

## Actifio CDS/Sky Tech Brief

# Configuring the Actifio OnVault Data Access Utility for Mounting Google Nearline Storage

Actifio OnVault provides a stand-alone data access utility, a command line tool, used for mounting images in Google Nearline buckets to local mount points. OnVault utility can be installed on a local Linux server, as well as a Linux box stored in the cloud.

After an Actifio CDS or Sky appliance sends captured snapshot data to an Google Nearline storage pool for long term retention, you may encounter a situation where you need to access your vault data without the use of your Actifio appliance (due to hardware failure or data center shutdown). The 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 Google Nearline and for furnishing access and private keys, please refer to: ***Configuring Google Nearline for Actifio Vault for Long-Term Data Retention.***

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### Before You Begin

The OnVault utility install.tar can be acquired from your Actifio representative.

Google Nearline users will need:

- Nearline access key and private key
- User credentials
- Accessfile name and bucketname.

## Installing

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

- **onvault-x.y.z.tar.gz** is the package containing the 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.

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

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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.

```
/tmp/Actifio/
```

## OnVault Utility Command Syntax

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

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

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

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

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

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

**Table 1: Optional Commands**

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

**Table 2: Required Commands**

Command	Output
<code>--i</code>	Interactive Mode
<code>--bucket BUCKET</code>	GS Bucket
<code>--cloud-storage {s3,gs}, -cs {s3,gs}</code>	Types of cloud storage. The valid types are Amazon S3 and Google Nearline.
<code>--accessfile ACCESSFILE</code>	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: <code>service_account_id:secret_key</code>

## Learning the Contents of a Vault

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:

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

---

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

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List Commands:

### List Commands for Google Nearline

To list all appliances, hosts, applications, or images

```
$ OnVault --bucket <bucketname> --accessfile <accessfile> --list <appliances> --cloud-storage gs
```

To list all hosts:

```
$ OnVault --bucket <bucketname> --accessfile <accessfile> --list <hosts> --cloud-storage gs
```

To list all applications:

```
$ OnVault --bucket <bucketname> --accessfile <accessfile> --list <applications> --cloud-storage gs
```

To list all images:

```
$ OnVault --bucket <bucketname> --accessfile <accessfile> --list <images> --cloud-storage gs
```

### For Example:

```
$ OnVault --bucket actifiobucket --accessfile secretfile --list appliances
```

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

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

## Running the 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 [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 [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 are being accessed. If the specification is not given, the script will assume the bucket is an Amazon S3 bucket.

### **--accessfile**

- Specify for Google Nearline. For further information to furnish and use an Access Key and Private Key, please refer to *Configuring Google Nearline for Actifio Vault for Long-Term Data Retention*.
- The access key and private must be in a file using the following formats:

- o For Google Nearline: `service_account_id:private_key`

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

- o 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 commands:

### **gcloud init --console-only**

For further details regarding how to configure Google Cloud, please check the official documentation at:

<https://cloud.google.com/sdk/gcloud/reference/init>

## 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 OnVault `--list` command.

Example:

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

## Interactive Mode

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

```
OnVault --bucket <bucketname> --accessfile <accessfile> --i --cloud-storage gs
```

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

```
$ accessmyvault --bucket actifiobucket --accessfile privatekeyfile --i gs
+----+-----+
|    | 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>
```