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# Buckets

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The Buckets resource represents a [bucket](#) in Cloud Storage. There is a single global namespace shared by all buckets. For more information, see [bucket name requirements](#).

Buckets contain [objects](#) which can be accessed by their own methods. In addition to the `acl` property, buckets contain [bucketAccessControls](#), for use in fine-grained manipulation of an existing bucket's access controls.

A bucket is always owned by the associated project's `projectOwner` [convenience value](#).

To try out the methods for this resource, such as creating a new bucket, see [Methods](#).

## Resource representations

```
{
  "kind": "storage#bucket",
  "selfLink": string,
  "id": string,
  "name": string,
  "projectNumber": "unsigned long",
  "metageneration": "long",
  "location": string,
  "storageClass": string,
  "etag": string,
  "defaultEventBasedHold": boolean,
  "timeCreated": "datetime",
  "updated": "datetime",
  "hierarchicalNamespace": {
    "enabled": boolean
  },
  "encryption": {
    "defaultKmsKeyName": string
  },
  "acl": [
    bucketAccessControls Resource
  ],
  "defaultObjectAcl": [
    defaultObjectAccessControls Resource
  ]
}
```

Property name	Value	Description	Notes
acl[]	list	Access controls on the bucket, containing one or more <a href="#">bucketAccessControls Resources</a> . If <code>iamConfiguration.uniformBucketLevelAccess.enabled</code> is set to true, this field is omitted in responses, and requests that specify this field fail with a 400 Bad Request response.	writable
autoclass	object	The bucket's <a href="#">Autoclass configuration</a> , which, when enabled, controls the storage class of objects based on how and when the objects are accessed.	writable
autoclass.enabled	boolean	Whether or not Autoclass is enabled. By default, this boolean is not set, and Autoclass is disabled.	writable

<code>autoclass.terminalStorageClass</code>	string	The coldest storage class that an object in an Autoclass-enabled bucket transitions to if it is not accessed. Valid values are NEARLINE and ARCHIVE. The default value is NEARLINE.	writable
<code>autoclass.terminalStorageClassUpdateTime</code>	datetime <sup>1</sup>	The time at which the terminal storage class was last updated for this bucket, in <a href="#">RFC 3339</a> <a href="#">🔗</a> format.	
<code>autoclass.toggleTime</code>	datetime <sup>1</sup>	The time at which Autoclass was last enabled or disabled for this bucket, in <a href="#">RFC 3339</a> <a href="#">🔗</a> format.	
<code>billing</code>	object	The bucket's billing configuration.	writable
<code>billing.requesterPays</code>	boolean	When set to true, <a href="#">Requester Pays</a> is enabled for this bucket.	writable
<code>cors[]</code>	list	The bucket's <a href="#">Cross-Origin Resource Sharing</a> <a href="#">🔗</a> (CORS) configuration.	writable
<code>cors[].maxAgeSeconds</code>	integer	The value, in seconds, to return in the <a href="#">Access-Control-Max-Age header</a> <a href="#">🔗</a> used in preflight responses.	writable
<code>cors[].method[]</code>	list	The list of HTTP methods on which to include CORS response headers, such as "GET", "OPTIONS", and "POST".  Note: "*" is permitted in the list of methods, and means "any method".	writable
<code>cors[].origin[]</code>	list	The list of <a href="#">Origins</a> <a href="#">🔗</a> eligible to receive CORS response headers.  Note: "*" is permitted in the list of origins, and means "any Origin".	writable
<code>cors[].responseHeader[]</code>	list	The list of HTTP headers other than the <a href="#">simple response headers</a> <a href="#">🔗</a> to give permission for the user-agent to share across domains.	writable
<code>customPlacementConfig</code>	object	Applicable only if a bucket is located in a <a href="#">configurable dual-region</a> . The bucket's custom location configuration.	writable for <a href="#">inser</a> requests
<code>customPlacementConfig.dataLocations[]</code>	list	The list of individual regions that comprise a configurable dual-region bucket. See <a href="#">Cloud Storage bucket locations</a> for a list of acceptable regions.	writable for <a href="#">inser</a> requests
<code>defaultEventBasedHold</code>	boolean	Whether or not to automatically apply an <a href="#">eventBasedHold</a> to new objects added to the bucket.	writable
<code>defaultObjectAcl[]</code>	list	Default access controls to apply to new objects when no ACL is provided. This list contains one or more <a href="#">defaultObjectAccessControls Resources</a> . If <code>iamConfiguration.uniformBucketLevelAccess.enabled</code> is set to true, this field is omitted in responses, and requests that specify this field fail.	writable
<code>encryption</code>	object	Encryption configuration for a bucket.	writable
<code>encryption.defaultKmsKeyName</code>	string	A <a href="#">Cloud KMS key</a> that will be used to encrypt objects written to this bucket if no encryption method is specified as part of the object write request.	writable
<code>etag</code>	string	HTTP 1.1 <a href="#">Entity tag</a> <a href="#">🔗</a> for the bucket.	
<code>hierarchicalNamespace.enabled</code> <a href="#">(preview)</a>	boolean	Whether or not <a href="#">hierarchical namespace</a> is enabled for this bucket.	writable for <a href="#">inser</a> requests
<code>iamConfiguration</code>	object	The IAM configuration for a bucket.	writable
<code>iamConfiguration.publicAccessPrevention</code>	string	The bucket's <a href="#">public access prevention</a> status, which is either "inherited" or "enforced". If "inherited", the bucket uses public access prevention only if the bucket is subject to the	writable

		<a href="#">public access prevention organization policy constraint</a> . Defaults to "inherited".	
iamConfiguration.uniformBucketLevelAccess	object	The bucket's <a href="#">uniform bucket-level access</a> configuration.  Note: iamConfiguration also includes the bucketPolicyOnly field, which uses a legacy name but has the same functionality as the uniformBucketLevelAccess field. We recommend only using uniformBucketLevelAccess, as specifying both fields may result in unreliable behavior.	writable
iamConfiguration.uniformBucketLevelAccess.enabled	boolean	Whether or not the bucket uses uniform bucket-level access. If set, access checks only use bucket-level IAM policies or above.	writable
iamConfiguration.uniformBucketLevelAccess.lockedTime	datetime <sup>1</sup>	The deadline time for changing iamConfiguration.uniformBucketLevelAccess.enabled from true to false, in <a href="#">RFC 3339</a> <a href="#">🔗</a> format.  iamConfiguration.uniformBucketLevelAccess.enabled may be changed from true to false until the locked time, after which the field is immutable.	
id	string	The ID of the bucket. For buckets, the id and name properties are the same.	
kind	string	The kind of item this is. For buckets, this is always "storage#bucket".	
labels	object	User-provided <a href="#">bucket labels</a> , in key/value pairs.	writable
labels.(key)	string	An individual label entry.	writable
lifecycle	object	The bucket's lifecycle configuration. See <a href="#">lifecycle management</a> for more information.	writable
lifecycle.rule[]	list	A lifecycle management rule, which is made of an action to take and the condition(s) under which the action will be taken.	writable
lifecycle.rule[].action	object	The lifecycle action to take.	writable
lifecycle.rule[].action.storageClass	string	The new storage class when action.type is "SetStorageClass". See <a href="#">lifecycle actions</a> for a table of supported storage class transitions.	writable
lifecycle.rule[].action.type	string	Type of the action. Currently, "Delete", "SetStorageClass", and "AbortIncompleteMultipartUpload" are supported.	writable
lifecycle.rule[].condition	object	The condition(s) under which the action will be taken.	writable
lifecycle.rule[].condition.age	integer	Age of an object (in days). This condition is satisfied when an object reaches the specified age.	writable
lifecycle.rule[].condition.createdBefore	date <sup>1</sup>	A date in the <a href="#">RFC 3339</a> <a href="#">🔗</a> format YYYY-MM-DD. This condition is satisfied when an object is created before midnight of the specified date in UTC.	writable
lifecycle.rule[].condition.customTimeBefore	date <sup>1</sup>	A date in the <a href="#">RFC 3339</a> <a href="#">🔗</a> format YYYY-MM-DD. This condition is satisfied when the customTime metadata for the object is set to an earlier date than the date used in this lifecycle condition.	writable
lifecycle.rule[].condition.daysSinceCustomTime	integer	Days since the date set in the customTime metadata for the object. This condition is satisfied when the current date and time is at least the specified number of days after the customTime.	writable
lifecycle.rule[].condition.daysSinceNoncurrentTime	integer	Relevant only for versioned objects. This condition is satisfied when an object has been noncurrent for more than the specified number of days.	writable

<code>lifecycle.rule[].condition.isLive</code>	boolean	Relevant only for versioned objects. If the value is <code>true</code> , this condition matches the live version of objects; if the value is <code>false</code> , it matches noncurrent versions of objects.	writable
<code>lifecycle.rule[].condition.matchesPrefix[]</code>	list of strings	The prefix of an object. This condition is satisfied when the beginning of an object's name is an exact case-sensitive match with the prefix. The prefix must meet <a href="#">object naming requirements</a> . You can specify one or multiple strings as a list.	writable
<code>lifecycle.rule[].condition.matchesStorageClass[]</code>	list	Objects having any of the storage classes specified by this condition will be matched. Values include "STANDARD", "NEARLINE", "COLDLINE", "ARCHIVE", "MULTI_REGIONAL", "REGIONAL", and "DURABLE_REDUCED_AVAILABILITY".	writable
<code>lifecycle.rule[].condition.matchesSuffix[]</code>	list of strings	The suffix of an object. This condition is satisfied when the end of an object's name is an exact case-sensitive match with the suffix. The suffix must meet <a href="#">object naming requirements</a> . You can specify one or multiple strings as a list.	writable
<code>lifecycle.rule[].condition.noncurrentTimeBefore</code>	date <sup>1</sup>	Relevant only for versioned objects. A date in the <a href="#">RFC 3339</a> <a href="#">🔗</a> format YYYY-MM-DD. This condition is satisfied for objects that became noncurrent on a date prior to the one specified in this condition.	writable
<code>lifecycle.rule[].condition.numNewerVersions</code>	integer	Relevant only for versioned objects. If the value is N, this condition is satisfied when there are at least N versions (including the live version) newer than this version of the object.	writable
<code>location</code>	string	The location of the bucket. Object data for objects in the bucket resides in physical storage within this location. Defaults to "US". See <a href="#">Cloud Storage bucket locations</a> for the authoritative list.	writable for <a href="#">inser</a> requests
<code>locationType</code>	string	The type of location that the bucket resides in. Possible values include <code>region</code> , <code>dual-region</code> , and <code>multi-region</code> .	
<code>logging</code>	object	The bucket's logging configuration, which defines the destination bucket and optional name prefix for the current bucket's <a href="#">usage logs and storage logs</a> .	writable
<code>logging.logBucket</code>	string	The destination bucket where the current bucket's logs should be placed.	writable
<code>logging.logObjectPrefix</code>	string	A prefix for log object names. The default prefix is the bucket name.	writable
<code>metageneration</code>	long <sup>1</sup>	The metadata generation of this bucket.	
<code>name</code>	string	The name of the bucket.	writable for <a href="#">inser</a> requests
<code>objectRetention</code>	object	The bucket's <a href="#">object retention configuration</a> .	
<code>objectRetention.mode</code>	string	When set to <code>Enabled</code> , retention configurations can be set on objects in the bucket.	
<code>owner</code>	object	The owner of the bucket. This is always the project team's owner group.	
<code>owner.entity</code>	string	The entity, in the form "project-owner- <i>projectId</i> ".	
<code>owner.entityId</code>	string	The ID for the entity.	
<code>projectNumber</code>	unsigned long <sup>1</sup>	The project number of the project the bucket belongs to.	
<code>selfLink</code>	string	The URI of this bucket.	
<code>retentionPolicy</code>	object	The bucket's <a href="#">retention policy</a> , which defines the minimum age an object in the bucket must reach before it can be deleted or	writable

		replaced.	
retentionPolicy.effectiveTime	datetime <sup>1</sup>	The time from which the retentionPolicy was effective, in <a href="#">RFC 3339</a> <a href="#">↗</a> format.	
retentionPolicy.isLocked	boolean	Whether or not the retentionPolicy is locked. If true, the retentionPolicy cannot be removed and the retention period cannot be reduced.	
retentionPolicy.retentionPeriod	unsigned integer <sup>1</sup>	The period of time, in seconds, that objects in the bucket must be retained and cannot be deleted, replaced, or made noncurrent. The value must be greater than 0 seconds and less than 3,155,760,000 seconds.	writable
rpo	string	The recovery point objective for cross-region replication of the bucket. Applicable only for dual- and multi-region buckets. "DEFAULT" uses default replication. "ASYNC_TURBO" enables turbo replication, valid for dual-region buckets only. If rpo is not specified when the bucket is created, it defaults to "DEFAULT". For more information, see <a href="#">redundancy across regions</a> .	writable
softDeletePolicy	object	The bucket's <a href="#">soft delete policy</a> , which defines the period of time during which objects in the bucket are retained in a soft-deleted state after being deleted. Objects in a soft-deleted state cannot be permanently deleted, and are restorable until their hardDeleteTime.	writable
softDeletePolicy.effectiveTime	datetime	The datetime at which the soft delete policy becomes effective, in <a href="#">RFC 3339</a> format.  softDeletePolicy.effectiveTime is updated whenever softDeletePolicy.retentionDurationSeconds is increased.	
softDeletePolicy.retentionDurationSeconds	long	The period of time during which a soft-deleted object is retained and cannot be permanently deleted, in seconds. The value must be greater than or equal to 604800 (7 days) and less than 7776000 (90 days). The value can also be set to 0, which disables the soft delete policy.	writable
storageClass	string	The bucket's default storage class, used whenever no storageClass is specified for a newly-created object. If storageClass is not specified when the bucket is created, it defaults to "STANDARD". For available storage classes, see <a href="#">Storage classes</a> .	writable
timeCreated	datetime <sup>1</sup>	The creation time of the bucket in <a href="#">RFC 3339</a> <a href="#">↗</a> format.	
updated	datetime <sup>1</sup>	The time at which the bucket's metadata or IAM policy was last updated, in <a href="#">RFC 3339</a> <a href="#">↗</a> format.	
versioning	object	The bucket's versioning configuration. For more information, see <a href="#">Object Versioning</a> .	writable
versioning.enabled	boolean	While set to true, versioning is fully enabled for this bucket.	writable
website	object	The bucket's website configuration, controlling how the service behaves when accessing bucket contents as a web site. See the <a href="#">Static Website Examples</a> for more information.	writable
website.mainPageSuffix	string	If the requested object path is missing, the service will ensure the path has a trailing '/', append this suffix, and attempt to retrieve the resulting object. This allows the creation of index.html objects to represent directory pages.	writable
website.notFoundPage	string	If the requested object path is missing, and any mainPageSuffix object is missing, if applicable, the service will return the named object from this bucket as the content for a <a href="#">404 Not Found</a> <a href="#">↗</a> result.	writable

<sup>1</sup> This property is a string formatted as the specified value type.

## Methods

Available methods for Buckets resources are as follows:

### **delete**

Deletes a bucket.

### **get**

Returns metadata for the specified bucket.

### **getIamPolicy**

Returns an IAM policy for the specified bucket.

### **insert**

Creates a new bucket.

### **list**

Retrieves a list of buckets for a given project.

### **listChannels**

Retrieves a list of active Object Change Notification channels for a bucket.

### **lockRetentionPolicy**

Irreversibly sets the retention policy on a bucket.

### **patch**

Updates a bucket. Changes to the bucket will be readable immediately after writing, but configuration changes may take time to propagate. This method supports **patch** semantics.

### **setIamPolicy**

Updates an IAM policy for the specified bucket.

### **testIamPermissions**

Tests a set of permissions on the given bucket to see which, if any, are held by the caller.

### **update**

Updates a bucket. Changes to the bucket will be readable immediately after writing, but configuration changes may take time to propagate. This method sets the complete metadata of a bucket. If you want to change some of a bucket's metadata while leaving other parts unaffected, use the **PATCH** method instead.

For information about status and error codes returned by these APIs, see the [reference page](#).

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Last updated 2024-10-23 UTC.

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