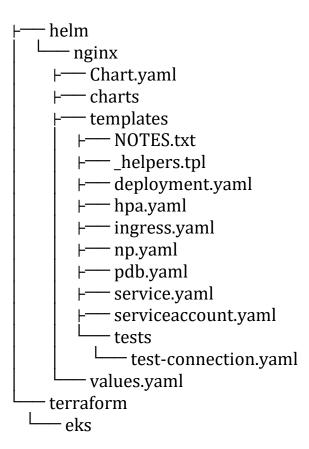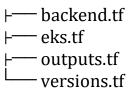**Provided Terraform** deploys the Infrastructure as per the supplied module from Github. Along with that we are using Helm templates to deploy our nginx chart deployment on EKS.

```
├── helm
│   └── nginx
│       ├── Chart.yaml
│       ├── charts
│       ├── templates
│       │   ├── NOTES.txt
│       │   ├── _helpers.tpl
│       │   ├── deployment.yaml
│       │   ├── hpa.yaml
│       │   ├── ingress.yaml
│       │   ├── np.yaml
│       │   ├── pdb.yaml
│       │   ├── service.yaml
│       │   ├── serviceaccount.yaml
│       │   └── tests
│       │       └── test-connection.yaml
│       └── values.yaml
└── terraform
    └── eks
```

```
├── backend.tf
├── eks.tf
├── outputs.tf
└── versions.tf
```

Directory structure –

Helm – Contains helm chart & templates for nginx.

Terraform - Contains .tf files which will overload EKS module on github {terraform-aws-eks}

Current state – The solution is deployed & running in **us-east-1** region.

How to deploy & test the solution -

If you want to deploy the solution to any region, Let's take us- east-1 for reference –

Terraform -

- cd terraform
- terraform init
- terraform plan
- terraform apply

Helm –

- cd helm/nginx/
- helm install -n casestudy-ns nginx .

What needs to setup in your local to test the solution ::

- Your aws credentials file should have preconfigured creds
  - aws_access_key_id
  - aws_secret_access_key
- Update 'provider' block in eks.tf with your aws profile.

Problem faced ::

- EKS_CNI ipv4 policy had to be reattached manually in the aws console to resolve CNI issues.
  - Failed to create pod sandbox: rpc error: code = Unknown desc = failed to setup network for sandbox "cc354eaf34d6576e9fb15d4dd5b13a6c397a9b0ad15f29a9bbc99fbc1d2684a2": plugin type="aws-cni" name="aws-cni" failed (add): add cmd: failed to assign an IP address to container
- Had to apply labels to nodes manually to make the affinity stuff working.