

You have several options for deploying MySQL as part of your Google Cloud Platform project. You can use Google Cloud SQL, Google Cloud Platform Marketplace, or manually install MySQL on Google Compute Engine.

[Google Cloud SQL](/sql/docs/introduction) (/sql/docs/introduction) offers MySQL as a web service. You can use Google Cloud SQL to host your MySQL database in Google's cloud, and let Google Cloud Platform handle administrative duties like replication, patch management, and database management.

[GCP Marketplace](/marketplace/?q=mysql) (/marketplace/?q=mysql) provides a simple click-to-deploy interface that makes it easy to install MySQL onto a Compute Engine instance. GCP Marketplace includes not only a stand alone MySQL installation, but also several web development stacks that use MySQL, including LAMP stacks, LEMP stacks, and Percona MySQL clusters.

If you prefer to manually install and customize MySQL, you can use Compute Engine to create a MySQL database in a matter of minutes. This document provides guidance on which option to choose and walks through the manual installation of a MySQL database on Compute Engine.

Google Cloud SQL is a great option if you want the convenience of having Google Cloud Platform take care of the backend database and server administration chores. For example, Cloud SQL provides automated backups and point-in-time recovery. Moreover, your data is replicated across multiple zones for greater availability and resiliency.

You might prefer to install MySQL on Compute Engine if you require a MySQL feature that is not supported by Cloud SQL. For example, Cloud SQL does not support user defined functions or the SUPER privilege. For more information, see [the Cloud SQL FAQ](/sql/faq#supportmysqlfeatures) (/sql/faq#supportmysqlfeatures).

If you decide to install MySQL on Compute Engine, you can either use Google GCP Marketplace to deploy a MySQL installation, or you can manually install MySQL on a Compute Engine instance. GCP Marketplace provides a convenient way to deploy MySQL as part of larger

development stacks. GCP Marketplace offers several [options for MySQL installations](#) (/marketplace/?q=mysql), including a stand alone MySQL installation, LAMP stacks, LEMP stacks, Nginx Stacks, a Percona MySQL Cluster installation, and several other options.

If the GCP Marketplace offerings don't meet your needs, you can manually install MySQL on a Compute Engine instance. You might, for example, want to deploy MySQL on a custom image that you have created, or you might want to have complete control of the installation process.

To manually install MySQL on a Compute Engine instance, you need only create a Compute Engine instance and install MySQL directly onto the instance. The remainder of this document describes the manual installation of MySQL on a Compute Engine instance.

- Create a Compute Engine instance
- Install MySQL
- Connect to MySQL

1. Create a new project in the [Google Cloud Console](https://console.cloud.google.com/project) (https://console.cloud.google.com/project). You can use an existing project, but creating a new project makes cleanup easier.

You can complete all of the steps in this document using the Google Cloud Console, but if you prefer to use the `gcloud` command line tool, follow these steps to enable the Compute Engine API and install the Google Cloud SDK.

1. Use the Google Cloud Console to [enable the Compute Engine API](https://console.cloud.google.com/flows/enableapi?apiid=compute_component) (https://console.cloud.google.com/flows/enableapi?apiid=compute\_component).
2. Install the [Google Cloud SDK](#) (/sdk/docs/).
3. Configure your workspace to make commands less verbose. Substitute your project's values for [PROJECT\_ID] and [ZONE] in the following commands. For the full list of zones, see [Available regions & zones](#) (/compute/docs/regions-zones/regions-zones#available).

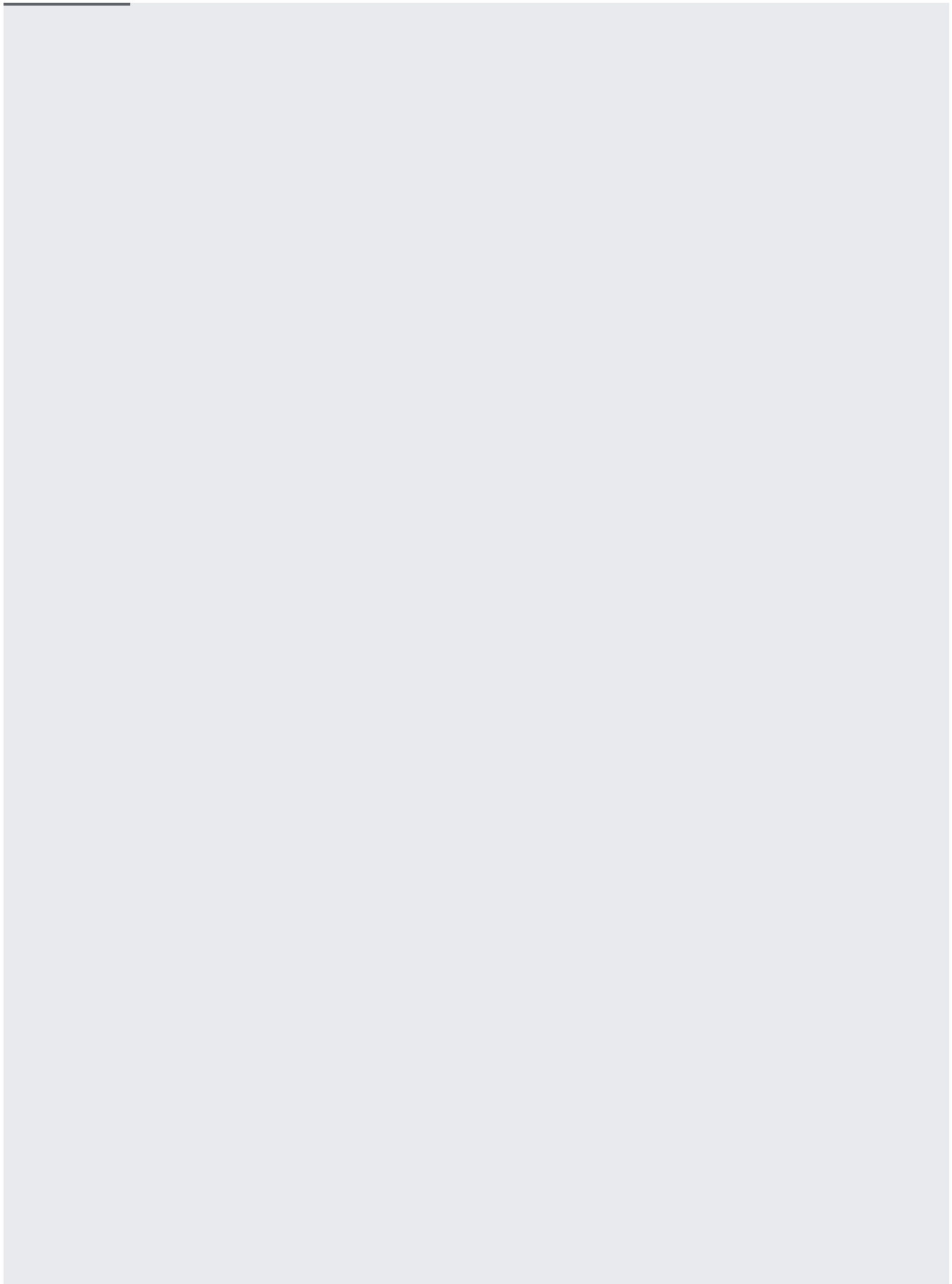
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**Important:** This tutorial uses Google Compute Engine, which is a billable component of Cloud Platform.

Use the [Pricing Calculator](/products/calculator/) (/products/calculator/) to generate a cost estimate based on your projected usage. New Cloud Platform users may be eligible for a [free trial](/free-trial/) (/free-trial/).

Create a Compute Engine instance for MySQL and establish an SSH connection to the newly created instance. The default operating system is Debian version 9. If you prefer to use a different operating system for this tutorial, you can choose from the options described on the [Images](/compute/docs/images/) (/compute/docs/images/) page in the Compute Engine documentation.

The following steps describe how to install MySQL on a Compute Engine instance.



To improve the security of your MySQL installation, run the `mysql_secure_installation` command. If you didn't set a password during the installation process, create a password in this step. For more information about this command, see the MySQL documentation for [`mysql\_secure\_installation`](https://dev.mysql.com/doc/refman/5.0/en/mysql-secure-installation.html) (<https://dev.mysql.com/doc/refman/5.0/en/mysql-secure-installation.html>).

The following steps describe how to connect to MySQL from your `mysql-test` instance.

1. Connect to MySQL using the MySQL client.

★ **Note:** In most cases, you should use a non-root user account to access your MySQL database. For details on adding a user account, see [Adding User Accounts](https://dev.mysql.com/doc/refman/8.0/en/adding-users.html) (<https://dev.mysql.com/doc/refman/8.0/en/adding-users.html>) in the MySQL documentation.

When you connect to MySQL, the prompt changes to:

You can then run MySQL commands. For example, the following command shows the threads running, including the current connection.

You can use the following command to generate a list of users.

2. When you are done running commands, use the `exit` command to quit out of the MySQL client, and then use `exit` again to sign out of the Compute Engine instance.

After you've finished the MySQL tutorial, you can clean up the resources that you created on GCP so they won't take up quota and you won't be billed for them in the future. The following sections describe how to delete or turn off these resources.

The easiest way to eliminate billing is to delete the project that you created for the tutorial.

To delete the project:

 **Caution:** Deleting a project has the following effects:


- **Everything in the project is deleted.** If you used an existing project for this tutorial, when you delete it, you also delete any other work you've done in the project.
- **Custom project IDs are lost.** When you created this project, you might have created a custom project ID that you want to use in the future. To preserve the URLs that use the project ID, such as an `appspot.com` URL, delete selected resources inside the project instead of deleting the whole project.

If you plan to explore multiple tutorials and quickstarts, reusing projects can help you avoid exceeding project quota limits.



1. In the Cloud Console, go to the **Manage resources** page.

[Go to the Manage resources page](https://console.cloud.google.com/iam-admin/projects) (https://console.cloud.google.com/iam-admin/projects)

2. In the project list, select the project you want to delete and click **Delete** .


3. In the dialog, type the project ID, and then click **Shut down** to delete the project.

To delete a Compute Engine instance:

1. In the Cloud Console, go to the **VM Instances** page.

[Go to the VM Instances page](https://console.cloud.google.com/compute/instances) (https://console.cloud.google.com/compute/instances)

2. Click the checkbox for the instance you want to delete.

3. Click **Delete**  to delete the instance.

You've now seen how to install MySQL server on Compute Engine. To see more complex applications that use MySQL, browse the [wide variety of development stacks](#) (/marketplace/?q=mysql) on GCP Marketplace that use MySQL.

If your requirements include high availability and scalability, consider installing [MySQL Cluster](https://www.mysql.com/products/cluster/) (https://www.mysql.com/products/cluster/) on Compute Engine. MySQL Cluster provides high availability and scalability through shared-nothing clustering and auto-sharding. GCP Marketplace provides a click-to-deploy option for [Percona](#) (/marketplace/?q=percona), an open source solution for MySQL clustering.

Another open source solution for MySQL scalability is [Vitess](http://vitess.io/) (http://vitess.io/), which has served all YouTube database traffic since 2011. Vitess is well-suited for applications that run in containers. For more information on using Vitess in a containerized environment, see [Running Vitess on Kubernetes](#) (http://vitess.io/getting-started/).

For more information about MySQL, see the [official MySQL documentation](https://dev.mysql.com/doc/) ([https://dev.mysql.com/doc](https://dev.mysql.com/doc/)).

Try out other Google Cloud features for yourself. Have a look at our [tutorials](/docs/tutorials/) (/docs/tutorials).