**How to create Postgresql instance and export data from postgresql to GCS bucket:**

1. Create the instance:

* gcloud sql instances create ***mypostgresql***\  
  --database-version=POSTGRES\_12 \  
  --cpu=***2*** \  
  --memory=7680MB \  
  --region=***us-central***

1. Note the automatically assigned IP address
2. Set the password for the postgres user

* gcloud sql users set-password postgres \  
  --instance= ***mypostgresql*** \  
  --password=**cvsgcp01**

1. At the Cloud Shell prompt, connect to your Cloud SQL instance:

* gcloud sql connect ***mypostgresql*** --user=postgres

1. Enter your postgres password. The psql prompt appears.

**Create a database and upload data**

1. Create a SQL database on your Cloud SQL instance

* CREATE DATABASE demodb;

1. Connect to the database

* \connect demodb;

1. Insert sample data into the database:

* CREATE TABLE entries (guestName VARCHAR(255), content VARCHAR(255),  
                          entryID SERIAL PRIMARY KEY);  
  INSERT INTO entries (guestName, content) values ('first guest', 'I got here!');  
  INSERT INTO entries (guestName, content) values ('second guest', 'Me too!');

1. Retrieve the data:

* SELECT \* FROM entries;

**Exporting data from Postgresql to GCS bucket:**

1. Create a Cloud Storage bucket. (https://cloud.google.com/storage/docs/creating-buckets)
2. Find the service account for the Cloud SQL instance you're exporting from. You can do this running the gcloud sql instances describe command. Look for the serviceAccountEmailAddress field in the output.
   1. gcloud sql instances describe INSTANCE\_NAME
3. Go to target bucket in UI to grant the storage.objectAdmin IAM role to the service account.
4. Export the database
   1. gcloud sql export csv INSTANCE\_NAME gs://BUCKET\_NAME/FILE\_NAME \

--database=DATABASE\_NAME \

--offload \

--query=SELECT\_QUERY

INSTANCE\_NAME: cloud postgresql instance name

Bucketname: replace it with bucket name

Query: actual query

# **Resources:**

<https://cloud.google.com/sql/docs/postgres/import-export/import-export-csv>

<https://cloud.google.com/storage/docs/access-control/iam-roles>

<https://cloud.google.com/storage/docs/access-control/using-iam-permissions#gsutil>

<https://cloud.google.com/storage/docs/getting-service-agent>

<https://cloud.google.com/sql/docs/postgres/create-instance#gcloud>

<https://cloud.google.com/sql/docs/postgres/create-instance>

# **Importing and exporting data - PostgreSQL**

<https://cloud.google.com/sql/docs/postgres/import-export>