Create sync relationships

Cloud Manager

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Create sync relationships

When you create a sync relationship, the Cloud Sync service copies files from the source to the target. After the initial copy, the service syncs any changed data every 24 hours.

Before you can create some types of sync relationships, you'll first need to create a working environment in Cloud Manager.

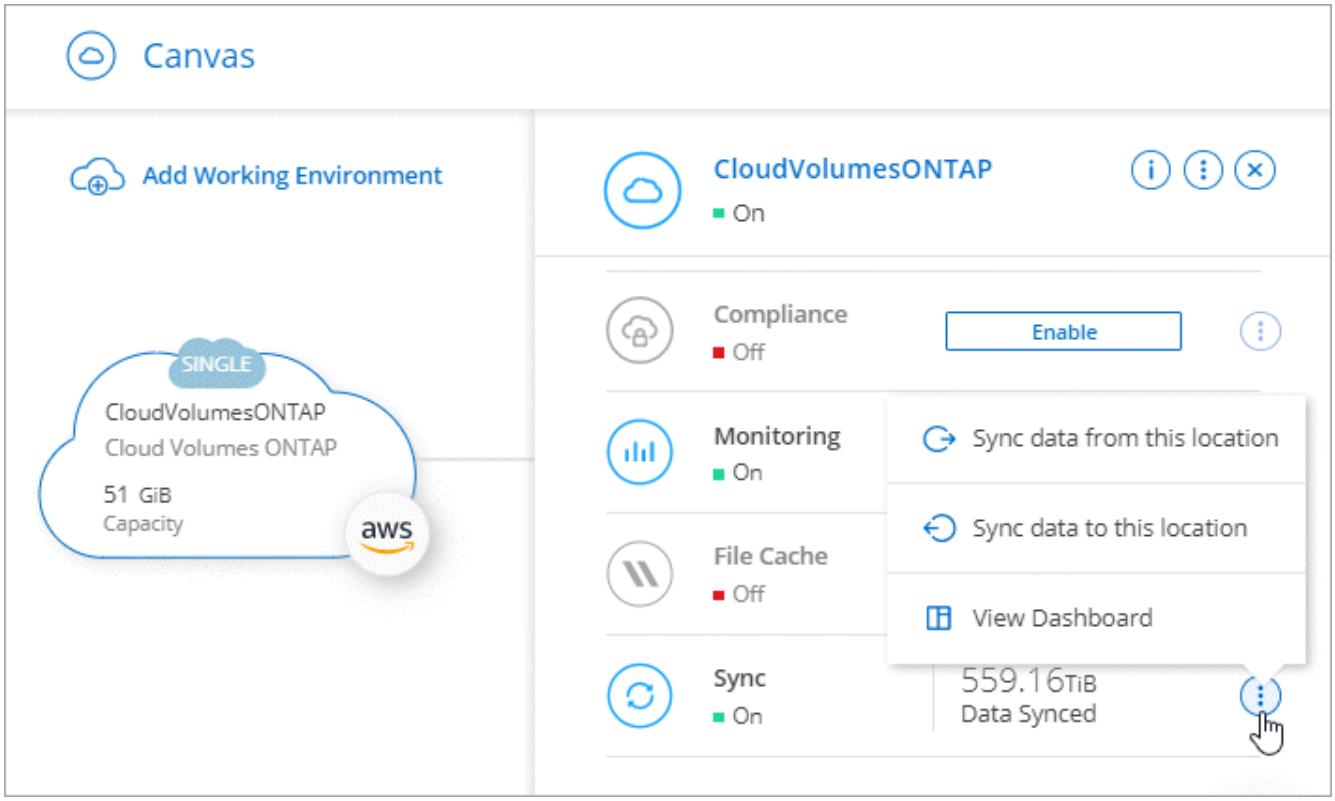
Create sync relationships for specific types of working environment

If you want to create sync relationships for any of the following, then you first need to create or discover the working environment:

- Amazon FSx for ONTAP
- Azure NetApp Files
- Cloud Volumes ONTAP
- On-prem ONTAP clusters

Steps

1. Create or discover the working environment.
    - Create an Amazon FSx for ONTAP working environment
    - Setting up and discovering Azure NetApp Files
    - Launching Cloud Volumes ONTAP in AWS
    - Launching Cloud Volumes ONTAP in Azure
    - Launching Cloud Volumes ONTAP in GCP
    - Adding existing Cloud Volumes ONTAP systems
    - Discovering ONTAP clusters
2. Click **Canvas**.
3. Select a working environment that matches any of the types listed above.
4. Select the action menu next to Sync.



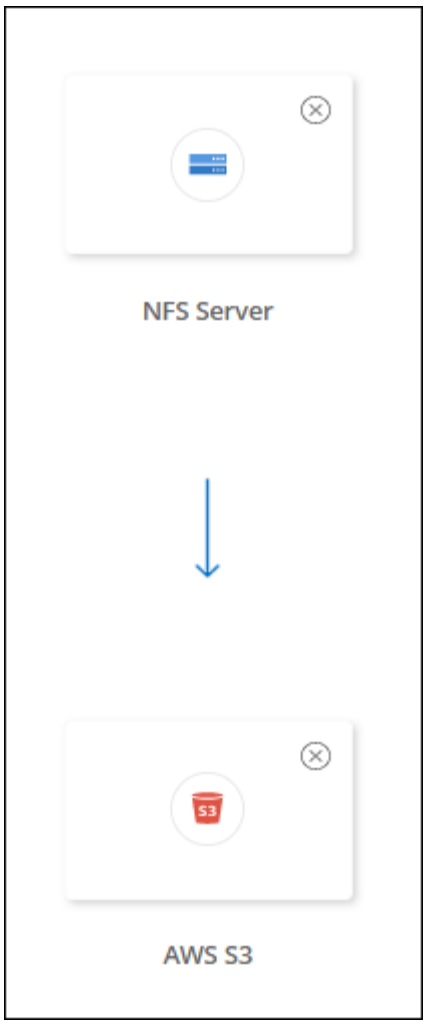
5. Select **Sync data from this location** or **Sync data to this location** and follow the prompts to set up the sync relationship.

Create other types of sync relationships

Use these steps to sync data to or from a supported storage type other than Amazon FSx for ONTAP, Azure NetApp Files, Cloud Volumes ONTAP, or on-prem ONTAP clusters. The steps below provide an example that shows how to set up a sync relationship from an NFS server to an S3 bucket.

1. In Cloud Manager, click **Sync**.
2. On the **Define Sync Relationship** page, choose a source and target.

   The following steps provide an example of how to create a sync relationship from an NFS server to an S3 bucket.

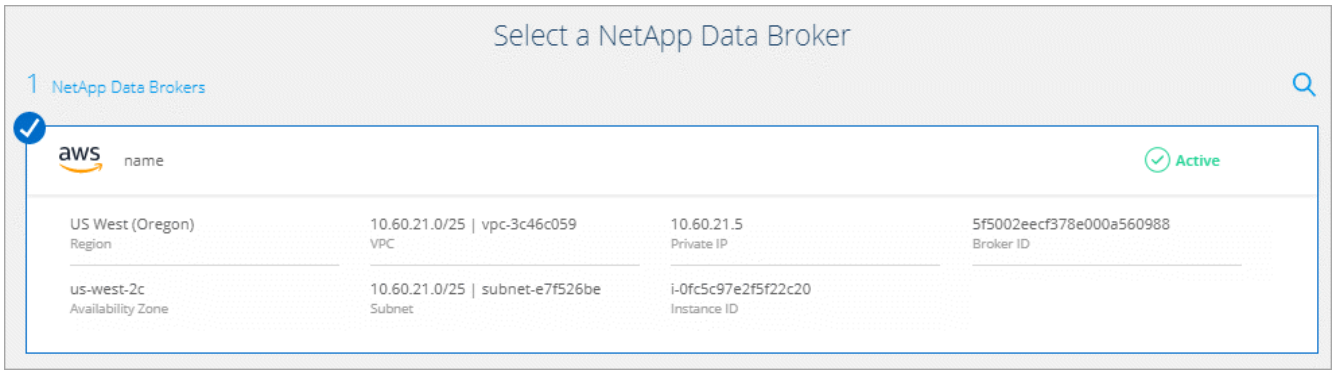


3. On the **NFS Server** page, enter the IP address or fully qualified domain name of the NFS server that you want to sync to AWS.
4. On the **Data Broker** page, follow the prompts to create a data broker virtual machine in AWS, Azure, or Google Cloud Platform, or to install the data broker software an existing Linux host.

   For more details, refer to the following pages:

   - Installing the data broker in AWS
   - Installing the data broker in Azure
   - Installing the data broker in GCP
   - Installing the data broker on a Linux host
5. After you install the data broker, click **Continue**.

   The following image shows a successfully deployed data broker in AWS:

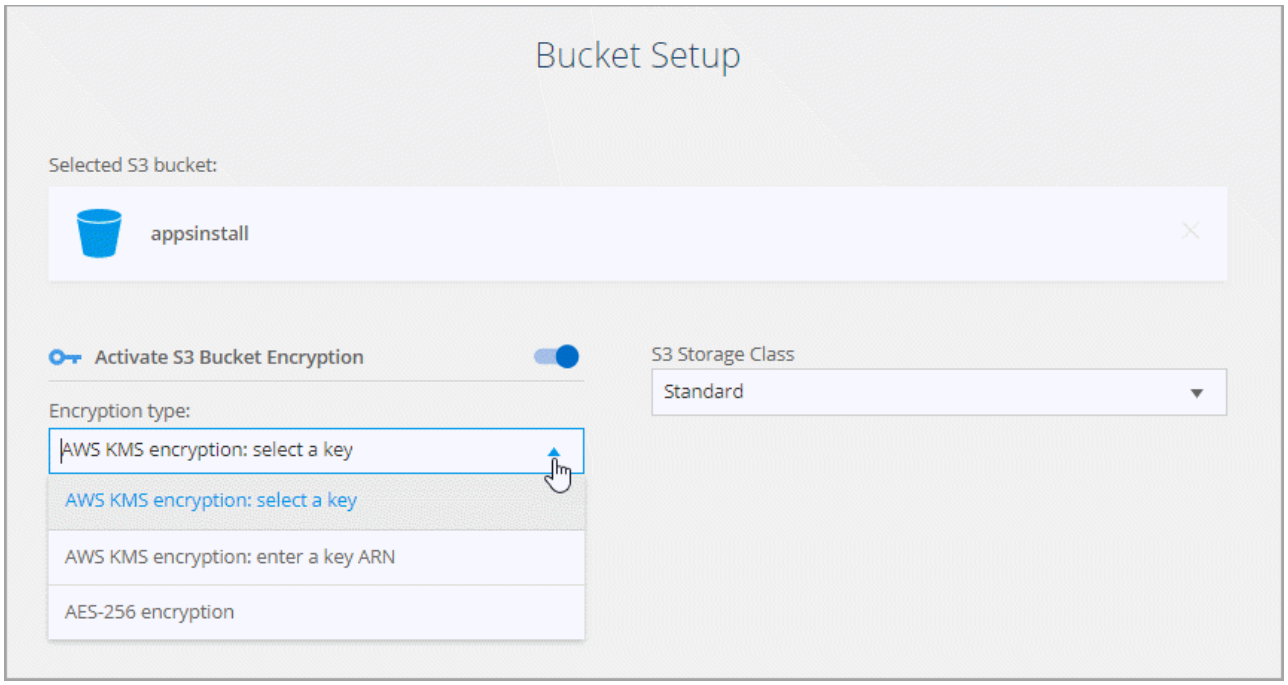


6. On the **Directories** page, select a top-level directory or subdirectory.

   If Cloud Sync is unable to retrieve the exports, click **Add Export Manually** and enter the name of an NFS export.

   If you want to sync more than one directory on the NFS server, then you must create additional sync relationships after you are done.

7. On the **AWS S3 Bucket** page, select a bucket:
   - Drill down to select an existing folder within the bucket or to select a new folder that you create inside the bucket.
   - Click **Add to the list** to select an S3 bucket that is not associated with your AWS account. Specific permissions must be applied to the S3 bucket.
8. On the **Bucket Setup** page, set up the bucket:
   - Choose whether to enable S3 bucket encryption and then select an AWS KMS key, enter the ARN of a KMS key, or select AES-256 encryption.
   - Select an S3 storage class. View the supported storage classes.



9. On the **Settings** page, define how source files and folders are synced and maintained in the target

location:

Schedule

Choose a recurring schedule for future syncs or turn off the sync schedule. You can schedule a relationship to sync data as often as every 1 minute.

Retries

Define the number of times that Cloud Sync should retry to sync a file before skipping it.

Compare By

Choose whether Cloud Sync should compare certain attributes when determining whether a file or directory has changed and should be synced again.

Even if you uncheck these attributes, Cloud Sync still compares the source to the target by checking the paths, file sizes, and file names. If there are any changes, then it syncs those files and directories.

You can choose to enable or disable Cloud Sync from comparing the following attributes:

- **mtime**: The last modified time for a file. This attribute isn't valid for directories.
- **uid**, **gid**, and **mode**: Permission flags for Linux.

Copy for Objects

Enable this option to copy object storage metadata and tags. If a user changes the metadata on the source, Cloud Sync copies this object in the next sync, but if a user changes the tags on the source (and not the data itself), Cloud Sync doesn't copy the object in the next sync.

You can't edit this option after you create the relationship.

Copying tags is supported with sync relationships that include an S3-compatible endpoint (S3, StorageGRID, or IBM Cloud Object Storage).

Copying metadata is supported with "cloud-to-cloud" relationships between any of the following endpoints:

- AWS S3
- Azure Blob
- Google Cloud Storage
- IBM Cloud Object Storage
- StorageGRID

Recently Modified Files

Choose to exclude files that were recently modified prior to the scheduled sync.

Delete Files on Source

Choose to delete files from the source location after Cloud Sync copies the files to the target location. This option includes the risk of data loss because the source files are deleted after they're copied.

If you enable this option, you also need to change a parameter in the local.json file on the data broker. Open the file and change the parameter named *workers.transferrer.delete-on-source* to **true**.

Delete Files on Target

Choose to delete files from the target location, if they were deleted from the source. The default is to never deletes files from the target location.

File Types

Define the file types to include in each sync: files, directories, and symbolic links.

Exclude File Extensions

Specify file extensions to exclude from the sync by typing the file extension and pressing **Enter**. For example, type *log* or *.log* to exclude *.log files. A separator isn't required for multiple extensions. The following video provides a short demo:

► https://docs.netapp.com/us-en/occm//media/video_file_extensions.mp4 *(video)*

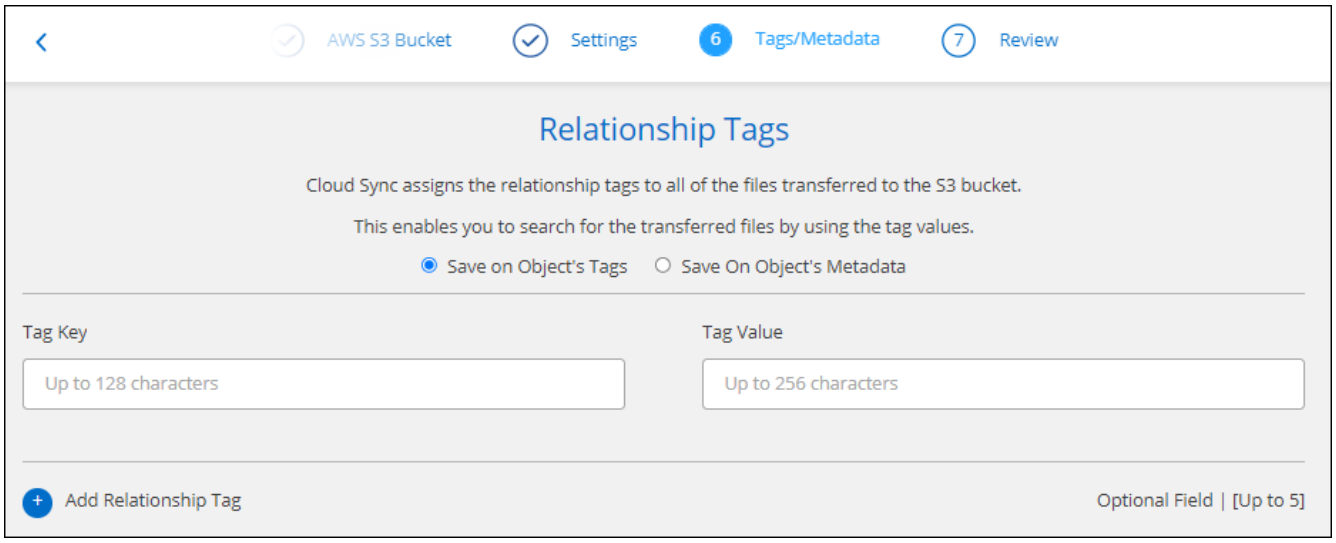
File Size

Choose to sync all files regardless of their size or just files that are in a specific size range.

Date Modified

Choose all files regardless of their last modified date, files modified after a specific date, before a specific date, or between a time range.

10. On the **Tags/Metadata** page, choose whether to save a key-value pair as a tag on all files transferred to the S3 bucket or to assign a metadata key-value pair on all files.



This same feature is available when syncing data to StorageGRID and IBM Cloud Object Storage. For Azure and Google Cloud Storage, only the metadata option is available.

11. Review the details of the sync relationship and then click **Create Relationship**.

Result

Cloud Sync starts syncing data between the source and target.