CDS Tech Brief

Configuring Actifio OnVault Utility

After an Actifio CDS or Sky appliance sends captured snapshot data to storage pool for long term retention, you may encounter a situation where you need to access your OnVault data without the use of your Actifio appliance (due to hardware failure or data center shutdown).

Actifio OnVault provides a stand-alone data access utility, a command line tool, that you can use for mounting images in cloud-vendor storage buckets to local mount points. OnVault utility can be installed on a local Linux server, or on Linux box stored in the cloud-vendor storage bucket.

The Actifio OnVault utility provides you the versatility to directly access and analyze your vault data on a local or virtual Linux machine. The OnVault utility provides a simple mechanism to access and view vault data prior to mounting, and to directly mount an image.

For further information on putting application data into your cloud vendor and for furnishing access and private keys, please refer to your cloud vendor's documentation.

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Before You Begin

The OnVault utility can be acquired from your Actifio representative.

You will need:

- Cloud vendor's private key p12 file

- Cloud vendor's access ID

- Cloud vendor's bucket name

Installing the Actifio OnVault Utility

Extract the .tar file. The following contents appear in the directory:

- **onvault-x.y.z.tar.gz** is the package containing Actifio OnVault Utility.
- **InstallingVaultPackage.sh** is the script for installing the utility.
- **README** is the README file.
- **UninstallVaultPackage.sh** is the script for uninstalling the utility.

Note: *To install the OnVault utility, the install must be run either as a root user or with sudo privileges.*

After extracting, run the OnVault utility install package through the Linux Command Prompt:

sudo ./InstallingVaultPackage.sh

or

sudo -i (switches to root user)

./InstallingVaultPackage.sh

The command installs the OnVault utility to the following directory.

/usr/bin

OnVault Utility Command Syntax

After the OnVault utility package has been installed, you can then run OnVault as follows.

Note: *OnVault needs to be run either as a root user or with sudo privileges.*

Type `sudo -i` to switch to root user and then run the utility,

or, if user already has sudo privileges, type `sudo onvaultaccess`.

Upon running OnVault without any tags, the following help prompt displays:

```
usage: onvaultaccess [-h] [-- appliance APPLIANCENAME] [-- host HOST] [-- app APP]
[-- image IMAGE]
[-- list {appliances,hosts,apps,images}] [-- i]
[-- bucket BUCKET] [-- cloud-storage {gs}]
[-- accessFile ACCESSFILE]
```

Optional Commands

Command	Output
-- h, -- help	Show this help message and exits.
-- appliance APPLIANCENAME	Appliance Name
-- host HOST	Host name
-- app APP	Application Name
-- image IMAGE	Image Name
-- list {appliances, hosts, apps, images}	Lists details about a bucket.

Required Commands

Command	Output
--i	Interactive Mode
--bucket BUCKET	Bucket name.
--cloud-storage {s3,gs,ms}, -cs {s3,gs,ms}	Types of cloud storage. The valid types are Amazon S3, Google Nearline, and Microsoft Azure, respectively.
--accessfile ACCESSFILE	The file containing access key and the secret key. The access file must be stored locally on the system from where the utility runs. This must be in the following format: `service_account_id:secret_key`

Learning the Contents of the Cloud Vendor's Storage OnVault Pool

Use the **--list** command in order to view the contents and receive further details of a bucket prior to accessing it.

The bucket's host use this hierarchy:

```
<bucket_name>/Actifio/<appliancename>/<hostname>/<appname>/<imagename>
```

Note: *You must have the bucket name and accessfile name in order to view the contents of a bucket.*

List Commands for OnVault Utility

To list all appliances, hosts, applications, or images

```
$ onvaultaccess --bucket <bucketname> --accessfile <accessfile> --list <appliances> --cloud-storage CV
```

To list all hosts:

```
$ onvaultaccess --bucket <bucketname> --accessfile <accessfile> --list <hosts> --cloud-storage CV
```

To list all applications:

```
$ onvaultaccess --bucket <bucketname> --accessfile <accessfile> --list <applications> --cloud-storage CV
```

To list all images:

```
$ onvaultaccess --bucket <bucketname> --accessfile <accessfile> --list <images> --cloud-storage CV
```

Example:

$ onvaultaccess --bucket actifiobucket --accessfile secretfile --list **appliances**

Based on the value queried by the **--list**, the output displays as the following:

```
+-------------------------------------------+
| Appliances                                |
|-------------------------------------------|
| cv://<bucketname>/Actifio/<appliance_name1>/ |
| cv://<bucketname>/Actifio/<appliance_name2>/ |
| cv://<bucketname>/Actifio/<appliance_name3>/ |
+-------------------------------------------+
```

Running the Actifio OnVault Utility

The OnVault utility has an interactive and a non-interactive mode.

- Use the non-interactive mode when you are aware the image location, such as after finding it through the List command. After determining where the contents of the image you need to mount are located, the non-interactive commands are used to mount image. This is detailed in Actifio OnVault Utility - Non-interactive mode on page 6.

- The interactive mode provides visual prompt tags for step-by-step selection of the Actifio appliance, host, application, and image name. This is detailed in Actifio OnVault Utility for Interactive Mode on page 5.

The following are examples of required commands for interactive and non-interactive modes.

--cloud-storage

- When using this command, specify which bucket is being accessed. If the specification is not given, the script will assume the bucket is an Amazon S3 bucket.

--accessfile

- Specify for your cloud vendor. For further information to furnish and use an access key and private key, refer your cloud vendor's storage documentation.

- The private key must be in a file using the following formats:

  o `service_account_id:private_key`

  The access file must be stored locally on the same system from where the utility is run.

Note: For Google Nearline, the private key file must be present locally. This must be accessed in Google Cloud. Access to Google Cloud can be configured using the following command: **gcloud init --console-only**

Actifio OnVault Utility - Non-interactive mode

For the non-interactive mode, you must enter the following additional tags to the utility. The tags can be found with the `onvaultaccess --list` command.

Example:

```
$ onvaultaccess --bucket <bucketname> --accessFile <accessfile> --i --cluster <cluster_name> --host <host_name> --app <app_name> --image <image_name>
```

Actifio OnVault Utility for Interactive Mode

The utility can be run in interactive mode with the following command line:

```
onvaultaccess --bucket <bucketname> --accessfile <accessfile> --i --cloud-storage cv
```

A typical output for the interactive mode appears as follows based on the sequence of configuration command prompts:

```
$ onvaultaccess --bucket actifiobucket --accessfile privatekeyfile --i cv
+----+-------------------------+
|    | Appliance(s)            |
|----+-------------------------|
|  1 | appliance1_appliancename |
|  2 | appliance2_appliancename |
+----+-------------------------+
```

At the prompt, enter the number of the appliance you wish to use. For example, **2.** A prompt for the Hosts that are protected by the selected appliance displays.

```
+----+---------------------+
|    | Host(s)             |
|----+---------------------|
|  1 | HostName1_HostnameId |
|  2 | HostName2_HostnameId |
+----|---------------------+
```

At the prompt, enter the number of the host you wish to use. For example, **1.** A prompt for the Applications that reside on the selected host displays.

```
+----+----------------+
|    | App(s)         |
|----+----------------|
|  1 | appid1_appname1 |
|  2 | appid2_appname2 |
+----+----------------+
```

At the prompt, enter the number corresponding to the application you wish to use. For example, **2.** A prompt for the captured images for the selected application that reside in the bucket.

```
+----+--------------+
|    | Image(s)     |
|----+--------------|
|  1 | BackupImage1 |
|  2 | BackupImage2 |
|  3 | BackupImage3 |
|  4 | BackupImage4 |
+----+--------------+
```

Enter a numeric choice for the image. In this example, the choice is 1.

After entering the input for an image, the OnVault utility processes and metadata after mounts the required bucket. The following is an example of the summary given upon completion of a interactive mode run:

```
Total Successful Mounts = 1
```

```
actifiobucket/actifio/<appliance2_appliancename>/<HostName2_HostnameId >/<appid2_appname>/
<BackupImage1>
```