

Using Google Cloud SQL

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Outlines

Create Google Cloud SQL instances

Create a database on Google Cloud SQL instances

Connect Google Cloud SQL with MySQL Workbench

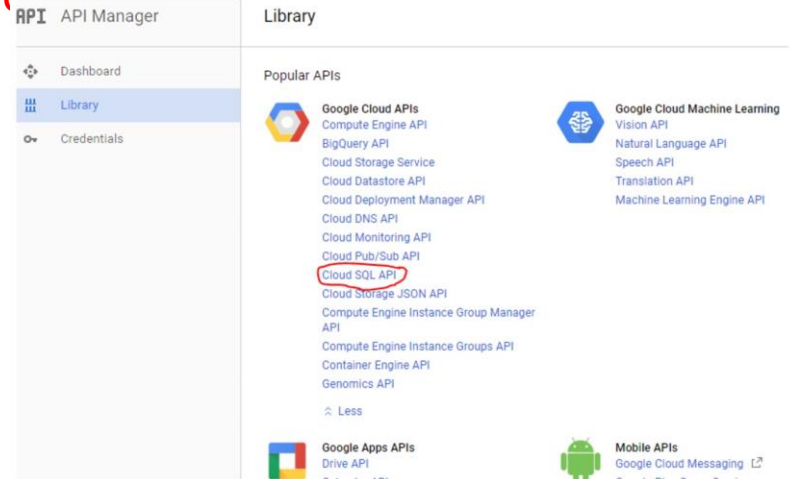
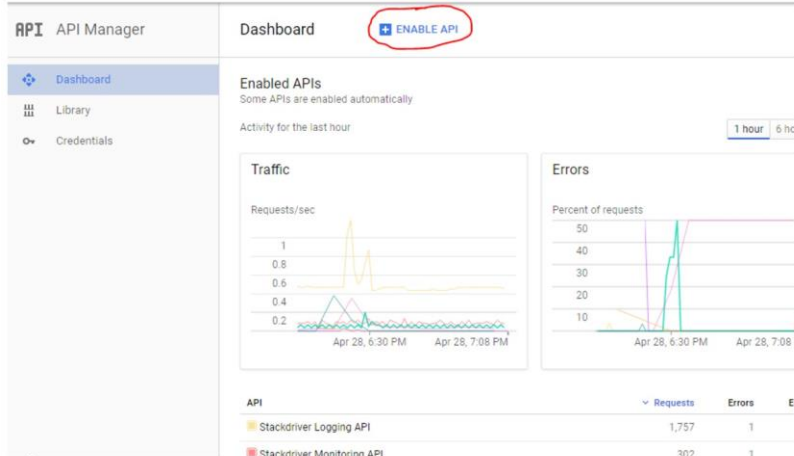
Create Google Cloud SQL instances

There are 2 version of Google Cloud SQL

- first generation
- second generation (recommend)
 - high performance
 - high storage capacity
 - low cost

Create Google Cloud SQL instances (cont.)

- Enter <https://console.cloud.google.com>
- Login to your account
- Select **API Manager** → **Library** → **Cloud SQL API**



Create Google Cloud SQL instances (cont.)

○ Enable API



Google Cloud SQL API

■ DISABLE

Overview

Quotas

About this API

[Documentation](#)

[Try this API in APIs Expl](#)

All API versions ▾

All API credentials ▾

All API methods ▾

1 hour

6 hours

12 hours

1 day

2 days

4 days

7 days

14 days

Traffic

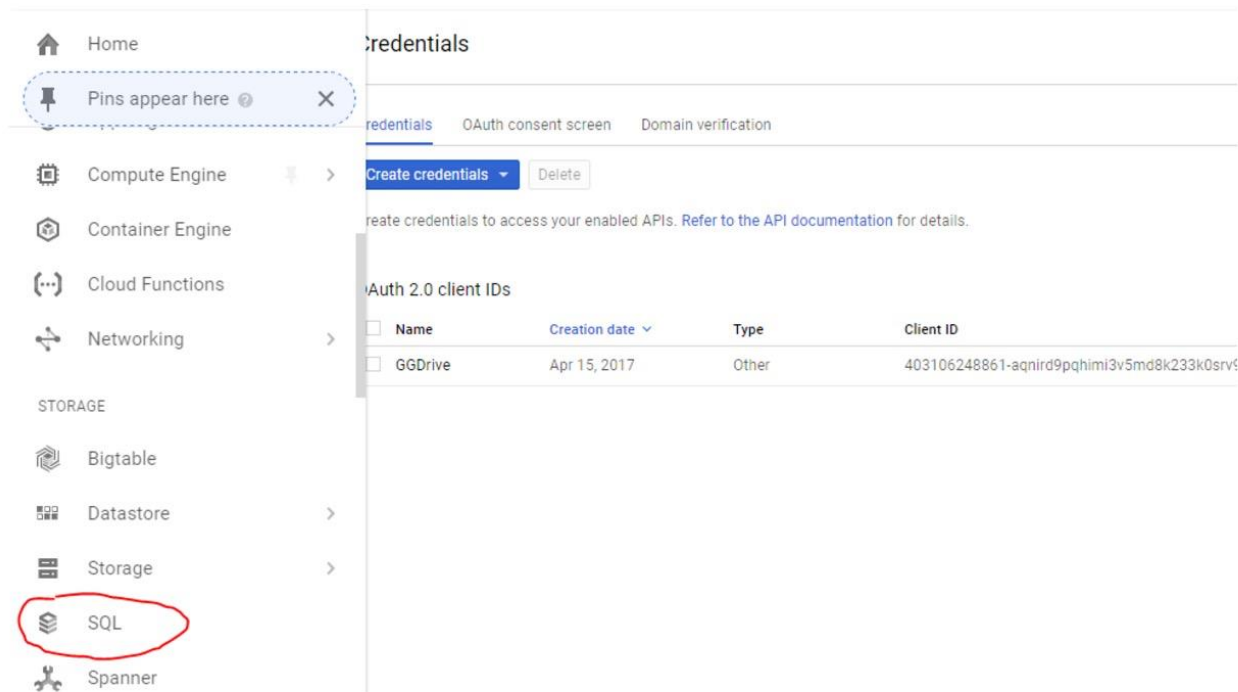
By response code ▾

Requests/sec (5 min average)

There is no data for this API in this time span

Create Google Cloud SQL instances (cont.)

- Back to Home → select SQL



The screenshot shows the Google Cloud console interface. On the left is a navigation menu with various services. The 'SQL' service is highlighted with a red circle. On the right, the 'Credentials' page is displayed, showing a 'Create credentials' button and a table of 'Auth 2.0 client IDs'.

Navigation Menu:

- Home
- Pins appear here
- Compute Engine
- Container Engine
- Cloud Functions
- Networking
- STORAGE
- Bigtable
- Datastore
- Storage
- SQL**
- Spanner

Credentials Page:

Credentials

OAuth consent screen Domain verification

Create credentials Delete

Create credentials to access your enabled APIs. [Refer to the API documentation](#) for details.

Auth 2.0 client IDs

<input type="checkbox"/>	Name	Creation date	Type	Client ID
<input type="checkbox"/>	GGDrive	Apr 15, 2017	Other	403106248861-aqnird9pqhimi3v5md8k233k0srvf

Create Google Cloud SQL instances (cont.)

- Create new Instance



The screenshot shows the Google Cloud SQL console. At the top, there's a navigation bar with the 'SQL' icon and the 'Instances' tab selected. A red circle highlights the '+ CREATE INSTANCE' button. Below the navigation bar is a table listing existing instances.

Instance ID 	Type	IP address	Failover	Storage used 	Location	
 databasew9	MySQL Second Generation	104.198.245.200	Add Failover	 1 GB of 10 GB	us-central1	
 nhom12tuan9	MySQL Second Generation	35.189.165.13	Add Failover	 1 GB of 10 GB	asia-east1	

Create Google Cloud SQL instances (cont.)

- Select MySQL

Choose a database engine

- ☒ MySQL
Versions 5.6 or 5.7
- ☐ PostgreSQL **BETA**
Version 9.6

Next

Create Google Cloud SQL instances (cont.)

- Choose Second Generation

MySQL Second Generation (Recommended)

High performance, high storage capacity, low cost.

- Up to 7X throughput and 20X storage capacity of First Generation
- Less expensive than First Generation for most use cases
- Option to add High Availability failover and read replication
- Configurable backup period and maintenance window
- Supports only MySQL 5.6 and 5.7

Choose Second Generation

MySQL First Generation (Legacy)

Older version of Cloud SQL providing basic performance and storage capacity. Does not support MySQL 5.7.

Choose First Generation

Create Google Cloud SQL instances (cont.)

- Fill instance name, password, location ...

Instance ID

ID is permanent. Use lowercase letters, numbers, or hyphens. Start with a letter.

Database version

MySQL 5.7

Location ?

For better performance, keep your data close to the services that need it.

Region

us-central1

Zone

Any

Machine type ?

For better performance, choose a machine type with enough memory to hold your largest table.



db-n1-standard-1

vCPUs

1

Memory

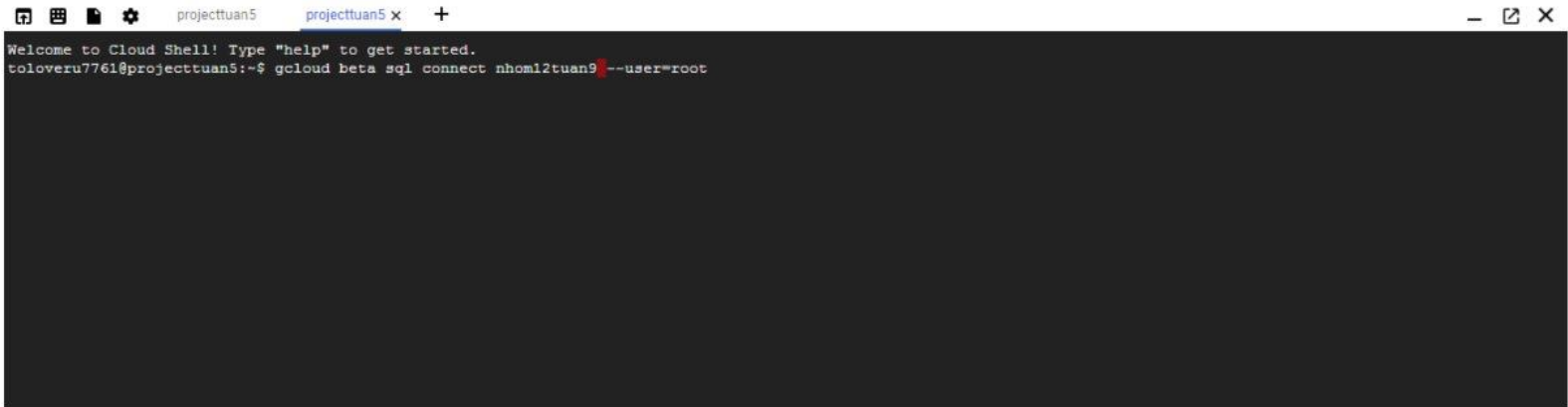
3.75 GB

Change

Create a database on Google Cloud SQL instances

Using CLI

- type the command: `gcloud beta sql connect mySQLInstance --user=root`
 - mySQLInstance: instance name



The screenshot shows a Cloud Shell terminal window with the title bar 'projecttuan5' and a tab 'projecttuan5 x'. The terminal content is as follows:

```
Welcome to Cloud Shell! Type "help" to get started.
toloveru7761@projecttuan5:~$ gcloud beta sql connect nhom12tuan9 --user=root
```

Create a database on Google Cloud SQL instances

Using CLI

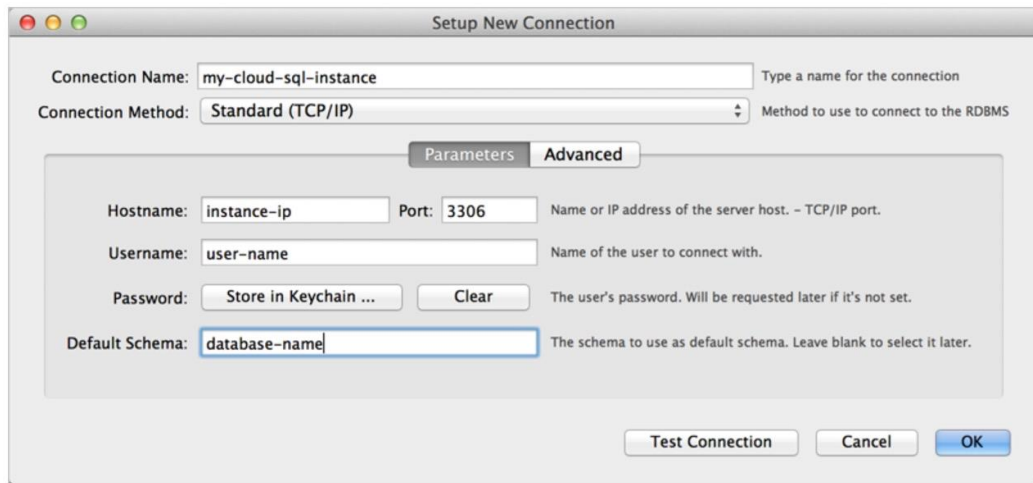
- create your database by using SQL command as the below example

```
1 CREATE DATABASE `postnews` /*!40100 DEFAULT CHARACTER SET utf8 */;  
2 use postnews;  
3 CREATE TABLE `postnews`.`post` (  
4   `id` INT(10) NOT NULL AUTO_INCREMENT,  
5   `title` VARCHAR(200) NULL,  
6   `content` LONGTEXT NULL,  
7   `file` MEDIUMTEXT NULL,  
8   PRIMARY KEY (`id`));  
9  
10 |
```

(you can paste these commands into CLI)

Connect Google Cloud SQL with MySQL Workbench

1. In the MySQL Workbench home view, click New Connection.
2. In the Setup New Connection window, provide a Connection Name, Hostname, Username, and Default Schema, if applicable, as shown below



The screenshot shows the 'Setup New Connection' dialog box in MySQL Workbench. The window has a title bar with standard macOS window controls (red, yellow, green buttons) and the title 'Setup New Connection'. Inside the window, there are several input fields and buttons. The 'Connection Name' field is filled with 'my-cloud-sql-instance'. The 'Connection Method' is set to 'Standard (TCP/IP)'. Below these, there are two tabs: 'Parameters' (selected) and 'Advanced'. Under the 'Parameters' tab, the 'Hostname' field is filled with 'instance-ip', the 'Port' field is filled with '3306', the 'Username' field is filled with 'user-name', and the 'Default Schema' field is filled with 'database-name'. There are also buttons for 'Store in Keychain ...' and 'Clear' next to the 'Password' field. At the bottom right, there are three buttons: 'Test Connection', 'Cancel', and 'OK'.

Setup New Connection

Connection Name: my-cloud-sql-instance Type a name for the connection

Connection Method: Standard (TCP/IP) Method to use to connect to the RDBMS

Parameters Advanced

Hostname: instance-ip Port: 3306 Name or IP address of the server host. – TCP/IP port.

Username: user-name Name of the user to connect with.

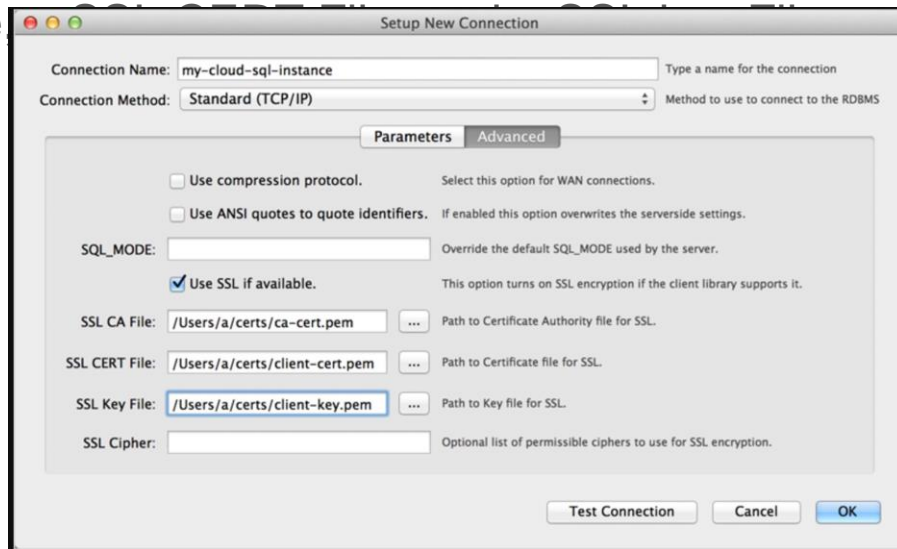
Password: Store in Keychain ... Clear The user's password. Will be requested later if it's not set.

Default Schema: database-name The schema to use as default schema. Leave blank to select it later.

Test Connection Cancel OK

Connecting with MySQL Workbench (cont.)

3. Click Test Connection. You will be prompted for a password.
4. Optionally, click Advanced, and fill in the information for connecting with SSL as shown in Figure 2. Be sure to select Use SSL if available and specify a SSL CA File



Connecting with MySQL Workbench (cont.)

5. Click Test Connection to make sure all the advanced parameters are okay.

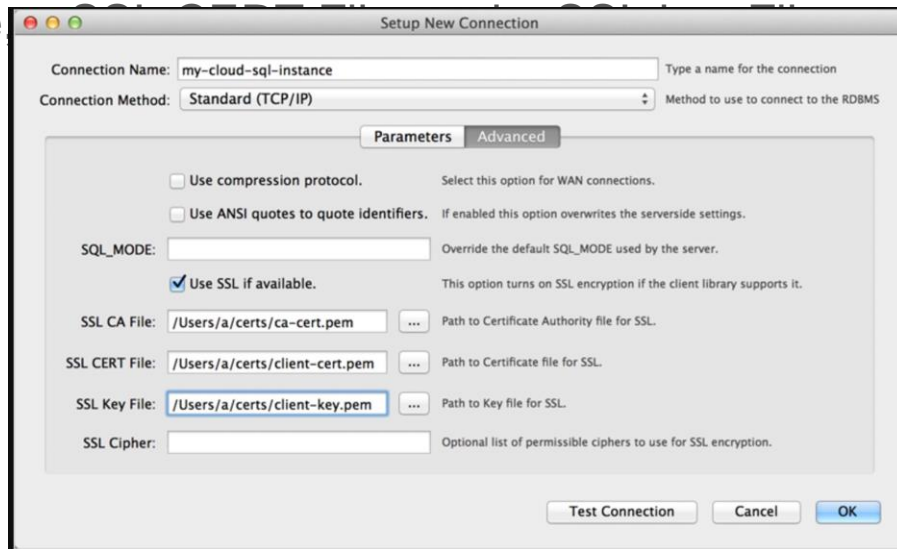
6. Click Close.

7. Connect with the connection you just created.

Now you can use MySQL workbench to manage your Google Cloud SQL instance.

Connecting with MySQL Workbench (cont.)

3. Click Test Connection. You will be prompted for a password.
4. Optionally, click Advanced, and fill in the information for connecting with SSL as shown in Figure 2. Be sure to select Use SSL if available and specify a SSL CA File



Exercises

Practice in group:

1. Create an Google Cloud SQL instance and connect to your MySQL Workbench.
2. Document your work.
3. Remember to list some general errors that and your solutions in the document.