# DevOps exercise

Thank you for participating in this exercise. This devops exercise is just a way that we evaluate candidates and we ask all our candidates to go through some form of this. Do ask us for clarifications, bounce ideas off us (we'll help where we can) and feel free to utilize all the resources available. We hope you have fun doing these problems.

### Instructions:

- Please complete this exercise and email back your answers
- Your solution should use good practices and conventions
- You are free to use any internet resources that you like. If you copy the solution from the internet, we will require that you can explain the solution completely and also the license under which it was copied
- You can attach any additional files (such as Helm charts, Terraform modules)
- You can complete and send the assignment within 2 days. Goodluck!

### Exercise:

**Write a *Helm chart* (or any other Kubernetes deployment manifest like Kustomize) to deploy a simple HTTP web server of your choice (e.g. python, flask, django, nodejs, etc.) on a Kubernetes cluster with the following config:**

- There should be **8 replicas** running.
- The deployment should autoscale at an average of **50% CPU** and **60% memory**.
- Use a custom docker image hosted on **GCR** or **ECR** or **ACR** called sample-test:latest (any region).
- Expose the app on port 8080 via any **GKE/EKS/AKS** load balancer.
- Any changes to the deployment should always ensure at least **5 replicas** are running at all times.
- Your pods should have higher priority than **Daemonset** pods.

- Bonus points if you include how to login and pull an image from **GCR/ECR/ACR**
- Bonus points if you create a **multi-staged** Dockerfile to reduce the Docker image size
- Bonus points if you use **Terraform** or any other ***Infrastructure as Code tool*** to create a Kubernetes Cluster on a cloud platform of your choice (AWS/GCP/Azure)