## Lab 3-05: Importing and Exporting data in Cloud SQL

### Introduction

To import and export data between two Cloud SQL instances through Cloud Storage, you can use the Cloud SQL import/export functionality. This involves creating a Cloud Storage bucket, exporting data from the source instance to the bucket, and then importing the data into the destination instance from the same bucket. This process provides a reliable and efficient way to move data between instances without having to transfer it over the internet.

### Problem

A company needs to migrate its database from one Cloud SQL instance to another, but the instances are located in different regions, and transferring the data over the internet is slow and unreliable. The company needs to find a way to efficiently move the database while minimizing downtime and ensuring data integrity.

### Solution

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| 1. Create two Cloud SQL instances.  2. Download the csv file from the following link.  <https://github.com/BPalmerLA/googlecloud/blob/master/SneakersandDates>  3. Open the Cloud shell and run the following commands:  l sudo sh -c 'echo -e "[mysql]\nlocal-infile=1" >> /etc/mysql/my.cnf'  Use the command pwd and copy your directory for further use.  4. Connect to instance-1.    5. Upload the csv file that we downloaded earlier through the upload option in the shell.    6. Use the command CREATE DATABASE sneakerinfo;.  Use the command USE sneakerinfo; to use the database to create a table.  Use the command CREATE TABLE sneakerrelease (name VARCHAR(15), model VARCHAR(30), datereleased VARCHAR(30));  Verify the table has been created by using command SHOW TABLES;  Use the 3 dotted horizontal lined button on the top right of the cloud shell and click on More, then click on Upload file and upload the CSV file downloaded from the instructions.  Use command LOAD DATA LOCAL INFILE '/home/your directory/SneakersandDates.csv' INTO TABLE sneakerrelease FIELDS TERMINATED BY ',';      7. Create a storage bucket.  8. Search for cloud storage from the search bar at the top.    9. Click on CREATE.    10. Rename the bucket, leave everything as default, and click CONTINUE.    11. Create a folder within the bucket.      12. Go back to instance-1 and click on export at the top of the console.    13. Choose CSV as the file type and use query SELECT \* FROM sneakerrelease.    14. Add the bucket and click on export.    15. Connect to instance-2.    16. Create a Database and Table within Instance-2  Use the command CREATE DATABASE sneakerinfo;.  Use the command USE sneakerinfo; to use the database to create a table.  Use the command CREATE TABLE sneakerrelease (name VARCHAR(15), model VARCHAR(30), datereleased VARCHAR(30));  Verify the table has been created by using command SHOW TABLES;.    17. Go to the instance-2 dashboard and select IMPORT.    18. Choose the Cloud Storage bucket sneakerinfo and folder sneakerrelease.  From that folder, you will see the SQL Export file.  Choose database sneakerinfo and type in sneakerrelease for the table and click on Import.    19. From the terminal, verify that the data is imported.  Use command SELECT \* FROM sneakerrelease\G;    20. The data has been imported successfully. |