

WordPress Website server orchestration using Terraform, Google Kubernetes Engine with MySQL Database.

Google Elements:

- Specifications of all Google instances, networks and container clusters are as follows:
 - All instances are protected by firewall allowing tcp (with port 80) and icmp protocols.
- Google compute instance in this project has the following parameters:
 - Having us-central1-a zone (region name is a variable, can be modified)
 - Google compute instance works under debian-10 image.
 - Uses local SSD (SCSI)
- Google container clusters are used to keep kubernetes applications inside it.
 - It works in us-central1 region (modifiable) and has initially 1 node.
 - Legacy endpoints are disabled.

Kubernetes cluster:

- Kubernetes Service (Load Balancer): Responsible from balancing the request load. Has the following parameters:
 - App: contains the name of the application - frontend
 - Port: Target port and local port are both set to 80. TCP protocol is used.
- Kubernetes deployment: contains the wordpress image, and container port for communicating with the cluster, which is set to 80.
- Ingress: Used to show the hide the original ip from external users. It has port number 80.

Cloud SQL service:

- Database: contains settings for SQL instances.
- SQL instance: Uses MySQL in region us-central1. High availability is ensured by regionality and enabling binary log. IP Configurations are as follows:
 - Enables ipv4
 - Authorized network: public (with value: 0.0.0.0/0)
- Sql user service: User authorization module for sql database, name and password protected.

Variables: