

google::cloud::storage::ObjectMetadata Class Reference

Represents the metadata for a Google Cloud Storage Object. [More...](#)

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

Public Member Functions

	ObjectMetadata ()=default
std::vector< ObjectAccessControl > const &	acl () const The access control list for this object. More...
std::vector< ObjectAccessControl > &	mutable_acl () The access control list for this object. More...
ObjectMetadata &	set_acl (std::vector< ObjectAccessControl > acl) Change the access control list. More...
std::string const &	bucket () const The name of the bucket containing this object. More...
std::string const &	cache_control () const The cacheControl attribute. More...
ObjectMetadata &	set_cache_control (std::string cache_control) Set the cacheControl attributes. More...
std::int32_t	component_count () const The number of components, for objects built using <code>ComposeObject()</code> . More...
std::string	content_disposition () const The contentDisposition attribute. More...
ObjectMetadata &	set_content_disposition (std::string value) Change the contentDisposition attribute. More...
std::string	content_encoding () const The contentEncoding attribute. More...
ObjectMetadata &	set_content_encoding (std::string value) Change the contentEncoding attribute. More...
std::string	content_language () const The contentLanguage attribute. More...
ObjectMetadata &	set_content_language (std::string value) Change the contentLanguage attribute. More...
std::string	content_type () const The contentType attribute. More...

ObjectMetadata & **set_content_type** (std::string value)

Change the contentLanguage attribute. [More...](#)

std::string const & **crc32c** () const

The CRC32C checksum for the object contents. [More...](#)

bool **has_customer_encryption** () const

Returns true if the object uses CSEK (Customer-Supplied Encryption Keys). [More...](#)

CustomerEncryption const & **customer_encryption** () const

Returns the CSEK metadata (algorithm and key SHA256). [More...](#)

bool **event_based_hold** () const

The eventBasedHold attribute. [More...](#)

ObjectMetadata & **set_event_based_hold** (bool v)

Changes the eventBasedHold attribute. [More...](#)

std::int64_t **generation** () const

The object generation. [More...](#)

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

The name of the KMS (Key Management Service) key used in this object. [More...](#)

std::string const & **md5_hash** () const

The MD5 hash of the object contents. Can be empty. [More...](#)

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

The HTTPS link to access the object contents. [More...](#)

std::chrono::system_clock::time_point **retention_expiration_time** () const

The retention expiration time, or the system clock's epoch, if not set. [More...](#)

std::uint64_t **size** () const

The size of the object's data. [More...](#)

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

Changes the storageClass attribute. [More...](#)

bool **temporary_hold** () const

The temporaryHold attribute. [More...](#)

ObjectMetadata & **set_temporary_hold** (bool v)

Changes the temporaryHold attribute. [More...](#)

std::chrono::system_clock::time_point **time_deleted** () const

The object's deletion timestamp. [More...](#)

std::chrono::system_clock::time_point **time_storage_class_updated** () const

The timestamp for the last storage class change. [More...](#)

bool **has_custom_time** () const

Returns true if the object has a customTime attribute. [More...](#)

`std::chrono::system_clock::time_point` **custom_time** () const
Returns the object's `customTime` or the system clock's epoch.
[More...](#)

ObjectMetadata & **set_custom_time** (std::chrono::system_clock::time_point v)
Changes the `customTime` attribute. [More...](#)

ObjectMetadata & **reset_custom_time** ()
Reset (clears) the `customTime` attribute. [More...](#)

Accessors and modifiers for metadata metadata.

The object metadata contains a user-defined set of key, value pairs, which are also called "metadata".

Applications can use these fields to add custom annotations to each object.

`bool` **has_metadata** (std::string const &key) const

`std::string const &` **metadata** (std::string const &key) const
Returns the value of `key` in the Object's metadata entries. [More...](#)

ObjectMetadata & **delete_metadata** (std::string const &key)
Delete a metadata entry. This is a no-op if the key does not exist.
[More...](#)

ObjectMetadata & **upsert_metadata** (std::string key, std::string value)
Insert or update the metadata entry. [More...](#)

`std::map< std::string, std::string > const &` **metadata** () const
Returns all the Object's metadata entries. [More...](#)

`std::map< std::string, std::string > &` **mutable_metadata** ()
Returns all the Object's metadata entries. [More...](#)

Friends

`bool` **operator==** (**ObjectMetadata** const &lhs, **ObjectMetadata** const &rhs)

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

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

Detailed Description

Represents the metadata for a Google Cloud Storage Object.

Note that all modifiers just change the local representation of the Object's metadata. Applications should use **Client::PatchObject()**, or a similar operation, to actually modify the metadata stored by GCS.

See also

https://cloud.google.com/storage/docs/json_api/v1/objects for a more detailed description of each attribute and their effects.

Definition at line **99** of file **object_metadata.h**.

Constructor & Destructor Documentation

◆ ObjectMetadata()

```
google::cloud::storage::ObjectMetadata::ObjectMetadata ( )
```

default

Member Function Documentation

◆ acl()

```
std::vector<ObjectAccessControl> const& google::cloud::storage::ObjectMetadata::acl ( ) const
```

inline

The access control list for this object.

Definition at line **107** of file **object_metadata.h**.

◆ bucket()

```
std::string const& google::cloud::storage::ObjectMetadata::bucket ( ) const
```

inline

The name of the bucket containing this object.

Definition at line **119** of file **object_metadata.h**.

◆ cache_control()

```
std::string const& google::cloud::storage::ObjectMetadata::cache_control ( ) const
```

inline

The cacheControl attribute.

Definition at line **122** of file **object_metadata.h**.

◆ component_count()

```
std::int32_t google::cloud::storage::ObjectMetadata::component_count ( ) const
```

inline

The number of components, for objects built using `ComposeObject()`.

Definition at line **131** of file [object_metadata.h](#).

◆ content_disposition()

```
std::string google::cloud::storage::ObjectMetadata::content_disposition ( ) const
```

inline

The `contentDisposition` attribute.

Definition at line **134** of file [object_metadata.h](#).

◆ content_encoding()

```
std::string google::cloud::storage::ObjectMetadata::content_encoding ( ) const
```

inline

The `contentEncoding` attribute.

Definition at line **143** of file [object_metadata.h](#).

◆ content_language()

```
std::string google::cloud::storage::ObjectMetadata::content_language ( ) const
```

inline

The `contentLanguage` attribute.

Definition at line **152** of file [object_metadata.h](#).

◆ content_type()

std::string google::cloud::storage::ObjectMetadata::content_type () const inline

The contentType attribute.

Definition at line **161** of file **object_metadata.h**.

◆ crc32c()

std::string const& google::cloud::storage::ObjectMetadata::crc32c () const inline

The CRC32C checksum for the object contents.

Definition at line **170** of file **object_metadata.h**.

◆ custom_time()

std::chrono::system_clock::time_point google::cloud::storage::ObjectMetadata::custom_time () const inline

Returns the object's customTime or the system clock's epoch.

Definition at line **354** of file **object_metadata.h**.

◆ customer_encryption()

CustomerEncryption const& google::cloud::storage::ObjectMetadata::customer_encryption () const inline

Returns the CSEK metadata (algorithm and key SHA256).

It is undefined behavior to call this member function if **has_customer_encryption()** == false.

Definition at line **184** of file **object_metadata.h**.

◆ delete_metadata()

ObjectMetadata& google::cloud::storage::ObjectMetadata::delete_metadata (std::string const & **key**) inline

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

Definition at line **253** of file **object_metadata.h**.

◆ event_based_hold()

bool google::cloud::storage::ObjectMetadata::event_based_hold () const inline

The eventBasedHold attribute.

Definition at line **192** of file **object_metadata.h**.

◆ generation()

std::int64_t google::cloud::storage::ObjectMetadata::generation () const inline

The object generation.

In buckets with object versioning enabled, each object may have multiple generations. Each generation data (the object contents) is immutable, but the metadata associated with each generation can be changed.

Definition at line **207** of file **object_metadata.h**.

◆ has_custom_time()

bool google::cloud::storage::ObjectMetadata::has_custom_time () const inline

Returns true if the object has a customTime attribute.

Definition at line **351** of file **object_metadata.h**.

◆ has_customer_encryption()

```
bool google::cloud::storage::ObjectMetadata::has_customer_encryption ( ) const
```

inline

Returns true if the object uses CSEK (Customer-Supplied Encryption Keys).

Definition at line [174](#) of file [object_metadata.h](#).

◆ has_metadata()

```
bool google::cloud::storage::ObjectMetadata::has_metadata ( std::string const & key ) const
```

inline

Returns true if the key is present in the object metadata entries.

Definition at line [238](#) of file [object_metadata.h](#).

◆ kms_key_name()

```
std::string const& google::cloud::storage::ObjectMetadata::kms_key_name ( ) const
```

inline

The name of the KMS (Key Management Service) key used in this object.

This is empty for objects not using CMEK (Customer Managed Encryption Keys).

Definition at line [221](#) of file [object_metadata.h](#).

◆ md5_hash()

```
std::string const& google::cloud::storage::ObjectMetadata::md5_hash ( ) const
```

inline

The MD5 hash of the object contents. Can be empty.

Definition at line [224](#) of file [object_metadata.h](#).

◆ media_link()

`std::string const& google::cloud::storage::ObjectMetadata::media_link () const` inline

The HTTPS link to access the object contents.

Definition at line [227](#) of file [object_metadata.h](#).

◆ metadata() [1/2]

`std::map<std::string, std::string> const& google::cloud::storage::ObjectMetadata::metadata () const` inline

Returns all the Object's metadata entries,.

Definition at line [274](#) of file [object_metadata.h](#).

◆ metadata() [2/2]

`std::string const& google::cloud::storage::ObjectMetadata::metadata (std::string const & key) const` inline

Returns the value of key in the Object's metadata entries.

It is undefined behavior to call `metadata(key)` if `has_metadata(key) == false`.

Definition at line [248](#) of file [object_metadata.h](#).

◆ mutable_acl()

`std::vector<ObjectAccessControl>& google::cloud::storage::ObjectMetadata::mutable_acl ()` inline

The access control list for this object.

Definition at line [110](#) of file [object_metadata.h](#).

◆ mutable_metadata()

std::map<std::string, std::string>& google::cloud::storage::ObjectMetadata::mutable_metadata () inline

Returns all the Object's metadata entries.

Definition at line [279](#) of file [object_metadata.h](#).

◆ reset_custom_time()

ObjectMetadata& google::cloud::storage::ObjectMetadata::reset_custom_time () inline

Reset (clears) the customTime attribute.

has_custom_time() returns false after calling this function.

Definition at line [366](#) of file [object_metadata.h](#).

◆ retention_expiration_time()

std::chrono::system_clock::time_point
google::cloud::storage::ObjectMetadata::retention_expiration_time () const inline

The retention expiration time, or the system clock's epoch, if not set.

Definition at line [306](#) of file [object_metadata.h](#).

◆ set_acl()

ObjectMetadata&
google::cloud::storage::ObjectMetadata::set_acl (std::vector< **ObjectAccessControl** > acl) inline

Change the access control list.

Definition at line [113](#) of file [object_metadata.h](#).

◆ set_cache_control()

ObjectMetadata& google::cloud::storage::ObjectMetadata::set_cache_control (std::string cache_control) inline

Set the cacheControl attributes.

Definition at line **125** of file **object_metadata.h**.

◆ set_content_disposition()

ObjectMetadata& google::cloud::storage::ObjectMetadata::set_content_disposition (std::string value) inline

Change the contentDisposition attribute.

Definition at line **137** of file **object_metadata.h**.

◆ set_content_encoding()

ObjectMetadata& google::cloud::storage::ObjectMetadata::set_content_encoding (std::string value) inline

Change the contentEncoding attribute.

Definition at line **146** of file **object_metadata.h**.

◆ set_content_language()

ObjectMetadata& google::cloud::storage::ObjectMetadata::set_content_language (std::string value) inline

Change the contentLanguage attribute.

Definition at line **155** of file **object_metadata.h**.

◆ set_content_type()

ObjectMetadata& google::cloud::storage::ObjectMetadata::set_content_type (std::string value) inline

Change the contentLanguage attribute.

Definition at line **164** of file **object_metadata.h**.

◆ set_custom_time()

ObjectMetadata&`google::cloud::storage::ObjectMetadata::set_custom_time (std::chrono::system_clock::time_point v)` inline

Changes the customTime attribute.

Definition at line [359](#) of file [object_metadata.h](#).

◆ set_event_based_hold()

`ObjectMetadata& google::cloud::storage::ObjectMetadata::set_event_based_hold (bool v)` inline

Changes the eventBasedHold attribute.

Definition at line [195](#) of file [object_metadata.h](#).

◆ set_storage_class()

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

Changes the storageClass attribute.

Definition at line [320](#) of file [object_metadata.h](#).

◆ set_temporary_hold()

`ObjectMetadata& google::cloud::storage::ObjectMetadata::set_temporary_hold (bool v)` inline

Changes the temporaryHold attribute.

Definition at line [329](#) of file [object_metadata.h](#).

◆ size()

std::uint64_t google::cloud::storage::ObjectMetadata::size () const inline

The size of the object's data.

Definition at line **314** of file **object_metadata.h**.

◆ temporary_hold()

bool google::cloud::storage::ObjectMetadata::temporary_hold () const inline

The temporaryHold attribute.

Definition at line **326** of file **object_metadata.h**.

◆ time_deleted()

std::chrono::system_clock::time_point google::cloud::storage::ObjectMetadata::time_deleted () const inline

The object's deletion timestamp.

Definition at line **338** of file **object_metadata.h**.

◆ time_storage_class_updated()

std::chrono::system_clock::time_point

google::cloud::storage::ObjectMetadata::time_storage_class_updated

() const inline

The timestamp for the last storage class change.

Definition at line **343** of file **object_metadata.h**.

◆ upsert_metadata()

```
ObjectMetadata& google::cloud::storage::ObjectMetadata::upsert_metadata ( std::string key,  
                                                                    std::string value  
                                                                    )
```

inline

Insert or update the metadata entry.

Definition at line [263](#) of file [object_metadata.h](#).

Friends And Related Function Documentation

◆ operator!=

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

friend

Definition at line [372](#) of file [object_metadata.h](#).

◆ operator<<

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

friend

◆ operator==

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

friend