

google::cloud::storage::BucketMetadata Class Reference

Represents a Google Cloud Storage Bucket Metadata object. [More...](#)

```
#include <google/cloud/storage/bucket_metadata.h>
```

Public Member Functions

	BucketMetadata ()=default
std::string const &	location () const
BucketMetadata &	set_location (std::string v)
std::string const &	location_type () const
BucketMetadata &	set_name (std::string v) Changes the name. More...
std::int64_t const &	project_number () const

Get and set Bucket Access Control Lists.

See also

<https://cloud.google.com/storage/docs/access-control/lists>

std::vector< BucketAccessControl > const &	acl () const
std::vector< BucketAccessControl > &	mutable_acl ()
BucketMetadata &	set_acl (std::vector< BucketAccessControl > acl)

Get and set billing configuration for the Bucket.

See also

<https://cloud.google.com/storage/docs/requester-pays>

bool	has_billing () const
BucketBilling const &	billing () const
absl::optional< BucketBilling > const &	billing_as_optional () const
BucketMetadata &	set_billing (BucketBilling const &v)
BucketMetadata &	reset_billing ()

Get and set the default event based hold for the Bucket.

Objects may have an event-based hold associated with them.

If a Bucket has the **default_event_based_hold()** parameter set, and you create a new object in the bucket without specifying its event-based hold then the object gets the value set in the bucket.

See also

<https://cloud.google.com/storage/docs/bucket-lock> for generation information on retention policies. The section on `Object` holds is particularly relevant.

<https://cloud.google.com/storage/docs/holding-objects> for examples of using default event-based hold policy.

```
bool default_event_based_hold () const
```

```
BucketMetadata & set_default_event_based_hold (bool v)
```

Get and set CORS configuration for the Bucket.

See also

https://en.wikipedia.org/wiki/Cross-origin_resource_sharing for general information on CORS.

<https://cloud.google.com/storage/docs/cross-origins> for general information about CORS in the context of Google Cloud Storage.

<https://cloud.google.com/storage/docs/configuring-cors> for information on how to set and troubleshoot CORS settings.

```
std::vector< CorsEntry > const & cors () const
```

```
std::vector< CorsEntry > & mutable_cors ()
```

```
BucketMetadata & set_cors (std::vector< CorsEntry > cors)
```

Get and set the Default Object Access Control Lists.

See also

<https://cloud.google.com/storage/docs/access-control/lists#default> for general information of default ACLs.

<https://cloud.google.com/storage/docs/encryption/customer-managed-keys> for information on Customer-Managed Encryption Keys.

```
std::vector< ObjectAccessControl > const & default_acl () const
```

```
std::vector< ObjectAccessControl > & mutable_default_acl ()
```

```
BucketMetadata & set_default_acl (std::vector< ObjectAccessControl > acl)
```

```
bool has_encryption () const
```

```
BucketEncryption const & encryption () const
```

```
absl::optional< BucketEncryption > const & encryption_as_optional () const
```

```
BucketMetadata & set_encryption (BucketEncryption v)
```

```
BucketMetadata & reset_encryption ()
```

Get and set the IAM configuration.

See also

Before enabling Uniform Bucket Level Access please review the [feature documentation](#), as well as "Should you use uniform bucket-level access?".

bool [has_iam_configuration](#) () const

[BucketIamConfiguration](#) const & [iam_configuration](#) () const

absl::optional< [BucketIamConfiguration](#) > const & [iam_configuration_as_optional](#) () const

[BucketMetadata](#) & [set_iam_configuration](#) ([BucketIamConfiguration](#) v)

[BucketMetadata](#) & [reset_iam_configuration](#) ()

Accessors and modifiers to the `labels`.

bool [has_label](#) (std::string const &key) const

Returns true if the key is present in the Bucket's metadata labels. [More...](#)

std::string const & [label](#) (std::string const &key) const

Returns the value of key in the Bucket's metadata labels. [More...](#)

[BucketMetadata](#) & [delete_label](#) (std::string const &key)

Delete a label. This is a no-op if the key does not exist. [More...](#)

[BucketMetadata](#) & [upsert_label](#) (std::string key, std::string value)

Insert or update the label entry. [More...](#)

std::map< std::string, std::string > const & [labels](#) () const

Returns all the Bucket's labels. [More...](#)

std::map< std::string, std::string > & [mutable_labels](#) ()

Returns all the Bucket's labels. [More...](#)

Accessors and modifiers for object lifecycle rules.

See also

<https://cloud.google.com/storage/docs/managing-lifecycles> for general information on object [lifecycle](#) rules.

bool [has_lifecycle](#) () const

[BucketLifecycle](#) const & [lifecycle](#) () const

absl::optional< [BucketLifecycle](#) > const & [lifecycle_as_optional](#) () const

[BucketMetadata](#) & [set_lifecycle](#) ([BucketLifecycle](#) v)

[BucketMetadata](#) & [reset_lifecycle](#) ()

Accessors and modifiers for logging configuration.

bool [has_logging](#) () const

[BucketLogging](#) const & [logging](#) () const

absl::optional< [BucketLogging](#) > const & [logging_as_optional](#) () const

[BucketMetadata](#) & [set_logging](#) ([BucketLogging](#) v)

[BucketMetadata](#) & [reset_logging](#) ()

Accessors and modifiers for retention policy configuration.

bool **has_retention_policy** () const
Sets the retention period. [More...](#)

BucketRetentionPolicy const & **retention_policy** () const
Sets the retention period. [More...](#)

absl::optional< **BucketRetentionPolicy** > const & **retention_policy_as_optional** () const
Sets the retention period. [More...](#)

BucketMetadata & **set_retention_policy** (**BucketRetentionPolicy** v)
Sets the retention period. [More...](#)

BucketMetadata & **set_retention_policy** (std::chrono::seconds retention_period)
Sets the retention period. [More...](#)

BucketMetadata & **reset_retention_policy** ()
Sets the retention period. [More...](#)

Accessors and modifiers for the Recovery Point Objective.

std::string const & **rpo** () const

BucketMetadata & **set_rpo** (std::string v)

Access and modify the default storage class attribute.

BucketMetadata & **set_storage_class** (std::string v)

Accessors and modifiers for versioning configuration.

absl::optional< **BucketVersioning** > const & **versioning** () const

bool **has_versioning** () const

BucketMetadata & **enable_versioning** ()

BucketMetadata & **disable_versioning** ()

BucketMetadata & **reset_versioning** ()

BucketMetadata & **set_versioning** (absl::optional< **BucketVersioning** > v)

Accessors and modifiers for website configuration.

bool **has_website** () const

BucketWebsite const & **website** () const

absl::optional< **BucketWebsite** > const & **website_as_optional** () const

BucketMetadata & **set_website** (**BucketWebsite** v)

BucketMetadata & **reset_website** ()

Friends

bool **operator==** (**BucketMetadata** const &lhs, **BucketMetadata** const &rhs)

bool **operator!=** (**BucketMetadata** const &lhs, **BucketMetadata** const &rhs)

std::ostream & **operator<<** (std::ostream &os, **BucketMetadata** const &rhs)

Detailed Description

Represents a Google Cloud Storage Bucket Metadata object.

Definition at line 527 of file [bucket_metadata.h](#).

Constructor & Destructor Documentation

◆ BucketMetadata()

```
google::cloud::storage::BucketMetadata::BucketMetadata ( )
```

default

Member Function Documentation

◆ acl()

```
std::vector<BucketAccessControl> const& google::cloud::storage::BucketMetadata::acl ( ) const
```

inline

Definition at line 539 of file [bucket_metadata.h](#).

◆ billing()

```
BucketBilling const& google::cloud::storage::BucketMetadata::billing ( ) const
```

inline

Definition at line 554 of file [bucket_metadata.h](#).

◆ billing_as_optional()

```
absl::optional<BucketBilling> const& google::cloud::storage::BucketMetadata::billing_as_optional ( ) const
```

inline

Definition at line 555 of file [bucket_metadata.h](#).

◆ cors()

std::vector<**CorsEntry**> const& google::cloud::storage::BucketMetadata::cors () const inline

Definition at line **606** of file **bucket_metadata.h**.

◆ default_acl()

std::vector<**ObjectAccessControl**> const& google::cloud::storage::BucketMetadata::default_acl () const inline

Definition at line **625** of file **bucket_metadata.h**.

◆ default_event_based_hold()

bool google::cloud::storage::BucketMetadata::default_event_based_hold () const inline

Definition at line **586** of file **bucket_metadata.h**.

◆ delete_label()

BucketMetadata& google::cloud::storage::BucketMetadata::delete_label (std::string const & **key**) inline

Delete a label. This is a no-op if the key does not exist.

Definition at line **717** of file **bucket_metadata.h**.

◆ disable_versioning()

BucketMetadata& google::cloud::storage::BucketMetadata::disable_versioning () inline

Definition at line **884** of file **bucket_metadata.h**.

◆ enable_versioning()

BucketMetadata& google::cloud::storage::BucketMetadata::enable_versioning () inline

Definition at line **880** of file **bucket_metadata.h**.

◆ encryption()

BucketEncryption const& google::cloud::storage::BucketMetadata::encryption () const inline

Definition at line **649** of file **bucket_metadata.h**.

◆ encryption_as_optional()

absl::optional<**BucketEncryption**> const&
google::cloud::storage::BucketMetadata::encryption_as_optional () const inline

Definition at line **650** of file **bucket_metadata.h**.

◆ has_billing()

bool google::cloud::storage::BucketMetadata::has_billing () const inline

Definition at line **553** of file **bucket_metadata.h**.

◆ has_encryption()

bool google::cloud::storage::BucketMetadata::has_encryption () const inline

Definition at line **648** of file **bucket_metadata.h**.

◆ has_iam_configuration()

bool google::cloud::storage::BucketMetadata::has_iam_configuration () const inline

Definition at line **678** of file **bucket_metadata.h**.

◆ has_label()

```
bool google::cloud::storage::BucketMetadata::has_label ( std::string const & key ) const
```

inline

Returns true if the key is present in the Bucket's metadata labels.

Definition at line 703 of file [bucket_metadata.h](#).

◆ has_lifecycle()

```
bool google::cloud::storage::BucketMetadata::has_lifecycle ( ) const
```

inline

Definition at line 751 of file [bucket_metadata.h](#).

◆ has_logging()

```
bool google::cloud::storage::BucketMetadata::has_logging ( ) const
```

inline

Definition at line 776 of file [bucket_metadata.h](#).

◆ has_retention_policy()

```
bool google::cloud::storage::BucketMetadata::has_retention_policy ( ) const
```

inline

Sets the retention period.

The retention period is the only writable attribute in a retention policy. This function makes it easier to set the retention policy when the [BucketMetadata](#) object is used to update or patch the bucket.

Definition at line 819 of file [bucket_metadata.h](#).

◆ has_versioning()

```
bool google::cloud::storage::BucketMetadata::has_versioning ( ) const
```

inline

Definition at line 879 of file [bucket_metadata.h](#).

◆ has_website()

```
bool google::cloud::storage::BucketMetadata::has_website ( ) const
```

inline

Definition at line **900** of file **bucket_metadata.h**.

◆ iam_configuration()

```
BucketIamConfiguration const& google::cloud::storage::BucketMetadata::iam_configuration ( ) const
```

inline

Definition at line **679** of file **bucket_metadata.h**.

◆ iam_configuration_as_optional()

```
absl::optional<BucketIamConfiguration> const&  
google::cloud::storage::BucketMetadata::iam_configuration_as_optional
```

() const inline

Definition at line **682** of file **bucket_metadata.h**.

◆ label()

```
std::string const& google::cloud::storage::BucketMetadata::label ( std::string const & key ) const
```

inline

Returns the value of key in the Bucket's metadata labels.

It is undefined behavior to call `label(key)` if `has_label(key) == false`.

Definition at line **712** of file **bucket_metadata.h**.

◆ labels()

```
std::map<std::string, std::string> const& google::cloud::storage::BucketMetadata::labels ( ) const
```

inline

Returns all the Bucket's labels.

Definition at line **738** of file **bucket_metadata.h**.

◆ lifecycle()

BucketLifecycle const& google::cloud::storage::BucketMetadata::lifecycle () const inline

Definition at line **752** of file **bucket_metadata.h**.

◆ lifecycle_as_optional()

absl::optional<**BucketLifecycle**> const&
google::cloud::storage::BucketMetadata::lifecycle_as_optional () const inline

Definition at line **753** of file **bucket_metadata.h**.

◆ location()

std::string const& google::cloud::storage::BucketMetadata::location () const inline

Definition at line **766** of file **bucket_metadata.h**.

◆ location_type()

std::string const& google::cloud::storage::BucketMetadata::location_type () const inline

Definition at line **772** of file **bucket_metadata.h**.

◆ logging()

BucketLogging const& google::cloud::storage::BucketMetadata::logging () const inline

Definition at line **777** of file **bucket_metadata.h**.

◆ logging_as_optional()

absl::optional<**BucketLogging**> const&

google::cloud::storage::BucketMetadata::logging_as_optional

() const inline

Definition at line **778** of file **bucket_metadata.h**.

◆ mutable_acl()

std::vector<**BucketAccessControl**>& google::cloud::storage::BucketMetadata::mutable_acl ()

inline

Definition at line **540** of file **bucket_metadata.h**.

◆ mutable_cors()

std::vector<**CorsEntry**>& google::cloud::storage::BucketMetadata::mutable_cors ()

inline

Definition at line **607** of file **bucket_metadata.h**.

◆ mutable_default_acl()

std::vector<**ObjectAccessControl**>& google::cloud::storage::BucketMetadata::mutable_default_acl ()

inline

Definition at line **628** of file **bucket_metadata.h**.

◆ mutable_labels()

std::map<std::string, std::string>& google::cloud::storage::BucketMetadata::mutable_labels ()

inline

Returns all the Bucket's labels.

Definition at line **741** of file **bucket_metadata.h**.

◆ project_number()

std::int64_t const& google::cloud::storage::BucketMetadata::project_number () const

inline

Definition at line **813** of file **bucket_metadata.h**.

◆ reset_billing()

BucketMetadata& google::cloud::storage::BucketMetadata::reset_billing ()

inline

Definition at line **562** of file **bucket_metadata.h**.

◆ reset_encryption()

BucketMetadata& google::cloud::storage::BucketMetadata::reset_encryption ()

inline

Definition at line **657** of file **bucket_metadata.h**.

◆ reset_iam_configuration()

BucketMetadata& google::cloud::storage::BucketMetadata::reset_iam_configuration ()

inline

Definition at line **690** of file **bucket_metadata.h**.

◆ reset_lifecycle()

BucketMetadata& google::cloud::storage::BucketMetadata::reset_lifecycle ()

inline

Definition at line **760** of file **bucket_metadata.h**.

◆ reset_logging()

BucketMetadata& google::cloud::storage::BucketMetadata::reset_logging ()

inline

Definition at line **785** of file **bucket_metadata.h**.

◆ reset_retention_policy()

BucketMetadata& google::cloud::storage::BucketMetadata::reset_retention_policy () inline

Sets the retention period.

The retention period is the only writable attribute in a retention policy. This function makes it easier to set the retention policy when the **BucketMetadata** object is used to update or patch the bucket.

Definition at line **844** of file **bucket_metadata.h**.

◆ reset_versioning()

BucketMetadata& google::cloud::storage::BucketMetadata::reset_versioning () inline

Definition at line **888** of file **bucket_metadata.h**.

◆ reset_website()

BucketMetadata& google::cloud::storage::BucketMetadata::reset_website () inline

Definition at line **909** of file **bucket_metadata.h**.

◆ retention_policy()

BucketRetentionPolicy const& google::cloud::storage::BucketMetadata::retention_policy () const inline

Sets the retention period.

The retention period is the only writable attribute in a retention policy. This function makes it easier to set the retention policy when the **BucketMetadata** object is used to update or patch the bucket.

Definition at line **820** of file **bucket_metadata.h**.

◆ retention_policy_as_optional()

absl::optional<**BucketRetentionPolicy**> const&
google::cloud::storage::BucketMetadata::retention_policy_as_optional () const inline

Sets the retention period.

The retention period is the only writable attribute in a retention policy. This function makes it easier to set the retention policy when the **BucketMetadata** object is used to update or patch the bucket.

Definition at line **823** of file **bucket_metadata.h**.

◆ rpo()

std::string const& google::cloud::storage::BucketMetadata::rpo () const inline

Definition at line **852** of file **bucket_metadata.h**.

◆ set_acl()

BucketMetadata&
google::cloud::storage::BucketMetadata::set_acl (std::vector< **BucketAccessControl** > acl) inline

Definition at line **541** of file **bucket_metadata.h**.

◆ set_billing()

BucketMetadata& google::cloud::storage::BucketMetadata::set_billing (**BucketBilling** const & v) inline

Definition at line **558** of file **bucket_metadata.h**.

◆ set_cors()

BucketMetadata& google::cloud::storage::BucketMetadata::set_cors (std::vector< **CorsEntry** > cors) inline

Definition at line **608** of file **bucket_metadata.h**.

◆ set_default_acl()

BucketMetadata&

google::cloud::storage::BucketMetadata::set_default_acl (std::vector< **ObjectAccessControl** > acl) inline

Definition at line **631** of file **bucket_metadata.h**.

◆ set_default_event_based_hold()

BucketMetadata& google::cloud::storage::BucketMetadata::set_default_event_based_hold (bool v) inline

Definition at line **587** of file **bucket_metadata.h**.

◆ set_encryption()

BucketMetadata& google::cloud::storage::BucketMetadata::set_encryption (**BucketEncryption** v) inline

Definition at line **653** of file **bucket_metadata.h**.

◆ set_iam_configuration()

BucketMetadata&

google::cloud::storage::BucketMetadata::set_iam_configuration (**BucketIamConfiguration** v) inline

Definition at line **686** of file **bucket_metadata.h**.

◆ set_lifecycle()

BucketMetadata& google::cloud::storage::BucketMetadata::set_lifecycle (**BucketLifecycle** v) inline

Definition at line **756** of file **bucket_metadata.h**.

◆ set_location()

BucketMetadata& google::cloud::storage::BucketMetadata::set_location (std::string v) inline

Definition at line **767** of file **bucket_metadata.h**.

◆ set_logging()

BucketMetadata& google::cloud::storage::BucketMetadata::set_logging (**BucketLogging** v) inline

Definition at line **781** of file **bucket_metadata.h**.

◆ set_name()

BucketMetadata& google::cloud::storage::BucketMetadata::set_name (std::string v) inline

Changes the name.

Note

Bucket names can only be set during bucket creation. This modifier is used to set the name when using a **BucketMetadata** object that changes some other attribute.

Definition at line **804** of file **bucket_metadata.h**.

◆ set_retention_policy() [1/2]

BucketMetadata&
google::cloud::storage::BucketMetadata::set_retention_policy (**BucketRetentionPolicy** v) inline

Sets the retention period.

The retention period is the only writable attribute in a retention policy. This function makes it easier to set the retention policy when the **BucketMetadata** object is used to update or patch the bucket.

Definition at line **827** of file **bucket_metadata.h**.

◆ set_retention_policy() [2/2]

BucketMetadata&

google::cloud::storage::BucketMetadata::set_retention_policy (std::chrono::seconds retention_period) inline

Sets the retention period.

The retention period is the only writable attribute in a retention policy. This function makes it easier to set the retention policy when the **BucketMetadata** object is used to update or patch the bucket.

Definition at line **839** of file **bucket_metadata.h**.

◆ set_rpo()

BucketMetadata& google::cloud::storage::BucketMetadata::set_rpo (std::string v) inline

Definition at line **853** of file **bucket_metadata.h**.

◆ set_storage_class()

BucketMetadata& google::cloud::storage::BucketMetadata::set_storage_class (std::string v) inline

Definition at line **862** of file **bucket_metadata.h**.

◆ set_versioning()

BucketMetadata&
google::cloud::storage::BucketMetadata::set_versioning (absl::optional< **BucketVersioning** > v) inline

Definition at line **892** of file **bucket_metadata.h**.

◆ set_website()

BucketMetadata& google::cloud::storage::BucketMetadata::set_website (**BucketWebsite** v) inline

Definition at line **905** of file **bucket_metadata.h**.

◆ upsert_label()

```
BucketMetadata& google::cloud::storage::BucketMetadata::upsert_label ( std::string key,  
                                                                    std::string value  
                                                                    )
```

inline

Insert or update the label entry.

Definition at line **727** of file **bucket_metadata.h**.

◆ versioning()

```
absl::optional<BucketVersioning> const& google::cloud::storage::BucketMetadata::versioning ( ) const
```

inline

Definition at line **876** of file **bucket_metadata.h**.

◆ website()

```
BucketWebsite const& google::cloud::storage::BucketMetadata::website ( ) const
```

inline

Definition at line **901** of file **bucket_metadata.h**.

◆ website_as_optional()

```
absl::optional<BucketWebsite> const&  
google::cloud::storage::BucketMetadata::website_as_optional ( ) const
```

inline

Definition at line **902** of file **bucket_metadata.h**.

Friends And Related Function Documentation

◆ operator!=

```
bool operator!= ( BucketMetadata const & lhs,  
                BucketMetadata const & rhs  
                )
```

[friend](#)

Definition at line 916 of file `bucket_metadata.h`.

◆ operator<<

```
std::ostream& operator<< ( std::ostream & os,  
                          BucketMetadata const & rhs  
                          )
```

[friend](#)

◆ operator==

```
bool operator== ( BucketMetadata const & lhs,  
                 BucketMetadata const & rhs  
                 )
```

[friend](#)