**DevOps Assessment**

**Task #1**

* You will create a terraform script to setup VPC and AWS EKS Cluster using AWS Terraform modules with the following requirements:
* Make sure you have AWS CLI installed and AWS access configured properly
* VPC configuration:
  + CIDR: 10.10.10.0/24
  + Subnets: slice the CIDR into 4 subnets (2 x private and 2 x public)
  + Private subnets: 1 NAT gateway
  + 1 IGW for both public and private
* EKS Cluster with 2 x t3.micro managed node.
  + cluster\_name: "${yourname}-cluster"
  + cluster\_version: 1.27
  + Cluster\_addons: coredns, kube-proxy, vpc-cni
  + EKS Manage Node Group: (Instance\_type = t3.micro, min\_size=1, max\_size=2, desired\_size=2)
* Run terraform init and output the tfplan to a file. Name your tfplan output file with <yourname-tfplan.txt>.
* Commit the terraform scripts in your branch
* Upload the tfplan output file to your S3 bucket and share to us.

Note: Do not run terraform apply. Applying this will incur cost as there is no free tier for EKS Cluster. It's a preporagative of the candidate if they want to explore and shoulder the expenses. Balsam should not be liable on any incurred cost.

**Task #2**

* Create an ECR Repository named "yourname-image" in your AWS account.
* Create a Dockerfile and build a simple static web app that says "Hello [Your Name]"/n "Welcome to Balsam Brands". Use /var/www/html as the root directory.
* Create a shell or python script to build docker image and upload to your ECR repository
* Image\_tag: yourname\_v1.0.0
* Commit the Dockerfile and build script in your your branch.

**Task #3**

* Create a Kubernetes deployment, service and ingress YAML manifests for your web app with the following configurations:
  + namespace name = "yourname"
  + Image tag: ${ECR\_repository}:${Image\_tag}
  + Ingress domain url = http://[yourname.local]/
* Create a shell to deploy the apache app in your namespace.
  + Shell script filename = deployment\_yourname.sh
* Commit your changes and raise the PR. Once done, cleanup your deployment including VPC, EKS cluster, ECR repo and other resources you have created.

**Good luck!**

[balsamhill / bb-devops-assessment — Bitbucket](https://bitbucket.org/balsamhill/bb-devops-assessment/src/master/)