

This page describes how to manage the lifecycle of a Cloud Spanner long-running operation using operations APIs.

Long-running operations are method calls that may take a substantial amount of time to complete. Cloud Spanner creates long-running operations for several database and instance actions. An example is the method to create a database, [`projects.instances.databases.create`](#) (/spanner/docs/reference/rest/v1/projects.instances.databases/create#try-it). When `projects.instances.databases.create` is called, the Cloud Spanner service creates a long-running operation to track the database creation status. Cloud Spanner provides operations APIs that allow you to check the status of long-running operations. You can also list and cancel long-running operations, as well as delete long-running instance operations.

In addition to REST APIs, the following sources generate long-running operations when you create databases and instances, update schema, and update instances:

- [Cloud Spanner client libraries](#) (/spanner/docs/reference/libraries)
- The [gcloud](#) (/sdk/gcloud/reference/spanner/) command-line tool
- The [Spanner page](#) (https://console.cloud.google.com/spanner) in the Google Cloud Console

Manage your Cloud Spanner long-running operations using these methods:

Action	Long-running database operations	Long-r
Cancel a long-running operation	<code>cancel</code> (/spanner/docs/reference/rest/v1/projects.instances.databases.operations/cancel#try-it)	<code>cancel</code> (/span
Delete a long-running operation	Unsupported	<code>delete</code> (/span
Get the status of a long-running operation	<code>get</code> (/spanner/docs/reference/rest/v1/projects.instances.databases.operations/get#try-it)	<code>get</code> (/s

Action	Long-running database operations	Long-r
List long-running operations	list (/spanner/docs/reference/rest/v1/projects.instances.databases.operations/list#try-it)	list (/

The following are long-running database operations.

- [**projects.instances.databases.create**](/spanner/docs/reference/rest/v1/projects.instances.databases/create#try-it)
(/spanner/docs/reference/rest/v1/projects.instances.databases/create#try-it)
- [**projects.instances.databases.updateDdl**](/spanner/docs/reference/rest/v1/projects.instances.databases/updateDdl#try-it)
(/spanner/docs/reference/rest/v1/projects.instances.databases/updateDdl#try-it)

Use [**projects.instances.databases.operations.get**](/spanner/docs/reference/rest/v1/projects.instances.databases.operations/get#try-it)

(/spanner/docs/reference/rest/v1/projects.instances.databases.operations/get#try-it) to get the status of a long-running database operation.

As an example, this is a response from [**projects.instances.databases.create**](/spanner/docs/reference/rest/v1/projects.instances.databases/create#try-it)
(/spanner/docs/reference/rest/v1/projects.instances.databases/create#try-it):

The `name` value at the top of the response shows the Cloud Spanner service created a long-running database operation named `projects/[PROJECT_ID]/instances/test-instance/databases/example-db/operations/_auto_1492721321097206`.

To get the status of the long-running database operation:

1. Click `projects.instances.databases.operations.get`

(</spanner/docs/reference/rest/v1/projects.instances.databases.operations/get#try-it>).

2. For **name**, enter the long-running database operation name as shown in the response to `projects.instances.databases.create` or `projects.instances.databases.updateDdl`. For example:

(Use the operation name you received instead of this value.) You can also retrieve the database operation name by [listing long-running database operations](#) (`#list_long-running_database_operations`).

3. Click **Execute** and view the response. When an operation is done, the `done` field will be set to `true`.

To poll a long-running database operation, repeatedly invoke the `projects.instances.databases.operations.get` method until the operation is done. Use a backoff between each poll request. For example, poll every 10 seconds.

Use `projects.instances.databases.operations.list`

(</spanner/docs/reference/rest/v1/projects.instances.databases.operations/list#try-it>) to list long-running database operations.

1. Click `projects.instances.databases.operations.list`

(</spanner/docs/reference/rest/v1/projects.instances.databases.operations/list#try-it>).

2. For **name**, enter:

3. Click **Execute**. The response contains the long-running database operations.

Use `projects.instances.databases.operations.cancel`

(</spanner/docs/reference/rest/v1/projects.instances.databases.operations/cancel#try-it>) to cancel a long-

running instance operation.

1. Click **`projects.instances.databases.operations.cancel`**
(`/spanner/docs/reference/rest/v1/projects.instances.databases.operations/cancel#try-it`).
2. For **name**, enter the long-running database operation name as shown in the long-running database operation response. For example:

(Use the operation name you received instead of this value.) You can also retrieve the database operation name by **`listing long-running database operations`**
(`#list_long-running_database_operations`).

3. Click **Execute**.

The following are long-running instance operations.

- **`projects.instances.create`** (`/spanner/docs/reference/rest/v1/projects.instances/create#try-it`)
- **`projects.instances.patch`** (`/spanner/docs/reference/rest/v1/projects.instances/patch#try-it`)

Use **`projects.instances.operations.get`**

(`/spanner/docs/reference/rest/v1/projects.instances.operations/get#try-it`) to get the status of a long-running instance operation.

As an example, this is a response from **`projects.instances.create`**

(`/spanner/docs/reference/rest/v1/projects.instances/create#try-it`):

The `name` value at the top of the response shows the Cloud Spanner service created a long-running instance operation named `projects/[PROJECT_ID]/instances/test-instance/operations/9af0cf8c1e123a2e`.

To get the status of the long-running instance operation:

1. Click `projects.instances.operations.get`
(`/spanner/docs/reference/rest/v1/projects.instances.operations/get#try-it`).
2. For **name**, enter the long-running instance operation name as shown in the response to `projects.instances.create` or `projects.instances.patch`. For example:

(Use the operation name you received instead of this value.) You can also retrieve the instance operation name by [listing long-running instance operations](#) (`#list_long-running_instance_operations`)

3. Click **Execute** and view the response. When an operation is done, the `done` field will be set to `true`.

To poll a long-running instance operation, repeatedly invoke the `projects.instances.operations.get` method until the operation is done. Use a backoff between each poll request. For example, poll every 10 seconds.

Use `projects.instances.operations.list`

(`/spanner/docs/reference/rest/v1/projects.instances.operations/list#try-it`) to list long-running instance operations.

1. Click `projects.instances.operations.list`
(`/spanner/docs/reference/rest/v1/projects.instances.operations/list#try-it`).

2. For **name**, enter:

3. Click **Execute**. The response contains the long-running instance operations.

Use `projects.instances.operations.cancel`

(/spanner/docs/reference/rest/v1/projects.instances.operations/cancel#try-it) to cancel a long-running instance operation.

1. Click `projects.instances.operations.cancel`

(/spanner/docs/reference/rest/v1/projects.instances.operations/cancel#try-it).

2. For **name**, enter the long-running instance operation name as shown in the long-running instance operation response. For example:

(Use the operation name you received instead of this value.) You can also retrieve the instance operation name by [listing long-running instance operations](#) (#list_long-running_instance_operations)

3. Click **Execute**.

Use `projects.instances.operations.delete`

(/spanner/docs/reference/rest/v1/projects.instances.operations/delete#try-it) to delete a long-running instance operation.

1. Click `projects.instances.operations.delete`

(/spanner/docs/reference/rest/v1/projects.instances.operations/delete#try-it).

2. For **name**, enter the long-running instance operation name as shown in the long-running instance operation response. For example:

(Use the operation name you received instead of this value.) You can also retrieve the instance operation name by [listing long-running instance operations](#) (#list_long-running_instance_operations)

3. Click **Execute**.