
gapic-google-cloud-logging-v2

Documentation

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Google APIs

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This is the API documentation for `gapic-google-cloud-logging-v2`.

`gapic-google-cloud-logging-v2` uses [google-gax](#) (Google API extensions) to provide an easy-to-use client library for the [Stackdriver Logging API \(v2\)](#) defined in the [googleapis](#) git repository

APIs

<i>google.cloud.gapic.logging.v2.config_service_v2_client</i>	Accesses the google.logging.v2 ConfigServiceV2 API.
<i>google.cloud.gapic.logging.v2.enums</i>	Wrappers for protocol buffer enum types.
<i>google.cloud.gapic.logging.v2.logging_service_v2_client</i>	Accesses the google.logging.v2 LoggingServiceV2 API.
<i>google.cloud.gapic.logging.v2.metrics_service_v2_client</i>	Accesses the google.logging.v2 MetricsServiceV2 API.

Contents

2.1 Getting started

gapic-google-cloud-logging-v2 will allow you to connect to the [Stackdriver Logging API](#) and access all its methods. In order to achieve this, you need to set up authentication as well as install the library locally.

2.1.1 Installation

Install this library in a `virtualenv` using pip. `virtualenv` is a tool to create isolated Python environments. The basic problem it addresses is one of dependencies and versions, and indirectly permissions.

With `virtualenv`, it's possible to install this library without needing system install permissions, and without clashing with the installed system dependencies.

Mac/Linux

```
pip install virtualenv
virtualenv <your-env>
source <your-env>/bin/activate
<your-env>/bin/pip install gapic-google-cloud-logging-v2
```

Windows

```
pip install virtualenv
virtualenv <your-env>
<your-env>\Scripts\activate
<your-env>\Scripts\pip.exe install gapic-google-cloud-logging-v2
```

2.1.2 Using the API

Authentication

To authenticate all your API calls, first install and setup the [Google Cloud SDK](#). Once done, you can then run the following command in your terminal:

```
$ gcloud beta auth application-default login
```

or

```
$ gcloud auth login
```

Please see [gcloud beta auth application-default login](#) document for the difference between these commands.

At this point you are all set to continue.

Examples

To see example usage, please read through the [API reference](#). The documentation for each API method includes simple examples.

2.2 API Reference

2.2.1 APIs

<code>google.cloud.gapic.logging.v2.config_service_v2_client</code>	Accesses the google.logging.v2 ConfigServiceV2 API.
<code>google.cloud.gapic.logging.v2.enums</code>	Wrappers for protocol buffer enum types.
<code>google.cloud.gapic.logging.v2.logging_service_v2_client</code>	Accesses the google.logging.v2 LoggingServiceV2 API.
<code>google.cloud.gapic.logging.v2.metrics_service_v2_client</code>	Accesses the google.logging.v2 MetricsServiceV2 API.

`google.cloud.gapic.logging.v2.config_service_v2_client`

Accesses the google.logging.v2 ConfigServiceV2 API.

Classes

`ConfigServiceV2Client([service_path, port, ...])` Service for configuring sinks used to export log entries outside of Stackdriver Logging.

```
class google.cloud.gapic.logging.v2.config_service_v2_client.ConfigServiceV2Client(service_path=
    port=443,
    chan-
    nel=None,
    cre-
    den-
    tials=None,
    ssl_credentials=None,
    scopes=None,
    client_config='g
    app_name='g
    app_version=
```

Service for configuring sinks used to export log entries outside of Stackdriver Logging.

Constructor.

Parameters

- **service_path** (*string*) – The domain name of the API remote host.
- **port** (*int*) – The port on which to connect to the remote host.
- **channel** (`grpc.Channel`) – A Channel instance through which to make calls.
- **credentials** (*object*) – The authorization credentials to attach to requests. These credentials identify this application to the service.
- **ssl_credentials** (`grpc.ChannelCredentials`) – A ChannelCredentials instance for use with an SSL-enabled channel.
- **scopes** (*list [string]*) – A list of OAuth2 scopes to attach to requests.
- **client_config** (*dict*) – A dictionary for call options for each method. See `google.gax.construct_settings()` for the structure of this data. Falls back to the default config if not specified or the specified config is missing data points.
- **app_name** (*string*) – The codename of the calling service.
- **app_version** (*string*) – The version of the calling service.

Returns A ConfigServiceV2Client object.

DEFAULT_SERVICE_PORT = 443

The default port of the service.

SERVICE_ADDRESS = ‘logging.googleapis.com’

The default address of the service.

create_sink (*parent, sink, unique_writer_identity=False, options=None*)

Creates a sink.

Example

```
>>> from google.cloud.gapic.logging.v2 import config_service_v2_client
>>> from google.cloud.grpc.logging.v2 import logging_config_pb2
>>> api = config_service_v2_client.ConfigServiceV2Client()
>>> parent = api.parent_path('[PROJECT]')
>>> sink = logging_config_pb2.LogSink()
>>> response = api.create_sink(parent, sink)
```

Parameters

- **parent** (*string*) – Required. The resource in which to create the sink:

```
"projects/[PROJECT_ID]"
"organizations/[ORGANIZATION_ID]"
```

- **sink** (`google.cloud.grpc.logging.v2.logging_config_pb2.LogSink`)
 - Required. The new sink, whose name parameter is a sink identifier that is not already in use.
- **unique_writer_identity** (*bool*) – Optional. Whether the sink will have a dedicated service account returned in the sink’s writer_identity. Set this field to be true to export logs from one project to a different project. This field is ignored for non-project sinks (e.g. organization sinks) because those sinks are required to have dedicated service accounts.

- **options** (`google.gax.CallOptions`) – Overrides the default settings for this call, e.g. timeout, retries etc.

Returns A `google.cloud.grpc.logging.v2.logging_config_pb2.LogSink` instance.

Raises

- `google.gax.errors.GaxError` if the RPC is aborted.
- `ValueError` if the parameters are invalid.

delete_sink (`sink_name`, `options=None`)

Deletes a sink.

Example

```
>>> from google.cloud.gapic.logging.v2 import config_service_v2_client
>>> api = config_service_v2_client.ConfigServiceV2Client()
>>> sink_name = api.sink_path('[PROJECT]', '[SINK]')
>>> api.delete_sink(sink_name)
```

Parameters

- **sink_name** (`string`) – Required. The resource name of the sink to delete, including the parent resource and the sink identifier:

```
"projects/[PROJECT_ID]/sinks/[SINK_ID]"
"organizations/[ORGANIZATION_ID]/sinks/[SINK_ID]"
```

It is an error if the sink does not exist.

- **options** (`google.gax.CallOptions`) – Overrides the default settings for this call, e.g. timeout, retries etc.

Raises

- `google.gax.errors.GaxError` if the RPC is aborted.
- `ValueError` if the parameters are invalid.

get_sink (`sink_name`, `options=None`)

Gets a sink.

Example

```
>>> from google.cloud.gapic.logging.v2 import config_service_v2_client
>>> api = config_service_v2_client.ConfigServiceV2Client()
>>> sink_name = api.sink_path('[PROJECT]', '[SINK]')
>>> response = api.get_sink(sink_name)
```

Parameters

- **sink_name** (`string`) – Required. The resource name of the sink to return:

```
"projects/[PROJECT_ID]/sinks/[SINK_ID]"
"organizations/[ORGANIZATION_ID]/sinks/[SINK_ID]"
```

- **options** (`google.gax.CallOptions`) – Overrides the default settings for this call, e.g. timeout, retries etc.

Returns A `google.cloud.grpc.logging.v2.logging_config_pb2.LogSink` instance.

Raises

- `google.gax.errors.GaxError` if the RPC is aborted.
- `ValueError` if the parameters are invalid.

list_sinks (`parent, page_size=0, options=None`)

Lists sinks.

Example

```
>>> from google.cloud.gapic.logging.v2 import config_service_v2_client
>>> from google.gax import CallOptions, INITIAL_PAGE
>>> api = config_service_v2_client.ConfigServiceV2Client()
>>> parent = api.parent_path('[PROJECT]')
>>>
>>> # Iterate over all results
>>> for element in api.list_sinks(parent):
>>>     # process element
>>>     pass
>>>
>>> # Or iterate over results one page at a time
>>> for page in api.list_sinks(parent, options=CallOptions(page_token=INITIAL_PAGE)):
>>>     for element in page:
>>>         # process element
>>>         pass
```

Parameters

- **parent** (`string`) – Required. The resource name where this sink was created:

```
"projects/[PROJECT_ID]"
"organizations/[ORGANIZATION_ID]"
```

- **page_size** (`int`) – The maximum number of resources contained in the underlying API response. If page streaming is performed per-resource, this parameter does not affect the return value. If page streaming is performed per-page, this determines the maximum number of resources in a page.
- **options** (`google.gax.CallOptions`) – Overrides the default settings for this call, e.g. timeout, retries etc.

Returns A `google.gax.PageIterator` instance. By default, this is an iterable of `google.cloud.grpc.logging.v2.logging_config_pb2.LogSink` instances. This object can also be configured to iterate over the pages of the response through the `CallOptions` parameter.

Raises

- `google.gax.errors.GaxError` if the RPC is aborted.
- `ValueError` if the parameters are invalid.

classmethod **match_project_from_parent_name** (*parent_name*)

Parses the project from a parent resource.

Parameters **parent_name** (*string*) – A fully-qualified path representing a parent resource.**Returns** A string representing the project.**classmethod** **match_project_from_sink_name** (*sink_name*)

Parses the project from a sink resource.

Parameters **sink_name** (*string*) – A fully-qualified path representing a sink resource.**Returns** A string representing the project.**classmethod** **match_sink_from_sink_name** (*sink_name*)

Parses the sink from a sink resource.

Parameters **sink_name** (*string*) – A fully-qualified path representing a sink resource.**Returns** A string representing the sink.**classmethod** **parent_path** (*project*)

Returns a fully-qualified parent resource name string.

classmethod **sink_path** (*project, sink*)

Returns a fully-qualified sink resource name string.

update_sink (*sink_name, sink, unique_writer_identity=False, options=None*)

Updates or creates a sink.

Example

```
>>> from google.cloud.gapic.logging.v2 import config_service_v2_client
>>> from google.cloud.grpc.logging.v2 import logging_config_pb2
>>> api = config_service_v2_client.ConfigServiceV2Client()
>>> sink_name = api.sink_path('[PROJECT]', '[SINK]')
>>> sink = logging_config_pb2.LogSink()
>>> response = api.update_sink(sink_name, sink)
```

Parameters

- **sink_name** (*string*) – Required. The resource name of the sink to update, including the parent resource and the sink identifier:

```
"projects/[PROJECT_ID]/sinks/[SINK_ID]"
"organizations/[ORGANIZATION_ID]/sinks/[SINK_ID]"
```

Example: "projects/my-project-id/sinks/my-sink-id".

- **sink** (*google.cloud.grpc.logging.v2.logging_config_pb2.LogSink*)
– Required. The updated sink, whose name is the same identifier that appears as part of sinkName. If sinkName does not exist, then this method creates a new sink.
- **unique_writer_identity** (*bool*) – Optional. Whether the sink will have a dedicated service account returned in the sink's writer_identity. Set this field to be true to export logs from one project to a different project. This field is ignored for non-project sinks (e.g. organization sinks) because those sinks are required to have dedicated service accounts.
- **options** (*google.gax.CallOptions*) – Overrides the default settings for this call, e.g. timeout, retries etc.

Returns A `google.cloud.grpc.logging.v2.logging_config_pb2.LogSink` instance.

Raises

- `google.gax.errors.GaxError` if the RPC is aborted.
- `ValueError` if the parameters are invalid.

google.cloud.gapic.logging.v2.enums

Wrappers for protocol buffer enum types.

Classes

<code>LabelDescriptor</code>	
<code>LogMetric</code>	
<code>LogSeverity</code>	The severity of the event described in a log entry, expressed as one of the standard severity levels listed below.
<code>LogSink</code>	
<code>NullValue</code>	<code>NullValue</code> is a singleton enumeration to represent the null value for the

class google.cloud.gapic.logging.v2.enums.`LogSeverity`

The severity of the event described in a log entry, expressed as one of the standard severity levels listed below. For your reference, the levels are assigned the listed numeric values. The effect of using numeric values other than those listed is undefined.

You can filter for log entries by severity. For example, the following filter expression will match log entries with severities `INFO`, `NOTICE`, and `WARNING`:

```
severity > DEBUG AND severity <= WARNING
```

If you are writing log entries, you should map other severity encodings to one of these standard levels. For example, you might map all of Java's `FINE`, `FINER`, and `FINEST` levels to `LogSeverity.DEBUG`. You can preserve the original severity level in the log entry payload if you wish.

`DEFAULT`

int

0.The log entry has no assigned severity level.

`DEBUG`

int

100.Debug or trace information.

`INFO`

int

200.Routine information, such as ongoing status or performance.

`NOTICE`

int

(300) Normal but significant events, such as start up, shut down, or a configuration change.

`WARNING`

int

400.Warning events might cause problems.

ERROR

int

500.Error events are likely to cause problems.

CRITICAL

int

600.Critical events cause more severe problems or outages.

ALERT

int

700.A person must take an action immediately.

EMERGENCY

int

800.One or more systems are unusable.

class google.cloud.gapic.logging.v2.enums.**NullValue**

NullValue is a singleton enumeration to represent the null value for the Value type union.

The JSON representation for NullValue is JSON null.

NULL_VALUE

int

Null value.

google.cloud.gapic.logging.v2.logging_service_v2_client

Accesses the google.logging.v2 LoggingServiceV2 API.

Classes

LoggingServiceV2Client([service_path, port, ...]) Service for ingesting and querying logs.

class google.cloud.gapic.logging.v2.logging_service_v2_client.**LoggingServiceV2Client**(*service_path*, *port*=443, *channel*=None, *credentials*=None, *ssl_credentials*=None, *scopes*=None, *client_config*=None, *app_name*=None, *app_version*=None)

Service for ingesting and querying logs.

Constructor.

Parameters

- **service_path** (*string*) – The domain name of the API remote host.

- **port** (*int*) – The port on which to connect to the remote host.
- **channel** (`grpc.Channel`) – A Channel instance through which to make calls.
- **credentials** (*object*) – The authorization credentials to attach to requests. These credentials identify this application to the service.
- **ssl_credentials** (`grpc.ChannelCredentials`) – A ChannelCredentials instance for use with an SSL-enabled channel.
- **scopes** (*list [string]*) – A list of OAuth2 scopes to attach to requests.
- **client_config** (*dict*) – A dictionary for call options for each method. See `google.gax.construct_settings()` for the structure of this data. Falls back to the default config if not specified or the specified config is missing data points.
- **app_name** (*string*) – The codename of the calling service.
- **app_version** (*string*) – The version of the calling service.

Returns A LoggingServiceV2Client object.

DEFAULT_SERVICE_PORT = 443

The default port of the service.

SERVICE_ADDRESS = ‘logging.googleapis.com’

The default address of the service.

delete_log (*log_name, options=None*)

Deletes all the log entries in a log. The log reappears if it receives new entries.

Example

```
>>> from google.cloud.gapic.logging.v2 import logging_service_v2_client
>>> api = logging_service_v2_client.LoggingServiceV2Client()
>>> log_name = api.log_path('[PROJECT]', '[LOG]')
>>> api.delete_log(log_name)
```

Parameters

- **log_name** (*string*) – Required. The resource name of the log to delete:

```
"projects/[PROJECT_ID]/logs/[LOG_ID]"
"organizations/[ORGANIZATION_ID]/logs/[LOG_ID]"
```

[LOG_ID] must be URL-encoded. For example, "projects/my-project-id/logs/syslog", "organizations/1234567890/logs/cloudresourcemanager.googleapis.com%2Factivities". For more information about log names, see LogEntry.

- **options** (`google.gax.CallOptions`) – Overrides the default settings for this call, e.g. timeout, retries etc.

Raises

- `google.gax.errors.GaxError` if the RPC is aborted.
- `ValueError` if the parameters are invalid.

list_log_entries (*resource_names*, *project_ids=None*, *filter_=''*, *order_by=''*, *page_size=0*, *options=None*)

Lists log entries. Use this method to retrieve log entries from Cloud Logging. For ways to export log entries, see [Exporting Logs](#).

Example

```
>>> from google.cloud.gapic.logging.v2 import logging_service_v2_client
>>> from google.gax import CallOptions, INITIAL_PAGE
>>> api = logging_service_v2_client.LoggingServiceV2Client()
>>> resource_names = []
>>>
>>> # Iterate over all results
>>> for element in api.list_log_entries(resource_names):
>>>     # process element
>>>     pass
>>>
>>> # Or iterate over results one page at a time
>>> for page in api.list_log_entries(resource_names, options=CallOptions(page_token=INITIAL_
```

Parameters

- **project_ids** (*list [string]*) – Deprecated. One or more project identifiers or project numbers from which to retrieve log entries. Example: "my-project-1A". If present, these project identifiers are converted to resource format and added to the list of resources in `resourceNames`. Callers should use `resourceNames` rather than this parameter.
- **resource_names** (*list [string]*) – Required. One or more cloud resources from which to retrieve log entries:

```
"projects/[PROJECT_ID]"
"organizations/[ORGANIZATION_ID]"
```

Projects listed in the `project_ids` field are added to this list.

- **filter** (*string*) – Optional. A filter that chooses which log entries to return. See [\[Advanced Logs Filters\]](#)(/logging/docs/view/advanced_filters). Only log entries that match the filter are returned. An empty filter matches all log entries. The maximum length of the filter is 20000 characters.
- **order_by** (*string*) – Optional. How the results should be sorted. Presently, the only permitted values are "timestamp asc" (default) and "timestamp desc". The first option returns entries in order of increasing values of `LogEntry.timestamp` (oldest first), and the second option returns entries in order of decreasing timestamps (newest first). Entries with equal timestamps are returned in order of `LogEntry.insertId`.
- **page_size** (*int*) – The maximum number of resources contained in the underlying API response. If page streaming is performed per-resource, this parameter does not affect the return value. If page streaming is performed per-page, this determines the maximum number of resources in a page.
- **options** (*google.gax.CallOptions*) – Overrides the default settings for this call, e.g. timeout, retries etc.

Returns A `google.gax.PageIterator` instance. By default, this is an iterable of `google.cloud.grpc.logging.v2.log_entry_pb2.LogEntry` instances. This object can also be configured to iterate over the pages of the response through the `CallOptions` parameter.

Raises

- `google.gax.errors.GaxError` if the RPC is aborted.
- `ValueError` if the parameters are invalid.

list_monitored_resource_descriptors (`page_size=0, options=None`)
Lists the monitored resource descriptors used by Stackdriver Logging.

Example

```
>>> from google.cloud.gapic.logging.v2 import logging_service_v2_client
>>> from google.gax import CallOptions, INITIAL_PAGE
>>> api = logging_service_v2_client.LoggingServiceV2Client()
>>>
>>> # Iterate over all results
>>> for element in api.list_monitored_resource_descriptors():
>>>     # process element
>>>     pass
>>>
>>> # Or iterate over results one page at a time
>>> for page in api.list_monitored_resource_descriptors(options=CallOptions(page_token=INITIAL_PAGE)):
>>>     for element in page:
>>>         # process element
>>>         pass
```

Parameters

- `page_size` (`int`) – The maximum number of resources contained in the underlying API response. If page streaming is performed per-resource, this parameter does not affect the return value. If page streaming is performed per-page, this determines the maximum number of resources in a page.
- `options` (`google.gax.CallOptions`) – Overrides the default settings for this call, e.g. timeout, retries etc.

Returns A `google.gax.PageIterator` instance. By default, this is an iterable of `google.api.monitored_resource_pb2.MonitoredResourceDescriptor` instances. This object can also be configured to iterate over the pages of the response through the `CallOptions` parameter.

Raises

- `google.gax.errors.GaxError` if the RPC is aborted.
- `ValueError` if the parameters are invalid.

classmethod log_path (`project, log`)

Returns a fully-qualified log resource name string.

classmethod match_log_from_log_name (`log_name`)

Parses the log from a log resource.

Parameters `log_name` (`string`) – A fully-qualified path representing a log resource.

Returns A string representing the log.

classmethod `match_project_from_log_name(log_name)`

Parses the project from a log resource.

Parameters `log_name (string)` – A fully-qualified path representing a log resource.

Returns A string representing the project.

classmethod `match_project_from_parent_name(parent_name)`

Parses the project from a parent resource.

Parameters `parent_name (string)` – A fully-qualified path representing a parent resource.

Returns A string representing the project.

classmethod `parent_path(project)`

Returns a fully-qualified parent resource name string.

write_log_entries(entries, log_name=''', resource=None, labels=None, partial_success=False, options=None)

Writes log entries to Stackdriver Logging. All log entries are written by this method.

Example

```
>>> from google.cloud.gapic.logging.v2 import logging_service_v2_client
>>> from google.cloud.grpc.logging.v2 import log_entry_pb2
>>> api = logging_service_v2_client.LoggingServiceV2Client()
>>> entries = []
>>> response = api.write_log_entries(entries)
```

Parameters

- `log_name (string)` – Optional. A default log resource name that is assigned to all log entries in `entries` that do not specify a value for `log_name`:

```
"projects/[PROJECT_ID]/logs/[LOG_ID]"
"organizations/[ORGANIZATION_ID]/logs/[LOG_ID]"
```

[LOG_ID] must be URL-encoded. For example, "projects/my-project-id/logs/syslog" or "organizations/1234567890/logs/cloudresourcemanager.googleapis.com%2Factiv... For more information about log names, see LogEntry.

- `resource(google.api.monitored_resource_pb2.MonitoredResource)` – Optional. A default monitored resource object that is assigned to all log entries in `entries` that do not specify a value for `resource`. Example:

```
{ "type": "gce_instance",
  "labels": {
    "zone": "us-central1-a", "instance_id": "00000000000000000000000000000000" }}
```

See LogEntry.

- `labels (dict[string -> google.cloud.grpc.logging.v2.logging_pb2.WriteLogEntriesRequest])` – Optional. Default labels that are added to the `labels` field of all log entries in `entries`. If a log entry already has a label with the same key as a label in this parameter, then the log entry's label is not changed. See LogEntry.

- **entries** (list[*google.cloud.grpc.logging.v2.log_entry_pb2.LogEntry*]) – Required. The log entries to write. Values supplied for the fields `log_name`, `resource`, and `labels` in this `entries.write` request are added to those log entries that do not provide their own values for the fields.

To improve throughput and to avoid exceeding the `quota_limit` for calls to `entries.write`, you should write multiple log entries at once rather than calling this method for each individual log entry.

- **partial_success** (`bool`) – Optional. Whether valid entries should be written even if some other entries fail due to `INVALID_ARGUMENT` or `PERMISSION_DENIED` errors. If any entry is not written, the response status will be the error associated with one of the failed entries and include error details in the form of `WriteLogEntriesPartialErrors`.
- **options** (`google.gax.CallOptions`) – Overrides the default settings for this call, e.g. timeout, retries etc.

Returns A `google.cloud.grpc.logging.v2.logging_pb2.WriteLogEntriesResponse` instance.

Raises

- `google.gax.errors.GaxError` if the RPC is aborted.
- `ValueError` if the parameters are invalid.

google.cloud.gapic.logging.v2.metrics_service_v2_client

Accesses the `google.logging.v2 MetricsServiceV2` API.

Classes

`MetricsServiceV2Client`([`service_path`, `port`, ...]) Service for configuring logs-based metrics.

```
class google.cloud.gapic.logging.v2.metrics_service_v2_client.MetricsServiceV2Client(service_path=None,  
                                 port=443,  
                                 channel=None,  
                                 credentials=None,  
                                 ssl_credentials=None,  
                                 scopes=None,  
                                 client_config=None,  
                                 app_name=None,  
                                 app_version=None)
```

Service for configuring logs-based metrics.

Constructor.

Parameters

- **service_path** (`string`) – The domain name of the API remote host.
- **port** (`int`) – The port on which to connect to the remote host.
- **channel** (`grpc.Channel`) – A Channel instance through which to make calls.

- **credentials** (*object*) – The authorization credentials to attach to requests. These credentials identify this application to the service.
- **ssl_credentials** (`grpc.ChannelCredentials`) – A `ChannelCredentials` instance for use with an SSL-enabled channel.
- **scopes** (*list [string]*) – A list of OAuth2 scopes to attach to requests.
- **client_config** (*dict*) – A dictionary for call options for each method. See `google.gax.construct_settings()` for the structure of this data. Falls back to the default config if not specified or the specified config is missing data points.
- **app_name** (*string*) – The codename of the calling service.
- **app_version** (*string*) – The version of the calling service.

Returns A `MetricsServiceV2Client` object.

DEFAULT_SERVICE_PORT = 443

The default port of the service.

SERVICE_ADDRESS = ‘logging.googleapis.com’

The default address of the service.

create_log_metric (*parent, metric, options=None*)

Creates a logs-based metric.

Example

```
>>> from google.cloud.gapic.logging.v2 import metrics_service_v2_client
>>> from google.cloud.grpc.logging.v2 import logging_metrics_pb2
>>> api = metrics_service_v2_client.MetricsServiceV2Client()
>>> parent = api.parent_path('[PROJECT]')
>>> metric = logging_metrics_pb2.LogMetric()
>>> response = api.create_log_metric(parent, metric)
```

Parameters

- **parent** (*string*) – The resource name of the project in which to create the metric:

```
"projects/[PROJECT_ID]"
```

The new metric must be provided in the request.

- **metric** (`google.cloud.grpc.logging.v2.logging_metrics_pb2.LogMetric`)
 - The new logs-based metric, which must not have an identifier that already exists.
- **options** (`google.gax.CallOptions`) – Overrides the default settings for this call, e.g. timeout, retries etc.

Returns A `google.cloud.grpc.logging.v2.logging_metrics_pb2.LogMetric` instance.

Raises

- `google.gax.errors.GaxError` if the RPC is aborted.
- `ValueError` if the parameters are invalid.

delete_log_metric (*metric_name, options=None*)

Deletes a logs-based metric.

Example

```
>>> from google.cloud.gapic.logging.v2 import metrics_service_v2_client
>>> api = metrics_service_v2_client.MetricsServiceV2Client()
>>> metric_name = api.metric_path('[PROJECT]', '[METRIC]')
>>> api.delete_log_metric(metric_name)
```

Parameters

- **metric_name** (*string*) – The resource name of the metric to delete:

```
"projects/[PROJECT_ID]/metrics/[METRIC_ID]"
```

- **options** (*google.gax.CallOptions*) – Overrides the default settings for this call, e.g. timeout, retries etc.

Raises

- *google.gax.errors.GaxError* if the RPC is aborted.
- *ValueError* if the parameters are invalid.

get_log_metric (*metric_name*, *options=None*)

Gets a logs-based metric.

Example

```
>>> from google.cloud.gapic.logging.v2 import metrics_service_v2_client
>>> api = metrics_service_v2_client.MetricsServiceV2Client()
>>> metric_name = api.metric_path('[PROJECT]', '[METRIC]')
>>> response = api.get_log_metric(metric_name)
```

Parameters

- **metric_name** (*string*) – The resource name of the desired metric:

```
"projects/[PROJECT_ID]/metrics/[METRIC_ID]"
```

- **options** (*google.gax.CallOptions*) – Overrides the default settings for this call, e.g. timeout, retries etc.

Returns A *google.cloud.grpc.logging.v2.logging_metrics_pb2.LogMetric* instance.

Raises

- *google.gax.errors.GaxError* if the RPC is aborted.
- *ValueError* if the parameters are invalid.

list_log_metrics (*parent*, *page_size=0*, *options=None*)

Lists logs-based metrics.

Example

```
>>> from google.cloud.gapic.logging.v2 import metrics_service_v2_client
>>> from google.gax import CallOptions, INITIAL_PAGE
>>> api = metrics_service_v2_client.MetricsServiceV2Client()
>>> parent = api.parent_path('[PROJECT]')
>>>
>>> # Iterate over all results
>>> for element in api.list_log_metrics(parent):
>>>     # process element
>>>     pass
>>>
>>> # Or iterate over results one page at a time
>>> for page in api.list_log_metrics(parent, options=CallOptions(page_token=INITIAL_PAGE)):
>>>     for element in page:
>>>         # process element
>>>         pass
```

Parameters

- **parent** (*string*) – Required. The name of the project containing the metrics:

```
"projects/[PROJECT_ID]"
```

- **page_size** (*int*) – The maximum number of resources contained in the underlying API response. If page streaming is performed per-resource, this parameter does not affect the return value. If page streaming is performed per-page, this determines the maximum number of resources in a page.
- **options** (*google.gax.CallOptions*) – Overrides the default settings for this call, e.g. timeout, retries etc.

Returns A *google.gax.PageIterator* instance. By default, this is an iterable of *google.cloud.grpc.logging.v2.logging_metrics_pb2.LogMetric* instances. This object can also be configured to iterate over the pages of the response through the *CallOptions* parameter.

Raises

- *google.gax.errors.GaxError* if the RPC is aborted.
- *ValueError* if the parameters are invalid.

classmethod **match_metric_from_metric_name** (*metric_name*)

Parses the metric from a metric resource.

Parameters **metric_name** (*string*) – A fully-qualified path representing a metric resource.

Returns A string representing the metric.

classmethod **match_project_from_metric_name** (*metric_name*)

Parses the project from a metric resource.

Parameters **metric_name** (*string*) – A fully-qualified path representing a metric resource.

Returns A string representing the project.

classmethod **match_project_from_parent_name** (*parent_name*)

Parses the project from a parent resource.

Parameters **parent_name** (*string*) – A fully-qualified path representing a parent resource.

Returns A string representing the project.

classmethod `metric_path` (*project, metric*)
Returns a fully-qualified metric resource name string.

classmethod `parent_path` (*project*)
Returns a fully-qualified parent resource name string.

update_log_metric (*metric_name*, *metric*, *options=None*)
Creates or updates a logs-based metric.

Example

```
>>> from google.cloud.gapic.logging.v2 import metrics_service_v2_client
>>> from google.cloud.grpc.logging.v2 import logging_metrics_pb2
>>> api = metrics_service_v2_client.MetricsServiceV2Client()
>>> metric_name = api.metric_path('[PROJECT]', '[METRIC]')
>>> metric = logging_metrics_pb2.LogMetric()
>>> response = api.update_log_metric(metric_name, metric)
```

Parameters

- **metric_name** (*string*) – The resource name of the metric to update:

"projects/ [PROJECT_ID] /metrics/ [METRIC_ID]"

The updated metric must be provided in the request and its name field must be the same as [METRIC_ID]. If the metric does not exist in [PROJECT_ID], then a new metric is created.

- **metric** (`google.cloud.grpc.logging.v2.logging_metrics_pb2.LogMetric`)
– The updated metric.
 - **options** (`google.gax.CallOptions`) – Overrides the default settings for this call,
e.g. timeout, retries etc.

Returns A `google.cloud.grpc.logging.v2.logging_metrics_pb2.LogMetric` instance.

Raises

- `google.gax.errors.GaxError` if the RPC is aborted.
 - `ValueError` if the parameters are invalid.

API types

```
google.api.label_pb2
google.api.monitored_resource_pb2
google.cloud.grpc.logging.v2.log_entry_pb2
google.cloud.grpc.logging.v2.logging_config_pb2
google.cloud.grpc.logging.v2.logging_metrics_pb2
google.cloud.grpc.logging.v2.logging_pb2
google.logging.type.http_request_pb2
google.protobuf.any_pb2
```

Continued on next page

Table 2.6 – continued from previous page

<code>google.protobuf.duration_pb2</code>
<code>google.protobuf.timestamp_pb2</code>

google.api.label_pb2

Classes

<code>LabelDescriptor</code>	A description of a label.
------------------------------	---------------------------

class google.api.label_pb2.**LabelDescriptor**
A description of a label.

key

string

The label key.

value_type

`enum google.cloud.gapic.logging.v2.enums.LabelDescriptor.ValueType`

The type of data that can be assigned to the label.

description

string

A human-readable description for the label.

google.api.monitored_resource_pb2

Classes

<code>MonitoredResource</code>	An object representing a resource that can be used for monitoring, logging, billing, or other purposes.
<code>MonitoredResourceDescriptor</code>	An object that describes the schema of a MonitoredResource object using a type name.

class google.api.monitored_resource_pb2.**MonitoredResource**

An object representing a resource that can be used for monitoring, logging, billing, or other purposes. Examples include virtual machine instances, databases, and storage devices such as disks. The `type` field identifies a `MonitoredResourceDescriptor` object that describes the resource's schema. Information in the `labels` field identifies the actual resource and its attributes according to the schema. For example, a particular Compute Engine VM instance could be represented by the following object, because the `MonitoredResourceDescriptor` for "gce_instance" has labels "instance_id" and "zone":

```
{ "type": "gce_instance",
  "labels": { "instance_id": "12345678901234",
             "zone": "us-central1-a" } }
```

type

string

Required. The monitored resource type. This field must match the `type` field of a `MonitoredResourceDescriptor` object. For example, the type of a Cloud SQL database is "cloudsql_database".

labels
dict[string -> google.api.monitored_resource_pb2.MonitoredResource.LabelsEntry]

Required. Values for all of the labels listed in the associated monitored resource descriptor. For example, Cloud SQL databases use the labels "database_id" and "zone".

class google.api.monitored_resource_pb2.**MonitoredResourceDescriptor**

An object that describes the schema of a MonitoredResource object using a type name and a set of labels. For example, the monitored resource descriptor for Google Compute Engine VM instances has a type of "gce_instance" and specifies the use of the labels "instance_id" and "zone" to identify particular VM instances.

Different APIs can support different monitored resource types. APIs generally provide a `list` method that returns the monitored resource descriptors used by the API.

name

string

Optional. The resource name of the monitored resource descriptor: "projects/{project_id}/monitoredResourceDescriptors/{type}" where {type} is the value of the `type` field in this object and {project_id} is a project ID that provides API-specific context for accessing the type. APIs that do not use project information can use the resource name format "monitoredResourceDescriptors/{type}".

type

string

Required. The monitored resource type. For example, the type "cloudsql_database" represents databases in Google Cloud SQL. The maximum length of this value is 256 characters.

display_name

string

Optional. A concise name for the monitored resource type that might be displayed in user interfaces. It should be a Title Cased Noun Phrase, without any article or other determiners. For example, "Google Cloud SQL Database".

description

string

Optional. A detailed description of the monitored resource type that might be used in documentation.

labels

list[[google.api.label_pb2.LabelDescriptor](#)]

Required. A set of labels used to describe instances of this monitored resource type. For example, an individual Google Cloud SQL database is identified by values for the labels "database_id" and "zone".

google.cloud.grpc.logging.v2.log_entry_pb2

Classes

LogEntry	An individual entry in a log.
--------------------------	-------------------------------

LogEntryOperation	Additional information about a potentially long-running operation with which a log entry is associated.
-----------------------------------	---

class google.cloud.grpc.logging.v2.log_entry_pb2.**LogEntry**

An individual entry in a log.

log_name

string

Required. The resource name of the log to which this log entry belongs:

```
"projects/ [PROJECT_ID] /logs/ [LOG_ID]"  
"organizations/[ORGANIZATION_ID]/logs/[LOG_ID]"
```

[LOG_ID] must be URL-encoded within log_name. Example: "organizations/1234567890/logs/cloudresourcemanager.googleapis.com%2Factivity". [LOG_ID] must be less than 512 characters long and can only include the following characters: upper and lower case alphanumeric characters, forward-slash, underscore, hyphen, and period.

For backward compatibility, if log_name begins with a forward-slash, such as /projects/..., then the log entry is ingested as usual but the forward-slash is removed. Listing the log entry will not show the leading slash and filtering for a log name with a leading slash will never return any results.

resource

```
google.api.monitored_resource_pb2.MonitoredResource
```

Required. The monitored resource associated with this log entry. Example: a log entry that reports a database error would be associated with the monitored resource designating the particular database that reported the error.

proto_payload

```
google.protobuf.any_pb2.Any
```

The log entry payload, represented as a protocol buffer. Some Google Cloud Platform services use this field for their log entry payloads.

text_payload

string

The log entry payload, represented as a Unicode string (UTF-8).

json_payload

```
google.protobuf.struct_pb2.Struct
```

The log entry payload, represented as a structure that is expressed as a JSON object.

timestamp

```
google.protobuf.timestamp_pb2.Timestamp
```

Optional. The time the event described by the log entry occurred. If omitted, Stackdriver Logging will use the time the log entry is received.

severity

```
enum google.cloud.logging.v2.enums.LogSeverity
```

Optional. The severity of the log entry. The default value is LogSeverity.DEFAULT.

insert_id

string

Optional. A unique ID for the log entry. If you provide this field, the logging service considers other log entries in the same project with the same ID as duplicates which can be removed. If omitted, Stackdriver Logging will generate a unique ID for this log entry.

http_request

```
google.logging.type.http_request_pb2.HttpRequest
```

Optional. Information about the HTTP request associated with this log entry, if applicable.

labels

```
dict[string -> google.cloud.grpc.logging.v2.log_entry_pb2.LogEntry.LabelsEntry]
```

Optional. A set of user-defined (key, value) data that provides additional information about the log entry.

operation

`google.cloud.grpc.logging.v2.log_entry_pb2.LogEntryOperation`

Optional. Information about an operation associated with the log entry, if applicable.

class `google.cloud.grpc.logging.v2.log_entry_pb2.LogEntryOperation`

Additional information about a potentially long-running operation with which a log entry is associated.

id

`string`

Optional. An arbitrary operation identifier. Log entries with the same identifier are assumed to be part of the same operation.

producer

`string`

Optional. An arbitrary producer identifier. The combination of `id` and `producer` must be globally unique. Examples for `producer`: "MyDivision.MyBigCompany.com", "github.com/MyProject/MyApplication".

first

`bool`

Optional. Set this to True if this is the first log entry in the operation.

last

`bool`

Optional. Set this to True if this is the last log entry in the operation.

google.cloud.grpc.logging.v2.logging_config_pb2

Classes

<code>CreateSinkRequest</code>	The parameters to <code>CreateSink</code> .
<code>DeleteSinkRequest</code>	The parameters to <code>DeleteSink</code> .
<code>GetSinkRequest</code>	The parameters to <code>GetSink</code> .
<code>ListSinksRequest</code>	The parameters to <code>ListSinks</code> .
<code>ListSinksResponse</code>	Result returned from <code>ListSinks</code> .
<code>LogSink</code>	Describes a sink used to export log entries outside of Stackdriver Logging.
<code>UpdateSinkRequest</code>	The parameters to <code>UpdateSink</code> .

class `google.cloud.grpc.logging.v2.logging_config_pb2.CreateSinkRequest`

The parameters to `CreateSink`.

parent

`string`

Required. The resource in which to create the sink:

```
"projects/[PROJECT_ID]"
"organizations/[ORGANIZATION_ID]"
```

sink

`google.cloud.grpc.logging.v2.logging_config_pb2.LogSink`

Required. The new sink, whose name parameter is a sink identifier that is not already in use.

unique_writer_identity
bool

Optional. Whether the sink will have a dedicated service account returned in the sink's writer_identity. Set this field to be true to export logs from one project to a different project. This field is ignored for non-project sinks (e.g. organization sinks) because those sinks are required to have dedicated service accounts.

class google.cloud.grpc.logging.v2.logging_config_pb2.**DeleteSinkRequest**

The parameters to DeleteSink.

sink_name
string

Required. The resource name of the sink to delete, including the parent resource and the sink identifier:

```
"projects/[PROJECT_ID]/sinks/[SINK_ID]"  
"organizations/[ORGANIZATION_ID]/sinks/[SINK_ID]"
```

It is an error if the sink does not exist.

class google.cloud.grpc.logging.v2.logging_config_pb2.**GetSinkRequest**

The parameters to GetSink.

sink_name
string

Required. The resource name of the sink to return:

```
"projects/[PROJECT_ID]/sinks/[SINK_ID]"  
"organizations/[ORGANIZATION_ID]/sinks/[SINK_ID]"
```

class google.cloud.grpc.logging.v2.logging_config_pb2.**ListSinksRequest**

The parameters to ListSinks.

parent
string

Required. The resource name where this sink was created:

```
"projects/[PROJECT_ID]"  
"organizations/[ORGANIZATION_ID]"
```

page_token
string

Optional. If present, then retrieve the next batch of results from the preceding call to this method. pageToken must be the value of nextPageToken from the previous response. The values of other method parameters should be identical to those in the previous call.

page_size
int

Optional. The maximum number of results to return from this request. Non-positive values are ignored. The presence of nextPageToken in the response indicates that more results might be available.

class google.cloud.grpc.logging.v2.logging_config_pb2.**ListSinksResponse**

Result returned from ListSinks.

sinks
list[*google.cloud.grpc.logging.v2.logging_config_pb2.LogSink*]

A list of sinks.

next_page_token
string

If there might be more results than appear in this response, then `nextPageToken` is included. To get the next set of results, call the same method again using the value of `nextPageToken` as `pageToken`.

class google.cloud.grpc.logging.v2.logging_config_pb2.LogSink

Describes a sink used to export log entries outside of Stackdriver Logging. A logs filter controls which log entries are exported. Sinks can have a start time and an end time; these can be used to place log entries from an exact time range into a particular destination. If both `start_time` and `end_time` are present, then `start_time` must be less than `end_time`.

name
string

Required. The client-assigned sink identifier, unique within the project. Example: "my-syslog-errors-to-pubsub". Sink identifiers are limited to 100 characters and can include only the following characters: upper and lower-case alphanumeric characters, underscores, hyphens, and periods.

destination
string

Required. The export destination:

```
"storage.googleapis.com/[GCS_BUCKET]"
"bigquery.googleapis.com/projects/[PROJECT_ID]/datasets/[DATASET]"
"pubsub.googleapis.com/projects/[PROJECT_ID]/topics/[TOPIC_ID]"
```

For more information, see [Exporting Logs With Sinks](#).

filter
string

Optional. An [advanced logs filter](#). Only log entries matching the filter are exported. The filter must be consistent with the log entry format specified by the `outputVersionFormat` parameter, regardless of the format of the log entry that was originally ingested by Stackdriver Logging. The following example uses field names in the v2 log entry format:

```
logName="projects/[PROJECT_ID]/logs/[LOG_ID]" AND severity>=ERROR
```

output_version_format
enum google.cloud.gapic.logging.v2.enums.LogSink.VersionFormat

Optional. The log entry version to use for this sink's exported log entries. This version does not have to correspond to the version of the log entry that was written to Stackdriver Logging. If omitted, the v2 format is used.

writer_identity
string

Output only. An IAM identity—a service account or group—that will write exported log entries to the destination on behalf of Stackdriver Logging. You must grant this identity write-access to the destination. Consult the destination service's documentation to determine the exact role that must be granted.

start_time
google.protobuf.timestamp_pb2.Timestamp

Optional. The time at which this sink will begin exporting log entries. If this value is present, then log entries are exported only if `start_time <= "entry.timestamp"`.

end_time

`google.protobuf.timestamp_pb2.Timestamp`

Optional. Time at which this sink will stop exporting log entries. If this value is present, then log entries are exported only if `entry.timestamp < end_time`.

class google.cloud.grpc.logging.v2.logging_config_pb2.UpdateSinkRequest

The parameters to `UpdateSink`.

sink_name

`string`

Required. The resource name of the sink to update, including the parent resource and the sink identifier:

```
"projects/ [PROJECT_ID]/sinks/[SINK_ID]"  
"organizations/[ORGANIZATION_ID]/sinks/[SINK_ID]"
```

Example: `"projects/my-project-id/sinks/my-sink-id"`.

sink

`google.cloud.grpc.logging.v2.logging_config_pb2.LogSink`

Required. The updated sink, whose name is the same identifier that appears as part of `sinkName`. If `sinkName` does not exist, then this method creates a new sink.

unique_writer_identity

`bool`

Optional. Whether the sink will have a dedicated service account returned in the sink's `writer_identity`. Set this field to be true to export logs from one project to a different project. This field is ignored for non-project sinks (e.g. organization sinks) because those sinks are required to have dedicated service accounts.

google.cloud.grpc.logging.v2.logging_metrics_pb2**Classes**

<code>CreateLogMetricRequest</code>	The parameters to <code>CreateLogMetric</code> .
<code>DeleteLogMetricRequest</code>	The parameters to <code>DeleteLogMetric</code> .
<code>GetLogMetricRequest</code>	The parameters to <code>GetLogMetric</code> .
<code>ListLogMetricsRequest</code>	The parameters to <code>ListLogMetrics</code> .
<code>ListLogMetricsResponse</code>	Result returned from <code>ListLogMetrics</code> .
<code>LogMetric</code>	Describes a logs-based metric.
<code>UpdateLogMetricRequest</code>	The parameters to <code>UpdateLogMetric</code> .

class google.cloud.grpc.logging.v2.logging_metrics_pb2.CreateLogMetricRequest

The parameters to `CreateLogMetric`.

parent

`string`

The resource name of the project in which to create the metric:

```
"projects/ [PROJECT_ID]"
```

The new metric must be provided in the request.

```
metric
google.cloud.grpc.logging.v2.logging_metrics_pb2.LogMetric
```

The new logs-based metric, which must not have an identifier that already exists.

```
class google.cloud.grpc.logging.v2.logging_metrics_pb2.DeleteLogMetricRequest
The parameters to DeleteLogMetric.
```

```
metric_name
string
```

The resource name of the metric to delete:

```
"projects/[PROJECT_ID]/metrics/[METRIC_ID]"
```

```
class google.cloud.grpc.logging.v2.logging_metrics_pb2.GetLogMetricRequest
The parameters to GetLogMetric.
```

```
metric_name
string
```

The resource name of the desired metric:

```
"projects/[PROJECT_ID]/metrics/[METRIC_ID]"
```

```
class google.cloud.grpc.logging.v2.logging_metrics_pb2.ListLogMetricsRequest
The parameters to ListLogMetrics.
```

```
parent
string
```

Required. The name of the project containing the metrics:

```
"projects/[PROJECT_ID]"
```

```
page_token
string
```

Optional. If present, then retrieve the next batch of results from the preceding call to this method. pageToken must be the value of nextPageToken from the previous response. The values of other method parameters should be identical to those in the previous call.

```
page_size
int
```

Optional. The maximum number of results to return from this request. Non-positive values are ignored. The presence of nextPageToken in the response indicates that more results might be available.

```
class google.cloud.grpc.logging.v2.logging_metrics_pb2.ListLogMetricsResponse
Result returned from ListLogMetrics.
```

```
metrics
```

```
list[google.cloud.grpc.logging.v2.logging_metrics_pb2.LogMetric]
```

A list of logs-based metrics.

```
next_page_token
string
```

If there might be more results than appear in this response, then nextPageToken is included. To get the next set of results, call this method again using the value of nextPageToken as pageToken.

class google.cloud.grpc.logging.v2.logging_metrics_pb2.**LogMetric**

Describes a logs-based metric. The value of the metric is the number of log entries that match a logs filter.

name

string

Required. The client-assigned metric identifier. Examples: "error_count", "nginx/requests".

Metric identifiers are limited to 100 characters and can include only the following characters: A–Z, a–z, 0–9, and the special characters _–., +!*'(), %/. The forward-slash character (/) denotes a hierarchy of name pieces, and it cannot be the first character of the name.

The metric identifier in this field must not be [URL-encoded](#). However, when the metric identifier appears as the [METRIC_ID] part of a metric_name API parameter, then the metric identifier must be URL-encoded. Example: "projects/my-project/metrics/nginx%2Frequests".

description

string

Optional. A description of this metric, which is used in documentation.

filter

string

Required. An [advanced logs filter](#). Example:

```
"resource.type=gae_app AND severity>=ERROR"
```

The maximum length of the filter is 20000 characters.

version

enum google.cloud.gapic.logging.v2.enums.LogMetric.ApiVersion

Output only. The API version that created or updated this metric. The version also dictates the syntax of the filter expression. When a value for this field is missing, the default value of V2 should be assumed.

class google.cloud.grpc.logging.v2.logging_metrics_pb2.**UpdateLogMetricRequest**

The parameters to UpdateLogMetric.

metric_name

string

The resource name of the metric to update:

```
"projects/[PROJECT_ID]/metrics/[METRIC_ID]"
```

The updated metric must be provided in the request and its name field must be the same as [METRIC_ID]. If the metric does not exist in [PROJECT_ID], then a new metric is created.

metric

google.cloud.grpc.logging.v2.logging_metrics_pb2.LogMetric

The updated metric.

google.cloud.grpc.logging.v2.logging_pb2

Classes

DeleteLogRequest

The parameters to DeleteLog.

ListLogEntriesRequest

The parameters to ListLogEntries.

Continued on next page

Table 2.12 – continued from previous page

<code>ListLogEntriesResponse</code>	Result returned from <code>ListLogEntries</code> .
<code>ListMonitoredResourceDescriptorsRequest</code>	The parameters to <code>ListMonitoredResourceDescriptors</code>
<code>ListMonitoredResourceDescriptorsResponse</code>	Result returned from <code>ListMonitoredResourceDescriptors</code> .
<code>WriteLogEntriesRequest</code>	The parameters to <code>WriteLogEntries</code> .
<code>WriteLogEntriesResponse</code>	Result returned from <code>WriteLogEntries</code> .

class google.cloud.grpc.logging.v2.logging_pb2.DeleteLogRequest
The parameters to `DeleteLog`.

log_name*string*

Required. The resource name of the log to delete:

"`projects/ [PROJECT_ID] /logs/ [LOG_ID]`"
"`organizations/ [ORGANIZATION_ID] /logs/ [LOG_ID]`"

[`LOG_ID`] must be URL-encoded. For example, "`projects/my-project-id/logs/syslog`", "`organizations/1234567890/logs/cloudresourcemanager.googleapis.com%2Factivity`".
For more information about log names, see `LogEntry`.

class google.cloud.grpc.logging.v2.logging_pb2.ListLogEntriesRequest
The parameters to `ListLogEntries`.

project_ids*list[string]*

Deprecated. One or more project identifiers or project numbers from which to retrieve log entries. Example: "`my-project-1A`". If present, these project identifiers are converted to resource format and added to the list of resources in `resourceNames`. Callers should use `resourceNames` rather than this parameter.

resource_names*list[string]*

Required. One or more cloud resources from which to retrieve log entries:

"`projects/ [PROJECT_ID]`"
"`organizations/ [ORGANIZATION_ID]`"

Projects listed in the `project_ids` field are added to this list.**filter***string*

Optional. A filter that chooses which log entries to return. See [Advanced Logs Filters](/logging/docs/view/advanced_filters). Only log entries that match the filter are returned. An empty filter matches all log entries. The maximum length of the filter is 20000 characters.

order_by*string*

Optional. How the results should be sorted. Presently, the only permitted values are "`timestamp asc`" (default) and "`timestamp desc`". The first option returns entries in order of increasing values of `LogEntry.timestamp` (oldest first), and the second option returns entries in order of decreasing timestamps (newest first). Entries with equal timestamps are returned in order of `LogEntry.insertId`.

page_size*int*

Optional. The maximum number of results to return from this request. Non-positive values are ignored. The presence of nextPageToken in the response indicates that more results might be available.

page_token

string

Optional. If present, then retrieve the next batch of results from the preceding call to this method. pageToken must be the value of nextPageToken from the previous response. The values of other method parameters should be identical to those in the previous call.

class google.cloud.grpc.logging.v2.logging_pb2.ListLogEntriesResponse
Result returned from ListLogEntries.

entries

list[*google.cloud.grpc.logging.v2.log_entry_pb2.LogEntry*]

A list of log entries.

next_page_token

string

If there might be more results than appear in this response, then nextPageToken is included. To get the next set of results, call this method again using the value of nextPageToken as pageToken.

class google.cloud.grpc.logging.v2.logging_pb2.ListMonitoredResourceDescriptorsRequest
The parameters to ListMonitoredResourceDescriptors

page_size

int

Optional. The maximum number of results to return from this request. Non-positive values are ignored. The presence of nextPageToken in the response indicates that more results might be available.

page_token

string

Optional. If present, then retrieve the next batch of results from the preceding call to this method. pageToken must be the value of nextPageToken from the previous response. The values of other method parameters should be identical to those in the previous call.

class google.cloud.grpc.logging.v2.logging_pb2.ListMonitoredResourceDescriptorsResponse
Result returned from ListMonitoredResourceDescriptors.

resource_descriptors

list[*google.api.monitored_resource_pb2.MonitoredResourceDescriptor*]

A list of resource descriptors.

next_page_token

string

If there might be more results than appear in this response, then nextPageToken is included. To get the next set of results, call this method again using the value of nextPageToken as pageToken.

class google.cloud.grpc.logging.v2.logging_pb2.WriteLogEntriesRequest

The parameters to WriteLogEntries.

log_name

string

Optional. A default log resource name that is assigned to all log entries in entries that do not specify a value for log_name:

```
"projects/[PROJECT_ID]/logs/[LOG_ID]"
"organizations/[ORGANIZATION_ID]/logs/[LOG_ID]"
```

[LOG_ID] must be URL-encoded. For example, "projects/my-project-id/logs/syslog" or "organizations/1234567890/logs/cloudresourcemanager.googleapis.com%2Factivity". For more information about log names, see LogEntry.

resource

```
google.api.monitored_resource_pb2.MonitoredResource
```

Optional. A default monitored resource object that is assigned to all log entries in entries that do not specify a value for resource. Example:

```
{ "type": "gce_instance",
  "labels": {
    "zone": "us-central1-a", "instance_id": "00000000000000000000" }}
```

See LogEntry.

labels

```
dict[string -> google.cloud.grpc.logging.v2.logging_pb2.WriteLogEntriesRequest.LabelsEntry]
```

Optional. Default labels that are added to the labels field of all log entries in entries. If a log entry already has a label with the same key as a label in this parameter, then the log entry's label is not changed. See LogEntry.

entries

```
list[google.cloud.grpc.logging.v2.log_entry_pb2.LogEntry]
```

Required. The log entries to write. Values supplied for the fields log_name, resource, and labels in this entries.write request are added to those log entries that do not provide their own values for the fields.

To improve throughput and to avoid exceeding the quota limit for calls to entries.write, you should write multiple log entries at once rather than calling this method for each individual log entry.

partial_success

```
bool
```

Optional. Whether valid entries should be written even if some other entries fail due to INVALID_ARGUMENT or PERMISSION_DENIED errors. If any entry is not written, the response status will be the error associated with one of the failed entries and include error details in the form of WriteLogEntriesPartialErrors.

class google.cloud.grpc.logging.v2.logging_pb2.WriteLogEntriesResponse

Result returned from WriteLogEntries. empty

Attributes:

google.logging.type.http_request_pb2**Classes**

HttpRequest A common proto for logging HTTP requests.

class google.logging.type.http_request_pb2.HttpRequest

A common proto for logging HTTP requests. Only contains semantics defined by the HTTP specification. Product-specific logging information MUST be defined in a separate message.

request_method

string

The request method. Examples: "GET", "HEAD", "PUT", "POST".

request_url

string

The scheme (http, https), the host name, the path and the query portion of the URL that was requested. Example: "http://example.com/some/info?color=red".

request_size

long

The size of the HTTP request message in bytes, including the request headers and the request body.

status

int

The response code indicating the status of response. Examples: 200, 404.

response_size

long

The size of the HTTP response message sent back to the client, in bytes, including the response headers and the response body.

user_agent

string

The user agent sent by the client. Example: "Mozilla/4.0 (compatible; MSIE 6.0; Windows 98; Q312461; .NET CLR 1.0.3705)".

remote_ip

string

The IP address (IPv4 or IPv6) of the client that issued the HTTP request. Examples: "192.168.1.1", "FE80::0202:B3FF:FE1E:8329".

server_ip

string

The IP address (IPv4 or IPv6) of the origin server that the request was sent to.

referer

string

The referer URL of the request, as defined in [HTTP/1.1 Header Field Definitions](#).

latency

google.protobuf.duration_pb2.Duration

The request processing latency on the server, from the time the request was received until the response was sent.

cache_lookup

bool

Whether or not a cache lookup was attempted.

cache_hit

bool

Whether or not an entity was served from cache (with or without validation).

cache_validated_with_origin_server*bool*

Whether or not the response was validated with the origin server before being served from cache. This field is only meaningful if `cache_hit` is True.

cache_fill_bytes*long*

The number of HTTP response bytes inserted into cache. Set only when a cache fill was attempted.

google.protobuf.any_pb2**Classes**

<i>Any</i>	Any contains an arbitrary serialized protocol buffer message along with a URL that describes the type of the serialized message.
------------	--

class google.protobuf.any_pb2.Any

Any contains an arbitrary serialized protocol buffer message along with a URL that describes the type of the serialized message.

Protobuf library provides support to pack/unpack Any values in the form of utility functions or additional generated methods of the Any type.

Example 1: Pack and unpack a message in C++.

```
Foo foo = ...;
Any any;
any.PackFrom(foo);
...
if (any.UnpackTo(&foo)) {
    ...
}
```

Example 2: Pack and unpack a message in Java.

```
Foo foo = ...;
Any any = Any.pack(foo);
...
if (any.is(Foo.class)) {
    foo = any.unpack(Foo.class);
}
```

The pack methods provided by protobuf library will by default use ‘`type.googleapis.com/full.type.name`’ as the type URL and the unpack methods only use the fully qualified type name after the last ‘/’ in the type URL, for example “`foo.bar.com/x/y.z`” will yield type name “`y.z`”.

JSON

The JSON representation of an Any value uses the regular representation of the deserialized, embedded message, with an additional field `@type` which contains the type URL. Example:

```
package google.profile;
message Person {
    string first_name = 1;
    string last_name = 2;
}
```

```
{  
    "@type": "type.googleapis.com/google.profile.Person",  
    "firstName": <string>,  
    "lastName": <string>  
}
```

If the embedded message type is well-known and has a custom JSON representation, that representation will be embedded adding a field `value` which holds the custom JSON in addition to the `@type` field. Example (for message `google.protobuf.Duration`):

```
{  
    "@type": "type.googleapis.com/google.protobuf.Duration",  
    "value": "1.212s"  
}
```

type_url
string

A URL/resource name whose content describes the type of the serialized protocol buffer message.

For URLs which use the schema `http`, `https`, or no schema, the following restrictions and interpretations apply:

- If no schema is provided, `https` is assumed.
- The last segment of the URL's path must represent the fully qualified name of the type (as in `path/google.protobuf.Duration`). The name should be in a canonical form (e.g., leading `."` is not accepted).
- An HTTP GET on the URL must yield a `google.protobuf.Type` value in binary format, or produce an error.
- Applications are allowed to cache lookup results based on the URL, or have them precompiled into a binary to avoid any lookup. Therefore, binary compatibility needs to be preserved on changes to types. (Use versioned type names to manage breaking changes.)

Schemas other than `http`, `https` (or the empty schema) might be used with implementation specific semantics.

value
bytes

Must be a valid serialized protocol buffer of the above specified type.

google.protobuf.duration_pb2

Classes

Duration A Duration represents a signed, fixed-length span of time represented as a count of seconds and fractions of seconds at nanosecond resolution.

class google.protobuf.duration_pb2.**Duration**

A Duration represents a signed, fixed-length span of time represented as a count of seconds and fractions of seconds at nanosecond resolution. It is independent of any calendar and concepts like “day” or “month”. It is related to `Timestamp` in that the difference between two `Timestamp` values is a `Duration` and it can be added or subtracted from a `Timestamp`. Range is approximately $\pm 10,000$ years.

Example 1: Compute Duration from two `Timestamp`s in pseudo code.

```

Timestamp start = ...;
Timestamp end = ...;
Duration duration = ...;

duration.seconds = end.seconds - start.seconds;
duration.nanos = end.nanos - start.nanos;

if (duration.seconds < 0 && duration.nanos > 0) {
    duration.seconds += 1;
    duration.nanos -= 10000000000;
} else if (duration.seconds > 0 && duration.nanos < 0) {
    duration.seconds -= 1;
    duration.nanos += 10000000000;
}

```

Example 2: Compute Timestamp from Timestamp + Duration in pseudo code.

```

Timestamp start = ...;
Duration duration = ...;
Timestamp end = ...;

end.seconds = start.seconds + duration.seconds;
end.nanos = start.nanos + duration.nanos;

if (end.nanos < 0) {
    end.seconds -= 1;
    end.nanos += 1000000000;
} else if (end.nanos >= 1000000000) {
    end.seconds += 1;
    end.nanos -= 1000000000;
}

```

seconds

long

Signed seconds of the span of time. Must be from -315,576,000,000 to +315,576,000,000 inclusive.

nanos

int

Signed fractions of a second at nanosecond resolution of the span of time. Durations less than one second are represented with a 0 seconds field and a positive or negative nanos field. For durations of one second or more, a non-zero value for the nanos field must be of the same sign as the seconds field. Must be from -999,999,999 to +999,999,999 inclusive.

google.protobuf.timestamp_pb2

Classes

[Timestamp](#) A Timestamp represents a point in time independent of any time zone or calendar, represented as seconds and fractions of seconds at nanosecond resolution in UTC Epoch time.

class google.protobuf.timestamp_pb2.Timestamp

A Timestamp represents a point in time independent of any time zone or calendar, represented as seconds and fractions of seconds at nanosecond resolution in UTC Epoch time. It is encoded using the Proleptic Gregorian Calendar which extends the Gregorian calendar backwards to year one. It is encoded assuming all minutes are 60 seconds long, i.e. leap seconds are “smeared” so that no leap second table is needed for interpretation. Range

is from 0001-01-01T00:00:00Z to 9999-12-31T23:59:59.999999999Z. By restricting to that range, we ensure that we can convert to and from RFC 3339 date strings. See <https://www.ietf.org/rfc/rfc3339.txt>.

Example 1: Compute Timestamp from POSIX `time()`.

```
Timestamp timestamp;
timestamp.set_seconds(time(NULL));
timestamp.set_nanos(0);
```

Example 2: Compute Timestamp from POSIX `gettimeofday()`.

```
struct timeval tv;
gettimeofday(&tv, NULL);

Timestamp timestamp;
timestamp.set_seconds(tv.tv_sec);
timestamp.set_nanos(tv.tv_usec * 1000);
```

Example 3: Compute Timestamp from Win32 `GetSystemTimeAsFileTime()`.

```
FILETIME ft;
GetSystemTimeAsFileTime(&ft);
UINT64 ticks = (((UINT64)ft.dwHighDateTime) << 32) | ft.dwLowDateTime;

// A Windows tick is 100 nanoseconds. Windows epoch 1601-01-01T00:00:00Z
// is 11644473600 seconds before Unix epoch 1970-01-01T00:00:00Z.
Timestamp timestamp;
timestamp.set_seconds((INT64)((ticks / 10000000) - 11644473600LL));
timestamp.set_nanos((INT32)((ticks % 1000000) * 100));
```

Example 4: Compute Timestamp from Java `System.currentTimeMillis()`.

```
long millis = System.currentTimeMillis();

Timestamp timestamp = Timestamp.newBuilder().setSeconds(millis / 1000)
    .setNanos((int)((millis % 1000) * 1000000)).build();
```

Example 5: Compute Timestamp from current time in Python.

```
now = time.time()
seconds = int(now)
nanos = int((now - seconds) * 10**9)
timestamp = Timestamp(seconds=seconds, nanos=nanos)
```

seconds
long

Represents seconds of UTC time since Unix epoch 1970-01-01T00:00:00Z. Must be from 0001-01-01T00:00:00Z to 9999-12-31T23:59:59Z inclusive.

nanos
int

Non-negative fractions of a second at nanosecond resolution. Negative second values with fractions must still have non-negative nanos values that count forward in time. Must be from 0 to 999,999,999 inclusive.

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