

[Cloud SQL](https://cloud.google.com/sql/) (<https://cloud.google.com/sql/>)

[Documentation](https://cloud.google.com/sql/docs/) (<https://cloud.google.com/sql/docs/>)

[MySQL](https://cloud.google.com/sql/docs/mysql/) (<https://cloud.google.com/sql/docs/mysql/>) [Guides](#)

How-to guides

Creating and managing instances

Creating instances

Create a new First Generation or Second Generation instance.

(<https://cloud.google.com/sql/docs/mysql/create-instance>)

Using customer-managed encryption keys (CMEK)

Create a new instance with a customer-enabled encryption key.

(<https://cloud.google.com/sql/docs/mysql/configure-cmek>)

Viewing instance information

View instance settings.

(<https://cloud.google.com/sql/docs/mysql/instance-info>)

Editing instances

Edit an existing instance.

(<https://cloud.google.com/sql/docs/mysql/edit-instance>)

Cloning instances

Clone an instance to create an independent copy of the instance.

(<https://cloud.google.com/sql/docs/mysql/clone-instance>)

Starting, stopping, and restarting instances

Start, stop, or restart an instance.

(<https://cloud.google.com/sql/docs/mysql/start-stop-restart-instance>)

Deleting instances

Delete an instance.

(<https://cloud.google.com/sql/docs/mysql/delete-instance>)

Configuring private IP connectivity

Enable or configure private IP for an instance.

(<https://cloud.google.com/sql/docs/mysql/configure-private-ip>)

Configuring public IP connectivity

Add or remove authorized IP addresses for an instance.

(<https://cloud.google.com/sql/docs/mysql/configure-ip>)

Configuring organization policies

Add organization policies to control access to and from Cloud SQL instances.

(<https://cloud.google.com/sql/docs/mysql/connection-org-policy>)

Configuring SSL/TLS

Configure SSL/TLS for an instance, including enforcing the use of SSL/TLS and certificate management.

(<https://cloud.google.com/sql/docs/mysql/configure-ssl-instance>)

Configuring database flags

Update database flags for an instance.

(<https://cloud.google.com/sql/docs/mysql/flags>)

Labeling instances

Add, update, or delete labels for an instance.

(<https://cloud.google.com/sql/docs/mysql/label-instance>)

Migrating data between Cloud SQL and external servers

Move your data into and out of Cloud SQL with minimal downtime.

(<https://cloud.google.com/sql/docs/mysql/migrate-data>)

Upgrading an instance to Second Generation

Upgrade your First Generation instance in place to Second Generation.

(<https://cloud.google.com/sql/docs/mysql/upgrade-2nd-gen>)

Upgrading MySQL

Upgrade the MySQL version for an instance by exporting and reimporting your data.

(<https://cloud.google.com/sql/docs/mysql/upgrade-db>)

Finding and setting maintenance windows

Find or set maintenance windows on instances.

(<https://cloud.google.com/sql/docs/mysql/set-maintenance-window>)

Connecting to instances

Connecting mysql client using IP addresses

Connect to an instance by authorizing access to an IP address or range of addresses.

(<https://cloud.google.com/sql/docs/mysql/connect-admin-ip>)

Connecting mysql client using the proxy

Connect to an instance by using the Cloud SQL Proxy.

(<https://cloud.google.com/sql/docs/mysql/connect-admin-proxy>)

Connecting mysql client using the proxy docker image

Connect to an instance by using the Cloud SQL Proxy Docker image.

(<https://cloud.google.com/sql/docs/mysql/connect-docker>)

Connecting mysql client from Compute Engine

Connect to an instance from a Compute Engine instance, either by using an IP address or by using the Cloud SQL Proxy.

(<https://cloud.google.com/sql/docs/mysql/connect-compute-engine>)

Connecting from App Engine

Connect to an instance from an App Engine application.

(<https://cloud.google.com/sql/docs/mysql/connect-app-engine>)

Connecting from external applications

Connect to an instance from an external application.

(<https://cloud.google.com/sql/docs/mysql/connect-external-app>)

Connecting from Kubernetes Engine

Connect to an instance from an application running in Google Kubernetes Engine.

(<https://cloud.google.com/sql/docs/mysql/connect-kubernetes-engine>)

Connecting from Cloud Functions

Connect to an instance from code running in Cloud Functions.

(<https://cloud.google.com/sql/docs/mysql/connect-functions>)

Connecting from other MySQL tools

Connect to an instance using MySQL administration tools.

(<https://cloud.google.com/sql/docs/mysql/admin-tools>)

Managing database connections

Best practices for managing database connections in your applications.

(<https://cloud.google.com/sql/docs/mysql/manage-connections>)

Replication and data management

Enabling and disabling high availability on an instance

Configure an instance to fail over to a different zone in case of a zonal outage or disable high availability on an instance.

(<https://cloud.google.com/sql/docs/mysql/configure-ha>)

Creating and managing on-demand and automatic backups

Schedule and disable automatic backups, create and manage on-demand backups, and view backups for your instance.

(<https://cloud.google.com/sql/docs/mysql/backup-recovery/backing-up>)

Restoring an instance

Restore an instance from a backup or perform a point-in-time recovery.

(<https://cloud.google.com/sql/docs/mysql/backup-recovery/restoring>)

Creating read replicas

Create read replicas for an instance.

(<https://cloud.google.com/sql/docs/mysql/replication/create-replica>)

Configuring external replicas

Configuring an external read replica for a master Cloud SQL instance.

(<https://cloud.google.com/sql/docs/mysql/replication/configure-external-replica>)

Replicating from an external server

Creating a Second Generation read replica for a MySQL server that you manage.

(<https://cloud.google.com/sql/docs/mysql/replication/replication-from-external>)

Configuring external masters

Configuring an external master for a First Generation replica.

(<https://cloud.google.com/sql/docs/mysql/replication/configure-external-master>)

Managing replicas

Starting and stopping replication, getting replication status, and promoting replicas.

(<https://cloud.google.com/sql/docs/mysql/replication/manage-replicas>)

Importing data into Cloud SQL

Import data from Cloud Storage to an instance.

(<https://cloud.google.com/sql/docs/mysql/import-export/importing>)

Exporting data from Cloud SQL

Export data from an instance to Cloud Storage.

(<https://cloud.google.com/sql/docs/mysql/import-export/exporting>)

Exporting data for import into Cloud SQL

Create SQL dump and CSV files from an external database for import into an instance.

(<https://cloud.google.com/sql/docs/mysql/import-export/creating-sqldump-csv>)

Checking the status of import and export operations

Check the status of import and export operations.

(<https://cloud.google.com/sql/docs/mysql/import-export/checking-status-import-export>)

Managing MySQL databases and users

Creating and managing MySQL databases

Create, list, and delete MySQL databases on an instance.

(<https://cloud.google.com/sql/docs/mysql/create-manage-databases>)

Creating and managing MySQL users

Create and manage MySQL users on an instance, including setting the root password.

(<https://cloud.google.com/sql/docs/mysql/create-manage-users>)

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