Quickstart for using the proxy for local testing

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 (https://cloud.google.com/sql/docs/mysql/external-connection-methods).

Before you begin

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

- Create a Google Cloud project and a Second Generation instance (https://cloud.google.com/sql/docs/mysql/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 (https://cloud.google.com/sql/docs/mysql/connect-admin-proxy).
- Optionally, install the `mysql` client.

  The client enables you to test your connection to your instance. The `mysql` client can be installed with the server package. Some operating systems support a client-only package. See the MySQL installation instructions (https://dev.mysql.com/doc/mysql-getting-started/en/#mysql-getting-started-installing).

Enable the Cloud SQL API

Enable the Cloud SQL Admin API.

ENABLE THE API (HTTPS://CONSOLE.CLOUD.GOOGLE.COM/FLOWS/ENABLEAPI?APIID=SQLADMIN&REDIR

Install and authenticate the gcloud command-line tool

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

   See the `gcloud` installation instructions (https://cloud.google.com/sdk/docs/#install_the_latest_cloud_sdk_version).

2. Initialize the `gcloud` tool:

```
gcloud init
```

3. Authenticate the `gcloud` tool:

```
gcloud auth login
```

Install the Cloud SQL Proxy client on your local machine

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.

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1. Download the proxy:

```
wget https://dl.google.com/cloudsql/cloud_sql_proxy.linux.amd64 -O cloud_sql_
```

2. Make the proxy executable:

```
chmod +x cloud_sql_proxy
```

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

Get the instance connection name

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/INSTANCE

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

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.

```
./cloud_sql_proxy -instances=<INSTANCE_CONNECTION_NAME>=tcp:3306
```

You should see a message similar to:

```
Listening on 127.0.0.1:3306 for myproject:us-central1:myinstance".
Ready for new connections
```

Connect to your database using the mysql client

This section is optional, but is recommended for testing your connection. See the MySQL installation instructions (https://dev.mysql.com/doc/mysql-getting-started/en/#mysql-getting-started-installing).

In a different terminal window from where you started the proxy, run the following command, replacing `<USERNAME>` with your MySQL username.

```
mysql -u <USERNAME> -p --host 127.0.0.1 --port 3306
```

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

```
New connection for "myproject:us-central1:myinstance"
```

What's next

- See troubleshooting information for the proxy (https://cloud.google.com/sql/docs/mysql/sql-proxy#troubleshooting).
- Learn more about the proxy (https://cloud.google.com/sql/docs/mysql/sql-proxy).
- Learn more about other connection options (https://cloud.google.com/sql/docs/mysql/external-connection-methods).

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