<u>Interview Task 4 – DevOps Automation Engineer</u>

Tools:
- Terraform, Ansible
- AWS or Google Cloud
- Kubernetes

Objective(s):
- Define Infrastructure using terraform. Here you should assume that you are using an empty provider; you will need to make sure that all necessary dependencies are defined on the terraform file.
- For the purpose of this exercise your setup should incorporate:
  - Setting up the necessary VPC, Security Groups, Subnets, Users and any other item you consider relevant.
  - 2 web servers. Here you can use AWS or Google based docker images for centos/redhat or Ubuntu. (You can choose the cloud provider and Linux distro you prefer for this exercise).
  - 1 load balancer.
- Deploy the application to created servers; you should trigger your deploy using ansible when terraform initialisation is complete.

Notes:
- You can use a simple webserver that provides an alive endpoint to validate if load balancer is working.
- Basic tests that the exercise should pass:
  - Run the provided code will create the desired infrastructure and deploy a working application automatically.
  - Add a third container to kubernetes and apply the changes.
  - Remove the third container to kubernetes and apply the changes.
  - Adding or removing servers should not have an impact on the existing ones.
  - Roll-out of one change should not promote downtime on the application (for example memory increase of the server, change instance type).

Please provide us with a README.md that contains:
- All the instructions necessary to run the example.
- A small explanation of your major decisions and problems encountered.

Feel free to improve the exercise in any way you consider relevant.

Delivering Method:
- Please try to return your solution to us within 1 week.
- Use any online service of your choosing to upload your final work (for example GitHub).