PROFESSIONAL DATA ENGINEER *- Google Cloud Platform*

TITLE: "Introduction to Google Cloud SQL - CLI"

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Task 1 - Create a Cloud SQL instance

1. Enter the following commands to create a Cloud SQL instance:
    - gcloud sql instances create titanic
      --database-version=POSTGRES_13 --cpu=2 --memory=8GiB
      --region=us-west1 --root-password=Passw0rd
2. Create an environment variable with the Cloud Shell IP address:
    - export ADDRESS=$(curl -s http://ipecho.net/plain (http://ipecho.net/plain))/32
3. Allowlist the Cloud Shell instance for management access to your SQL instance:
    - gcloud sql instances patch titanic --authorized-networks $ADDRESS
4. When prompted press, Y to accept the change.

Task 2 - Create database and table

1. To import data into a Postgres table, you first create an empty database and a table with the correct schema.
2. In the Cloud Console, on the Navigation menu (Navigation menu icon), click SQL.
3. To open the Overview page of an instance, click the instance name flights.
4. Select Databases from the SQL navigation menu on the left.
5. Click Create database.In the New database dialog, name the database bts.

6. Click Create.
7. To open the Overview page of an instance, select Overview from the SQL navigation menu.
8. Click IMPORT on the top.
9. In the Cloud Storage file field, click Browse.
10. In the Buckets section, click the arrow opposite your bucket name.
11. Select the file create_table_titanic.sql.
12. Click Select.
13. In the File format section, select SQL.
14. Specify the Database bts in your Cloud SQL instance.
15. Click Import start the import.A few seconds later, the empty table will be created.

Task 3 - Add data to a Cloud SQL instance

1. We created the empty database and table, now load the CSV files into this table. Loading the Titanic data by browsing to titanic.csv in your bucket and specifying CSV as the format, bts as the database, and flights as the table.
2. In your Cloud SQL instance page, click IMPORT.
3. In the Cloud Storage file field, click Browse, and then click the arrow opposite your bucket name, and then click titanic.csv.
4. Click Select.
5. Select CSV as File format.
6. Select the bts database and type in flights as your table.
7. Click IMPORT.

Task 4 - Interact with the database

1. Connect to the Cloud SQL instance from Cloud Shell using:
    - gcloud sql connect flights --user=postgres
        - NOTE: When prompted for a password enter Passw0rd. You may not see the letters as you type.

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(or)
```

- psql -h 34.150.173.226 -U postgres

2. In the prompt that comes up, connect to the bts database:

    - \c bts;
        - When prompted for a password enter Passw0rd.

3. Then, run a query to obtain the data:

SELECT * from titanic LIMIT 5;

Task 5 - To delete Cloud SQL instances.

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* gcloud sql instances delete titanic
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However, a relational database is a poor choice if:

- Your data is primarily read-only
- If your dataset sizes go into the terabyte range
- You have a need to scan the full table (such as to compute the maximum value of a column) or if your data streams in at high rates.
