



# Create sync relationships

## Cloud Manager

Ben Cammett  
July 08, 2021

This PDF was generated from [https://docs.netapp.com/us-en/occm/task\\_sync\\_creating\\_relationships.html](https://docs.netapp.com/us-en/occm/task_sync_creating_relationships.html) on July 20, 2021. Always check docs.netapp.com for the latest.

# Table of Contents

- Create sync relationships ..... 1
  - Create sync relationships for Cloud Volumes ONTAP, Azure NetApp Files, or on-prem clusters ..... 1
  - Create other types of sync relationships ..... 2

# Create sync relationships

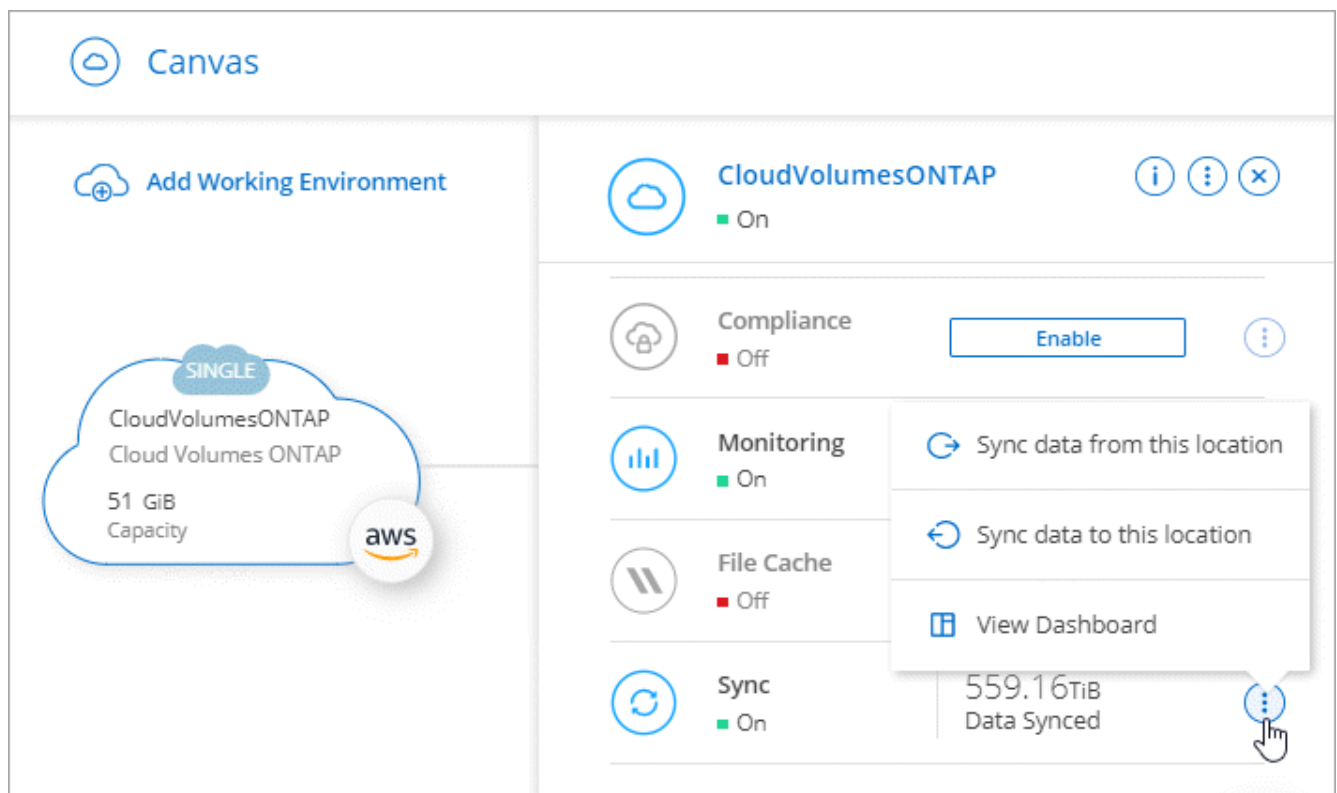
When you create a sync relationship, the Cloud Sync service copies files from the source to the target. After the initial copy, the service syncs any changed data every 24 hours.

## Create sync relationships for Cloud Volumes ONTAP, Azure NetApp Files, or on-prem clusters

If you want to create sync relationships for Cloud Volumes ONTAP, Azure NetApp Files, or an on-prem ONTAP cluster, then you first need to create or discover the working environment.

### Steps

1. Create or discover the working environment.
  - [Launching Cloud Volumes ONTAP in AWS](#)
  - [Launching Cloud Volumes ONTAP in Azure](#)
  - [Launching Cloud Volumes ONTAP in GCP](#)
  - [Adding existing Cloud Volumes ONTAP systems](#)
  - [Setting up and discovering Azure NetApp Files](#)
  - [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.



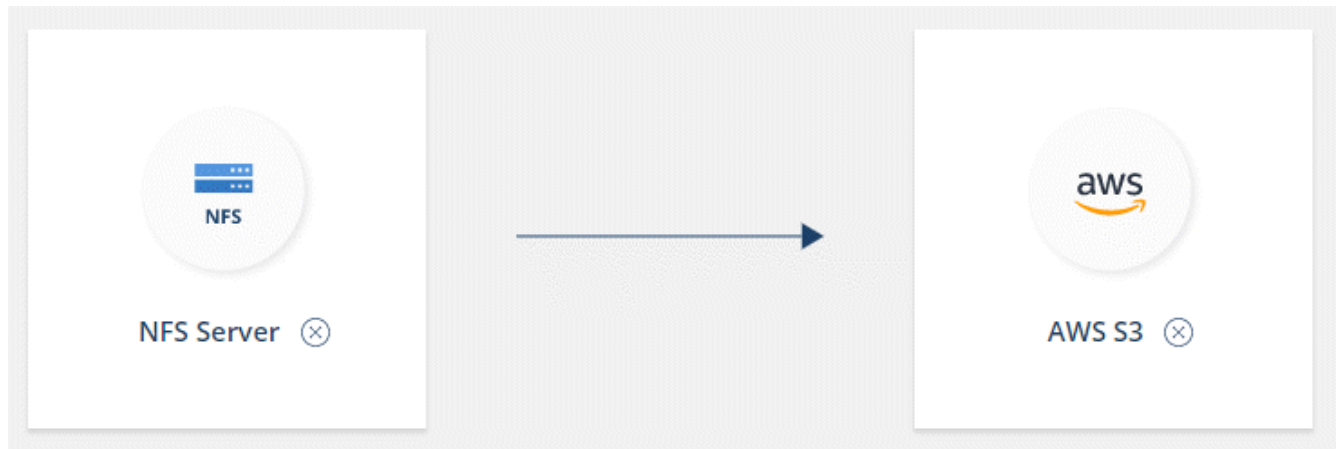
5. Select **Sync data from this location** or **Sync data to this location** and follow the prompts to set up the sync relationship.

## Create other types of sync relationships

Use these steps to sync data to or from a supported storage type other than Cloud Volumes ONTAP, Azure NetApp Files, 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 on 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:

### Select a NetApp Data Broker

1 NetApp Data Brokers

 name 

US West (Oregon) Region	10.60.21.0/25   vpc-3c46c059 VPC	10.60.21.5 Private IP	5f5002eecf378e000a560988 Broker ID
us-west-2c Availability Zone	10.60.21.0/25   subnet-e7f526be Subnet	i-0fc5c97e2f5f22c20 Instance ID	

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.](#)

### Bucket Setup

Selected S3 bucket:

 appsinstall

 **Activate S3 Bucket Encryption** ☒

Encryption type:

AWS KMS encryption: select a key

AWS KMS encryption: select a key

AWS KMS encryption: enter a key ARN

AES-256 encryption

S3 Storage Class

Standard

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 delete 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](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 **Relationship Tags** page, enter up to 9 relationship tags and then click **Continue**.

The Cloud Sync service assigns the tags to each object that it syncs to the S3 bucket.

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

### Result

Cloud Sync starts syncing data between the source and target.

## Copyright Information

Copyright © 2021 NetApp, Inc. All rights reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means-graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system-without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

RESTRICTED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.277-7103 (October 1988) and FAR 52-227-19 (June 1987).

## Trademark Information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.