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Creating and Managing Projects

Google Cloud projects form the basis for creating, enabling, and using all Google Cloud services including managing APIs, enabling billing, adding and removing collaborators, and managing permissions for Google Cloud resources.

This page explains how to create and manage Google Cloud projects using the Resource Manager API and the Google Cloud Console.

Before you begin

Read about the project resource in the [Resource Hierarchy overview](#)

(https://cloud.google.com/resource-manager/docs/cloud-platform-resource-hierarchy#projects).

The following are used to identify your project:

- **Project name:** A human-readable name for your project.

The project name isn't used by any Google APIs. You can edit the project name at any time during or after project creation. Project names do not need to be unique.

- **Project ID:** A customizable unique identifier for your project.

The default project ID is composed of the project name and a randomly assigned number. You can customize the project ID only during project creation.

Some words are restricted from use in project IDs. If you use restricted words in the project name, such as `google` or `ssl`, the generated project ID will not include these words.

- **Project number:** An automatically generated unique identifier for your project.

The project number and project ID are unique across Google Cloud. If another user owns a project ID for their project, you won't be able to use the same project ID. You can't reuse the project ID of a deleted project.

When you choose your project ID (or any resource names), don't include any sensitive information in your names.

Creating a project

To create a project, you must have the `resourcemanager.projects.create` permission. This permission is included in the Project Creator `roles/resourcemanager.projectCreator` role, which is granted by default to the entire domain of a new organization and to free trial users. For information on how to grant individuals the role and limit organization-wide access, see the [Managing Default Organization Roles](https://cloud.google.com/resource-manager/docs/default-access-control) (<https://cloud.google.com/resource-manager/docs/default-access-control>) page.

If you do not specify the parent resource, a parent resource is selected automatically based on the user account's domain.

You can create a new project using the Cloud Console, the `gcloud` command-line tool, or the `projects.create()` (<https://cloud.google.com/resource-manager/reference/rest/v1/projects/create>) method.

CONSOLE	GLOUD	API	PYTHON
To create a new project:			
1. Go to the Manage resources page in the Cloud Console.			
GO TO THE MANAGE RESOURCES PAGE (HTTPS://CONSOLE.CLOUD.GOOGLE.COM/CLOUD-RESOU			
2. On the Select organization drop-down list at the top of the page, select the organization in which you want to create a project. If you are a free trial user, skip this step, as this list does not appear.			
3. Click Create Project .			
4. In the New Project window that appears, enter a project name and select a billing account as applicable.			
5. If you want to add the project to a folder, enter the folder name in the Location box.			
6. When you're finished entering new project details, click Create .			

Creating a project using a service account

You can use a service account to automate project creation. Like user accounts, service accounts can be granted permission to create projects within an organization. Service accounts are not allowed to create projects outside of an organization and must specify the parent resource when creating a project. Service accounts can create a new project using the `gcloud` tool or the `projects.create()` method.

Managing project quotas

If you have fewer than 30 projects remaining in your quota, a notification will display the number of projects remaining in your quota on the **New Project** (<https://console.cloud.google.com/projectcreate>) page. Once you have reached your project limit, to create more projects you must request a project limit increase. Alternatively, you can schedule some projects to be deleted after 30 days on the [Manage Resources Page](https://console.cloud.google.com/cloud-resource-manager) (<https://console.cloud.google.com/cloud-resource-manager>). Projects that users have soft deleted (`#shutting_down_projects`) count against your quota. These projects will be fully deleted after 30 days.

To request additional capacity for projects in your quota, see the [Request Billing Quota Increase](https://support.google.com/code/contact/billing_quota_increase) (https://support.google.com/code/contact/billing_quota_increase) support page. More information about quotas and why they are used can be found at the [Free Trial Project Quota Requests](https://support.google.com/cloud/answer/6330231?hl=en) (<https://support.google.com/cloud/answer/6330231?hl=en>) support page.

Identifying projects

To interact with Google Cloud resources, you must provide the identifying project information for every request. A project is identified by its project ID and project number.

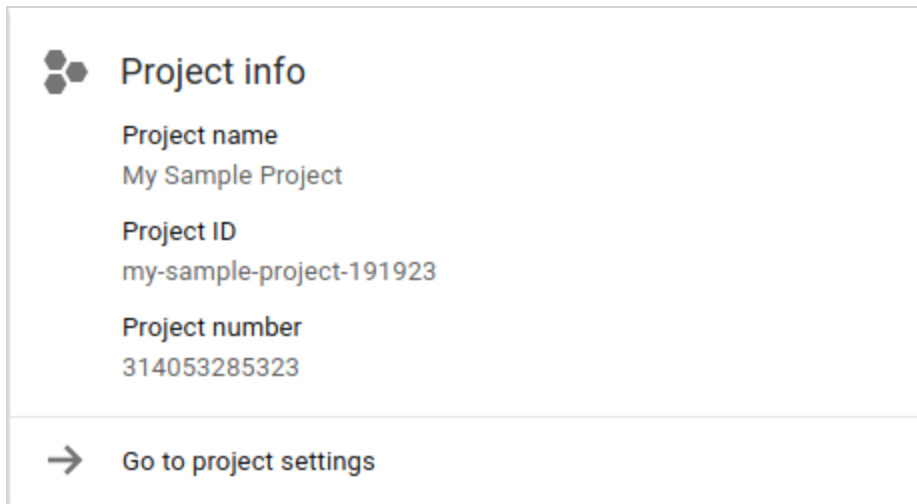
To get the project ID and the project number:

1. Go to the **Dashboard** page (<https://console.cloud.google.com/home>) in the Cloud Console.

GO TO THE DASHBOARD PAGE ([HTTPS://CONSOLE.CLOUD.GOOGLE.COM/HOME](https://console.cloud.google.com/home))

2. Click the **Select from** drop-down list at the top of the page. In the **Select from** window that appears, select your project.

The project ID and project number are displayed on the project Dashboard **Project info** card:



The screenshot shows a 'Project info' card with a Google Cloud logo icon. It lists the following details:

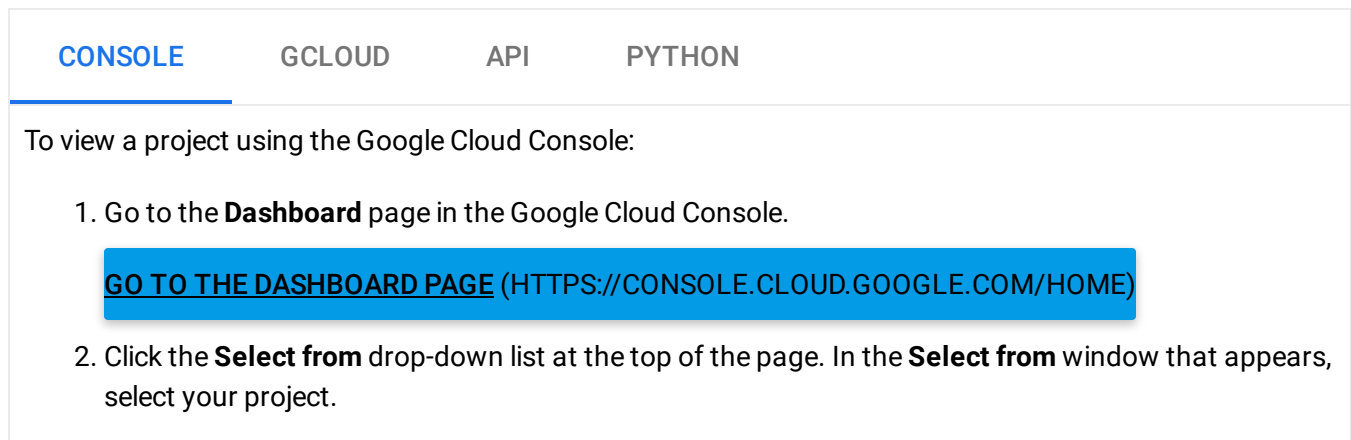
- Project name:** My Sample Project
- Project ID:** my-sample-project-191923
- Project number:** 314053285323

At the bottom of the card, there is a button with a right-pointing arrow and the text 'Go to project settings'.

In the above example, the project name is **My Sample Project** and the project ID is **my-sample-project-191923**.

Get an existing project

You can get an existing project using the Cloud Console or the `projects.get()` (<https://cloud.google.com/resource-manager/reference/rest/v1/projects/get>) method.



The screenshot shows a documentation page with tabs for 'CONSOLE', 'G CLOUD', 'API', and 'PYTHON'. The 'CONSOLE' tab is selected. The content reads:

To view a project using the Google Cloud Console:

1. Go to the **Dashboard** page in the Google Cloud Console.
GO TO THE DASHBOARD PAGE (HTTPS://CONSOLE.CLOUD.GOOGLE.COM/HOME)
2. Click the **Select from** drop-down list at the top of the page. In the **Select from** window that appears, select your project.

Listing projects

You can list all projects you have access to using the Cloud Console or the `projects.list()` (<https://cloud.google.com/resource-manager/reference/rest/v1/projects/list>) method.

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To list projects using the Google Cloud Console:

- Go to the Cloud Console.

[GO TO THE CLOUD CONSOLE \(HTTPS://CONSOLE.CLOUD.GOOGLE.COM/\)](https://console.cloud.google.com/)

- All your projects are listed in the **projects** drop-down on the top bar. Use the **Search projects and folders** textbox to filter projects.
- To list all your projects, click **Manage Resources**. Use the **Filter by name, ID, or label** textbox to filter your projects.

Updating projects

You can update projects using the Cloud Console or the `projects.update()`

(<https://cloud.google.com/resource-manager/reference/rest/v1/projects/update>) method. Currently the only fields that can be updated are the project name and labels. You cannot change the project ID value that you use with the `gcloud` command-line tool or API requests. For more information about updating projects, see the [project API reference page](#)

(<https://cloud.google.com/resource-manager/reference/rest/v1/projects>).

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To update a project's field using the Cloud Console:

- Open the Settings page in the Google Cloud Console.

[OPEN THE SETTINGS PAGE \(HTTPS://CONSOLE.CLOUD.GOOGLE.COM/IAM-ADMIN/SETTINGS\)](https://console.cloud.google.com/iam-admin/settings)

- At the top of the screen, click the project selection drop-down list.
- On the **Select from** window that appears, click the organization drop-down list and then select your organization.
- Select your project from the list that appears.
- To change the project name, edit **Project name**, then click **Save**.
- To change labels, click **Labels** on the left nav. Learn more about [Using Labels](#) (<https://cloud.google.com/resource-manager/docs/using-labels>).

Shutting down (deleting) projects

You can shut down projects using the Cloud Console or the `projects.delete()` (<https://cloud.google.com/resource-manager/reference/rest/v1/projects/delete>) method. A project must have a lifecycle state of `ACTIVE` to be shut down in this way.

This method immediately marks a project to be deleted and sends a notification email to the project owner. A project that is marked for deletion is not usable. If the project has a billing account associated with it, that association is broken, and will not be reinstated even if the project delete operation is immediately canceled. After approximately 30 days, the project will be fully deleted. To stop this process during the 30-day period, see the [steps to restore a project](#) (`#restoring_a_project`).

Warning: You can recover most resources if you restore a project within the 30-day period. Some resources, such as Cloud Storage resources, are deleted much sooner. These resources might not be fully recoverable even if you restore the project within the 30-day period. Billing accounts are immediately disconnected, and must be manually linked again after the project is restored.

At the end of the 30-day period, the project and all of its resources are deleted and cannot be recovered. Until it is deleted, the project will count towards your project quota.

If you have set up billing for a project, it might not be completely deleted until the current billing cycle ends and your account is successfully charged. The number and types of services in use can also affect when the system permanently deletes a project. To learn more about data retention and safe deletion, see [How Google retains data we collect](#) (<https://policies.google.com/technologies/retention>).

To shut down a project:

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To shut down a project using the Cloud Console:

- Open the Settings page (found under IAM & admin) in the Google Cloud Console.

[OPEN THE SETTINGS PAGE \(HTTPS://CONSOLE.CLOUD.GOOGLE.COM/IAM-ADMIN/SETTINGS\)](https://console.cloud.google.com/iam-admin/settings)

- Click **Select a project**.
- Select a project you want to delete, and click **Open**.

- Click **Shut down**.
- Enter the Project ID, then click **Shut down**.

Restoring a project

Project owners can restore a deleted project within the 30-day recovery period that starts when the project is shut down. Restoring a project returns it to the state it was in before it was shut down. Cloud Storage resources are deleted before the 30-day period ends, and may not be fully recoverable.

Some services might need to be restarted manually. For more information, see [Restarting Google Cloud Services](https://cloud.google.com/billing/docs/how-to/restart-services) (<https://cloud.google.com/billing/docs/how-to/restart-services>).

To restore a project:

1. Go to the **Manage resources** page in the Google Cloud Console.

[GO TO THE MANAGE RESOURCES PAGE](https://console.cloud.google.com/cloud-resources) ([HTTPS://CONSOLE.CLOUD.GOOGLE.COM/CLOUD-RESOUR](https://console.cloud.google.com/cloud-resources))

2. In the **Organization** drop-down in the upper left, select your organization.
3. Below the list of projects, click **Resources pending deletion**.
4. Check the box for the project you want to restore, then click **Restore**. In the dialog that appears, confirm that you want to restore the project.

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