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This page shows you how to connect to Cloud SQL from a local test environment using the Cloud SQL Proxy. Connecting through the proxy enables you to test an App Engine application in your local environment, or establish a secure connection for database administration.

Do not use these instructions to set up the proxy for a production environment. For more connection options, see Connection Options for External Applications (/sql/docs/postgres/external-connection-methods).

Before performing the steps in this quickstart, you should complete the following tasks:

- Create a Google Cloud project and a PostgreSQL instance (/sql/docs/postgres/create-instance).

- If you are using a pre-existing project, ensure that your Google Cloud user is an owner of your project, or has a Cloud SQL role other than `Cloud SQL Viewer`. Otherwise, you should set up the proxy using the instructions outlined in Connecting using the Cloud SQL Proxy (/sql/docs/postgres/connect-admin-proxy).

- Optionally, install the `psql` client.

  The client enables you to test your connection to your instance. The `psql` client can be installed with the server package or alone. See the PostgreSQL installation instructions (https://www.postgresql.org/docs/9.6/static/install-procedure.html).

Enable the Cloud SQL Admin API.

Enable the API (https://console.cloud.google.com/flows/enableapi?apiid=sqladmin&redirect=https://console.cloud.google.com)

1. If you haven't already, install the `gcloud` command-line tool.

   See the gcloud installation instructions (/sdk/docs/#install_the_latest_cloud_sdk_version).

2. Initialize the `gcloud` tool:

3. Authenticate the `gcloud` tool:

The proxy binary you download depends on your operating system, and whether it uses a 32-bit or 64-bit kernel. Most newer hardware uses a 64-bit kernel. If you are unsure whether your machine is running a 64-bit kernel, use the `uname -a` command for Linux or macOS, or click **Computer > Properties** in the Start Menu for Windows.

If your operating system isn't included here, you can also compile the proxy from source
 (http://github.com/GoogleCloudPlatform/cloudsql-proxy).

1. Go to the Cloud SQL Instances page in the Google Cloud Console.

   Go to the Cloud SQL Instances page (https://console.cloud.google.com/sql/instances)

2. Click the instance name to open its **Instance details** page.

3. Under **Connect to this instance**, note the **Instance connection name**.

   You will use this value in the next step.

Start the proxy in its own terminal so you can monitor its output. Replace `<INSTANCE_CONNECTION_NAME>` with the instance connection name you copied in the previous step.

You should see a message similar to:

This section is optional, but is recommended for testing your connection. See the PostgreSQL installation instructions (https://www.postgresql.org/docs/9.6/static/install-procedure.html).

In a different terminal window from where you started the proxy, run the following command, replacing `<USERNAME>` with your PostgreSQL username, and `<DB_NAME>` with the name of the database to connect to.

You should see the psql prompt. A message similar to the following should appear in the proxy terminal:

- See troubleshooting information for the proxy (/sql/docs/postgres/sql-proxy#troubleshooting).

- Learn more about the proxy (/sql/docs/postgres/sql-proxy).

- <u>Learn more about other connection options</u> (/sql/docs/postgres/external-connection-methods).