



# **Cloud Tiering technical FAQ**

## **Cloud Manager**

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# Cloud Tiering technical FAQ

This FAQ can help if you're just looking for a quick answer to a question.

## ONTAP

The following questions relate to ONTAP.

### What are the requirements for my ONTAP cluster?

It depends on where you tier the cold data. Refer to the following:

- [Tiering data from on-premises ONTAP clusters to Amazon S3](#)
- [Tiering data from on-premises ONTAP clusters to Azure Blob storage](#)
- [Tiering data from on-premises ONTAP clusters to Google Cloud Storage](#)
- [Tiering data from on-premises ONTAP clusters to StorageGRID](#)

### Does Cloud Tiering enable inactive data reporting?

Yes, Cloud Tiering enables inactive data reporting on each aggregate. This setting enables us to identify the amount of inactive data that can be tiered to low-cost object storage.



Cloud Tiering enables inactive data reporting on HDD aggregates if the cluster is running ONTAP 9.6 or later.

### Can I tier data from NAS volumes and SAN volumes?

You can use Cloud Tiering to tier data from NAS volumes to the public cloud and from SAN volumes to a private cloud using StorageGRID.

### What about Cloud Volumes ONTAP?

If you have Cloud Volumes ONTAP systems, you'll find them in the Cluster Dashboard so you get a full view of data tiering in your hybrid cloud infrastructure.

From the Cluster Dashboard, you can view tiering information similar to an on-prem ONTAP cluster: operational health, current savings, savings opportunities, details about volumes and aggregates, and more.

Cloud Volumes ONTAP systems are read-only from Cloud Tiering. You can't set up data tiering on Cloud Volumes ONTAP from Cloud Tiering. You'll still set up tiering the same way: from the working environment in Cloud Manager.

## Object storage

The following questions relate to object storage.

### Which object storage providers are supported?

Amazon S3, Azure Blob storage, Google Cloud Storage, and StorageGRID using the S3 protocol are

supported.

## Can I use my own bucket/container?

Yes, you can. When you set up data tiering, you have the choice to add a new bucket/container or to select an existing bucket/container.

## Which regions are supported?

- [Supported AWS regions](#)
- [Supported Azure regions](#)
- [Supported Google Cloud regions](#)

## Which S3 storage classes are supported?

Cloud Tiering supports data tiering to the *Standard*, *Standard-Infrequent Access*, *One Zone-IA*, or *Intelligent* storage class. See [Supported S3 storage classes](#) for more details.

## Which Azure Blob access tiers are supported?

Cloud Tiering automatically uses the *Hot* access tier for your inactive data.

## Which storage classes are supported for Google Cloud Storage?

Cloud Tiering uses the *Standard* storage class for inactive data.

## Does Cloud Tiering use one object store for the entire cluster or one per aggregate?

One object store for the entire cluster.

## Can I apply policies to my object store to move data around independent of tiering?

No, Cloud Tiering does not support object lifecycle management rules that move or delete data from object stores.

# Connectors

The following questions relate to Connectors.

## Where does the Connector need to be installed?

- When tiering data to S3, a Connector can reside in an AWS VPC or on your premises.
- When tiering data to Blob storage, a Connector must reside in an Azure VNet.
- When tiering data to Google Cloud Storage, a Connector must reside in a Google Cloud Platform VPC.
- When tiering data to StorageGRID, a Connector must reside on an on premises Linux host.

# Networking

The following questions relate to networking.

## What are the networking requirements?

- The ONTAP cluster initiates an HTTPS connection over port 443 to your object storage provider.

ONTAP reads and writes data to and from object storage. The object storage never initiates, it just responds.

- For StorageGRID, the ONTAP cluster initiates an HTTPS connection over a user-specified port to StorageGRID (the port is configurable during tiering setup).
- A Connector needs an outbound HTTPS connection over port 443 to your ONTAP clusters, to the object store, and to the Cloud Tiering service.

For more details, see:

- [Tiering data from on-premises ONTAP clusters to Amazon S3](#)
- [Tiering data from on-premises ONTAP clusters to Azure Blob storage](#)
- [Tiering data from on-premises ONTAP clusters to Google Cloud Storage](#)
- [Tiering data from on-premises ONTAP clusters to StorageGRID](#)

# Permissions

The following questions relate to permissions.

## What permissions are required in AWS?

Permissions are required [to manage the S3 bucket](#).

## What permissions are required in Azure?

No extra permissions are needed outside of the permissions that you need to provide to Cloud Manager.

## What permissions are required in Google Cloud Platform?

Storage Admin permissions are needed for a service account that has storage access keys.

## What permissions are required for StorageGRID?

[S3 permissions are needed](#).

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