



Restoring volume data from backup files

Cloud Manager

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Table of Contents

- Restoring volume data from backup files..... 1
 - Restoring a volume from a backup 1
 - Restoring files from a backup 2

Restoring volume data from backup files

Backups are stored in an object store in your cloud account so that you can restore data from a specific point in time. You can restore an entire volume from a saved backup file, or if you only need to restore a few files, you can restore up to 8 individual files (at one time) from a saved backup file.

Restoring an entire volume is part of the Backup to Cloud service that you used to create the backup file. Once you have activated the Backup to Cloud service in a working environment, you can restore an entire volume in the same working environment, or to a different working environment, that's using the same cloud account. See [Restoring a volume from a backup](#).

Restoring individual files from a backup file actually uses two services. It uses the Backup to Cloud service to create the backup file just like described above. But when you initiate a single file restore it uses the Restore service to restore the files. Again, you can restore files to a volume in the same working environment, or to a volume in a different working environment, that's using the same cloud account. See [Restoring files from a backup](#).




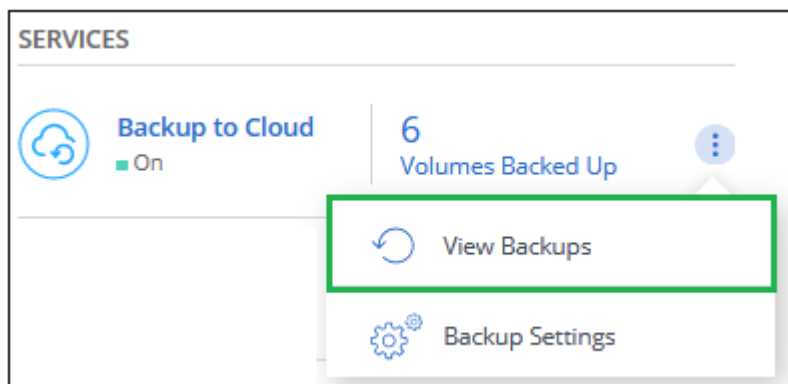
Backups created from on-premises ONTAP systems can be restored only to Cloud Volumes ONTAP systems that use the same cloud provider as where the backup resides.

Restoring a volume from a backup

When you restore a volume from a backup file, Cloud Manager creates a *new* volume using the data from the backup. You can restore the data to a volume in the same working environment or to a different working environment that's located in the same cloud account as the source working environment.

Steps

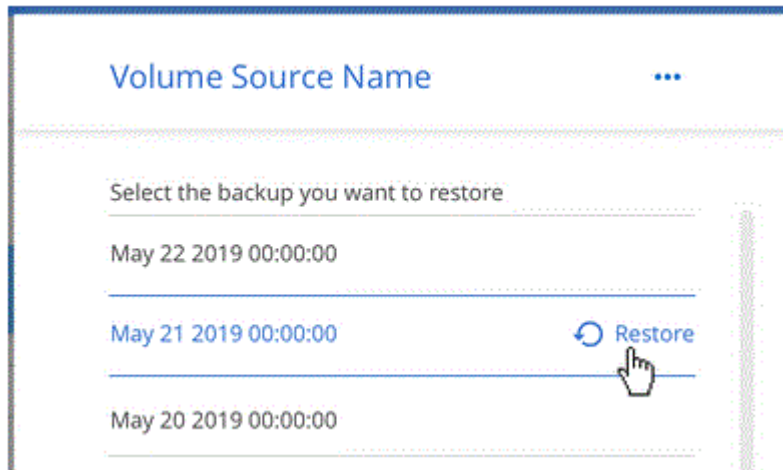
1. Select the working environment.
2. Click  and select **View Backups**.



3. Select the row for the volume that you want to restore and click **View Backup List**.

6 of 16 Volumes						
Working Environment	Source Volume	Last Backup	Policy & Retention	Relationship Status		
gfcDevQaSaCvo (On)	cifsvol9 (Available)	Aug 13, 2020 02:00:12 PM UTC	30 Daily	Active	(Idle)	View Backup List
gfcDevQaSaCvo (On)	smbvol (Available)	Aug 13, 2020 02:00:33 PM UTC	30 Daily	Active	(Idle)	View Backup List

4. Find the backup that you want to restore and click the **Restore** icon.



5. Fill out the *Restore Backup to new volume* page:

- Select the working environment.
- Enter a name for the volume.
- Click **Restore**.

Result

Cloud Manager creates a new volume based on the backup you selected and you are directed to that working environment so you can view the restore progress. You can [manage this new volume](#) as required.

Restoring files from a backup

If you only need to restore a few files for a volume, you can choose to restore individual files instead of restoring the entire volume. Restoring individual files from a backup file uses the Restore service. You can restore files to a volume in the same working environment, or to a different working environment, that's using the same cloud account.

You can restore up to 8 files at a time from a volume in a backup file. If you need to restore more than

8 files you can run the restore process a second time. All the files are restored to the same destination volume that you choose.



Single File Restore is supported only with AWS at this time.

The process goes like this:

1. You activate the Restore service from the Services panel.

A Restore instance is deployed in your cloud providers' environment, and then it is shut down to save costs while there are no active restore jobs.

2. When you need to restore one or more files from a volume, you click the Restore tab and select the backup file (the snapshot) where the file resides.

The Restore instance starts up and displays the folders and files that exist in the backup file.

3. You choose the file (or up to 8 files) from that backup, select the location where you want the file(s) to be written (working environment, volume, and folder), and click Restore.

The Restore instance restores the file(s), and then the instance is shut down after one hour of inactivity.

Details

Costs

See [this topic](#) for the cost of both the Backup to Cloud service and the Restore service.

AWS permissions required

The IAM role that provides Cloud Manager with permissions must include S3 permissions from the latest [Cloud Manager policy](#) as described in [AWS requirements](#).

Additionally, the following permissions are needed in the policy for single file restore:

```
"Action": [  
  "ec2:DescribeInstanceTypeOfferings",  
  "ec2:startInstances",  
  "ec2:stopInstances",  
  "ec2:terminateInstances"  
],
```

Access

The Restore instance requires outbound internet access to manage resources and processes within your public cloud environment.

Activating the Restore service

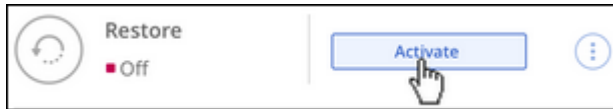
This is a one-time operation per working environment to create the Restore instance.



The Backup to Cloud service must already be activated for this working environment.

Steps

1. Select the working environment.
2. Click the **Activate** button from the Restore service.



A Restore instance is deployed in your cloud providers' environment, and then it is shut down. The instance is stopped to save you money so that you incur restore costs only when the instance is active.

Restoring a single file from a backup file

Follow these steps to restore up to 8 files from a volume backup to a new volume. This functionality uses Live Browsing so that you can view the current list of directories and files within the backup file.

Note that the wording in the UI calls each backup file a "snapshot" because backup files are created using NetApp Snapshot technology.

The following video shows a quick walkthrough of restoring a single file:

<https://img.youtube.com/vi/ROAY6gPL9N0/maxresdefault.jpg>

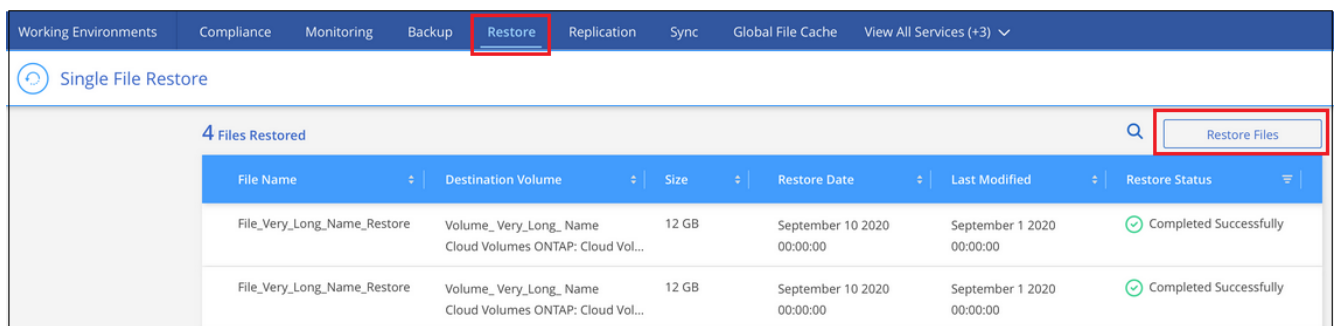


The ONTAP version must be 9.6 or greater in your source and destination Cloud Volumes ONTAP systems.

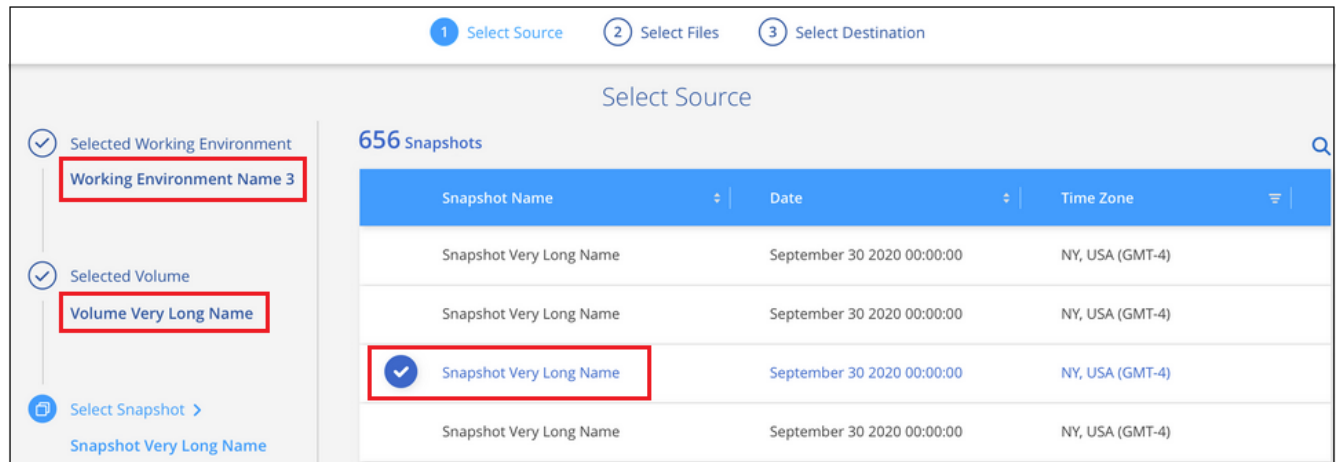
Steps

1. Click the **Restore** tab.

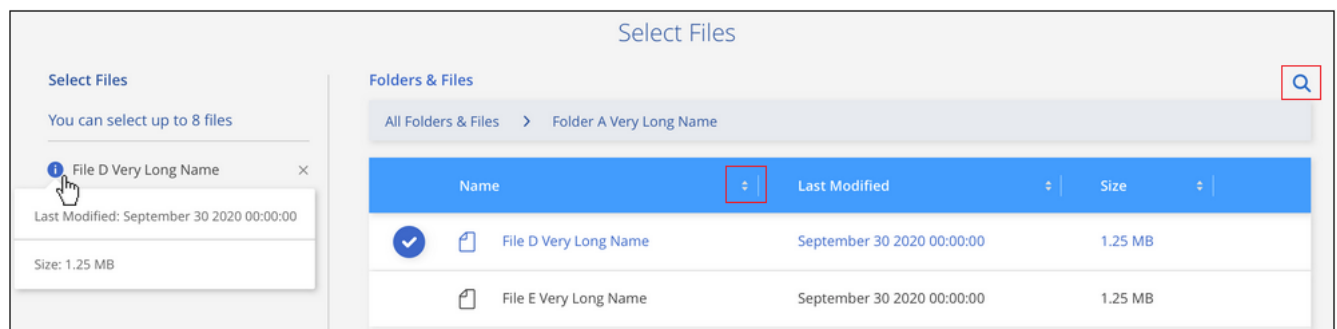
The Restore Dashboard appears.




2. Click the **Restore Files** button.
3. In the *Select Source* page, select the **Working Environment**, the **Volume**, and the **Snapshot** that has the date/time stamp from which you want to restore files.



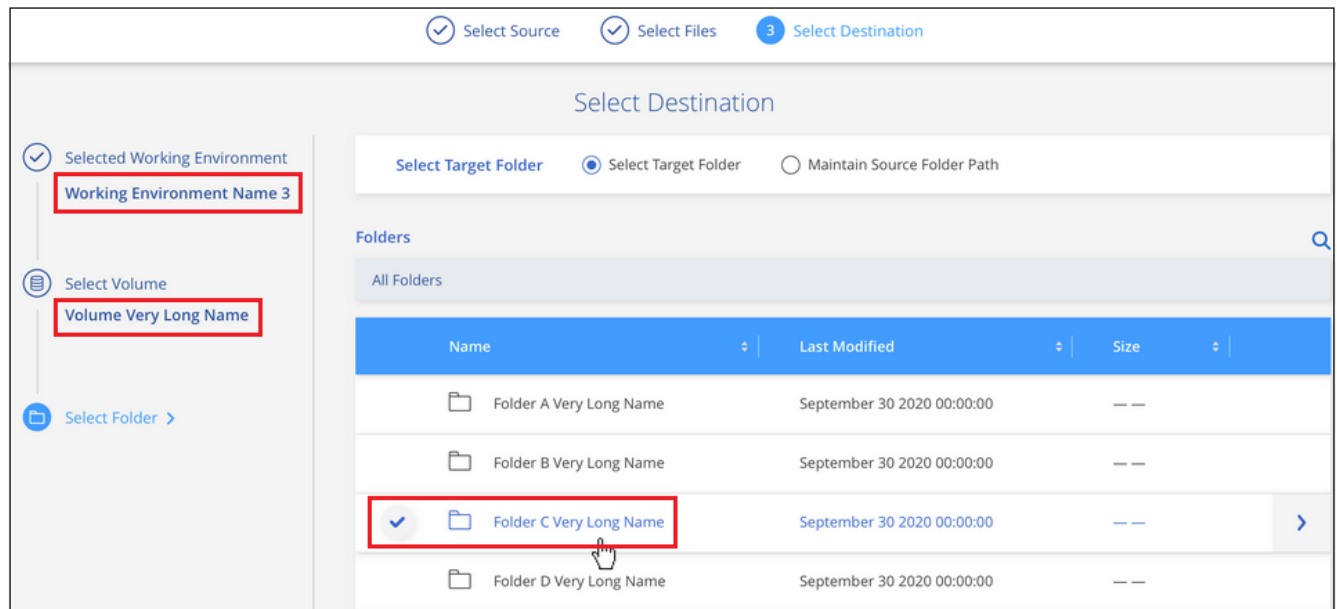
4. Click **Continue** and the Restore instance is started. After a few minutes the Restore instance displays the list of folders and files from the volume snapshot.



5. In the *Select Files* page, select the file or files that you want to restore and click **Continue**.
 - You can click the search icon and enter the name of the file to navigate directly to the file.
 - You can click the file name if you see it.
 - You can navigate down levels in folders using the  button at the end of the row to find the file.


As you select files they are added to the left side of the page so you can see the files that you have already chosen. You can remove a file from this list if needed by clicking the **x** next to the file name.


6. In the *Select Destination* page, select the **Working Environment**, the **Volume**, and the **Folder** where you want to restore the files.



You have a few options for the location when restoring files.

When you have chosen **Select Target Folder**, as shown above:

- You can select any folder.
- You can hover over a folder and click  at the end of the row to drill down into subfolders, and then select a folder.

If you have selected the same Working Environment and Volume as the source file (as identified by the  icon), you can select **Maintain Source Folder Path** to restore the file, or all files, to the same folder where they existed in the source structure. All the same folders and sub-folders must exist - folders are not created.

7. Click **Restore** and you are returned to the Restore Dashboard so you can see the progress of the restore operation.

The Restore instance is shut down after a certain period of inactivity.

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