shows cleanup jobs which by default are not shown.

Note: *If the user who issued this command is an AGM User, they will be reported as AGMUser. You may see also see this refered to as momuser, which is the same thing.*

For example: **`reportjobs -d 9 -a 57-140`**

This displays nine days of job history for application ID 57 lengthening the app name from 20 to 40 characters.

Example CLI Commands

The following commands shows all successful jobs for application ID 57 for the last nine days:

```
udsinfo lsjobhistory -filtervalue status=succeeded\&appid=57\&"jobhistory since 9 days"
```

Typical Output:

```
Actifio:sa-hq:admin> reportjobs
StartDate StartTime JobName        JobClass         Status      PolicyName        HostName            AppName          AppID     Duration
2016-10-30 20:00:46 Job_27798060   expiration       succeeded   Dedup to Dedup    sql-masking-prod    unmasked         20990406  00:00:11
2016-10-30 20:00:47 Job_27798061   expiration       succeeded   Dedup to Dedup    demo-sql-4          AV_CG            23385555  00:00:10
2016-10-30 20:06:54 Job_27798066   snapshot(Log)    succeeded   12hr Snap         oracle-rac-1        racbigdb         21681349  00:03:10
2016-10-30 20:26:24 Job_27798080   snapshot(Log)    succeeded   12hr Snap         Oracle-Prod         smalldb          27095220  00:03:13
2016-10-30 20:26:42 Job_27798082   snapshot(Log)    succeeded   12hr Snap         hq-sql              smalldb          20941648  00:02:50
2016-10-30 21:06:58 Job_27798109   snapshot(Log)    succeeded   12hr Snap         oracle-rac-1        racbigdb         21681349  00:03:10
2016-10-30 21:26:25 Job_27798122   snapshot(Log)    succeeded   12hr Snap         Oracle-Prod         smalldb          27095220  00:03:20
2016-10-30 21:26:43 Job_27798124   snapshot(Log)    succeeded   12hr Snap         hq-sql              smalldb          20941648  00:02:42
2016-10-30 21:42:55 Job_27798139   dedupasync       succeeded   Production to M   demo-mgmt-8         Demo-Mgmt-8      20929560  00:01:52
2016-10-30 21:42:57 Job_27798140   dedupasync       succeeded   Production to M   demo-mgmt-3         Demo-Mgmt-3      20929545  00:02:11
2016-10-30 21:59:59 Job_27798169   cleanup          succeeded   Production to M   demo-mgmt-8         Demo-Mgmt-8      20929560  00:00:10
```

reportlist

Use this command to list all the available reports. The output varies according to the product and software version you are using.There are two categories of report available as shown below:

- Job History Reports
- Current Status Reports

Typical Output:

The following is sample output from the command:

```
[07:25:36] atlantic:~ # reportlist
Job History Reports      Report Function
reportaudit              Report on the contents of the Audit log
reportcanceledjobs       Report 2 days of canceled jobs.  Filter by recent days or by recent days and app id
reportclones             Report 2 days of clone jobs.  Filter by recent days and/or app id
reportdaily              Report the quantity of jobs that were run for each app for each type
reportdailyfailures      Report quantities of failed jobs for each application
reportdarusage           Report all dedup async related jobs: failovertest deletetest failover syncback failback
reportdedupasyncs        Report 2 days of dedupasync jobs.  Filter by recent days and/or app id
reportdedups             Report 2 days of dedup jobs.  Filter by recent days and/or app id
reportdirectdedups       Report 2 days of directdedup jobs.  Filter by recent days and/or app id
reportexpires            Report 2 days of expiration jobs.  Filter by recent days and/or app id
reportfailedjobs         Report 2 days of failed jobs.  Filter by recent days and/or app id
reportjobcount           Report how many successful jobs of each class occurred
reportjobs               Report 2 days of jobs.  Filter by recent days and/or app id
reportliveclones         Report 2 days of liveclone jobs.  Filter by recent days and/or app id
reportmounts             Report 2 days of mount jobs.  Filter by recent days
reportpoolhistory        Report on pool space history
reportremotededups       Report 2 days of remote dedup jobs.  Filter by recent days and/or app id
reportrestores           Report 2 days of restore jobs.  Filter by recent days
reportslaviolations      Report all SLA Violations for the previous day
reportsnaps              Report 2 days of snapshot jobs.  Filter by recent days and/or app id
reportstats              Report 2 days of jobs.  Filter by recent days and/or app id
reportstreamsnaps        Report 2 days of StreamSnap and LogReplicate jobs.  Filter by recent days and/or app id
reportsweeps             Report all garbage collection jobs
reportonvaults           Report 2 days of OnVault jobs.  Filter by recent days and/or app id

Current Status Reports   Report Function
reportadvancedsettings   Show all Advanced policy options that have been set
reportappcount           Count all applications and show protection status
reportapps               Report all protected applications sorted by app type then hostname and appname
reportclonedisks         Report on clone disks that were created by clone jobs
reportcompliance         Report on the compliance status of every protected application
reportconnectors         Report all connector versions.  Display help with -h to get update commands
reportconnectoroptions   Report any options set for connector operations
reportconsumption        Report on space consumption by application
reportdedupratio         Report on the ratio of total image size to dedup pool size
reportdisables           Report all applications that have scheduling or expiration disabled
reporteverything         Report as many details as possible about each application.  CSV output only
reportfabric             Report that displays information about the SAN and iSCSI fabric
reportfctree             Report the snapshot tree
reportgroups             Report all protected applications that are in groups
reporthealth             Report on the health status of the Appliance
reportimagecount         Lists the quantity of images available for each application in each jobclass
reportimages             List all images for specified applications or job classes
reportinband             Report on any inband disks so show their protection status
reportiostats            Report on historical IO Stats
reportmailer             Create an XLS file wth one tab per report to be mailed to the desired recipients
reportmappeddisks        Report on all staging disk mapped to hosts
reportmdiskspace         Report on how the MDisks are used in the pools
reportmountedimages      Report all mounted images active in the system
reportnet                Report on network interface throughput
reportorgmembers         Report that lists which organizations an application is in
reportorgusage           Report that shows resource consumption by organization
reportperfstats          Report on node IOPS throughput and response times
reportpolicies           Report all in-use policies including number of apps using each one
reportpools              Report on pool space consumption
reportprofiles           Report on all resource profiles defined in the system
reportrbac               Report on Role Based Access Control (RBAC)
reportrpo                Report the most recent consistency date for each jobclass for each protected application
reportrunningjobs        Report all jobs currently running in the system
reportslaoptions         Report all options set for each SLA
reportsnappool           Report on the space usage of the snap pool
reportunprotected        Report all apps that dont have an SLA
reportvms                Report on VM discovery status
reportworkflows          Report on all workflows
```

reportliveclones

Use this command to list LiveClone jobs for protected applications. If you specify no parameters, it displays the last two days jobs.

> ***Note:*** *This report lists jobs that created LiveClone images, not the LiveClone images themselves. The images that are created by these jobs may already have expired. To find all images, use* reportimages *or* reportimagecount.

Statistics

The following statistics are provided for each job:

Statistic	Description
VirtSize (GB)	Size of the application's disks. For VMs this is the full size of the VMDKs.
AppSizeGB	Size of the data being used by the application.
DataCopiedGB	New application data found by this job.
ChangeRate%	The percentage of data copied is of application size (used data).

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-c	Display the report output in CSV format.
-d <number>	Display a different number of days backwards from now.
-l <number>	Change the length of the application name from the default of 20 characters.
-n	Exclude the header information.
-s	Sort the data by hostname/appname rather than by date and then hostname/appname.
-w	Change column width to exactly match output data with no truncation.

For example: **reportliveclones -d 9 -a 57 -l 40**

This displays nine days data for the application ID 57, lengthening the application name from 20 to 40 characters.

Example CLI Commands

The following command shows the successful LiveClone jobs for the application ID 57 in last nine days:

```
udsinfo lsjobhistory -filtervalue
jobclass=liveclone\&status=succeeded\&appid=57\&"jobhistory since 9 days"
```

Typical Output

The following is sample output from the command:

Actifio:sa-hq:admin> reportliveclones

StartDate	StartTime	JobName	JobClass	PolicyName	HostName	AppName	AppID	Duration	VirtSizeGB	AppSizeGB	DataCopiedGB	ChangeRate%
2016-11-01	06:00:00	Job_27808677	refreshliveclone	12hr Snap	sql-masking-prod	unmasked	20990406	00:00:19	48.0	0.0	0.018	360.00
2016-11-01	06:05:39	Job_27808704	reprovision	12hr Snap	sql-masking-prod	unmasked	20990406	00:04:00	48.0	0.0	0.000	0.00
2016-11-01	10:03:44	Job_27810022	reprovision	Production to	Oracle-Mask-Prd	dmdb	17433999	00:03:30	50.0	1.5	0.000	0.00
2016-11-01	16:05:00	Job_27818209	refreshliveclone	Production to	Oracle-Mask-Prd	dmdb	17433999	00:00:30	50.0	1.5	1.903	130.25
2016-11-01	16:17:23	Job_27818506	reprovision	Production to	Oracle-Mask-Prd	dmdb	17433999	00:03:30	50.0	1.5	0.000	0.00

reportmailer

Use this command to email reports. A single XLS file with one tab per report is emailed to the desired recipient or recipients. When the report opens as a spreadsheet it actually be in XML format.

You must place multiple email addresses in double quotes with a single space or comma between each address. Also place multiple reports in double quotes with a comma between each report.

Note: *If a report with identical parameters is requested more than once, duplicates will be ignored. For each report you can optionally specify any parameters you wish to run against that report. Parameters specified against a particular report will run against just that report.*

For this particular command, you need not to use **-c** to get CSV, the output will always be an XML formatted XLS file.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-d <number>	Used with **-s** to determine how many days of jobs to include. The default is 30.
-e <email address>	Select a destination addres(s) (placed inside double quotes with comma separation).
-r <report>	Specify desired report or reports (placed inside double quotes with comma separation).
-s	Used instead of **-r** to send a default pack of reports with 30 days of history.
-z	Zip the XLS before emailing it. ***Note:*** *If zip is not available then gzip will be used.*

Example CLI Commands

```
reportmailer -e johnsmith@acme.com -r "reportfailedjobs -d9,reportrpo"
```

reportmappeddisks

Use this report to list all the mapped disks except in-band disks. This is normally needed if you are attempting to delete a host, but it cannot be deleted as there are mapped volumes. This report will help you find these mapped volumes.

Note: *Sideband VDisks are not shown unless they are misnamed.*

Default Sort Order

The default sort order is by mapped host.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-c	Change the output to comma separated variable (CSV).
-n	Not print the header lines.
-s	Sort the data by Host name/Application Name rather than by ActifioMappedHost.
-t	Sort the data by Apptype/Hostname/AppName rather than on ActifioMappedHost.
-u	ACTIFIO SERVICE ONLY - print a sample command to un-map the volume (it does not actually do the un-map).
-w	Change column width to exactly match output data with no truncation.

Note: *LUNID is a decimal value. Some hosts may report LUNID in hex so LUNID 10 will show as 0xA.*

reportmdiskspace

Use this command to show MDisk utilization. For each pool you get a variety of statistics.

MDisk utilization is based on allocated disk space, which is different to used space. Allocated space is space that has been marked as dedicated to a particular pool at the MDisk layer. Used space is space that is marked as being in use at the VDisk layer.

This means the amount of free space shown by reportmdiskspace will be smaller than that shown in reportpools. This is because reportpools displays used space while reportmdiskspace displays allocated space. For the dedup pool this will become more apparent after a Garbage Collection and sweep.

This is because while a sweep will release used space as reported by reportpools, it will not increase free space as reported by reportmdiskspace. In other words the amount of space in use by dedup will have dropped, but the amount of disk allocated to dedup will not.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-c	Display the report output in CSV format.
-n	Exclude the header information.
-t <seconds>	Change the timeout to scan for SSDs and unmanaged disks from 60 seconds to a user defined value.
-u	Print only unused MDisks.
-z	Do not check on SSD health.

Note: *Disk Sizes are in GB unless otherwise indicated. A disk size with T at the end is in TiB.*

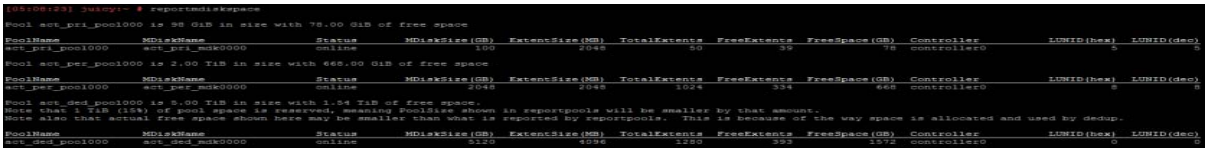
Example CLI commands

The following command shows the MDisks used by Actifio CDS:

```
usvcinfo lsmdisk
```

Typical Output:

The following is sample output from the command:



reportmdlusage

Run the reportapps command to get the required information.

reportmirrordisks

Use this command to list all mirror VDisks.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-c	Change the output to comma separated variable (CSV).
-n	Exclude header information.
-w	Change column width to exactly match output data with no truncation.

Note: *The* ***-c*** *and* ***-w*** *options cannot be run together. Please only use one of those options.*

Example CLI commands

```
reportmirrordisks
```

Typical Output:

The following is sample output from the command:

```
[09:54:49] wta29u29:~ # reportmirrordisks
Hostname              AppName               Appid  Jobclass    ImageID  SourceAppliance  TargetAppliance  SourceSize(GiB)  SourceVDisk  TargetVDisk  SourceIdentifier
1gb_empty_vm14        1GB_Empty_VM14      1174013  dedupasync  4840877  babybear         barkley                        -            -            vmvol:6000C29f-625d-9
1gb_empty_vm14        1GB_Empty_VM14      1174013  dedupasync  4840877  babybear         barkley                        -            -            vmvol:6000C292-2b44-0
1gb_empty_vm15        1GB_Empty_VM15      1174015  dedupasync  3233134  babybear         barkley                        -            -            vmvol:6000C293-7997-9
1gb_empty_vm15        1GB_Empty_VM15      1174015  dedupasync  3233134  babybear         barkley                        -            -            vmvol:6000C296-5bec-1
1gb_empty_vm15        1GB_Empty_VM15      1174015  dedupasync  3233132  babybear         barkley                        -            -            vmvol:6000C293-7997-9
1gb_empty_vm15        1GB_Empty_VM15      1174015  dedupasync  3233132  babybear         barkley                        -            -            vmvol:6000C296-5bec-1
1gb_empty_vm20        1GB_Empty_VM20       939992  dedupasync  5702847  babybear         barkley                        -            -            vmvol:6000C291-abfb-8
1gb_empty_vm20        1GB_Empty_VM20       939992  dedupasync  5702847  babybear         barkley                        -            -            vmvol:6000C295-0633-1
ASHOk-RHEL-Unix       delete              5655328  dedupasync  5719249  barkley          ktsky.sqa.actifio.c      50.0  vm-5AAA34A12300  vm-5AAA36213C00  dasvol:delete
```

reportmountedimages

Use this command to list all the active mount images. Consumed space by default is always shown in GB but can changed to MB or TB. The command reportmounts shows the historical mount jobs regardless of whether the mount is currently in use.

The following are the possible Transport modes:

- Network Based - means the image is being presented over iSCSI to a host
- NFS to Container - means the image is available to any of the IPs listed in the MountedHost column (being any host IP)
- NFS to Host - means the image is being shared to specific hosts via NFS
- NFS to Hypervisor - means the image is being shared as VMDKs in an NFS Datastore presented to ESXi
- SAN Based - means the image is being presented over Fibre Channel or iSCSI to a host

Statistics

The following statistics are provided for each mounted image:

Statistic	Description
VirtSize (GB)	The size of the application's disks. For VMs this is the full size of the VMDKs.
ConsumedSize	The amount of disk space consumed by the mounted image.

Default Sort Order

The default sort order for images is source host name followed by source application name. Optionally, the images are sorted by Target Host.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name.Names with spaces or special characters will need to be encased in single quotes.
-b	Print bringback information needed to remount SQL and Oracle images, such as mountedhostid and provisioningdata.
-c	Display the report output in CSV format.
-e	Checkd every ESP pool for mounted disks. If you mount from ESP and don't use -e then consumed space on those mounts will be zero.
-i	Shows SQL Instance name in AppName column.
-l <number>	Change the application name from the default of 20 characters.
-m	Only show mounts where the original image should have expired.

Parameter	Use this Parameter to:
-n	Exclude the header information.
-p	Optionally show the snapshot pool selected at mount time. Default is shown if not selected.
-r	Show the RAC options (RAC cluster list and ASM Disk Group name) when used with -1 option to print remount command.
-s	Show additional fields in regular and wide view that contain mount age and parent snap space consumption.
-t	Sort the data by target host followed by source hostname/source appname).
-u	Display consumed size using specified units, either m for MB or t for TB.
-1	A variation on the output shown by -b, which will supply the whole remount command for databases.
-2	Shows mounted log images.

Note: *If the user who issued this command is an AGM User, they will be reported as AGMUser. You may see also see this refered to as momuser, which is the same thing.*

Example: **-l 40**

This will lengthen the source app name field from 20 to 40 characters

The Transport column will show if NFS or Block access is being used.

If 'Dedup' appears in the transport column this image is being accessed directly from the dedup pool.

The MountImageName displayed in this report can be used to unmount and delete the image.

For instance, if the MountImageName is Image_9774404 then the following command could be used to unmount and delete the image:

udstask unmountimage -delete -nowait -image Image_9774404

If the image is currently unmounted, then instead use this command to expire the image:

udstask deleteimage -nowait -image Image_9774404

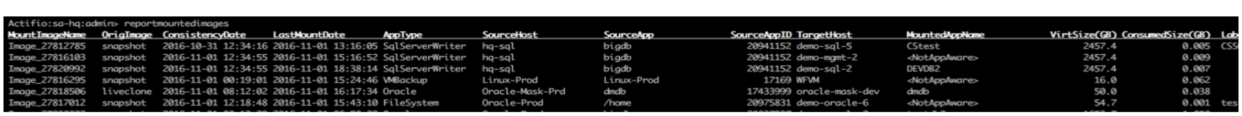
Example CLI commands

The following command shows all the mount jobs:

```
udsinfo lsbackup -filtervalue jobclass=mount
```

Typical Output

The following is sample output from the command:



```
Actifio:sa-hq:admin> reportmountedimages
MountImageName  OrigImage  ConsistencyDate     LastMountDate       AppType           SourceHost        SourceApp    SourceAppID TargetHost        MountedAppName  VirtSize(GB) ConsumedSize(GB)  Lab
Image_27812785  snapshot   2016-10-31 12:34:16 2016-11-01 13:16:05 SqlServerWriter   hq-sql            bigdb        20941152 demo-sql-5       CStest                2457.4            0.005  CSS
Image_27816103  snapshot   2016-11-01 12:34:55 2016-11-01 15:16:52 SqlServerWriter   hq-sql            bigdb        20941152 demo-mgmt-2      <NotAppAware>         2457.4            0.009
Image_27820992  snapshot   2016-11-01 12:34:55 2016-11-01 18:38:14 SqlServerWriter   hq-sql            bigdb        20941152 demo-sql-2       DEVDB2                2457.4            0.007
Image_27816295  snapshot   2016-11-01 00:19:01 2016-11-01 15:24:46 VMBackup          Linux-Prod        Linux-Prod      17169 WFVM             <NotAppAware>           16.0            0.062
Image_27818506  liveclone  2016-11-01 08:12:02 2016-11-01 16:17:34 Oracle            Oracle-Mask-Prd   dmdb         17433999 oracle-mask-dev  dmdb                    50.0            0.038
Image_27817012  snapshot   2016-11-01 12:18:48 2016-11-01 15:43:10 FileSystem        Oracle-Prod       /home        20975831 demo-oracle-6    <NotAppAware>           54.7            0.001  tes
```

reportmounts

Use this command to see successful mount, pre-mounts, and remote-mount jobs in the last two days. If no parameter is specified, last two days mount jobs are displayed.
If the mount is Application Aware you will see (AppAware) in the jobclass field.

The Transport field will show either NFS or Block Access as well as the following possible extra information:

- If the mount is using instant access from dedup you will see (InstDedup) in the Transport field.
- If the mount selected a dedup image but a snapshot image was used you will see (FromSnap) in the Transport field.
- If the mount selected a dedup image and rehydration from the dedup pool occurred then you will see (Rehydrate) in the Transport field.

The following are the possible Transport modes:

- Network Based - means the image is being presented over iSCSI to a host
- NFS to Container - means the image is available to any of the IPs listed in the MountedHost column (being any host IP)
- NFS to Host - means the image is being shared to specific hosts via NFS
- NFS to Hypervisor - means the image is being shared as VMDKs in an NFS Datastore presented to ESXi
- SAN Based - means the image is being presented over Fibre Channel or iSCSI to a host

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name.Names with spaces or special characters will need to be encased in single quotes.
-b <backupname>	Search for mounts that used a specific backupname (must be name, not ID).
-c	Display the report output in CSV format.
-d <number>	Display a different number of days backwards from now.
-e	Display jobs regardless of status, instead of showing only successful jobs.
-j <job-class>	Display mounts for a particular mount type job-class (you can use any mix of case when typing the job-class name.
-l <number>	Change the application name from the default of 20 characters.
-m	Only show System Recovery jobs (Cloud Mobility).
-n	Exclude the header information.
-o <job class>	Display mounts from a particular original job class (you can use any mix of case when typing the job class name).
-r	Only show re-provision jobs.

Parameter	Use this Parameter to:
-s	Sort the data by hostname/appname rather than by date and then hostname/appname.
-u	Print unmount jobs as well as mount jobs.
-w	Change the column width to exactly match with the output data with no truncation.
-x	Show only unmount type jobs (unmount, unmount-delete, prep-unmount).

Note: *If the user who issued this command is an AGM User, they will be reported as AGMUser. You may see also see this refered to as momuser, which is the same thing.*

For example: `reportmountjobs -d 9 -l 40`

This displays last nine days job history, increasing the application name from 20 to 40 characters.

Example CLI commands

The following command shows all mount jobs:

```
udsinfo lsjobhistory -filtervalue jobclass=mount
```

Typical Output:

The following is sample output from the command:

```
Actifio:sa-hq:admin> reportmounts
StartDate StartTime  JobName      JobClass  SourceHost     SourceApp     SourceAppID TargetHost     Duration  VirtSize(GB)  AppSize(GB)
2016-10-31 09:36:14  Job_27800423  mount     oracle-rac-1   racbigdb      21681349 oracle-rac-1     00:08:09  2000.0        1330.0
2016-10-31 10:01:16  Job_27801149  mount     Oracle-Prod    bigdb         20837997 demo-oracle-6    00:02:39  1653.7        1102.5
2016-10-31 11:33:54  Job_27801806  mount     oracle-rac-1   racbigdb      21681349 oracle-rac-1     00:07:41  2000.0        1330.0
2016-10-31 11:38:35  Job_27801952  mount     hq-sql         bigdb         20941152 demo-sql-6       00:01:52  2457.4        1972.2
2016-10-31 11:48:31  Job_27802418  mount     Oracle-Prod    bigdb         20837997 demo-oracle-1    00:03:20  1653.7        1102.5
2016-10-31 11:49:10  Job_27802457  mount     Oracle-Prod    /             20975829 demo-oracle-6    00:00:51  60.0          4.3
2016-10-31 11:50:43  Job_27802560  mount     hq-sql         bigdb         20941152 demo-sql-1       00:02:19  2457.4        1972.2
2016-10-31 11:51:50  Job_27802656  mount     windows-prod   Windows-Prod  21388278 Bill2            00:00:21  100.0         12.8
2016-10-31 14:18:46  Job_27803949  mount     hq-sql         bigdb         20941152 demo-sql-8       00:01:50  2457.4        1972.2
2016-10-31 14:24:12  Job_27804138  mount     Oracle-Prod    bigdb         20837997 Oracle-Prod      00:03:40  1653.7        1102.5
2016-10-31 14:39:59  Job_27804500  mount     hq-sql         bigdb         20941152 demo-sql-3       00:02:10  2457.4        1972.2
2016-10-31 14:46:23  Job_27804729  mount     demo-mgmt-2    Demo-Mgmt-2   20929543 DLI-test         00:00:29  60.0          60.0
2016-10-31 15:21:04  Job_27805095  mount     hq-sql         bigdb         20941152 demo-sql-8       00:01:49  2457.4        1972.2
2016-10-31 15:21:34  Job_27805136  mount     ansible        Ansible       22672364 ACtest           00:01:10  32.0          32.0
2016-10-31 16:25:04  Job_27805658  mount     Oracle-Prod    bigdb         20837997 demo-oracle-6    00:02:40  1653.7        1102.5
2016-10-31 16:28:19  Job_27805739  mount     hq-sql         bigdb         20941152 demo-sql-6       00:01:50  2457.4        1972.2
```

reportnet

Use this report to display network port throughput. By default, this report runs for 20 intervals and then stops.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-c	Change the output to comma separated variable (CSV).
-i	Change the number of lines of output that are printed from the default of 20.
-m	Display throughput in MBps rather than KBps.
-n	Exclude the header information.
-r	Change the data capture rate from 5 seconds to another value in seconds.

Example CLI Commands

For instance the following command will output CSV data with 2 second of data per line and 10 lines of output:

reportnet -c -i10 -r2

If the reportnet command is run via REST API or PowerShell then:

- Rate (-r) will be limited to a maximum of 10 and will default to 5
- Intervals (-i) will be limited to a maximum of 6 and will default to 3.

reportonvaults

Use this command to list OnVault jobs. If you specify none, you see successful OnVault jobs in the last two days.

Statistics

The following statistics are provided for each job:

Statistic	Description
Virtual Size	Shows the size of the application disks. For VMs, this is the full size of the VMDKs.
AppSize (GB)	Shows the size of the data used by the application.
Precompress (GB)	Shows the size of the data that needed to be copied to Object Storage uncompressed. This includes metadata.
DataCopied (GB)	Shows the size of the data that was copied to create this image to Object Storage. Unless the target doesn't support it, this is compressed data. So for most applications this is compressed new data being send to object storage. Note this doesn't include any metadata.
ChangeRate%	Shows the percentage that data copied (new data, normally compressed) is of application size (uncompressed used data). Because the data copied is normally compressed, this change rate % is going to be much smaller.
CompRatio	Shows the compression ratio achieved before sending the data to Object Storage. This includes metadata (where datacopied does not).

If you are trying to understand how much new data needed to be sent, use PreCompress(GB). Understand that it does include a small amount of metadata.

If you are trying to understand how much actual new data was sent to object storage, use DataCopied(GB). Understand that it is normally compressed.

If you are trying to understand how compressible your data is, use CompRatio. Understand that it does include metadata as well as application data.

If you are confused why a full backup can show a changerate much less than 100%, understand that it is normally looking at compressed changes, which makes the rate smaller.

If you are comparing the Data Copied to AppSize to validate the CompRatio and find they are not exactly the same, understand that CompRatio includes metdata, where datacopied does not.

CaptureType will show as 'Full' for several reasons:

1) This is the first ever OnVault Job for this application

2) The snapshot being used as the source for this OnVault job is a Full, meaning the OnVault is also a full

3) The CBT for the source VM has been invalidated so a full DirectOnVault must be run

4) DataCopied multiplied by the CompressionRatio equals or exceeds the AppSize (meaning the size of the uncompressed pre-transmitted data was the same as the AppSize)

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-b	Not show OnVault (log) jobs.
-c	Display the report output in CSV format.
-d <number>	Display a different number of days backwards from now.
-e	Show every job regardless of status. Failed or Canceled Jobs will show this in the CaptureType column.
-f	Show only full copy OnVaults.
-j <class>	Display either OnVault or DirectOnVault or OnVaultreplicate or log (or use -1 or -2 or -3 or -4 instead).
-l <number>	Change the length of the application name from its default value of 20 characters.
-n	Exclude the header information.
-o	Show only on-demand jobs.
-p <number>	Search for jobs created by a specific policy ID.
-s	Sort the data by hostname/appname rather than by date and then hostname/appname.
-w	Change column width to exactly match output data with no truncation.
-1	Display only OnVault jobs.
-2	Display only DirectOnVault jobs.
-3	Display only OnVaultReplicate jobs.

Example CLI command

```
udsinfo lsjobhistory -filtervalue jobclass=vault
```

reportorgmembers

This command is used to list the application and organization mapping, this lets you determine if an application is:

- In a particular organization
- Not in an organization
- In one or more organizations
- In the wrong organization

You can use this command along with reportorgusage to ensure all applications whose usage you wish to track are in the correct organizations. A common method is to use the Actifio Desktop to assign applications to organizations. Use –u to find missing applications, then use –m to find the applications that are double allocated. Misallocated organizations are harder to find as they need knowledge of which applications should be in which organization.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-c	Display the report output in CSV format.
-m	Print only applications that are members of more than one organization.
-n	Exclude the header information.
-o xxxxn	Print applications in a specific organization, specified as a numerical ID.
-u	Print only the applications that are not members of an organization.
-w	Change column width to exactly match output data with no truncation.

Example CLI Commands

- **`udsinfo lsorg`**: To list organizations.
- **`udsinfo lsorgresource`**: To find resources in organizations.

Typical Output:

The following is sample output from the command:

```
[05:51:42] juicy:~ # reportorgmembers
SourceCluster    AppType      HostName                  AppName                 AppID  Template         Profile          Ignored     AppMemberOrgs
0                SQLServer    CLU09.paradise.local      narpxClusterDB01        648976 RemoteApp        RemoteApp        false

branchagm_sky.sqa.a FileSystem branchagm_win2           E:\                     893563 RemoteApp        RemoteApp        false

jaz              CIFS         spsql2008vm01             \\172.16.1.37\mad_cifs  665087 UnprotectedApp   UnprotectedApp   false

jaz              ConsistGrp   BB5AIX1                   AIX_InBand_CG           760629 Snap-DAR         Remote_SVTClust( false

jaz              ConsistGrp   BB5AIX1                   AIX_OOB_CG              760963 Snap-12          LocalProfile     false

jaz              ConsistGrp   BB5AIX1                   Bug28229                713777 UnprotectedApp   UnprotectedApp   false

jaz              ConsistGrp   CLU09.paradise.local      Con_Grp_master          261104 Snap-12          LocalProfile     false

jaz              ConsistGrp   CLU09.paradise.local      narcg1                  648975 UnprotectedApp   UnprotectedApp   false

jaz              ConsistGrp   CLUSTERPARA05.PARADISE.LOC Con_Grp1470311981134   620956 UnprotectedApp   UnprotectedApp   false

jaz              ConsistGrp   hpqavm06                  Con_Grphpqa06           302489 OrphanApp        OrphanApp        OrphanApp
```

reportorgusage

Use this command to see the usage metrics for organizations or templates.

To appear in this report, the VDP Appliance needs to have created at least one image of the app.

Some stats are only updated once every 24 hours at 3am. You can run with **-z** to force an update.

Statistics

The following statistics are provided for each organization or template:

Statistic	Description
AppQty	The sum of all applications and groups in this organization.
ProtectedAppQty	The sum of all protected applications or groups in this organization. If –t is used then the Protected App Qty will be the same as the App Qty. *This counts groups, not the applications inside the groups.*
MDLUsage(GB)	Is based on used data *or* device size depending on application type as of 3am.
VDisks	The sum of all VDisks used as of 3am.
SnapPoolUsage(GB)	The sum of the Staging Disks and Snapshots as of 3am.
DataCopied(GB)	The sum of all data copied by snapshots and Dedup Async over the last 30 days (or from the days set by -d xx).
LocalPostCompress(GB)	The net new data written to the local dedup pool by this app over the last 3 days (or from the days set by -d xx).
RemotePostCompress(GB)	The net new data written to any remote dedup pool by this app over the last 30 days (or from the days set by -d xx).
OnVaultDataCopied)GB)	The sum of all data copied by OnVault over the last 30 days (or from the days set by -d xx).

Default Sort Order

The Organizations or Templates are sorted by name.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-c	Display the report output in CSV format.
-d <number>	Display a different number of days backwards from now.
-e	Include any stats generated by jobs that were not successful (such as failed or canceled jobs OnVault jobs). Cannot be used with **-r**.
-n	Exclude the header information.

Parameter	Use this Parameter to:
-p	Print by Host rather than by Organization or Template.
-t	Print the usage by template rather than by organization. This does not display unprotected applications.
-z	Force an update of the statistics for MDLUsage, VDisk and SnapPoolUsage columns.

reportorphanimages

Run the reportimages command with option **-p** to get the required information.

reportorphanapps

Run the reportapps command with option **-o** to get the required information.

reportperfstats

Use this command to see the I/O performance of the Actifio appliance.

For Virtual Appliance the following IOSTAT stats are shown:

- **rrqm/s** - The number of read requests merged per second that were queued to the device.
- **wrqm/s** - The number of write requests merged per second that were queued to the device.
- **r/s** - The number of read requests that were issued to the device per second.
- **w/s** - The number of write requests that were issued to the device per second.
- **rkB/s** - The number of kilobytes read from the device per second.
- **wkB/s** - The number of kilobytes written to the device per second.
- **avgrq-sz** - The average size (in sectors) of the requests that were issued to the device.
- **avgqu-sz** - The average queue length of the requests that were issued to the device.
- **await** - The average time (in milliseconds) for I/O requests issued to the device to be served. This includes the time spent by the requests in queue and the time spent servicing them.
- **svctm** - The average service time (in milliseconds) for I/O requests that were issued to the device. Warning! Do not trust this field any more. This field will be removed in a future sysstat version.
- **%util** - Percentage of CPU time during which I/O requests were issued to the device (bandwidth utilization for the device). Device saturation occurs when this value is close to 100%.

By default, only 20 seconds will be displayed.

To display more than 20 seconds (or less) use the **-i xxx** paramter where xxx is a different number.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-c	Change the output to comma separated variable (CSV).
-f	Show Fibre Channel throughput.
-i xxxx	Change the display interval from 20 sets of data to another value.
-n	Exclude the header information.
-o <object>	Print a certain object, either one VDisk starting with vm- or rs- or all the VDisks in one image starting with Image.
-s <seconds>	Set sleep time.

reportpolicies

Use this command to list the templates and their associated policies. The total number of applications using each policy is also listed. By default, unused templates are not included. You can use the **-e** option to see these templates, however there are two aspects to how this command behaves:

- If there are no protected applications (such as on a brand new appliance), then all the policy templates are be shown regardless of whether **-e** is used.
- Once the first application is protected, only the policy templates in use are shown. You can use t **-e** option to force all templates to be printed.

If you have unused templates or profiles, Actifio recommends you to delete them.

Valid Parameters

The following options are available:

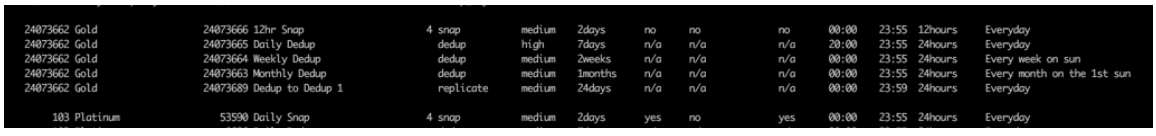
Parameter	Use this Parameter to:
-a <ID/name>	Display just the policies for one selected application using the Application ID (App ID) or SLA ID or AppName. AppNames with spaces or special characters will need to be encased in single quotes. ***Note:*** *If you specify an AppName that is used by multiple apps, you will get an error and will need to use the unique App ID instead.*
-c	Display the report output in CSV format.
-e	Display every template including the ones not currently in use by an SLA.
-n	Exclude the header information.
-t <SLT ID>	Display just a specific template ID. This overrides the use of -a so do not specify both.

Log Protection will either show:

- **Minutes**: Logs are being protected at that internal and retained for the retention period of that snapshot
- **Minutes/Days**: Logs are being protected at that internal and retained for that number of days
- **Minutes/Days/R**: Logs are being protected at that internal and retained for that number of days and replicated using StreamSnap
- **Minutes/Days/O**: Logs are being protected at that internal and retained for that number of days and replicated using OnVault
- **Minutes/Days/OR**: Logs are being protected at that internal and retained for that number of days and replicated using OnVault and StreamSnap

Typical Output

In this example there are three policy templates. The following is sample output from the command:



Example CLI Commands

The following command shows the templates and profiles:

```
udsinfo lsslt
```

reportpoolhistory

Use this command to see the pool space history. This reports shows the size and growth of each pool over a period of time using the output of the command **`udsinfo lsdiskpoolstat`**. For pool stats, app stats and VDisk stats, all available history will be shown (normally 84-90 days). For replication stats **-r**, **-s** and **-t** by default only 2 days are shown. Historical statistics is measured at 3 a.m.

Default Sort Order

The pools are listed in alphabetical order.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a	Show protected application history.
-b	Display output of **-r**, **-s**, and **-t** in bits rather than bytes (multiplied by 8).
-c	Display the report output in CSV format.
-d <days>	Limit the number of days of history. The default is 84 days.
-g	Show MDL consumption history per application. Default is 7 days of history.
-n	Exclude the header information.
-p <poolname>	Display the history of a specific pool.
-r	Display bandwidth stats for dedup traffic (Dedup replication and Dedup Async)
-s	Display bandwidth stats for StreamSnap replication
-t	Display a combination of dedup and StreamSnap replication stats (**-r** plus **-s**)
-v	Show VDisk usage history instead of pool history (overrides **-p**).
-x <ID/name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.

The **-a**, **-r**, **-s**, **-t** or **-v** options should not all be specified at once. Please use only one option from that list.

If you do specify more than one, only one option will be used, based on alphabetical order.

Note: *The **-r**, **-s** and **-t** stats show bandwidth stats per hour, total throughput, average throughput for every second in that hour and the peak throughput for 1 minute in that hour (except for **-t** where peak is not shown).*

The time shown for **-r**, **-s** and **-t** stats is the end of the measuring period, not the start. So 02:00 means the stats shown were collected from 01:00:01 to 02:00:00.

Example CLI Commands

The following command shows the pool history:

```
udsinfo lsdiskpoolstat
```

reportpools

Use this command to list Pool Usage. This reports shows how the size and growth of each pool both over the last 24 hours and 7 days. Historical stats are measured each day at 3am. The report for OnVault pool usage includes the OnVault bucket name(s) as well as the object size used by OnVault (for example, 256KB, 1MB, etc.).

> ***Note:*** *The dedup capacity is normally reported at 85% of actual physical capacity since 15% is reserved space. Also note that printed with the dedup pool name is the maximum possible physical space of the dedup pool in TB.*

The Dedup Pool compression value is actually the total dedup ratio as reported by reportdedupratio, so it is more than just compression. If there are no dedup images in the pool, then a ratio of n/a is reported.

The OnVault Pool compression value compares the summed pre and post compression statistics for all active and expiring images in the pool. If no images are found or the pool is reported to be empty then a ratio of 1 is shown. This ratio can be skewed by expiration of images.

For instance if the first image uploaded gets a low compression ratio and a second incremental gets a high compression ratio, you will see the average of the two. But when the first image expires, then the ratio will go up even if many of the lower compression blocks remain as dependent blocks of the second image.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-c	Display the report output in CSV format.
-n	Exclude the header information.
-u	Display size values in TB rather than GB. There are no other size choices.

Typical Output

The below mentioned example shows the dedup pool that currently has 1548 GB of usable space (which is 85% of total allocated disk to the pool) and that it can grow to a maximum size of 42 TB (of which 85% will be usable).

Example CLI Commands

The following command shows all the defined pools:

```
udsinfo lsdiskpool
```

The following command shows the usage and capacity of the dedup pool:

```
udsinfo lsdiskpoolstat -filtervalue poolname=act_ded_pool000 -delim ,
```

The following command shows the usage and capacity of the snapshot pool:

```
udsinfo lsdiskpoolstat -filtervalue poolname=act_per_pool000 -delim ,
```

reportprofiles

Use this command to list all the resource profiles.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <appid/ name>	Display the profile for one selected application using the Application ID or Name. **Note:** *If you specify an AppName used by multiple apps you may get multiple profiles.*
-c	Display the report output in CSV format.
-n	Exclude the header information.

reportrbac

This command can be used to analyze, offload and document the setup of roles and orgs on an Actifio appliance or AGM. There are a number of separate reports supplied by reportrbac, so unless a specific report is requested, the help message will be printed.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-c	Display the report output in CSV format. For some reports this may be the best way to read the output since some reports (such as **-r** and **-u**) are very wide. Use **-c** and then place the output into a spreadsheet (using the text to columns option).
-n	Exclude the header information.
-o <object>	Search on a specific object such as an Org or Role or User. This option applies to all reports. Note that searches by name are case sensitive.

Available Reports

There are a number of reports currently available:

Use	To Get the Report
-d	**Dependencies**: To display missing dependencies per organization, currently this examines Snapshot and OnVault Pools, SLPs and SLTs When a protected application is added to an organization, certain dependent resources should be added at the same time. The Template and Profile being used to protect an App are two of these, as are the Performance Pool and OnVault Pool specified by the Profile. If these resources are missing, users with rights to perform actions, may not be able to do so. For instance if a user has the SLA Manage right, they can only edit a template if the template is visible in the organization. A good practice would be to run -d on a regular basis to check for missing dependent resources and then add them. Ideally -d should show no output. Currently this report only checks for missing Templates, Profiles, Performance Pools and OnVault pools. You can use **-o** to display a specific organization by name or ID. **Example Output**: In this example the test organization is missing three resources, a Profile, a Template, and the Snapshot Pool. These should be added to that organization as they are clearly needed by a protected application that is already in this organization. **Example Usage Scenario**: A user who has SLA Manage rights cannot edit a Template being used in their organization. After running reportrbac -d the Administrator can see that this Template was overlooked and adds it to the organization.

Use	To Get the Report
-l	LDAP Mapping: To list LDAP group mappings to roles and organizations. If LDAP mapping is in use, this report can be used to see which Actifio Roles and organizations are mapped to which LDAP Groups. On AGM this report will mirror the output shown on the LDAP mapping panel. You can use -o to display a specific LDAP Group by name or ID. Example Output In this example a number of LDAP Groups have been mapped to Roles and organizations. Each mapping can be clearly seen. Example usage scenario The security manager wants to confirm what access specific LDAP Groups will get on an Actifio Appliance. By running `reportrbac -lc` the Actifio Administrator can share a spreadsheet that shows all mapping from LDAP Group to Actifio Role and organization. After learning this, they may choose run `reportrbac -r` to explore the rights of each role and `reportrbac -m` to explore the members of each Org.
-m	Members: To list organization members (output is CSV by default and cannot be changed) This report shows all resources currently in each organization. Resources listed are Apps, Groups, Hosts, Orgs, Pools, Profiles, Templates and Users. To help understand why an App may be visible in an organization even though it has not been discreetly added to an organization, for each App the reason the App is in the organization will be printed (Added by App, by Host or by Group). This is because when a Host is added to an organization, all Apps on that host are automatically added. Equally if a Group is added to an organization, all Apps in the Group are automatically added. By showing the reason an App will be visible in an organization you can determine why an App can be seen inside that Org. This does mean an App may be listed more than once per Org. Note that only resources in Parent organizations are listed, meaning that if Org1 contains Org2 then only the resources in Org1 will be listed against Org1, even though User placed in Org1 will also be able to access the resources in Org2. This means if you were documenting the resources in Org1, you may consider adding the resources of Org2. You can use -o to display a specific Org by name or ID. Example output In this example there are three Orgs. Org Test has an application /boot added by App ID. Example usage scenarios 1) The Actifio Administrator wants to confirm which apps are visible in a particular Org. They run `reportrbac -mc` and place the output in a spreadsheet so they can filter by Org and Resource Type 2) The Actifio Administrator can see that a user is able to access an Application, but that Application has not been added to the Org. They run `reportrbac -m -o <org>` and find that this App is visible because the Host that owns that App has been added to the Org.
-r	Roles: To list the rights that each role has (CSV output using -c is recommended). This will list all rights in each role. This report can be very wide so using -c is recommended. A right will only be listed if it is included in at least one Role. You can use -o to display a specific Role by name or ID. Example output In this example you can see how wide the report is. This is a good reason to run it using -c and place the output into a spreadsheet. Example usage scenario An Administrator wishes to compare the rights of two roles to see how different they are. They run `reportrbac -rc` and use filters in a spreadsheet to do the comparison.

Use	To Get the Report
-s	Summary: To list a summary view of which roles and organizations each user is in This will list a summary per User of which LDAP Groups this user is a member of, which Roles that user has been assigned and which Orgs that User can access. Note that only assigned Orgs are listed, meaning that if a User can access Org1, which is a parent of Org2, Org2 will not be listed even though the user can access it. In some environments, the number of LDAP Groups a user is a member of can be very extensive. If a user is in a newly mapped LDAP Group (or had their LDAP Group unmapped from a role or an org), but has not logged in since the mapping was changed, the user Roles and Orgs may effectively be out of date. However the used needs to login at least once to update this. Note that on AGM, this report currently does not list LDAP Groups. Also note that if LDAP integration is not in use, no column will be shown for LDAP Groups. You can use -o to display a specific User by name or ID. Example output In this example no LDAP integration exists, so no LDAP Groups are shown. For each user the Role And Org are shown. This output is similar to what was seen in -l, but here it is from the perspective of an individual user rather than an LDAP Group. Example usage scenario An Administrator wishes to confirm which Role and Org a specific user is in. They learn the user name, for example 'av' and then run: `reportrbac -s -o av`
-u	**User Rights**: To list the rights that each user has based on their combined roles (CSV output using **-c** is recommended) This lists all rights that a user has. Because a user can have multiple roles, the total rights of that user is determined by the combination of all the assigned roles. This report shows the combined rights per user. This report is very wide, using **-c** is recommended. You can use **-o** to display a specific User by name or ID. **Example Output**: In this example describes how wide the report is. For the same reason, Actifio recommends you to use **-c** and place the output into a spreadsheet. You can see the output is very similar to what is shown by -r, but it is from the perspective of a user and shows combined rights based on the number of assigned roles. Example usage scenario Because a user called api has two roles, the Administrator wants to understand what the combination of those roles will enable a user to do. They run `reportrbac -u -o api` and can now learn the combined rights.

reportremotededups

Use this command to list the remote dedup jobs. If no parameter is specified, it displays the last two days data. This report lists jobs that created remote dedup images, not the remote dedup images themselves. The images that are created by these jobs may already have expired. To find all images, use reportimages or reportimagecount.

Statistics

The following statistics are provided:

Statistic	Description
VirtSizeGB (GB)	Size of the application's disks. For VMs this is the full size of the VMDKs.
AppSizeGB (GB)	Size of the data being used by the application.
NewLocal(MB)	New data produced by the dedup image that this job is sending.
DataSent(MB)	New data written to the remote dedup pool for this job.
TotalSent(MB)	The total amount of data sent to the remote site for this job. This includes metadata as well as deduplicated and compressed data.
Saving%	The reduction between TotalSent as a percentage of NewLocal.

Note: *TotalSent includes meta-data as well as dedup data this means TotalSent may exceed DataSent due to the meta data that is sent with each image.*

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-c	Display the report output in CSV format. The image expiry date is included.
-d <number>	Display a different no. of days backwards from now.
-l <number>	Change the length of the app name from the default of 20 characters.
-n	Exclude the header information.
-0	Show only on-demand jobs.
-p <number>	Search for remote-dedups created by a specific policy ID.
-s	Sort the data by hostname/appname rather by date and then hostname/appname.
-w	Change column width to exactly match output data with no truncation.

Example CLI Commands

The following command shows all successful jobs in the remote dedup class:

```
udsinfo lsjobhistory -filtervalue jobclass=remote-dedup\&status=succeeded
```

reportremoteimages

Run the reportimages command with option **-r** to get the required information.

reportrestores

Use this command to see the restore and remote-restore jobs. If no parameter is specified, last two days jobs are displayed by default.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-c	Display the report output in CSV format.
-d	Display a different number of days backwards from now.
-l <number>	Change the length of the application name from the default value of 20 characters.
-n	Exclude the header information.
-s	Sort the data by hostname/application name rather by date and then hostname/application name.
-w	Change column width to exactly match the output data with no truncation.

Note: *If the user who issued this command is an AGM User, they will be reported as AGMUser. You may see also see this refered to as momuser, which is the same thing.*

Example CLI Commands

The following command shows the restore jobs:

```
udsinfo lsjobhistory -filtervalue jobclass=restore
```

This command shows the restore jobs that used an image in a remote clusters dedup pool:

```
udsinfo lsjobhistory -filtervalue jobclass=remote-restore
```

reportrpo

Use this command to list the most recent consistent image in each job class for each protected application. The time and date shown for each job class is the consistency date when the image is created.

> ***Note:*** *If a remote dedup job is created from a local dedup, which is created from a snapshot, then all three jobs shows the same consistency date. There may be many other images in each Job class, this command only shows the most recent.*

The LogSmart column shows the most recent available log date. There may be circumstances when the most recent snapshot has a older date than the most recent database log data. This is because as a new snap may be created which has not accumulated any logs yet. To confirm, use the command **`reportimages -axxxx`** where xxxx is the application ID.

To make the report narrower in normal or wide print mode, if there are no Snapshot (ST), DirectDedup(D2D), RemoteDedup(RD), Dedup (DP), ProdMirror (PM), LiveCLone(LC) or OnVault(OV) RPOs, the column width for those clases will be reduced to four characters.

Default Sort Order

The default sort order is by application type, followed by hostname, and application name. To sort by template, use the **`-t`** option. This makes it easier to find the missed SLA.

Consistency groups are always shown by default. Individual apps inside a CG are not listed.

Statistics

The following statistics are provided for each application:

Statistics	Description
AppSize(GB)	Shows the size of the data being used by the Application (as at 3am).

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-c	Display the report output in CSV format.
-e	Display the most distant (highest) expiration date, instead of consistency dates. Log dates will not be shown. Use -o to display the lowest date. In otherwords, **-e** shows when the last expiration job will be run if no more images with a later expiration date are created.
-i	Used with or instead of **-m**, will ignore mismatched apps where a job is currently running that may remove this mismatch.
-f	Show apps which have the scheduler disabled. These are normally ignored.

Parameter	Use this Parameter to:
-g <number>	Forces the **-m** option to show the policy ID that matches with the depth requested. The default is 1 which is the policy with the shortest retention. If **-g** 2 is used then the policy ID will be the second shortest retention. If there are three dedup policies and **-g** 3 is used then the dedup policy with the longest retention will be shown.
-k <SLT>	Only show protected applications using a specified SLT ID/Name. Use the command report policies to get SLT IDs. Names with spaces need to be encased in quotes. Case is ignored, plus if you have two SLTs with names Gold and gold, only one will be shown.
-l <number>	Change the length of the application name from its default value of 20 characters.
-m	Only print apps that have mismatched RPO dates between snapshot and other pools. ***Note:*** *If you use* **-c** *option you will get both dedup and replicate jobs (where applicable) in separate columns. You can use* **-x** *to only examine OnVault. If you use* **-x** *you don't need to specify* **-m**. *You can use* **-y** *to ignore remote-dedup. If you use* **-y** *you don't need to specify* **-m**. Apps with scheduler disabled will not be examined. You can also use **-x** and **-y** and **-z** as alternate ways to run this. ***Note:*** *This test assumes each jobclass has the same interval, normally daily. So you may get a false policy if for instance snapshot is daily but dedup is weekly.*
-n	Exclude the header information.
-o	Show the oldest image in each class rather than the most recent. This also shows the oldest log backup for SQL and Oracle apps. One thing to be aware of is the oldest log may not be applicable to the oldest snapshot. It may apply instead to a dedup image. Also if **-e** is used to display expiration dates, **-o** will display the lowest date, which may be in the past if expiration was missed. If no expiration has been missed, then **-e** combined with **-o** will effectively show when the next expiration job will run.
-r	Show the RPO of Apps that were sent to this Appliance by a remote Appliance.
-s	Sort the data by hostname/appname rather than by date and then hostname/appname.
-t	Sort the data by template/profile first (then host/app name).
-x	When used with or instead of **-m**, only compares snapshot RPO to OnVault RPO.
-w	Change column width to exactly match output data with no truncation.
-y	When used with or instead of **-m**, ignores remote-dedup RPO.
-z	Used with **-m**, will offer a backup command with sourceimage name of the most recent snapshot or dedup image. Using this may result in intermediate images being ignored, so use this only if you are prepared to skip these images if they exist.

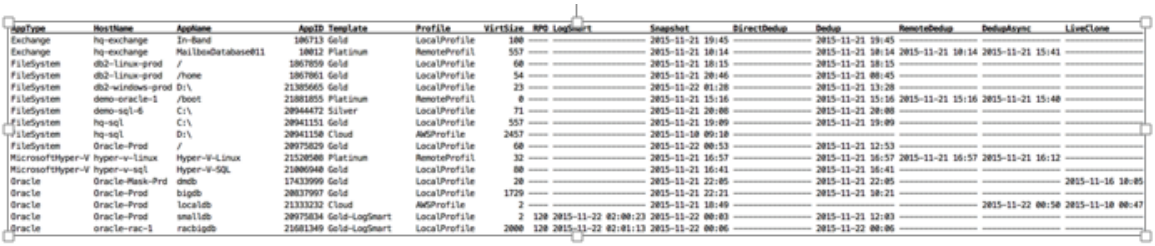
Example CLI Commands

The following command shows all snapshot images for the application ID 106713. Each field is delimited by a comma. The reportcons command reports the field headed consistencydate.

```
udsinfo lsbackup -delim , -filtervalue jobclass=snapshot\&appid=106713
```

Typical Output

The default sort order is by application type. In this example, some applications have a more recent consistent image locally than remotely. The following is sample output from the command:



AppType	HostName	AppName	AppID	Template	Profile	VirtSize	RPO	LogSmart	Snapshot	DirectDedup	Dedup	RemoteDedup	DedupAsync	LiveClone
Exchange	hq-exchange	In-Band	106713	Gold	LocalProfile	100	----	----	2015-11-21 19:45	----	2015-11-21 19:45	----	----	----
Exchange	hq-exchange	MailboxDatabase011	10012	Platinum	RemoteProfil	557	----	----	2015-11-21 10:14	----	2015-11-21 10:14	2015-11-21 10:14	2015-11-21 15:41	----
FileSystem	db2-linux-prod	/	1867859	Gold	LocalProfile	60	----	----	2015-11-21 18:15	----	2015-11-21 18:15	----	----	----
FileSystem	db2-linux-prod	/home	1867861	Gold	LocalProfile	54	----	----	2015-11-21 20:46	----	2015-11-21 08:45	----	----	----
FileSystem	db2-windows-prod	D:\	21385665	Gold	LocalProfile	23	----	----	2015-11-22 01:28	----	2015-11-21 13:28	----	----	----
FileSystem	demo-oracle-1	/boot	21881855	Platinum	RemoteProfil	0	----	----	2015-11-21 15:16	----	2015-11-21 15:16	2015-11-21 15:16	2015-11-21 15:40	----
FileSystem	demo-sql-6	C:\	20944472	Silver	LocalProfile	71	----	----	2015-11-21 20:08	----	2015-11-21 20:08	----	----	----
FileSystem	hq-sql	C:\	20941151	Gold	LocalProfile	557	----	----	2015-11-21 19:09	----	2015-11-21 19:09	----	----	----
FileSystem	hq-sql	D:\	20941158	Cloud	AWSProfile	2457	----	----	2015-11-10 09:10	----	----	----	----	----
FileSystem	Oracle-Prod	/	20975829	Gold	LocalProfile	60	----	----	2015-11-22 00:53	----	2015-11-21 12:53	----	----	----
MicrosoftHyper-V	hyper-v-linux	Hyper-V-Linux	21520580	Platinum	RemoteProfil	32	----	----	2015-11-21 16:57	----	2015-11-21 16:57	2015-11-21 16:57	2015-11-21 16:12	----
MicrosoftHyper-V	hyper-v-sql	Hyper-V-SQL	21006948	Gold	LocalProfile	80	----	----	2015-11-21 16:41	----	2015-11-21 16:41	----	----	----
Oracle	Oracle-Mask-Prd	dmdb	17433999	Gold	LocalProfile	20	----	----	2015-11-21 22:05	----	2015-11-21 22:05	----	----	2015-11-16 18:05
Oracle	Oracle-Prod	bigdb	20837997	Gold	LocalProfile	1729	----	----	2015-11-21 22:21	----	2015-11-21 18:21	----	----	----
Oracle	Oracle-Prod	localdb	21333232	Cloud	AWSProfile	2	----	----	2015-11-21 18:49	----	----	----	2015-11-22 00:50	2015-11-10 00:47
Oracle	Oracle-Prod	smalldb	20975834	Gold-LogSmart	LocalProfile	2	120	2015-11-22 02:00:23	2015-11-22 00:03	----	2015-11-21 12:03	----	----	----
Oracle	oracle-rac-1	racbigdb	21681349	Gold-LogSmart	LocalProfile	2000	120	2015-11-22 02:01:13	2015-11-22 00:06	----	2015-11-22 00:06	----	----	----

reportrunningjobs

Use this report to list of jobs that are currently running.

Default Sort Order

The default sort order for running jobs is by Jobclass/HostName/AppName/JobName. and the default sort order for queued jobs is by Priority/Queuetime.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-c	Display the report output in CSV format.
-e	Show every job type. Otherwise cleanup jobs are not displayed.
-f	Follow all jobs currently running as well as their sub jobs unless the report also includes the -p option which allows only the parent jobs to get printed.
-j <jobclass>	Display failed jobs for a particular job-class.
-k <number>	Issue cancel against snapshots with progress% lower than the number specified when run with -x option.
-l <number>	Change the length of the app name from the default of 30 characters.
-m	Enter monitor mode. The screen will refresh every 5 seconds for one hour.
-n	Exclude the header information.
-o	Show only on-demand jobs.
-q	Show queued jobs and not the running jobs.
-s	Sort the data by Hostname/AppName.
-p	Only show parent jobs, this makes the output shorter but less detailed.
-t	Optionally show the template name.
-w	Change column width to exactly match output data with no truncation.
-x <hours>	Show jobs that have been running or queued for longer than the number of hours specified. For example, "-q -x 10" will show jobs that are queued for 10 hours or more.
-y	Shows the duration of the last three successful with the same job class and log type. The most recent of the three is on the left.

Parameter	Use this Parameter to:
-z <perc>	To only show parent jobs whose progress percentage is equal or lower than the percentage requested with this option.

Example CLI Commands

The following command also shows the running jobs: `udsinfo lsjob.`

You can see the details of a particular running job by using the same command against that job in this format:

```
udsinfo lsjob Job_0123456
```

reportsarg

Use this command to run the SARG reports. Every SARG report listed in report list will be run and you can mark each report as passed or failed.You can also run reports with extra options or extra days. The following reports are not run unless the -e option is used:

- reportfctree
- reportnet
- reportperfstats
- reportvms

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-e	Run every report.

reportslaoptions

Use this Actifio report to show all options that are set for each SLA. It allows you to get the SLA ID for each application.

Note: *Only consistency groups are shown since apps inside a consistency group do not have an SLA.*

Note: *Dedup async (DAR) can be disabled with two disabledar and dedupasyncoff settings.*

If either are set to true then the DAROff column will show true. If enabling DAR via CLI make sure to check both settings.

Default Sort Order

Default sort order is by app type, then host name then app name. If you wish to sort by template use the **-t** option.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-c	Display the report output in CSV format.
-d <days>	Display applications protected in x recent days, so **-d** 7 would only show apps protected in the last 7 days.
-l <number>	Change the length of the app name from the default of 20 characters.
-n	Exclude the header information.
-s	Sort the data by SLA create date. ***Note:*** *If an app is unprotected and re-protected, the most recent protection date is shown.*
-u	Changes the output to show only the username of the user who created the SLA.
-t	Sort the data by template/profile first (then app type/host/app name).
-w	Change column width to exactly match output data with no truncation.

Note: *CreateDate is when the SLA was created (when the app was most recently protected). It is not when the app was discovered. If the CreateDate shows as NotRecorded, then the SLA was created on an older code version that did not support retaining this date. If the UserName shown with* ***-u*** *is a dash, then the SLA was created more than 12 weeks ago and is no longer available.*

Example CLI Commands

The following command also shows the SLA options:

```
udsinfo lssla
```

reportslaviolations

Use this command to see the most recent SLA violations. By default, SLA violations that occur because the scheduler has been turned off are NOT shown. Use the option **-s** to include them.

Default Sort Order

The default sort order is by hostname/appname and then by date.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-c	Display the report output in CSV format.
-d <number>	Display a different number of days backwards from now.
-e	Include schedule off SLA violations, which by default are not shown.
-j <job class>	Only display SLA violations for a particular job class. The valid job classes are: • dedup • dedupasync • directdedup • directonvault • onvault • remotededup • streamshot • snapshot
-n	Exclude the header information.
-p	Show the policy ID instead of the policy name (only if a policy ID is available).
-s	Sort the data by hostname/application name instead by date.
-t	Show only the total quantity of applications that had an SLA Violation per job-class.
-w	Change column width to exactly match output data with no truncation.

If the CSV output is selected, then the udstask backup command syntax will be printed. This will help you rerun that job although log type backups will need the logtype parameter.

Statistics

The following statistics are provided for each application:

Statistic	Description
Expected	Number of jobs that are expected to run.
Tolerance	Number of failed jobs that are tolerated (normally zero).
Succeeded	Number of successful jobs.
Failed	Number of failed jobs.

Example CLI Commands

The following command shows the SLA violations:

```
udsinfo lssnmpevent
```

reportsnappool

Use this command to display snapshot pool usage. By default, this report examines only the snapshot (performance) pool known as act_per_pool000.

This command runs in real time so there is a pause while processing occurs.

Statistics

The following statistics are provided for each job (either at 3am, or the last time when updated):

Statistic	Description
Vols	Is the number of volumes in the most recent image, not including log disks.
AppSize (GB)	The size of the data being used by the application.
VDisks	Is the number of VDisks being used by this application.
Stage(GB)	Is the used bytes size of the staging disks (named vm-) that are not log data disks.
Snap(GB)	Is the used bytes size of the snapshot disks (named fc-) that are not protecting log data disks.
Logs(GB)	Is the used bytes size of all disks (both vm- and fc-) being used to hold log data.
Mount(GB)	Is the used bytes size of the mounted images (named rs-). These are a form of snapshot.
Mirror(GB)	Only for remote applications is the used bytes size of the DAR and Streamsnap staging disks (named vm-) and snapshots of those disks (named fc-)
LiveClone(GB)	Is the used bytes size of the LiveClone images (named vm-). These are a form of staging disk
Rehydrate(GB)	Is the used bytes size of disks being used to rehydrate from dedup (named ct-)
Clone(GB)	Is the used bytes size of disks created by clone jobs (named rs-). These are a form of staging disk.
Total(GB)	Is the sum of all used bytes. Image mode disks will be included in this even though they are not summed elsewhere.
Virtualsize(GB)	Is the actual size of the disks that make up the application in GiB (shown in CSV only).

- ActifioInternal are VDisks that are used internally by Actifio. They should not be changed or deleted. Use -u to list them.
- AllocatedEmpty is space that is allocated to the pool but which is not yet being used by any VDisk. This empty space will be used first.
- LeakedVDisks are VDisks that are not attached to an image, but should be. If they still exist after 24 hours, report them to Actifio CSE to investigate. Use -u to list them.
- ManuallyDefined are VDisks have been created manually and are often image mode disks. Use -u to list them.

Default Sort Order

The default sort order is SourceCluster/AppType/HostName/AppName.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-c	Display the report output in CSV format.
-e	Measure usage for every pool. This means every VDisk in every pool is examined.
-f	Show fixed output. Do not scan for real time usage but instead show usage as at 3am. Can be used with -z.
-l <number>	Change the width of the application name from the default 20 characters.
-n	Exclude the header information.
-p <pool name>	Select a different pool to the default snapshot pool (which is the pool named act_per_pool000).
-s	Sort the data by HostName/AppName
-t	Sort the data by Template/HostName/AppName
-u	Print VDisks that are either Actifio internal, leaked or manually defined so they can be investigated
-v	Print number of VDisks in each category of usage.
-x	Print extra stats. this will print totals for certain columns
-y	Diagnostic mode, use only under direction from support. Will print VDisk names for a specific App ID (must be an ID not a name)
-z	Force an update of the statistics when used with -f.

There are three app types:

- **UnlistedApp**: means that the application is likely in the process of being expired. If the Application continues to be listed after 24 hours, contact Support to have it investigated, as its expiration may be stalled.
- **OrphanApp**: means the Application has been deleted, but the images created for that application have not yet expired.
- **Unprotected**: means the Application is no longer protected by an SLA, but the images created for that application have not yet expired.

Example CLI commands

The following command also shows the snapshot pool usage:

```
udsinfo lssnappoolstat
```

reportsnaps

Use this command to list the snapshot jobs. If you specify no parameters, it displays all the successful snapshot jobs for the last two days. This command lists the jobs that created snapshot images, not the snapshot images themselves. The images created by these jobs may already have expired. To find all images, use reportimages or reportimagecount.

The capture type reflects whether this snapshot job was able to use a previous snapshot as a base. A full backup indicates that there are no previous snapshot (indicted by the presence of only one source_ID in the job history). Inband snaps will complete almost immediately.

An incremental backup indicates that the option is available to compare the delta between two snapshot (indicated by the presence of two source_IDs in the job history rather than just one). There may be situations where a full backup occurs however, such as when VMware loses CBT information, forcing a full ingest even though a previous image exists.

Statistics

The following statistics are provided for each snapshot job:

Statistic	Description
VirtSizeGB	Shows the size of the application's disks. For VMs this is the full size of the VMDKs.
AppSizeGB	Shows the size of the data being used by the application.
DataCopiedMB	Shows the new application data found by the snapshot job.
ChangeRate%	Shows the percentage that data copied is of application size (used data).

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes. ***Note:*** *If a host ID is used, then snapshots for all apps on that host will be reported.*
-b	Not show log only snapshots. DB and Log+DB are shown.
-c	Display the report output in CSV format.
-d <number>	Display a different number of days backward from now.
-f	Only show full copy snapshots.
-l <number>	Change the length of the application name from the default 20 characters.
-n	Exclude the header information.
-o	Display only on-demand jobs.

Parameter	Use this Parameter to:
-p <number>	Search for snapshots created by a specific policy ID.
-r <number>	Only show snapshots with a change rate that is higher than the value entered.
-t <type>	Search for snapshots that used a specific transport (nfs, nbd, nfsds, sideband, sb, block or all). ***Note:*** *'-t all' is not really a search option. It shows the transport in the Jobclass column for all jobs.*
-s	Sort by hostname/appname rather than by date and then hostname/appname
-w	Change column width to exactly match output data with no truncation.
-x <minutes>	Only show snapshots with a duration in minutes higher than the value entered.
-y	Print target host rather than HostName. For clustered apps this will show the host that performed the snapshot. Ignored for -c.

Note: *Image expiry date is also printed when CSV output is selected. Target host is also printed when CSV output is selected. If the transport type is NFS then (NFS) will appear after the jobtype. If the apptype is a VMBackup and the transport was sideband then (SB) will appear after the jobtype.*

Example: -d 9 -a 57 -l 40

This will display 9 days for application ID 57 lengthening the app name from 20 to 40 characters

Do not use the application name, it must be the application ID, which is always a number

Invalid parameters will be ignored.

Example CLI Commands

To display snapshot jobs use the following CLI command:

```
udsinfo lsjobhistory -filtervalue jobclass=snapshot
```

reportstats

Use this command to list interesting job stats for protected applications. If you specify no parameters you will get all snapshot, direct to dedup, dedup, and remote-dedup jobs performed in the last two days.

Statistics

The following statistics are provided for each node:

Statistic	Description
VirtSizeGB	Size of the Applications Disks. For VMs this is the full size of the VMDKs.
AppSizeGB	Size of the data being used by the application.
DataCopiedMB	New application data that was found by the snapshot job.
BytesReadMB	New data scanned by the dedup engine.
PostCompressMB	New data written to the dedup pool for this job.
DataSentMB	Total amount of data sent to the remote site for this job.

Note: *All sizes are actually GiB or MiB. You can use* ***-g*** *to force all stats to GiB.*

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-b	Not show log only snapshots or log replication or OnVault (log). DB and Log+DB will be shown.
-c	Display the report output in CSV format.
-d <number>	Display a different number of days backwards from now.
-g	Show all stats in GiB rather than MiB.
-l <number>	Change the length of the application name from the default of 20 characters.
-n	Exclude the header information.
-o	Show only on-demand jobs.
-s	Sort the data by hostname/appname rather than by date and then hostname/appname

Parameter	Use this Parameter to:
-w	Use this command to change column width to match output data with no truncation.

Typical Output

This example shows the job statistics for the application ID 1802612 for last two days. See the work-flow of snapshot job to dedup job to remote dedup job. The following is sample output from the command:

```
Actifio:sa-hq:admin> reportstats -a1882612 -d2
StartDate StartTime JobName     JobClass     PolicyName    HostName        AppName              AppID  Duration  VirtualSizeGB    AppSizeGB  DataCopiedMB   BytesReadMB PostCompressMB
2014-08-27 08:18:37 Job_1915614 snapshot     24hSnap       vq-db2-win-a    VQ-DB2-WIN-A       1882612  00:01:12          120.0        100.3        57.344
2014-08-27 08:19:51 Job_1915643 dedup        24hDedup      vq-db2-win-a    VQ-DB2-WIN-A       1882612  00:00:08          120.0        100.3                       52.312          3.058
2014-08-27 08:20:01 Job_1915652 remote-dedup 24hReplicate  vq-db2-win-a    VQ-DB2-WIN-A       1882612  00:00:34          120.0        100.3
2014-08-27 22:31:26 Job_1920446 snapshot     24hSnap       vq-db2-win-a    VQ-DB2-WIN-A       1882612  00:01:05          120.0        100.3        15.360
2014-08-27 22:32:59 Job_1920500 snapshot     24hSnap       vq-db2-win-a    VQ-DB2-WIN-A       1882612  00:00:59          120.0        100.3         3.072
2014-08-28 08:19:56 Job_1924962 dedup        24hDedup      vq-db2-win-a    VQ-DB2-WIN-A       1882612  00:00:07          120.0        100.3                       25.562          1.623
2014-08-28 08:20:07 Job_1924966 remote-dedup 24hReplicate  vq-db2-win-a    VQ-DB2-WIN-A       1882612  00:00:33          120.0        100.3
2014-08-28 22:33:00 Job_1930421 snapshot     24hSnap       vq-db2-win-a    VQ-DB2-WIN-A       1882612  00:01:00          120.0        100.3        18.432
```

Example CLI Commands

Use the **`udsinfo lsjobhistory`** command against individual jobs to see the job statistics.

reportstreamsnaps

Use this to list StreamSnap and LogReplicate jobs. If you specify no parameters, you will see all successful StreamSnap jobs performed in the last two days. This report lists jobs that created StreamSnap images, not the StreamSnap images themselves. The images created by these jobs may already expired. Use reportimages or reportimagecount to see those jobs.

Statistics

The following statistics are provided for each job:

Statistic	Description
Virtual Size	Size of the application's disks. For VMs this is the full size of the VMDKs.
AppSize	Size of the data being used by the application.
DataCopiedMB	New data that was found by the snapshot for this job.
BytesSentMB	Total amount of data sent to the remote site for this job.
BytesWrittenMB	Amount of data written into the relevant pool at the remote site.
WANReduction%	The savings% of Bytes Sent to Bytes Written (100 - BytesSentMB/BytesWrittenMB).

Note: *TotalSent may exceed WroteLocal due to the meta data that is sent with each image.*

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-b	Not show LogReplicate jobs. DB and Log+DB StreamSnaps will be shown
-c	Display the report output in CSV format. Image expiry date is also included.
-d <number>	Display a different number of days backwards from now.
-f	Only show full copy StreamSnaps.
-g	Show all statistics in GB.
-l <number>	Change the length of the application name from the default value of 20 characters.
-n	Exclude the header information.
-o	Show only on-demand jobs.
-s	Sort the data by hostname/appname rather than by date and then hostname/appname.

Parameter	Use this Parameter to:
-w	Change column width to exactly match output data with no truncation.
-x	Print additional statistics on wait time when CSV output is selected.

Example CLI Commands

Use the following CLI command to see the snapshot jobs:

```
udsinfo lsjobhistory -filtervalue jobclass=streamsnap
```

reportsweeps

Use this command to list garbage collection and sweep jobs. Garbage collection (GC) jobs identify blocks in the dedup pool that are not owned by any image and Sweep jobs then remove those blocks. For a sweep to find unowned blocks, garbage collection must have run first. If no sweep is scheduled, it will run immediately after GC completes. Incremental Garbage Collection (IGC) is used to find unowned blocks created by images that expired very quickly.

Supplemental Information

The following additional information is provided for each job in non-delimiter mode or when **-s** option is used:

- **GC Threshold**: Determines the dedup pool requirements to be perform a full Garbage Collection (GC).
- **GC Scheduled**: Determine how often the GC is scheduled.
- **GC Schedule Date**: Determines the next scheduled date of GC if the GC is enabled.
- **GC Enabled**: Determines whether GC is enabled or disabled.
- **Sweep Enabled**: Determines whether the sweep option is enabled or disabled.
- **Sweep Threshold**: Determines how intensive the sweep is.

Supplemental information printed at the start of this report cannot display in CSV format or if the no header option is selected. You can use **–s** option to display the supplemental information including with the **–c** option in which case it will not display in horizontal view.

Statistics

The following statistics are provided for each job (unless **-s** option is used):

Statistic	Description
SpaceReclaimed (GB)	Blocks removed from the dedup pool by a sweep job type.
SpaceSwept (GB)	The sweep threshold determines how much actual space is swept.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-c	Display the report output in CSV format.
-n	Exclude the header information.
-s	Print only the supplemental information.

Typical Output

The initial settings are shown in this example:

```
Actifio:amazon:admin> reportsweeps

GC Parameters      Setting

GC Threshold       65%
GC Scheduled       Every 4 weeks
GC Schedule Date   Sat May 02 01:00:00 EDT 2015
GC Enabled         Yes
IGC Scheduled      Yes
Sweep Enabled      Yes
Sweep Threshold    50%
```

```
Actifio:sa-hq:admin> reportsweeps
GC Parameters      Setting
GC Enabled         Yes
GC Scheduled       Every 1 weeks
GC Threshold       60% (Dedup currently 74%)
GC Schedule Date   Wed Nov 02 07:20:00 EDT 2016
Sweep Enabled      Yes
Sweep Threshold    50%

StartDate           EndDate             JobName          JobClass  Status     Progress  Duration  SpaceReclaimed(GB)  SpaceSwept(GB)
2016-05-15 13:00:00 2016-05-15 13:01:09 sweep_24869516   gc        succeeded  n/a       00:01:09  n/a                 n/a
2016-05-16 13:00:00 2016-05-16 13:01:10 sweep_24873391   gc        succeeded  n/a       00:01:10  n/a                 n/a
2016-05-17 13:00:00 2016-05-17 13:01:10 sweep_24878838   gc        succeeded  n/a       00:01:10  n/a                 n/a
2016-05-18 07:20:00 2016-05-18 10:51:41 gc_24882168      gc        succeeded  n/a       03:31:41  n/a                 n/a
2016-05-18 13:00:00 2016-05-18 13:40:11 sweep_24884844   gc        succeeded  n/a       00:40:11  60.7                84.0
2016-05-19 13:00:00 2016-05-19 13:01:12 sweep_24893347   gc        succeeded  n/a       00:01:12  n/a                 n/a
2016-05-20 13:00:00 2016-05-20 13:01:12 sweep_24900078   gc        succeeded  n/a       00:01:12  n/a                 n/a
2016-05-21 13:00:00 2016-05-21 13:01:13 sweep_24902382   gc        succeeded  n/a       00:01:13  n/a                 n/a
2016-05-22 13:00:00 2016-05-22 13:01:13 sweep_24904738   gc        succeeded  n/a       00:01:13  n/a                 n/a
2016-05-23 13:00:00 2016-05-23 13:01:13 sweep_24908496   gc        succeeded  n/a       00:01:13  n/a                 n/a
2016-05-24 13:00:00 2016-05-24 13:01:15 sweep_24924668   gc        succeeded  n/a       00:01:15  n/a                 n/a
2016-05-25 07:20:00 2016-05-25 10:43:16 gc_24950710      gc        succeeded  n/a       03:23:16  n/a                 n/a
2016-05-25 13:00:00 2016-05-25 13:28:16 sweep_24958205   gc        succeeded  n/a       00:28:16  56.0                68.0
```

Example CLI commands

Use the following command to see garbage collection jobs:

```
udsinfo lsjobhistory -filtervalue jobclass=gc
```

Use the following command to see the currently running garbage collection jobs:

```
udsinfo lsjob -filtervalue jobclass=gc
```

reportunprotected

Use this command to see all unprotected applications. By default, applications marked as ignored are not displayed. If an application lists volumes or size, this is from the last image for that particular application. If it lists images then it means that the unprotected application is still consuming space, which you can reclaim by expiring such images.

Use this command with host ID they will get all unprotected applications on that host.

Valid Parameters

The following are the valid parameters:

Parameter	Use this Parameter to:
-a <ID/name>	Display a specific application by ID or Name. Names with spaces or special characters will need to be encased in single quotes. ***Note:*** *If a host ID is used, then all unprotected apps from that host will be displayed.*
-c	Display the report output in CSV format.
-i	Hide the ignored applications.
-n	Exclude the header information.
-s	Sort the data by hostname/appname rather than by date and then hostname/appname (which is default).
	Optionally one (and only one) of the following AppTypes can be entered: -tb Actifo NAS Director -tc CIFS -tcg ConsistGrp -td DB2 or DB2Instance -te Microsoft Exchange -tf FileSystem -tg Consistency Group -th Microsoft Hyper-V -tl LVM Volume -tn NFS -to Oracle -ts Microsoft SQL Application Types -tsh SAPHANA -tss SystemState -tsy SYBASE or SYBASEInstance -tv VMBackup If your App Type is not listed as an option you can search for it by using the full value from the Friendlytype field.

Example CLI Commands

When a template and a resource profile are applied to an application, it creates an SLA. You can use the below mentioned command to display applications with:

`udsinfo lsapplication`

You can display SLAs (which are effectively a combination of a template and profile with an application) with:

`udsinfo lssla`

If you know the application ID, you can confirm whether the SLA exists for an application by searching as shown below:

`udsinfo lssla -filtervalue appid=1098211,` where the application ID is 1098211

If the application is not protected, you cannot see any output.

Use host ID “4353” to view list of all unprotected applications on that host.

```
Actifio:friday13:admin> reportunprotected -a 4353
AppType         HostName                  AppName                                  AppID  Ignored     InstanceStatus
FileSystem      sun116-103.sqa.actifio.com /                                       13020241 NotIgnored  n/a
FileSystem      sun116-103.sqa.actifio.com /export                                 13020238 NotIgnored  n/a
FileSystem      sun116-103.sqa.actifio.com /export/home                            13020237 NotIgnored  n/a
FileSystem      sun116-103.sqa.actifio.com /export/home/brad                       13020236 NotIgnored  n/a
FileSystem      sun116-103.sqa.actifio.com /export/home/grid                       13020235 NotIgnored  n/a
FileSystem      sun116-103.sqa.actifio.com /export/home/oracle                     13020234 NotIgnored  n/a
FileSystem      sun116-103.sqa.actifio.com /rpool                                  13020233 NotIgnored  n/a
FileSystem      sun116-103.sqa.actifio.com /system/zones                           13020232 NotIgnored  n/a
FileSystem      sun116-103.sqa.actifio.com /var                                    13020240 NotIgnored  n/a
FileSystem      sun116-103.sqa.actifio.com /var/share                              13020239 NotIgnored  n/a
FileSystem      sun116-103.sqa.actifio.com /var/share/pkg                          13020231 NotIgnored  n/a
FileSystem      sun116-103.sqa.actifio.com /var/share/pkg/repositories             13020230 NotIgnored  n/a
Oracle          sun116-103.sqa.actifio.com onedb                                   13020242 NotIgnored  n/a
```

reportvaults

Use this command to list OnVault jobs. If you specify no parameters you will get all OnVault jobs performed in the last two days.

Statistics

The following statistics are provided for each job:

Statistic	Description
Virtual Size	Size of the application disks. For VMs, this is the full size of the VMDKs.
AppSize	Size of the data used by the application.
DataCopied(GB)	Shows the data that was copied to create this image to OnVault.
ChangeRate%	Shows the percentage that data copied is of application size (used data).
CompRatio	Shows the compression ratio achieved before sending the data to Object Storage.

CaptureType will show as 'Full' for several reasons:

1. This is the first ever OnVault Job for this application.
2. The snapshot being used as the source for this OnVault job is a Full, meaning the OnVault is also a full.
3. The CBT for the source VM has been invalidated so a full DirectOnVault must be run.
4. DataCopied multiplied by the CompressionRatio equals or exceeds the AppSize (meaning the size of the uncompressed pre-transmitted data was the same as the AppSize).

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <ID/Name>	Display information about a specific application using the application ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-c	Display the report output in CSV format.
-d <number>	Display a different number of days backwards from now.
-e	Show all jobs including canceled and failed jobs.
-f	Only show full copy OnVaults.
-j <job class>	Display either OnVault or DirectOnVault.
-l <number>	Change the length of the application name from its default value of 20 characters.
-n	Exclude the header information.

Parameter	Use this Parameter to:
-o	Show only on-demand jobs.
-p <number>	Search for jobs created by a specific policy ID.
-s	Sort the data by hostname/appname rather than by date and then hostname/appname.
-w	Change column width to exactly match output data with no truncation.
-1	Display only OnVault jobs.
-2	Display only DirectOnVault jobs.
-3	Display only OnVaultReplicate jobs.

Example CLI command

Use the command **reportvaults** to see the output:

```
[05:31:02] wta29u29:~ # reportvaults
StartDate StartTime JobName      JobClass       PolicyName      HostName            AppName              AppID  Duration VirtSize(GB) AppSize(GB) DataCopied(GB
2018-03-20 00:06:09 Job_5719141  OnVault        SS-Valut        SQL2012CLU01SP.SQA  GHKCon_Grp23       5207006  00:16:31        120.0         0.1          0.
2018-03-20 00:06:09 Job_5719140  OnVault        SS-Valut        ASHOk-RHEL-Unix     GHK-CG1GRP         5442725  00:19:20         11.6         0.6          0.
2018-03-21 00:00:33 Job_5731139  OnVault        SS-Valut        SQL2012CLU01SP.SQA  GHKCon_Grp23       5207006  00:17:20        120.0         0.1          0.
```

reportvdisks

Run the reportsnappool command with option **-v** to get the required information.

reportvms

Use this command to list VM discovery statistics. It will list VMs that this VDP Appliance has discovered, VMs not yet discovered and VMs that no longer exist in vCenter.

Valid Parameters

The following options are available:

Parameter	Use this Parameter to:
-a <appid>	When used with **-e** or **-i** or **-v** will display volume information for that VM by Application ID.
-c	See the report output in CSV format.
-e	List all disks for every VM. You can also use **-i** to list just independent disks.
-u	Used with -v to make each VMDK print on a separate line.
-v	Show VMs with include or exclude VMDK settings. Output can be modified using -u option to print on line per VMDK as opposed to one line per VM.
-i	Search for Independent disks. Output can be modified using -u option to print on line per VMDK as opposed to one line per VM. Use -a to display a specific VM.

reportworkflows

Use this command to report to list all workflows.

Valid Parameters

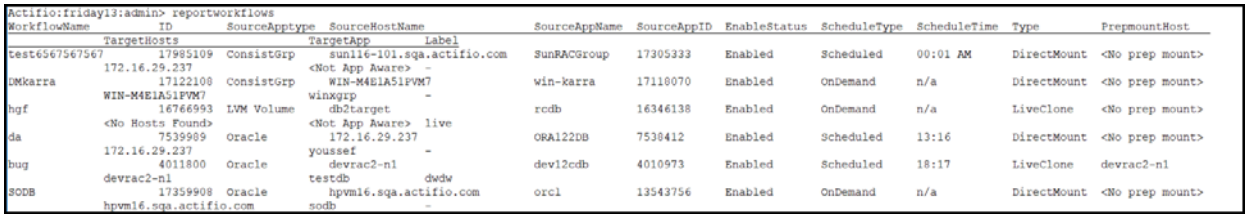
The following options are available:

Parameter	Use this Parameter to:
-a <ID/Name>	Display information about a specific application using the application ID or Name. Names with spaces or special characters will need to be encased in single quotes.
-c	Display the report output in CSV format.
-d <number>	When used with **-s** limits the number of days checked for work-flow status, which will ignore work-flows run earlier than the days requested.
-i	Show one specific workflow ID. When used with -s it will show a history of workflow runs which can be limited with -d.
-n	Exclude the header information.
-p	Sort by prepmount host instead of sorting by Apptype, Hostname, AppName, WorkflowName

Parameter	Use this Parameter to:
-s	Instead print the most recent run status of each workflow
-t	Sort the data by target host instead of sorting by Apptype, Hostname, AppName, WorkflowName. This will print one line for each target host if a work-flow has multiple target hosts.
-w	Sort the data by workflow name instead of sorting by Apptype, Hostname, AppName, WorkflowName

Example CLI command

Use the command **reportworkflows** to see the output:



```
Actifio:friday13:admin> reportworkflows
WorkflowName          ID        SourceApptype  SourceHostName                SourceAppName  SourceAppID  EnableStatus  ScheduleType  ScheduleTime  Type         PrepmountHost
                      TargetHosts                 TargetApp        Label
test6567567567        17985109  ConsistGrp     sun116-101.sqa.actifio.com    SunRACGroup    17305333     Enabled       Scheduled     00:01 AM      DirectMount  <No prep mount>
                      172.16.29.237               <Not App Aware>  -
DMkarra               17122100  ConsistGrp     WIN-M4E1A51PVM7               win-karra      17110070     Enabled       OnDemand      n/a           DirectMount  <No prep mount>
                      WIN-M4E1A51PVM7             winxgrp          -
hgf                   16766993  LVM Volume     db2target                     rcdb           16346138     Enabled       OnDemand      n/a           LiveClone    <No prep mount>
                      <No Hosts Found>            <Not App Aware>  live
da                    7539909   Oracle         172.16.29.237                 ORA122DB       7538412      Enabled       Scheduled     13:16         DirectMount  <No prep mount>
                      172.16.29.237               youssef          -
bug                   4011800   Oracle         devrac2-n1                    dev12cdb       4010973      Enabled       Scheduled     18:17         LiveClone    devrac2-n1
                      devrac2-n1                  testdb           dwdw
SODB                  17359908  Oracle         hpvm16.sqa.actifio.com        orcl           13543756     Enabled       OnDemand      n/a           DirectMount  <No prep mount>
                      hpvm16.sqa.actifio.com      sodb             -
```