



Getting Started with Projects

Google Cloud Platform



Google Cloud Platform

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Project Fundamentals

2

Project Best Practices

3

Integration with Google Apps

Projects

- All Google Cloud Platform services are associated with a project that is used to:
 - Track resource and quota **usage**
 - Enable **billing**
 - Manage **permissions** and **credentials**
 - Enable **services** and **APIs**
- Projects use three identifying attributes:
 - Project **Name**
 - Project **Number**
 - Project **Id**
 - Also known as Application Id
- Interact with projects using the Developers Console or the Cloud Resource Manager API **Beta**



Project Permissions



Owner

- Invite members
- Remove members
- Can delete project
- Includes Editor rights



Editor

- Deploy applications
- Modify code
- Configure services
- Includes Viewer rights



Viewer

- Read-only access



Billing administrator

- Manage billing
- Add administrators
- Remove administrators

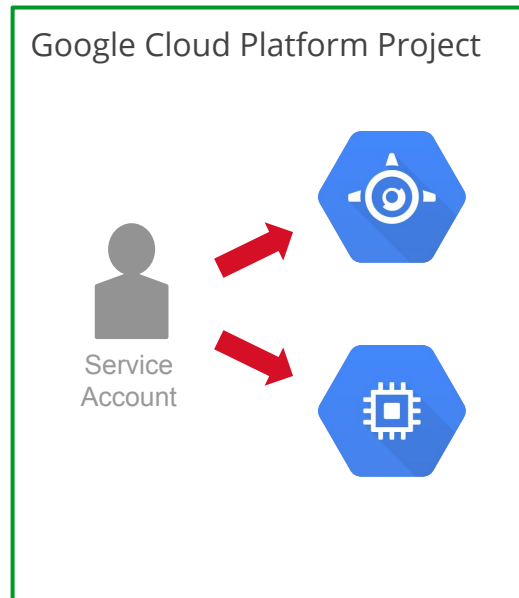
A project can have multiple owners, editors, viewers and billing administrators.

Google Cloud IAM

- Google Cloud Identity and Access Management can be used to create and manage permissions for projects
 - Currently also supports Google Genomics and Cloud Pub/Sub
 - Accessible via Google Developers Console or IAM APIs
- Create policies that assign users or groups to roles
 - Roles provide access to resources
 - Exposes additional, more flexible roles beyond owner, editor, and viewer
 - Example: Pub/Sub exposes topic publisher/subscriber roles
- Cloud IAM supports granting permissions via:
 - Google groups, a Google-hosted domain, Google accounts or service accounts

Service Accounts

- Provide an identity for carrying out **server-to-server** interactions in a project
- Identified with an **email** address:
 <project_number>@developer.gserviceaccount.com
 <project_id>@developer.gserviceaccount.com
- Used with Compute Engine, App Engine and Google Cloud Monitoring
- Used to **authenticate** from one service to another using view or edit permissions



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Project Fundamentals

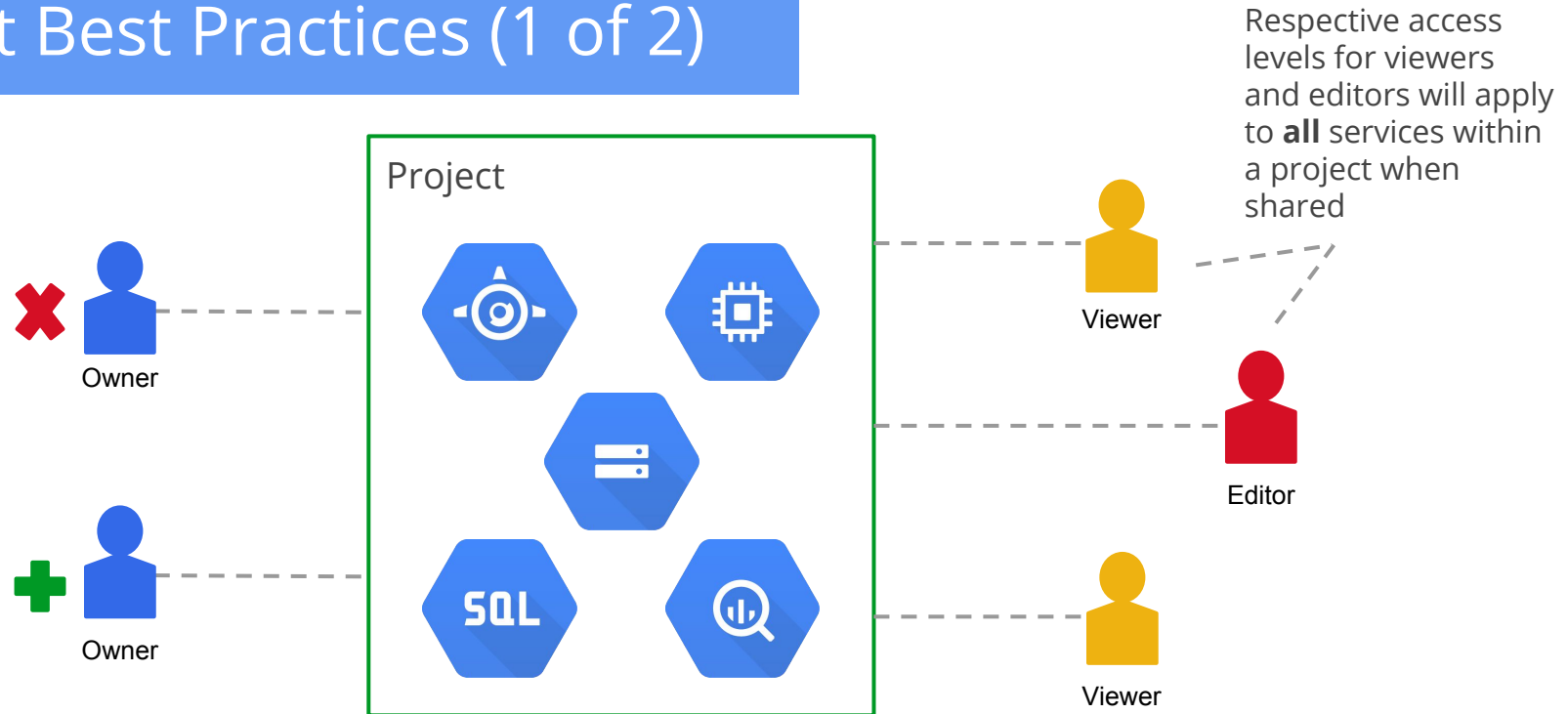
2

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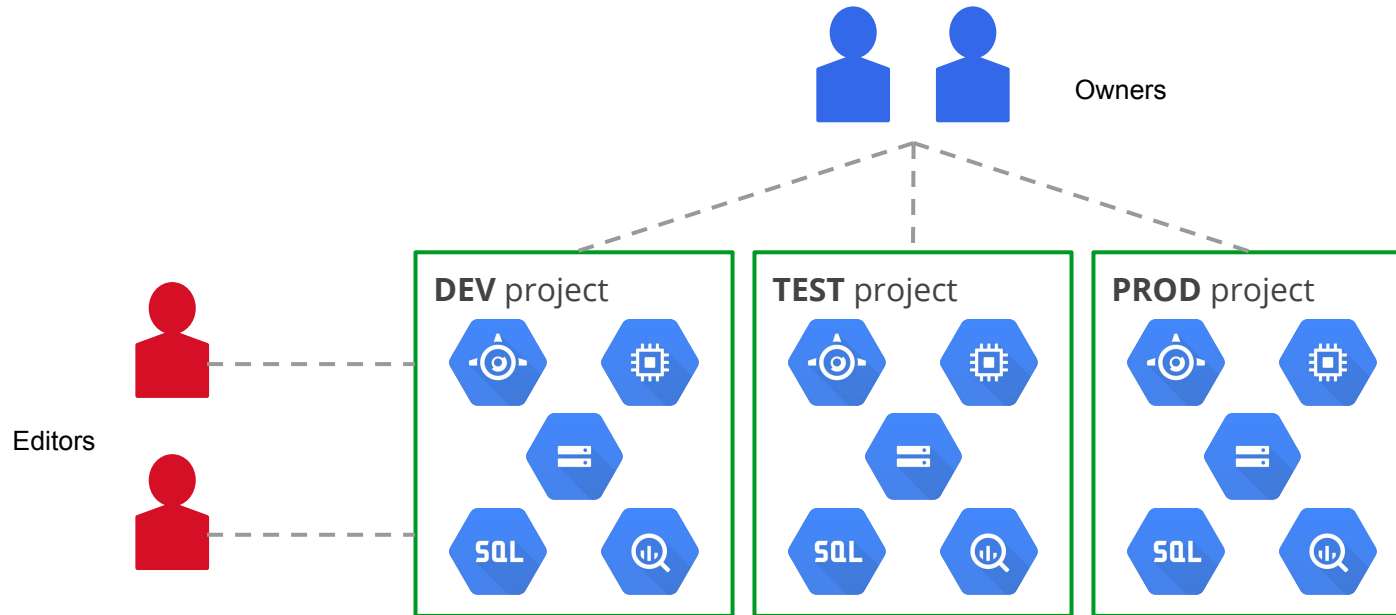
Project Best Practices (1 of 2)



Pro tip!

Share your project with additional **owners** to protect against deletion if the original owner's account is deleted.

Project Best Practices (2 of 2)



Pro tip!

It's common to use **multiple projects** to manage development, test and production stages of a release pipeline with different permission structures.

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Using Google Apps

- Very common to use Google Apps to manage accounts used with Google Cloud Platform
- Best to suspend owner accounts when no longer required rather than delete
- Google Apps is also used to map custom SSL domains for App Engine applications as illustrated below:



https://www.example.com
(Custom domain)



https://project-id.appspot.com
(App Engine URL)

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Quiz

Which 4 of the following are considered best practices for working with Google Cloud Platform projects?

- ☐ Add multiple owners to a project
- ☐ Use separate projects for development, test, and production
- ☐ Ensure that there are multiple editors for a project
- ☐ Suspend the owner account when an employee leaves the company
- ☐ Delete the owner account when an employee leaves the company
- ☐ Use service accounts for server-to-server interactions

Resources

- Configuring permissions on Google Cloud Platform
<https://cloud.google.com/developers/articles/best-practices-for-configuring-permissions-on-gcp/>
- Google Developers Console Help
<https://developers.google.com/console/help/new/>
- Compute Engine Projects
<https://cloud.google.com/compute/docs/projects>
- Using Projects (Cloud Storage)
<https://cloud.google.com/storage/docs/projects>

Quiz Answers

Which 4 of the following are considered best practices for working with Google Cloud Platform projects?

- ✓ Add multiple owners to a project
- ✓ Use separate projects for development, test, and production
- ☐ Ensure that there are multiple editors for a project
- ✓ Suspend the owner account when an employee leaves the company
- ☐ Delete the owner account when an employee leaves the company
- ✓ Use service accounts for server-to-server interactions



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