



# **StorageGRID S3 REST API operations**

## **StorageGRID**

NetApp  
July 18, 2022

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# StorageGRID S3 REST API operations

There are operations added on to the S3 REST API that are specific to StorageGRID system.

- [GET Bucket consistency request](#)

The GET Bucket consistency request allows you to determine the consistency level being applied to a particular bucket.

- [PUT Bucket consistency request](#)

The PUT Bucket consistency request allows you to specify the consistency level to apply to operations performed on a bucket.

- [GET Bucket last access time request](#)

The GET Bucket last access time request allows you to determine if last access time updates are enabled or disabled for individual buckets.

- [PUT Bucket last access time request](#)

The PUT Bucket last access time request allows you to enable or disable last access time updates for individual buckets. Disabling last access time updates improves performance, and is the default setting for all buckets created with version 10.3.0, or later.

- [DELETE Bucket metadata notification configuration request](#)

The DELETE Bucket metadata notification configuration request allows you to disable the search integration service for individual buckets by deleting the configuration XML.

- [GET Bucket metadata notification configuration request](#)

The GET Bucket metadata notification configuration request allows you to retrieve the configuration XML used to configure search integration for individual buckets.

- [PUT Bucket metadata notification configuration request](#)

The PUT Bucket metadata notification configuration request allows you to enable the search integration service for individual buckets. The metadata notification configuration XML that you supply in the request body specifies the objects whose metadata is sent to the destination search index.

- [GET Storage Usage request](#)

The GET Storage Usage request tells you the total amount of storage in use by an account, and for each bucket associated with the account.

- [Deprecated Bucket requests for legacy Compliance](#)

You might need to use the StorageGRID S3 REST API to manage buckets that were created using the legacy Compliance feature.

# GET Bucket consistency request

The GET Bucket consistency request allows you to determine the consistency level being applied to a particular bucket.

The default consistency controls are set to guarantee read-after-write for newly created objects.

You have the s3:GetBucketConsistency permission, or be account root, to complete this operation.

## Request example

```
GET /bucket?x-ntap-sg-consistency HTTP/1.1
Date: <em>date</em>
Authorization: <em>authorization string</em>
Host: <em>host</em>
```

## Response

In the response XML, <Consistency> will return one of the following values:

Consistency control	Description
all	All nodes receive the data immediately, or the request will fail.
strong-global	Guarantees read-after-write consistency for all client requests across all sites.
strong-site	Guarantees read-after-write consistency for all client requests within a site.
read-after-new-write	<p>(Default) Provides read-after-write consistency for new objects and eventual consistency for object updates. Offers high availability and data protection guarantees. Most closely matches Amazon S3 consistency guarantees.</p> <p><b>Note:</b> If your application uses HEAD requests on objects that do not exist, you might receive a high number of 500 Internal Server errors if one or more Storage Nodes are unavailable. To prevent these errors, set the consistency control to “available” unless you require consistency guarantees similar to Amazon S3.</p>

Consistency control	Description
available (eventual consistency for HEAD operations)	Behaves the same as the “read-after-new-write” consistency level, but only provides eventual consistency for HEAD operations. Offers higher availability for HEAD operations than “read-after-new-write” if Storage Nodes are unavailable. Differs from Amazon S3 consistency guarantees for HEAD operations only.

## Response example

```

HTTP/1.1 200 OK
Date: Fri, 18 Sep 2020 01:02:18 GMT
Connection: CLOSE
Server: StorageGRID/11.5.0
x-amz-request-id: 12345
Content-Length: 127
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8"?>
<Consistency xmlns="http://s3.storagegrid.com/doc/2015-02-01/">read-after-
new-write</Consistency>

```

## Related information

[Consistency controls](#)

# PUT Bucket consistency request

The PUT Bucket consistency request allows you to specify the consistency level to apply to operations performed on a bucket.

The default consistency controls are set to guarantee read-after-write for newly created objects.

You have the s3:PutBucketConsistency permission, or be account root, to complete this operation.

## Request

The x-ntap-sg-consistency parameter must contain one of the following values:

Consistency control	Description
all	All nodes receive the data immediately, or the request will fail.
strong-global	Guarantees read-after-write consistency for all client requests across all sites.

Consistency control	Description
strong-site	Guarantees read-after-write consistency for all client requests within a site.
read-after-new-write	<p>(Default) Provides read-after-write consistency for new objects and eventual consistency for object updates. Offers high availability and data protection guarantees. Most closely matches Amazon S3 consistency guarantees.</p> <p><b>Note:</b> If your application uses HEAD requests on objects that do not exist, you might receive a high number of 500 Internal Server errors if one or more Storage Nodes are unavailable. To prevent these errors, set the consistency control to “available” unless you require consistency guarantees similar to Amazon S3.</p>
available (eventual consistency for HEAD operations)	Behaves the same as the “read-after-new-write” consistency level, but only provides eventual consistency for HEAD operations. Offers higher availability for HEAD operations than “read-after-new-write” if Storage Nodes are unavailable. Differs from Amazon S3 consistency guarantees for HEAD operations only.

**Note:** In general, you should use the “read-after-new-write” consistency control value. If requests are not working correctly, change the application client behavior if possible. Or, configure the client to specify the consistency control for each API request. Set the consistency control at the bucket level only as a last resort.

## Request example

```
PUT /bucket?x-ntap-sg-consistency=strong-global HTTP/1.1
Date: <em>date</em>
Authorization: <em>authorization string</em>
Host: <em>host</em>
```

### Related information

[Consistency controls](#)

## GET Bucket last access time request

The GET Bucket last access time request allows you to determine if last access time updates are enabled or disabled for individual buckets.

You have the `s3:GetBucketLastAccessTime` permission, or be account root, to complete this operation.

## Request example

```
GET /bucket?x-ntap-sg-lastaccesstime HTTP/1.1
Date: <em>date</em>
Authorization: <em>authorization string</em>
Host: <em>host</em>
```

## Response example

This example shows that last access time updates are enabled for the bucket.

```
HTTP/1.1 200 OK
Date: Sat, 29 Nov 2015 01:02:18 GMT
Connection: CLOSE
Server: StorageGRID/10.3.0
x-amz-request-id: 12345
Content-Length: 127
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8"?>
<LastAccessTime xmlns="http://s3.storagegrid.com/doc/2015-02-01/">enabled
</LastAccessTime>
```

## PUT Bucket last access time request

The PUT Bucket last access time request allows you to enable or disable last access time updates for individual buckets. Disabling last access time updates improves performance, and is the default setting for all buckets created with version 10.3.0, or later.

You have the `s3:PutBucketLastAccessTime` permission for a bucket, or be account root, to complete this operation.



Starting with StorageGRID version 10.3, updates to last access time are disabled by default for all new buckets. If you have buckets that were created using an earlier version of StorageGRID and you want to match the new default behavior, you must explicitly disable last access time updates for each of those earlier buckets. You can enable or disable updates to last access time using the PUT Bucket last access time request, the **S3 > Buckets > Change Last Access Setting** check box in the Tenant Manager, or the Tenant Management API.

If last access time updates are disabled for a bucket, the following behavior is applied to operations on the bucket:

- GET Object, GET Object ACL, GET Object Tagging, and HEAD Object requests do not update last access time. The object is not added to queues for information lifecycle management (ILM) evaluation.
- PUT Object - Copy and PUT Object Tagging requests that update only the metadata also update last access time. The object is added to queues for ILM evaluation.

- If updates to last access time are disabled for the source bucket, PUT Object - Copy requests do not update last access time for the source bucket. The object that was copied is not added to queues for ILM evaluation for the source bucket. However, for the destination, PUT Object - Copy requests always update last access time. The copy of the object is added to queues for ILM evaluation.
- Complete Multipart Upload requests update last access time. The completed object is added to queues for ILM evaluation.

## Request examples

This example enables last access time for a bucket.

```
PUT /bucket?x-ntap-sg-lastaccesstime=enabled HTTP/1.1
Date: <em>date</em>
Authorization: <em>authorization string</em>
Host: <em>host</em>
```

This example disables last access time for a bucket.

```
PUT /bucket?x-ntap-sg-lastaccesstime=disabled HTTP/1.1
Date: <em>date</em>
Authorization: <em>authorization string</em>
Host: <em>host</em>
```

### Related information

[Use tenant account](#)

## DELETE Bucket metadata notification configuration request

The DELETE Bucket metadata notification configuration request allows you to disable the search integration service for individual buckets by deleting the configuration XML.

You have the `s3:DeleteBucketMetadataNotification` permission for a bucket, or be account root, to complete this operation.

### Request example

This example shows disabling the search integration service for a bucket.

```
DELETE /test1?x-ntap-sg-metadata-notification HTTP/1.1
Date: <em>date</em>
Authorization: <em>authorization string</em>
Host: <em>host</em>
```



# GET Bucket metadata notification configuration request

The GET Bucket metadata notification configuration request allows you to retrieve the configuration XML used to configure search integration for individual buckets.

You have the `s3:GetBucketMetadataNotification` permission, or be account root, to complete this operation.

## Request example

This request retrieves the metadata notification configuration for the bucket named `bucket`.

```
GET /bucket?x-ntap-sg-metadata-notification HTTP/1.1
Date: <em>date</em>
Authorization: <em>authorization string</em>
Host: <em>host</em>
```

## Response

The response body includes the metadata notification configuration for the bucket. The metadata notification configuration lets you determine how the bucket is configured for search integration. That is, it allows you to determine which objects are indexed, and which endpoints their object metadata is being sent to.

```
<MetadataNotificationConfiguration>
  <Rule>
    <ID>Rule-1</ID>
    <Status>rule-status</Status>
    <Prefix>key-prefix</Prefix>
    <Destination>
      <Urn>arn:aws:es:_region:account-
ID_:domain/_mydomain/myindex/mytype_</Urn>
    </Destination>
  </Rule>
  <Rule>
    <ID>Rule-2</ID>
    ...
  </Rule>
  ...
</MetadataNotificationConfiguration>
```

Each metadata notification configuration includes one or more rules. Each rule specifies the objects that it applies to and the destination where StorageGRID should send object metadata. Destinations must be specified using the URN of a StorageGRID endpoint.

Name	Description	Required
MetadataNotificationConfiguration	<p>Container tag for rules used to specify the objects and destination for metadata notifications.</p> <p>Contains one or more Rule elements.</p>	Yes
Rule	<p>Container tag for a rule that identifies the objects whose metadata should be added to a specified index.</p> <p>Rules with overlapping prefixes are rejected.</p> <p>Included in the MetadataNotificationConfiguration element.</p>	Yes
ID	<p>Unique identifier for the rule.</p> <p>Included in the Rule element.</p>	No
Status	<p>Status can be 'Enabled' or 'Disabled'. No action is taken for rules that are disabled.</p> <p>Included in the Rule element.</p>	Yes
Prefix	<p>Objects that match the prefix are affected by the rule, and their metadata is sent to the specified destination.</p> <p>To match all objects, specify an empty prefix.</p> <p>Included in the Rule element.</p>	Yes
Destination	<p>Container tag for the destination of a rule.</p> <p>Included in the Rule element.</p>	Yes

Name	Description	Required
Urn	<p>URN of the destination where object metadata is sent. Must be the URN of a StorageGRID endpoint with the following properties:</p> <ul style="list-style-type: none"> <li>• <code>es</code> must be the third element.</li> <li>• The URN must end with the index and type where the metadata is stored, in the form <code>domain-name/myindex/mytype</code>.</li> </ul> <p>Endpoints are configured using the Tenant Manager or Tenant Management API. They take the following form:</p> <ul style="list-style-type: none"> <li>• <code>arn:aws:es:_region:account-ID_:domain/mydomain/myindex/mytype</code></li> <li>• <code>urn:mysite:es:::mydomain/myindex/mytype</code></li> </ul> <p>The endpoint must be configured before the configuration XML is submitted, or configuration will fail with a 404 error.</p> <p>Urn is included in the Destination element.</p>	Yes

## Response example

The XML included between the

`<MetadataNotificationConfiguration></MetadataNotificationConfiguration>` tags shows how integration with a search integration endpoint is configured for the bucket. In this example, object metadata is being sent to an Elasticsearch index named `current` and type named `2017` that is hosted in an AWS domain named `records`.

```
HTTP/1.1 200 OK
Date: Thu, 20 Jul 2017 18:24:05 GMT
Connection: KEEP-ALIVE
Server: StorageGRID/11.0.0
x-amz-request-id: 3832973499
Content-Length: 264
Content-Type: application/xml

<MetadataNotificationConfiguration>
  <Rule>
    <ID>Rule-1</ID>
    <Status>Enabled</Status>
    <Prefix>2017</Prefix>
    <Destination>
      <Urn>arn:aws:es:us-east-
1:33333333:domain/records/current/2017</Urn>
    </Destination>
  </Rule>
</MetadataNotificationConfiguration>
```

#### Related information

[Use tenant account](#)

## PUT Bucket metadata notification configuration request

The PUT Bucket metadata notification configuration request allows you to enable the search integration service for individual buckets. The metadata notification configuration XML that you supply in the request body specifies the objects whose metadata is sent to the destination search index.

You have the `s3:PutBucketMetadataNotification` permission for a bucket, or be account root, to complete this operation.

### Request

The request must include the metadata notification configuration in the request body. Each metadata notification configuration includes one or more rules. Each rule specifies the objects that it applies to, and the destination where StorageGRID should send object metadata.

Objects can be filtered on the prefix of the object name. For example, you could send metadata for objects with the prefix `/images` to one destination, and objects with the prefix `/videos` to another.

Configurations that have overlapping prefixes are not valid, and are rejected when they are submitted. For example, a configuration that included one rule for objects with the prefix `test` and a second rule for objects with the prefix `test2` would not be allowed.

Destinations must be specified using the URN of a StorageGRID endpoint. The endpoint must exist when the

metadata notification configuration is submitted, or the request fails as a 400 Bad Request. The error message states: Unable to save the metadata notification (search) policy. The specified endpoint URN does not exist: *URN*.

```
<MetadataNotificationConfiguration>
  <Rule>
    <ID>Rule-1</ID>
    <Status>rule-status</Status>
    <Prefix>key-prefix</Prefix>
    <Destination>
      <Urn>arn:aws:es:region:account-
ID:domain/mydomain/myindex/mytype</Urn>
    </Destination>
  </Rule>
  <Rule>
    <ID>Rule-2</ID>
    ...
  </Rule>
  ...
</MetadataNotificationConfiguration>
```

The table describes the elements in the metadata notification configuration XML.

Name	Description	Required
MetadataNotificationConfiguration	Container tag for rules used to specify the objects and destination for metadata notifications.  Contains one or more Rule elements.	Yes
Rule	Container tag for a rule that identifies the objects whose metadata should be added to a specified index.  Rules with overlapping prefixes are rejected.  Included in the MetadataNotificationConfiguration element.	Yes
ID	Unique identifier for the rule.  Included in the Rule element.	No

Name	Description	Required
Status	<p>Status can be 'Enabled' or 'Disabled'. No action is taken for rules that are disabled.</p> <p>Included in the Rule element.</p>	Yes
Prefix	<p>Objects that match the prefix are affected by the rule, and their metadata is sent to the specified destination.</p> <p>To match all objects, specify an empty prefix.</p> <p>Included in the Rule element.</p>	Yes
Destination	<p>Container tag for the destination of a rule.</p> <p>Included in the Rule element.</p>	Yes

Name	Description	Required
Urn	<p>URN of the destination where object metadata is sent. Must be the URN of a StorageGRID endpoint with the following properties:</p> <ul style="list-style-type: none"> <li>• <code>es</code> must be the third element.</li> <li>• The URN must end with the index and type where the metadata is stored, in the form <code>domain-name/myindex/mytype</code>.</li> </ul> <p>Endpoints are configured using the Tenant Manager or Tenant Management API. They take the following form:</p> <ul style="list-style-type: none"> <li>• <code>arn:aws:es:region:account-ID:domain/mydomain/myindex/mytype</code></li> <li>• <code>urn:mystore:es:::mydomain/myindex/mytype</code></li> </ul> <p>The endpoint must be configured before the configuration XML is submitted, or configuration will fail with a 404 error.</p> <p>Urn is included in the Destination element.</p>	Yes

## Request examples

This example shows enabling search integration for a bucket. In this example, object metadata for all objects is sent to the same destination.

```

PUT /test1?x-ntap-sg-metadata-notification HTTP/1.1
Date: <em>date</em>
Authorization: <em>authorization string</em>
Host: <em>host</em>

<MetadataNotificationConfiguration>
  <Rule>
    <ID>Rule-1</ID>
    <Status>Enabled</Status>
    <Prefix></Prefix>
    <Destination>
      <Urn>urn:sgws:es::sgws-notifications/test1/all</Urn>
    </Destination>
  </Rule>
</MetadataNotificationConfiguration>

```

In this example, object metadata for objects that match the prefix `/images` is sent to one destination, while object metadata for objects that match the prefix `/videos` is sent to a second destination.

```

PUT /graphics?x-ntap-sg-metadata-notification HTTP/1.1
Date: <em>date</em>
Authorization: <em>authorization string</em>
Host: <em>host</em>

<MetadataNotificationConfiguration>
  <Rule>
    <ID>Images-rule</ID>
    <Status>Enabled</Status>
    <Prefix>/images</Prefix>
    <Destination>
      <Urn>arn:aws:es:us-east-1:3333333:domain/es-
domain/graphics/imagetype</Urn>
    </Destination>
  </Rule>
  <Rule>
    <ID>Videos-rule</ID>
    <Status>Enabled</Status>
    <Prefix>/videos</Prefix>
    <Destination>
      <Urn>arn:aws:es:us-west-1:22222222:domain/es-
domain/graphics/videotype</Urn>
    </Destination>
  </Rule>
</MetadataNotificationConfiguration>

```



## JSON generated by the search integration service

When you enable the search integration service for a bucket, a JSON document is generated and sent to the destination endpoint each time object metadata or tags are added, updated, or deleted.

This example shows an example of the JSON that could be generated when an object with the key `SGWS/Tagging.txt` is created in a bucket named `test`. The `test` bucket is not versioned, so the `versionId` tag is empty.

```
{
  "bucket": "test",
  "key": "SGWS/Tagging.txt",
  "versionId": "",
  "accountId": "86928401983529626822",
  "size": 38,
  "md5": "3d6c7634a85436eee06d43415012855",
  "region": "us-east-1"
  "metadata": {
    "age": "25"
  },
  "tags": {
    "color": "yellow"
  }
}
```

## Object metadata included in metadata notifications

The table lists all the fields that are included in the JSON document that is sent to the destination endpoint when search integration is enabled.

The document name includes the bucket name, object name, and version ID if present.

Type	Item name	Description
Bucket and object information	bucket	Name of the bucket
Bucket and object information	key	Object key name
Bucket and object information	versionID	Object version, for objects in versioned buckets
Bucket and object information	region	Bucket region, for example <code>us-east-1</code>
System metadata	size	Object size (in bytes) as visible to an HTTP client

Type	Item name	Description
System metadata	md5	Object hash
User metadata	metadata <i>key:value</i>	All user metadata for the object, as key-value pairs
Tags	tags <i>key:value</i>	All object tags defined for the object, as key-value pairs

**Note:** For tags and user metadata, StorageGRID passes dates and numbers to Elasticsearch as strings or as S3 event notifications. To configure Elasticsearch to interpret these strings as dates or numbers, follow the Elasticsearch instructions for dynamic field mapping and for mapping date formats. You must enable the dynamic field mappings on the index before you configure the search integration service. After a document is indexed, you cannot edit the document's field types in the index.

#### Related information

[Use tenant account](#)

## GET Storage Usage request

The GET Storage Usage request tells you the total amount of storage in use by an account, and for each bucket associated with the account.

The amount of storage used by an account and its buckets can be obtained by a modified GET Service request with the `x-ntap-sg-usage` query parameter. Bucket storage usage is tracked separately from the PUT and DELETE requests processed by the system. There might be some delay before the usage values match the expected values based on the processing of requests, particularly if the system is under heavy load.

By default, StorageGRID attempts to retrieve usage information using strong-global consistency. If strong-global consistency cannot be achieved, StorageGRID attempts to retrieve the usage information at a strong-site consistency.

You have the `s3:ListAllMyBuckets` permission, or be account root, to complete this operation.

### Request example

```
GET /?x-ntap-sg-usage HTTP/1.1
Date: <em>date</em>
Authorization: <em>authorization string</em>
Host: <em>host</em>
```

### Response example

This example shows an account that has four objects and 12 bytes of data in two buckets. Each bucket contains two objects and six bytes of data.

```
HTTP/1.1 200 OK
Date: Sat, 29 Nov 2015 00:49:05 GMT
Connection: KEEP-ALIVE
Server: StorageGRID/10.2.0
x-amz-request-id: 727237123
Content-Length: 427
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8"?>
<UsageResult xmlns="http://s3.storagegrid.com/doc/2015-02-01">
<CalculationTime>2014-11-19T05:30:11.000000Z</CalculationTime>
<ObjectCount>4</ObjectCount>
<DataBytes>12</DataBytes>
<Buckets>
<Bucket>
<Name>bucket1</Name>
<ObjectCount>2</ObjectCount>
<DataBytes>6</DataBytes>
</Bucket>
<Bucket>
<Name>bucket2</Name>
<ObjectCount>2</ObjectCount>
<DataBytes>6</DataBytes>
</Bucket>
</Buckets>
</UsageResult>
```

## Versioning

Every object version stored will contribute to the `ObjectCount` and `DataBytes` values in the response. Delete markers are not added to the `ObjectCount` total.

### Related information

[Consistency controls](#)

## Deprecated bucket requests for legacy Compliance

You might need to use the StorageGRID S3 REST API to manage buckets that were created using the legacy Compliance feature.

### Compliance feature deprecated

The StorageGRID Compliance feature that was available in previous StorageGRID versions is deprecated and has been replaced by S3 Object Lock.

If you previously enabled the global Compliance setting, the global S3 Object Lock setting is enabled in

StorageGRID 11.6. You can no longer create new buckets with Compliance enabled; however, as required, you can use the StorageGRID S3 REST API to manage any existing legacy Compliant buckets.

- [Use S3 Object Lock](#)
- [Manage objects with ILM](#)
- [NetApp Knowledge Base: How to manage legacy Compliant buckets in StorageGRID 11.5](#)

Deprecated compliance requests:

- [Deprecated - PUT Bucket request modifications for compliance](#)

The SGCompliance XML element is deprecated. Previously, you could include this StorageGRID custom element in the optional XML request body of PUT Bucket requests to create a Compliant bucket.

- [Deprecated - GET Bucket compliance request](#)

The GET Bucket compliance request is deprecated. However, you can continue to use this request to determine the compliance settings currently in effect for an existing legacy Compliant bucket.

- [Deprecated - PUT Bucket compliance request](#)

The PUT Bucket compliance request is deprecated. However, you can continue to use this request to modify the compliance settings for an existing legacy Compliant bucket. For example, you can place an existing bucket on legal hold or increase its retention period.

## Deprecated: PUT Bucket request modifications for compliance

The SGCompliance XML element is deprecated. Previously, you could include this StorageGRID custom element in the optional XML request body of PUT Bucket requests to create a Compliant bucket.



The StorageGRID Compliance feature that was available in previous StorageGRID versions is deprecated and has been replaced by S3 Object Lock.

[Use S3 Object Lock](#)

[Manage objects with ILM](#)

[NetApp Knowledge Base: How to manage legacy Compliant buckets in StorageGRID 11.5](#)

You can no longer create new buckets with Compliance enabled. The following error message is returned if you attempt to use the PUT Bucket request modifications for compliance to create a new Compliant bucket:

```
The Compliance feature is deprecated.  
Contact your StorageGRID administrator if you need to create new Compliant  
buckets.
```

### Related information

[Manage objects with ILM](#)

## Deprecated: GET Bucket compliance request

The GET Bucket compliance request is deprecated. However, you can continue to use this request to determine the compliance settings currently in effect for an existing legacy Compliant bucket.



The StorageGRID Compliance feature that was available in previous StorageGRID versions is deprecated and has been replaced by S3 Object Lock.

[Use S3 Object Lock](#)

[Manage objects with ILM](#)

[NetApp Knowledge Base: How to manage legacy Compliant buckets in StorageGRID 11.5](#)

You have the `s3:GetBucketCompliance` permission, or be account root, to complete this operation.

### Request example

This example request allows you to determine the compliance settings for the bucket named `mybucket`.

```
GET /mybucket/?x-ntap-sg-compliance HTTP/1.1
Date: <em>date</em>
Authorization: <em>authorization string</em>
Host: <em>host</em>
```

### Response example

In the response XML, `<SGCompliance>` lists the compliance settings in effect for the bucket. This example response shows the compliance settings for a bucket in which each object will be retained for one year (525,600 minutes), starting from when the object is ingested into the grid. There is currently no legal hold on this bucket. Each object will be automatically deleted after one year.

```
HTTP/1.1 200 OK
Date: <em>date</em>
Connection: <em>connection</em>
Server: StorageGRID/11.1.0
x-amz-request-id: <em>request ID</em>
Content-Length: <em>length</em>
Content-Type: application/xml

<SGCompliance>
  <RetentionPeriodMinutes>525600</RetentionPeriodMinutes>
  <LegalHold>false</LegalHold>
  <AutoDelete>true</AutoDelete>
</SGCompliance>
```

Name	Description
RetentionPeriodMinutes	The length of the retention period for objects added to this bucket, in minutes. The retention period starts when the object is ingested into the grid.
LegalHold	<ul style="list-style-type: none"><li>• True: This bucket is currently under a legal hold. Objects in this bucket cannot be deleted until the legal hold is lifted, even if their retention period has expired.</li><li>• False: This bucket is not currently under a legal hold. Objects in this bucket can be deleted when their retention period expires.</li></ul>
AutoDelete	<ul style="list-style-type: none"><li>• True: The objects in this bucket will be deleted automatically when their retention period expires, unless the bucket is under a legal hold.</li><li>• False: The objects in this bucket will not be deleted automatically when the retention period expires. You must delete these objects manually if you need to delete them.</li></ul>

## Error responses

If the bucket was not created to be compliant, the HTTP status code for the response is 404 Not Found, with an S3 error code of XNoSuchBucketCompliance.

## Related information

[Manage objects with ILM](#)

[Use tenant account](#)

## Deprecated: PUT Bucket compliance request

The PUT Bucket compliance request is deprecated. However, you can continue to use this request to modify the compliance settings for an existing legacy Compliant bucket. For example, you can place an existing bucket on legal hold or increase its retention period.



The StorageGRID Compliance feature that was available in previous StorageGRID versions is deprecated and has been replaced by S3 Object Lock.

[Use S3 Object Lock](#)

[Manage objects with ILM](#)

[NetApp Knowledge Base: How to manage legacy Compliant buckets in StorageGRID 11.5](#)

You have the `s3:PutBucketCompliance` permission, or be account root, to complete this operation.

You must specify a value for every field of the compliance settings when issuing a PUT Bucket compliance request.

### Request example

This example request modifies the compliance settings for the bucket named `mybucket`. In this example, objects in `mybucket` will now be retained for two years (1,051,200 minutes) instead of one year, starting from when the object is ingested into the grid. There is no legal hold on this bucket. Each object will be automatically deleted after two years.

```
PUT /mybucket/?x-ntap-sg-compliance HTTP/1.1
Date: <em>date</em>
Authorization: <em>authorization name</em>
Host: <em>host</em>
Content-Length: 152

<SGCompliance>
  <RetentionPeriodMinutes>1051200</RetentionPeriodMinutes>
  <LegalHold>false</LegalHold>
  <AutoDelete>true</AutoDelete>
</SGCompliance>
```

Name	Description
RetentionPeriodMinutes	<p>The length of the retention period for objects added to this bucket, in minutes. The retention period starts when the object is ingested into the grid.</p> <p><b>Attention:</b> When specifying a new value for RetentionPeriodMinutes, you must specify a value that is equal to or greater than the bucket's current retention period. After the bucket's retention period is set, you cannot decrease that value; you can only increase it.</p>
LegalHold	<ul style="list-style-type: none"> <li>• True: This bucket is currently under a legal hold. Objects in this bucket cannot be deleted until the legal hold is lifted, even if their retention period has expired.</li> <li>• False: This bucket is not currently under a legal hold. Objects in this bucket can be deleted when their retention period expires.</li> </ul>
AutoDelete	<ul style="list-style-type: none"> <li>• True: The objects in this bucket will be deleted automatically when their retention period expires, unless the bucket is under a legal hold.</li> <li>• False: The objects in this bucket will not be deleted automatically when the retention period expires. You must delete these objects manually if you need to delete them.</li> </ul>

### Consistency level for compliance settings

When you update the compliance settings for an S3 bucket with a PUT Bucket compliance request, StorageGRID attempts to update the bucket's metadata across the grid. By default, StorageGRID uses the **strong-global** consistency level to guarantee that all data center sites and all Storage Nodes that contain bucket metadata have read-after-write consistency for the changed compliance settings.

If StorageGRID cannot achieve the **strong-global** consistency level because a data center site or multiple Storage Nodes at a site are unavailable, the HTTP status code for the response is 503 `Service Unavailable`.

If you receive this response, you must contact the grid administrator to ensure that the required storage services are made available as soon as possible. If the grid administrator is unable to make enough of the Storage Nodes at each site available, technical support might direct you to retry the failed request by forcing the **strong-site** consistency level.



Never force the **strong-site** consistency level for PUT bucket compliance unless you have been directed to do so by technical support and unless you understand the potential consequences of using this level.

When the consistency level is reduced to **strong-site**, StorageGRID guarantees that updated compliance settings will have read-after-write consistency only for client requests within a site. This means that the



StorageGRID system might temporarily have multiple, inconsistent settings for this bucket until all sites and Storage Nodes are available. The inconsistent settings can result in unexpected and undesired behavior. For example, if you are placing a bucket under a legal hold and you force a lower consistency level, the bucket's previous compliance settings (that is, legal hold off) might continue to be in effect at some data center sites. As a result, objects that you think are on legal hold might be deleted when their retention period expires, either by the user or by AutoDelete, if enabled.

To force the use of the **strong-site** consistency level, reissue the PUT Bucket compliance request and include the `Consistency-Control` HTTP request header, as follows:

```
PUT /mybucket/?x-ntap-sg-compliance HTTP/1.1
Consistency-Control: strong-site
```

### Error responses

- If the bucket was not created to be compliant, the HTTP status code for the response is 404 Not Found.
- If `RetentionPeriodMinutes` in the request is less than the bucket's current retention period, the HTTP status code is 400 Bad Request.

### Related information

[Deprecated: PUT Bucket request modifications for compliance](#)

[Use tenant account](#)

[Manage objects with ILM](#)

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