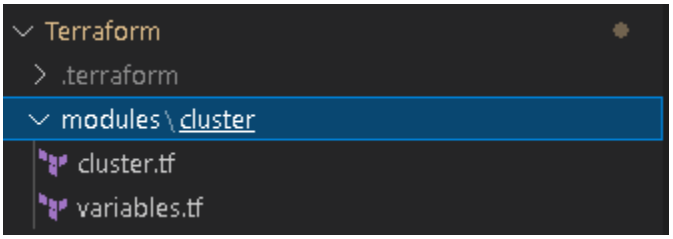
Lesson4 - Module For AKS Cluster

In the previous lesson we created main.tf and tested terraform init and terraform plan. In this lesson we will create terraform child module for AKS cluster provisioning. We are using child modules to keep the main.tf clean as much as possible.

Create modules folder and cluster sub folder with cluster.tf and variables.tf files




variables.tf


cluster.tf

NOTES:

We need to provide the **service principal** to cluster.tf so the AKS will use it to function.

```
service_principal {
    client_id = var.serviceprinciple_id
    client_secret = var.serviceprinciple_key
}
```

The **modules\cluster\variables.tf** need **serviceprinciple_id** and **serviceprinciple_key** variables defined in **terraform\varibales.tf** so terraform will be function also for the child module**.**

```
1 reference
variable "serviceprinciple_id" {
}

1 reference
variable "serviceprinciple_key" {
}
```

The **terraform\varibales.tf** need the extra variables defined in **modules\cluster\variables.tf** so it will pass it from the main variables.tf to the child variables.tf during plan and apply commands.

```
1 reference
variable "location" {
    default = "westus"
}

1 reference
variable "kubernetes_version" {
  default = "1.18.6"
}

1 reference
variable "ssh_key" {
}
```

Generate SSH key in order to connect to the AKS in case of problems

ssh-keygen -t rsa -b G096 -N "VeryStrongSecret123!" -C "email@example.com"

$SSH_KEY=cat .\ssh\id_rsa.pub

echo $SSH_KEY

Add the cluster module to main.tf so terraform will execute the child module during plan and apply commands

```
module "cluster" {
  source = "./modules/cluster/"
  serviceprinciple_id    = var.serviceprinciple_id
  serviceprinciple_key   = var.serviceprinciple_key
  ssh_key                = var.ssh_key
  location               = var.location
  kubernetes_version     = var.kubernetes_version
}
```

terraform init - let terraform know about the cluster module that we added

terraform plan

terraform plan -var serviceprinciple_id=$SERVICE_PRINCIPAL -var serviceprinciple_key="$SERVICE_PRINCIPAL_SECRET" -var tenant_id=$TENTANT_ID -var subscription_id=$SUBSCRIPTION -var ssh_key=$SSH_KEY

terraform apply

terraform apply -var serviceprinciple_id=$SERVICE_PRINCIPAL -var serviceprinciple_key="$SERVICE_PRINCIPAL_SECRET" -var tenant_id=$TENTANT_ID -var subscription_id=$SUBSCRIPTION -var ssh_key=$SSH_KEY