Conteúdo

Pre requisite

Billing: If you have a new account created on google cloud, ensure that you activated your billing account details or your free testing period on google.
SDK: if you do not have the SDK already installed on your desktop, follow the procedure for Installing/Configuring SDK as detailed on this document Apendice A.
Python framework: install Python and the necessary modules as detailed on Appendix B.:

Pre requite before running the Terraform

Download the project from git:

Change to the Terraform project folder downloaded from git

On the google console, execute the following steps

Create a new project called prjdbjsolucx and associate it with your billing account

Create a GSA (google service account) and gives to it the Project->Editor role

Change the content of the terraform-gsa variable on the file terraform.tfvars to the GSA name created on the step before.

Download the GSA json key and rename it as: prjdbjsolucx-gsa.json

Executar o build da imagem

```
gcloud builds submit --tag gcr.io/prjdbjsolucx/helloworld-gke .
```

Running Terraform

Execute the following command to install the providers defined on the main.tf:

```
terraform init
```

Run the terraform fmt command to check the main.tf for readability and consistency:

```
terraform fmt
```

Run the terraform validate command to check syntax consistency of the main.tf:

```
terraform validate
```

Run the terraform apply command to execute the main.tf. As illustrated by the command bellow:

```
terraform apply -var="cred-file-path=<CRED_FILE>" -var="yaml-file-path=< YAML_FILE >"
```

< CRED_FILE >: deve ser substituido pelo nome complete do arquivo de credenciais prjdbjsolucx-gsa.json.
< YAML_FILE >: deve ser substituido pelo nome complete do arquivo deployment-ter.yaml.
Exemplo: terraform apply -var="cred-file-path=C:\\decio\\prjdbjsolucx-gsa.json" -var="yaml-file-path=C:\\decio\\deployment-ter.yaml"

Connect to the mysql instance and creates: database, table and one record

```
gcloud sql connect dbjmysql21 --user=root
```

```
Connecting to database with SQL user [root].Enter password:password123
```

```
mysql> create database exemplo\g
mysql> use exemplo\g
mysql>   create table tabela(
         linha INT NOT NULL AUTO_INCREMENT,
         mensagem VARCHAR(100) NOT NULL,
         PRIMARY KEY ( linha )
         )\g
mysql> insert into tabela (mensagem) VALUES (“Hello World!”)\g
mysql> exit
```

Configure kubectl to communicate with the cluster:

```
gcloud container clusters get-credentials helloworld-ter
```

Add annotation to the Kubernetes service account.

```
kubectl annotate serviceAccount --namespace default helloworld-gke-ksa iam.gke.io/gcp-service-account=helloworld-gsa@prjdbjsolucx.iam.gserviceaccount.com
```

Deploy the application.

```
kubectl apply -f deployment-ter.yaml
```

```
kubectl apply -f service.yaml
```

```
kubectl get services
```