



Configuring global settings for stored objects

StorageGRID 11.5

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Configuring global settings for stored objects

You can use Grid Options to configure the settings for all of the objects stored in your StorageGRID system, including stored object compression, stored object encryption, and stored object hashing.

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Configuring stored object compression

You can use the Compress Stored Objects grid option to reduce the size of objects stored in StorageGRID, so that objects consume less storage.

What you'll need

- You must be signed in to the Grid Manager using a supported browser.
- You must have specific access permissions.

About this task

The Compress Stored Objects grid option is disabled by default. If you enable this option, StorageGRID attempts to compress each object when saving it, using lossless compression.



If you change this setting, it will take about one minute for the new setting to be applied. The configured value is cached for performance and scaling.

Before enabling this option, be aware of the following:

- You should not enable compression unless you know that the data being stored is compressible.
- Applications that save objects to StorageGRID might compress objects before saving them. If a client application has already compressed an object before saving it to StorageGRID, enabling Compress Stored Objects will not further reduce an object's size.
- Do not enable compression if you are using NetApp FabricPool with StorageGRID.
- If the Compress Stored Objects grid option is enabled, S3 and Swift client applications should avoid performing GET Object operations that specify a range of bytes be returned. These “range read” operations are inefficient because StorageGRID must effectively uncompress the objects to access the requested bytes. GET Object operations that request a small range of bytes from a very large object are especially inefficient; for example, it is inefficient to read a 10 MB range from a 50 GB compressed object.

If ranges are read from compressed objects, client requests can time out.



If you need to compress objects and your client application must use range reads, increase the read timeout for the application.

Steps

1. Select **Configuration > System Settings > Grid Options**.

2. In the Stored Object Options section, select the **Compress Stored Objects** check box.

Stored Object Options



Compress Stored Objects  

Stored Object Encryption  ☒ None ☐ AES-128 ☐ AES-256

Stored Object Hashing  ☒ SHA-1 ☐ SHA-256

3. Click **Save**.

Configuring stored object encryption

You can encrypt stored objects if you want to ensure that data cannot be retrieved in a readable form if an object store is compromised. By default, objects are not encrypted.

What you'll need

- You must be signed in to the Grid Manager using a supported browser.
- You must have specific access permissions.

About this task

Stored object encryption enables the encryption of all object data as it is ingested through S3 or Swift. When you enable the setting, all newly ingested objects are encrypted but no change is made to existing stored objects. If you disable encryption, currently encrypted objects remain encrypted but newly ingested objects are not encrypted.



If you change this setting, it will take about one minute for the new setting to be applied. The configured value is cached for performance and scaling.

Stored objects can be encrypted using the AES-128 or AES-256 encryption algorithm.

The Stored Object Encryption setting applies only to S3 objects that have not been encrypted by bucket-level or object-level encryption.

Steps

1. Select **Configuration > System Settings > Grid Options**.
2. In the Stored Object Options section, change Stored Object Encryption to **None** (default), **AES-128**, or **AES-256**.

Stored Object Options

Compress Stored Objects  ☐

Stored Object Encryption  ☒ None ☐ AES-128 ☐ AES-256

Stored Object Hashing  ☒ SHA-1 ☐ SHA-256

3. Click **Save**.

Configuring stored object hashing

The Stored Object Hashing option specifies the hashing algorithm used to verify object integrity.

What you'll need

- You must be signed in to the Grid Manager using a supported browser.
- You must have specific access permissions.

About this task

By default, object data is hashed using the SHA-1 algorithm. The SHA-256 algorithm requires additional CPU resources and is generally not recommended for integrity verification.



If you change this setting, it will take about one minute for the new setting to be applied. The configured value is cached for performance and scaling.

Steps

1. Select **Configuration > System Settings > Grid Options**.
2. In the Stored Object Options section, change Stored Object Hashing to **SHA-1** (default) or **SHA-256**.

Stored Object Options

Compress Stored Objects  ☐

Stored Object Encryption  ☒ None ☐ AES-128 ☐ AES-256

Stored Object Hashing  ☒ SHA-1 ☐ SHA-256

3. Click **Save**.

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