NetApp

FAQ
CLOUD SYNC

1 What is Cloud Sync?

NetApp® Data Fabric Cloud Sync is a simple replication and synchronization service. This software-as-a-service (SaaS) offering enables you to transfer and synchronize NAS data to and from cloud or on-premises object storage.

The SMB/CIFS or NFS server can be the NetApp Cloud Volumes Service, a NetApp system, or a non-NetApp system.

Cloud Sync supports these sources and targets:

- CIFS
- NFS
- Amazon S3
- Amazon EFS
- Azure Blob
- IBM Cloud Object Storage
- NetApp StorageGRID® Webscale appliance

After your data is synchronized, it remains available for use in the target server and is updated during the next synchronization cycle.

2 Why should I use Cloud Sync?

Cloud Sync enables you to perform data migration, data transformation, and data synchronization in a fast, efficient, and secure way. Key benefits of using Cloud Sync are:

Fast. Cloud Sync transfers data in parallel processes. This speeds throughput to 1TB in four hours (in the default configuration), and up to 10x faster than in-house developed or traditional tools (such as rsync or Robocopy).

Efficient. After the initial synchronization, only changes since the last synchronization are transferred. Data that hasn't changed isn't re-replicated, which makes updates faster.

Cost-effective. Cloud Sync pricing is based on hourly usage, not on capacity.

Compatible. Cloud Sync supports any NFS or CIFS servers, Amazon or private S3 buckets, Azure Blob, IBM Cloud Object Storage, Amazon EFS.

Secure. Data is not transferred to our service domain; it remains in your protected environment.

Consistent. File metadata is maintained and restored during the transfer and transformations.

Audits and logging. Cloud Sync audits the transfer process, tracks progress, and logs errors.

Robust and recoverable. Cloud Sync can perform distinct recovery actions, pick up from where it stopped, and continue without needing to repeat the entire transfer process.

Scalable. Cloud Sync is designed to support enterprise-scale and webscale architectures, handling unlimited amounts of data.

Manageable. Cloud Sync is a service-based solution. There's no need to write scripts, maintain changes, update versions, and handle compatibility issues.

Intuitive. Cloud Sync is simple: You identify your source server (for example, NFS) and a target (for example, an Amazon S3 bucket), identify your Data Broker (the mediator that connects the source and target), and create your Cloud Sync relationship. That's all there is to it.

3 How do I access Cloud Sync?

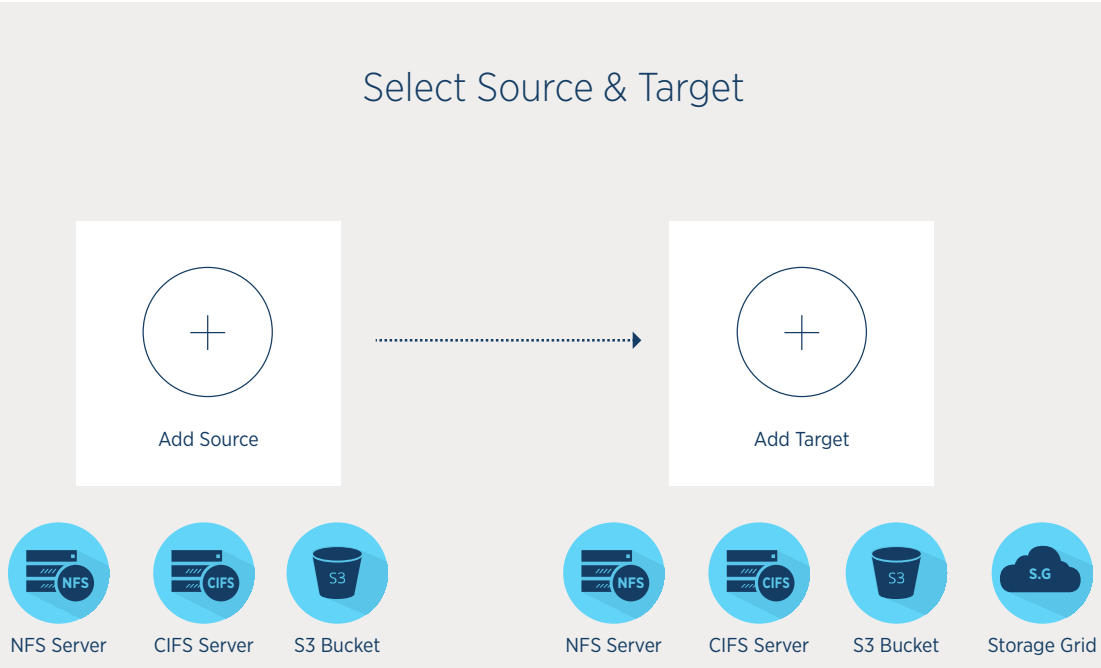
Go to https://cloud.netapp.com/cloud-sync-service, and click the START Free Trial button. In the browser window that opens, log in or sign up for the Cloud Sync service.

When you're authenticated and signed up, you're ready to get started using the Cloud Sync service.

Another option is to access Cloud Sync through AWS Marketplace: Cloud Sync service 14 Days Free Trial or Cloud Sync service - Annual license.

4 How does Cloud Sync work?

Cloud Sync links your source server to the Cloud Sync Data Broker instance that runs in your AWS account, Azure account or on the premises, and updates the target of your choice with the data from your source.



The Data Broker controls the sync relationships between your sources and targets. After you identify your source and target (NFS, CIFS or EFS server, S3 bucket, Azure Blob, IBM Cloud Object Storage or StorageGRID) and select Create Relationship, Cloud Sync analyzes your source system and breaks it up into multiple replication streams to push to your selected target.

For more information, see the Cloud Sync documentation.

5 How much does Cloud Sync cost?

There are two types of costs associated with using Cloud Sync: service charges and infrastructure charges.

Cloud Sync Service Charges

Cloud Sync service charges are hourly, based on the number of sync relationships you create. A sync relationship is created each time you establish a connection between a source server and a target.

The hourly rate per sync relationship is tiered as follows:

- First 1 to 5 relationships: $0.15 per relationship per hour
- Next 6 to 20 relationships: $0.10 per relationship per hour
- More than 20 relationships: $0.085 per relationship per hour

For more information about pricing, see the Cloud Sync webpage.

Example: If you establish 7 Cloud Sync relationships, you're charged $0.15 per hour for the first 5 relationships, and $0.10 per hour for the additional 2 relationships.

5 * $0.15 = $0.75 per hour
2 * $0.10 = $0.20 per hour

Total: = $0.95 per hour

Cloud Sync License Option

Cloud Sync license purchase is available through your NetApp representative. Each license covers 20 Cloud Sync relationships for 12 months.

Cloud Sync Infrastructure Charges

The Cloud Service Infrastructure charges are related to the AWS EC2 resource charges for the Data Broker.

The current default configuration for the Cloud Sync data broker is:

- EC2 instance type = m4.xlarge
- Attached Amazon EBS volume = 50GB gp2

EC2 instance charges are hourly and very depending on the AWS region.

Amazon Elastic Block Store (EBS) volume pricing is per gigabyte per Month and will varies depending on the AWS region.

6 How does the 14-Day Free Trial work?

The 14-day free trial starts when you sign up for the Cloud Sync service. At that point, you are not subject to NetApp charges for Cloud Sync relationships you create for 14 days. However, all resource charges for any Data Broker you deploy still apply.

7 How is Cloud Sync Billed?

The billing for Cloud Sync (PAYGO) is associated with your AWS account. Your AWS account lists the Cloud Sync relationship charges separately from AWS resource charges for any Data Broker you deploy.

8 What are the networking requirements for Cloud Sync?

The Cloud Sync environment requires that the Data Broker is connected with the source and the target through the selected protocol (NFS, CIFS, EFS) or object storage API (Amazon S3, Azure Blob, IBM Cloud Object Storage).

In addition, the Data Broker needs internet access to communicate with the Cloud Sync service.

9 Is Cloud Sync Secure?

Yes. All Cloud Sync service networking connectivity is done using Amazon Simple Queue Service (SQS).

If you're using Cloud Sync with on-premises (source or destination) system(s), there are few recommended connectivity options:

- An AWS Direct Connect or Azure ExpressRoute connection, which is non-internet routed (and can only communicate with the AWS VPCs or Azure VNet you specify)
- A VPN connection between your on-premises gateway device and your Amazon VPC or Azure VNet
- For extra secure data transfer with S3 bucket or Azure Blob, an Amazon Private S3 Endpoint or Azure Virtual Network Service Endpoints may be established.

Either method establishes a secure connection between your on-premises NAS servers and a Cloud Sync Data Broker that resides in your AWS or Azure account.

10 Is data encrypted by Cloud Sync?

All communication between the Data Broker and Amazon S3, Azure Blob or IBM Cloud Object Storage is done through the HTTPS protocol. To learn more best practices to secure your Cloud Sync environment, contact our experts by using the chat capability in the Cloud Sync service or on cloud.netapp.com.

11 How often does synchronization occur?

The initial default schedule is set for daily synchronization. After the initial synchronization, you can:

- Delete the sync schedule (no data will be lost; only the sync relationship will be removed)
- Disable the sync schedule
- Modify the sync schedule to your desired number of days, hours or minutes (minimum 5 minutes)

12 What is the minimum sync schedule?

The minimum schedule that can be configured in the Cloud Sync GUI is 5 minutes.

There is an option to set shorter schedules through the Cloud Sync API.

13 What happens if I delete my Cloud Sync relationship?

Deleting a relationship stops any sync scheduled for the future and terminates the payment for it. Any data that was synced to the target will remain as-is.

14 What happens if I delete something from my source server? Is it removed from the target too?

By default, if you have an active Cloud Sync replication relationship, the item deleted on the source server is not deleted from the target during the next synchronization. However there is an option in the sync settings for each relationship, where you can define that Cloud Sync will delete files in the target location if they were deleted from the source.

15 What happens if I delete something from my target? Is it removed from my source too?

If an item is deleted from the target, it will not be removed from the source. The relationship is one-way—from source to target.

On the next sync cycle, Cloud Sync will compare the source to the target, identify that the item is missing, and Cloud Sync will copy it again from the source to the target.

16 What versions of NFS and CIFS does Cloud Sync support?

Cloud Sync supports NFS version 3 and later, and SMB version 1 and later.

17 Are the data permissions synced to the target location?

Cloud Sync copies permissions on both NFS and CIFS data to the target location.

18 Can I use Cloud Sync outside the cloud?

Yes. You can launch the Cloud Sync Data Broker either in your AWS account, Azure account or on a virtual machine in your on-premises network.

In addition, for on-premises synchronization, a private S3 bucket target/source is available through the NetApp StorageGRID Webscale object storage solution.

In either case, you still need an internet connection to communicate with the Cloud Sync service. If you do not have a BYOL, you will need an AWS account for the PAYGO Cloud Sync service billing, which is done through your AWS account.

19 Can I purchase a license for Cloud Sync from NetApp?

Yes. To purchase a BYOL (Bring Your Own License) for Cloud Sync, contact your NetApp representative. Each BYOL license covers 20 Cloud Sync relationships for 12 months.

Another option is to purchase the license through the AWS market place: Cloud Sync service - Annual license.

20 Where can I find more information about Cloud Sync?

For more information, and to log in to Cloud Sync, go to:

cloud.netapp.com/cloud-sync.

21 What are some common use cases for Cloud Sync?

Use Cloud Sync when you need a quick, easy, and secure way to copy, transform, or sync data from data sources to a target object or file system. For example:

- Migration to the cloud
- Data migration
- Data tiering
- Data archiving
- Data lakes
- Data consolidation
- Data collaboration
- Data protection
- Big data analytics (using AWS or Azure services)

22 How can Cloud Sync help in data migration?

Migrating your data to any storage format—in the cloud or on the premises—is challenging. Because of the massive amounts of data that large organizations typically handle, issues such as transfer speed, data security, process flexibility, costs, tracking of errors and failures, recovery mechanisms, data compatibility, and overall ease of use are critical for the success of enterprise data migration projects.

Such projects require a solution that can carry out the scale and complexity of data migration. Developing in-house tools means untested solutions, spiraling costs, and a repeating process of trial-and-error failures. Cloud Sync outperforms such tools in terms of setup, performance, costs, ease of use, and feature set. Cloud Sync was designed exactly for this purpose—to move data from any source to any target. It supports all formats, and has built-in mechanisms for tracking and logging errors, recovery, and continuous sync schedules.

23 How is Cloud Sync better than in-house or other tools?

Although engineers might want to build their own transfer tools using rsync, rclone, or similar utilities, do-it-yourself tools lead to untested solutions, spiraling costs, and trial and error. Cloud Sync outperforms other tools by offering these benefits:

- Cloud Sync transfers data up to 10x faster than in-house developed or traditional tools.
- Cloud Sync costs are low and flexible, based on hourly usage.
- Cloud Sync tracks and does not re-replicate unchanged files.
- Cloud Sync is reliable, tracks and logs errors and failures, and can recover or pick up from where it stopped.
- Cloud Sync is a service-based solution—you don't need to write and maintain scripts, interact with a cloud provider, schedule updates, track progress, validate each step, handle failure scenarios, and so on. Everything is built in as part of the service.
- Cloud Sync supports a friendly, intuitive web GUI where users can create relationships, change sync schedules, and monitor operations.

24 How is Cloud Sync Supported?

There are several places to go for support and information:

NetApp Hybrid Cloud Communities

In this forum, you can use labels and filters to look at Cloud Sync topics. If you'd like to ask a question, click the Register link in the upper-right corner to sign up.

Cloud Sync Webpage

The Cloud Sync webpage is your default stop for Cloud Sync information. For additional support, use the chat function on this page or in the Cloud Sync service. Our Cloud Sync specialists will address your questions online; if they are not available, they will respond as soon as possible.

Cloud Sync Technical Documentation

You can access the Cloud Sync technical documentation through the Cloud Sync Resources link on the Cloud Sync webpage. In addition to technical documentation, you'll find instructional videos, blog posts, e-books, webinar links, and events.

Cloud Sync Chat Service

To chat with NetApp cloud experts, use the chat icon in the lower-right corner of the Cloud Sync webpage or in the service itself after you log in.