1. This terraform scripts creates:
2. An AWS VPC on eu-west-1 region with 3 private and 3 public subnets.
3. 3 Availability Zones (eu-west-1a, eu-west-1b, eu-west-1c)
4. All AZs have a private and public subnet respectively
5. 3 ubuntu servers (serving as web servers) on each private subnets(To prevent public access) of all AZs for fault tolerance.
6. An ELB (Elastic Load balancer) to spread traffic across each web servers
7. An RDS instance with multi AZs capability to replicate data across regions for fault tolerance networked on the private subnets of the VPC for security.
8. Bastian Instance to Administer all Instances within the VPCs( It allows SSH public access to only specified block of IPs)
9. An NGINX webserver for Django was deployed on the webserver using the ansible script specified in this questions folder.
10. Security groups used to manage connectivity within a VPC.

NB. This VPC is very secured.

1. An preconfigured SSH key called bastian (located in this repo) is used to access on the instances with the VPC including the bastian instance.

NB. To Log in to the bastian instance , clone this project and run this command on the projects folder “ssh -i bastian [ubuntu@52.49.216.86](mailto:ubuntu@52.49.216.86)”.

**NB:** To run this terraform script please find the terraform installation process for respective platforms on <https://learn.hashicorp.com/terraform/getting-started/install.html>

Install git also following this

<https://www.linode.com/docs/development/version-control/how-to-install-git-on-linux-mac-and-windows/>

clone this repo by running

git clone <repo.git>

cd /<repo>

terraform init

terraform plan

terraform apply

**Security Specification**

The ELB only accepts public traffic on port 443 and 80

The ELB can only connect to the webservers and only on port 443 and 80

The webservers can only connect to the RDS only on port 3306

The bastian host can only connect to the webservers only on port 22

The bastian host only accepts SSH public traffic from specified CIDR block