FAQs

1. What is Cloud Sync?

Answer: Data Fabric Cloud Sync (Cloud Sync for short) is a new data service offered by NetApp that enables you to synchronize your NFS File Systems with Amazon Web Services (AWS) Simple Storage Service (S3). Once your data is synchronized with your AWS S3 bucket, you can then run analytics on your data with AWS services like RedShift, Eleastic Map Reduce (EMR), RDS, or create Data Lakes to use with your own applications and services. The data remains available for use in your S3 bucket and will be updated upon the next synchronization cycle.

2. Why should I use Cloud Sync?

Answer: Cloud Sync enables you to peform data analytics and data mining on your NFS data in a fast, efficient and secure way. Key benefits of using Cloud Sync are:

- Leverage a secure data synchronization with Amazon S3 that is up to 30x faster than traditional data synchronizations
- Only changes since the last synchronization schedule are transferred after initial sync which makes updates extremely fast
- Perform analytics via AWS services, or custom data mining and then synchronize those results back to your NFS server
- And above all, Cloud Sync is simple. Identify your NFS server, select a data broker and an Amazon S3 bucket, and create your Cloud Sync relationship. That's all there is to it!

3. How do I access Cloud Sync?

Answer: You can access Cloud Sync by going to cloud.netapp.com/cloud-sync, and clicking on the '30-Day Free Trial' button in the top banner. This will open a new browser window where you can log-in or sign-up for the Cloud Sync service

You now have the option to create a new user, log-in with your existing credentials, or even use your own Amazon.com user ID (not to be confused with your aws.amazon.com user ID).

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

4. How does Cloud Sync work?

Answer: Cloud sync works by linking your NFS server to the Cloud Sync data broker instance that runs in your AWS account (aws.amazon.com, not amazon.com), and updates an Amazon S3 bucket of your choice with the data from your NFS server.
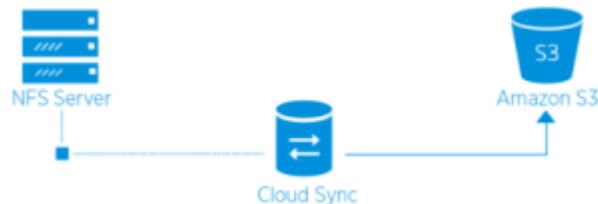
When you sign up for Cloud Sync you will be guided through a simple deployment of a Data Broker in your AWS account. This Data Broker will control the sync relationships between your NFS server(s) and your AWS S3 bucket(s).

Once you've identified your source NFS file system, and your AWS S3 bucket and select 'Create

Relationship', Cloud Sync will analyze your file system and break that up into multiple replication streams to push into your AWS S3 bucket

For more information, please reference the Cloud Manager documentation: cloud.netapp.com/cloud-sync-documentation

5. How much does Cloud Sync cost?

Answer: There are two main types of costs associated with Cloud sync. Those are the Cloud Sync service charges, and the Cloud Sync infrastructure charges.

Cloud Sync Service Charges:

The 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 one-way connection between an NFS server and an AWS S3 bucket.

The cost per sync relationship will vary depending on the number if sync relationships you have established.

The current pricing structure is thus:

First 1 to 5 relationships = $0.150 per relationship per hour

Next 6 to 20 relationships = $0.100 per relationship per hour

More than 20 relationships = $0.0850 per relationship per hour

Please reference the cloud.netapp.com/cloud-sync web page for the most up to date information on pricing

EXAMPLE: If you establish 7 Cloud Sync relationships you will be charged $0.15 per hour for the first 5 relationsips, and $0.10 per hour for the additional 2 relationships.

5 * $0.15 = $0.75 per hour

2 * $0.10 = $0.20 per hour

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Total: = $0.95 per hour

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 = m4.2xlarge
- Attached EBS volume = 8GiB gp2

AWS EC2 instance charges are hourly and will vary by AWS region. Click here for full EC2 pricing

AWS EBS volume pricing is per GB per Month and will vary by AWS region. Click here for full EBS pricing

6. How does the 30-Day Free Trial work?

Answer: The 30-Day Free trial starts when you sign up for the Cloud Sync service. At that point you will not be subject to any NetApp charges for any Cloud Sync relationships you create for 30 Days. Please realize that any and all AWS resource charges for any data brokers you deploy still apply.

7. How is Cloud Sync Billed?

Answer: The billing for Cloud Sync is associated with your AWS Account. There you will see a breakout of the Cloud Sync relationship charges, as well as the AWS resource charges for any data Data Brokers you deploy.

8. What are the networking requirements for Cloud Sync to work?

Answer: Cloud Sync requires that the NFS server can communicate with the data broker in your AWS account, and that the Data Broker can communicate with the specified AWS S3 bucket.

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To facilitate communication with the AWS S3 bucket a specific Identiy and Access Management (IAM) Role is added to the AWS account to allow the data broker to manage the specificed S3 bucket.

Communication between the NFS server and the data broker will be one of the following:

- The NFS server will already be hosted within your AWS VPC (example: an ONTAP Cloud system in your VPC)
- There will be a VPN connection between your on premises network and your AWS VPC to allow communication between your NFS server and the data broker
- There will be an AWS Direct Connect connection between your on premises network and your AWS VPC to allow communication between your NFS server and the data broker

9. Is Cloud Sync Secure?

Answer: Yes. All Cloud Sync networking connectivity is tied to your AWS network (VPC).

For using Cloud Sync with an on-premises system you have two connectivity options:

1. An AWS Direct Connect connection, which is non-internet routed [and can only communicate with the AWS VPC(s) you specify],
2. or you can establish a VPN connection between your on-premises gateway device and your AWS VPC.

Either method will establish a secure connection between your on-premises NFS servers and the Cloud Sync data broker that resides in your AWS account.

Depending on security requirements, it's also possible to establish separate IPSEC tunnels for either an AWS Direct Connect connection, or a VPN connection.

Once connectivity is established between your NFS server and your AWS account, all traffic is routed over the internal AWS private networks.

Data transfer between the data broker and the AWS S3 bucket is also facilitated over the internal AWS private network. All data transfers stay within a customer's security boundaries. No data is transferred externally.

10.   Is data encrypted by Cloud Sync?

Answer: no, not at this time. If this is something you would like to see, please use the Intercom chat capability within the Cloud Sync service or on cloud.netapp.com

11. How often is the synchronization schedule performed?

Answer: There are two different synchronization schedules. One for NFS to S3, and another one for S3 to NFS.

NFS to S3:

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The initial default schedule is set for daily synchronization. After that, you have the options to:

- Delete the sync schedule (no data will be lost… only the sync relationship will be removed)
- Diable the sync schedule
- Modify the sync schedule to your desired number of hours or days.

S3 to NFS:

The synchronization cycle from S3 to NFS is event driven. The databroker will recognize when new objects are added to the S3 bucket, and will initiate a new synchronization event to push the new changes to the associated NFS server and file system.

12.   What happens if I delete my Cloud Sync relationship?

Answer: Deleting a Cloud Sync relationship will stop the replication of data from your NFS server to your Amazon S3 bucket, however the data on your NFS server and your Amazon S3 bucket will remain in place.

13.   What happens if I delete something from my NFS server? Is it removed from AWS S3 as well?

Answer: If you have an active Cloud Sync replication relationship, then the item deleted on the NFS server will be dropped from the Amazon S3 bucket the next time the synchronization runs.

14.   What versions of NFS are supported with Cloud Sync?

Answer: NFS v3 and v4.0 are supported.

15.   What happens if I delete something from my S3 bucket? Is it removed from my NFS file system as well?

Answer: If you have an active Cloud Sync replication relationship, then the item deleted from the S3 bucket will be deleted from the NFS server when the synchronization takes place.

16.   Can I use Cloud Sync outside of AWS?

Answer: Yes. It is possible to launch the Cloud Sync data broker either in your AWS account, or you can deploy the data broker on a virtual machine in your on-premises network.

At this time the S3 bucket destination still needs to be an AWS S3 target or source. A private S3 bucket target / source will be available via a NetApp Storage Grid WebScale object storage solution in an upcoming cloud sync release.

17.   Can I purchase a license for Cloud Sync from NetApp?

Answer: Yes. You are able to contact your NetApp representative to purchase a Bring Your Own License (BYOL) license for Cloud Sync. Each BYOL license covers 20 Cloud Sync relationships, and there are 2-month and a 12-month BYOL options available.

18.   If I already have a license for Cloud Sync from NetApp can I extend it's duration?

Answer: Yes. There are 2-month and 12-month BYOL license extensions available. You can contact your NetApp representative and let them know you require an extension.

19.   Where can I find more information about Cloud Sync?

Answer: The best place to find more information about Cloud Sycn, as well as to be able to log into Cloud Sync is cloud.netapp.com/cloud-sync

20.   What are some common use cases where I should consider using Cloud Sync?

Answer: With Cloud Sync there are many new ways in which you can use your data. Some of these include:

- Deep Analytics with AWS services like:
    - Elastic Map Reduce (EMR)
    - RedShift
    - Relational Database Service (RDS)
- Behavior Analytics
- Production Forecasting
- Predictive Analyitics

And some other targete use cases:

- Seismic Analysis
- Credit & Market Risk Mangement
- Fraud Detection & Prevention
- Genomics Data for Drug Development
- Patient Records

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… and more.

21.   How is Cloud Sync supported?

Answer: Support for Cloud Sync is community driven. That said, there here are a few places you can look for support and more information:

NetApp Hybrid Cloud Communities

The Hybrid Cloud Communities is a forum where you can ask your Hybrid Cloud related questions, an there is a specific label / filter where you can look at all of the Cloud Sync related topics. If you'd like to ask a question of your own, you simply need to click on the 'Register' link in the upper right corner to sing-up.

Cloud.netapp.com/cloud-sync

The Cloud Sync information web page should be your default stop to find out all information about Cloud Sync, even if the information you're looking for is for more support.

Additionally, there is an Intercom chat ability on the Cloud Sync web page, and in th service itself where you can ask your question. If one of our Cloud Sync specialists is online, they will address your question as soon as possible. If they are not available when you ask your question, they will respond once they are back online.

Cloud Sync Documentation

The Cloud Sync documentation is available from the Cloud Sync web page, and contains our Techncial documentation, Instructional videos, our latest Blog posts, as well as any upcoming Webinar events.

Cloud Sync Chat Service

Chat service is available on cloud.netapp.com/cloud-sync or, even as an option within the service itself once you have logged in. NetApp cloud experts are available 24/7 to help you with your Cloud Sync questions - simply click the chat icon to get started.