# Engineering Assignment

## Introduction

There is no right or wrong solution, the purpose of this exercise is to get a better understanding of your skills and way of thinking. Please publish the code on GitHub and send us the link so we can have a look.

**Please don't email us a file with the solution.**

## Exercise

Use Ansible and/or Terraform to automate the process of creating an AWS EC2 instance and complete the following tasks:

1. The deployment should take AWS credentials and AWS region as input parameters.
2. A VPC with the required networking, don't use the default VPC.
3. Provision a "**t2.micro**" EC2 instance, with an OS of your choice.
4. Change the security group of the instance to ensure its security level.
5. Change the OS/Firewall settings of the started instance to further enhance its security level.
6. Install Docker CE.
7. Deploy and start a NGINX docker container in the EC2 instance.
8. Deploy a script (or multiple scripts) on the EC2 instance to complete the following sub-tasks:
    a. Log the health status and resource usage of the NGINX container every 10 seconds into a log file.
    b. Featch output of the NGINX default HTTP page, print out the word that occurs most on the the page. (exclude HTML tags)
9. A **README.md** describing what you've done as well as steps explaining how to run the infrastructure automation and execute the script(s).
10. Describe any risks associated with your application/deployment.

## Bonus Points

1. Show the result of the resource.log on a webpage served from the NGINX server

if you have any questions about the assignment feel free to reach out to us.

**Good luck!**