Steps to Deploy Go Microservice for Chicago Business Intelligence on GCP

**Step1: Initial Setup for Google Cloud Platform**

* Install the google cloud CLI on your local machine.
* Create a new project on your google cloud console. Make a note of the project id and project Name.

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After creating a project on Google Cloud Console execute “gcloud init” command on your local machine and select the project created above when prompted

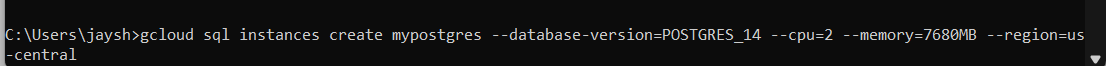
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**Step 2: Postgres database Setup**

* Create database instance of postgres using the following command.

*gcloud sql instances create mypostgres --database-version=POSTGRES\_14 --cpu=2 -- memory=7680MB --region=us-central*



* Create sql users on the database instance using the following command.

*gcloud sql users set-password postgres --instance=mypostgres --password=root*

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* Create a database for our microservice using the following command.

*gcloud sql databases create chicago\_business\_intelligence --instance=mypostgres*

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* Open Google Cloud console, search for SQL and confirm that database instance is up and running

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**Step 3: Setting up continuous deployment using cloud build**.

* Create a repository on github to store the source code for our CBI project.
* Open Google Cloud Console, Search for Cloud build API and Enable it for your project

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* After the API is enabled, click on the create trigger button.

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* Fill the details for the trigger as shown in the below images.

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* Click on connect repository, select github and authenticate.

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* After authentication select the repository created for Chicago business intelligence

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* Select the repository after connecting the project

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**Step 4: Setting up the containers for Go-microservice and Pgadmin**

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* Go to IAM page and make sure all the required roles are enabled for the project.

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* The images for the go microservice and pgadmin are created with the help of cloudbuild.yaml file
* Go to the postgres instance created in the previous steps and copy the instance connection name.

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Uncomment line 189 of your main.go source code file and update the connection string with your Instance connecton name as shown below.

*user=postgres dbname=chicago\_business\_intelligence password=root host=/cloudsql/smart-window-348005:us-central1:mypostgres:us-central1:mypostgres sslmode=disable port = 5432*

- Push the source code along with the cloudbuild.yaml file to the repository created in the above steps - A build is triggered in cloud build immediately after pushing the code to the github.

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Open the URL in a Browser and Login to pgadmin to validate that tables are created

Add new server and provide the name gcp-postgres

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Add host name as your sql instance name with /cloudsql/smart-window-348005:us-central1:mypostgres provide the post number as 5432 and user name postgres with password root as specified in code.

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**After successful connection you will get your database and tables with data in postgres hosted on google cloud.**

**Table

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**Link for Github Repo where the Code is hosted:**

**https://github.com/pateldivyesh12/chicago\_business\_intelligence**