Kubernetes Cluster Creation

Minikube

Minimum Requirements to create a minikube cluster

- 2 CPUs or more
- 2GB of free memory
- 20GB of free disk space
- Internet connection
- Container or virtual machine manager, such as docker

Step - 1 Install docker

sudo su -

sudo apt update -y

sudo apt install apt-transport-https ca-certificates curl software-properties-common -y

curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo apt-key add -

sudo add-apt-repository "deb [arch=amd64] https://download.docker.com/linux/ubuntu bionic stable" -y

sudo apt update -y

apt-cache policy docker-ce

sudo apt install docker-ce -y

sudo systemctl status docker

sudo chmod 777 /var/run/docker.sock

Step - 2 Install kubectl
curl -LO "https://dl.k8s.io/release/$(curl -L -s https://dl.k8s.io/release/stable.txt)/bin/linux/amd64/kubectl"

sudo install -o root -g root -m 0755 kubectl /usr/local/bin/kubectl

kubectl version --client

Step - 3 Install minikube
curl -LO https://storage.googleapis.com/minikube/releases/latest/minikube-linux-amd64

sudo install minikube-linux-amd64 /usr/local/bin/minikube && rm minikube-linux-amd64

Step - 4 Add ubuntu user to docker group
exit
sudo usermod -aG docker ubuntu

Step - 5 Start minikube
minikube start --force

AWS EKS

Minimum requirements to create a AWS EKS cluster.

- AWS cli
- eksctl installation
- kubectl installation

Generate and configure access_key and secret_key as shown in the class then follow below.
Here is the yaml file that you need to execute inorder to create an AWS EKS cluster.

```yaml
apiVersion: eksctl.io/v1alpha5
kind: ClusterConfig

metadata:
 name: "uat-dev"
 region: "ap-south-1"
 version: "1.23"

nodeGroups:
 - name: ng-1
   instanceType: t3.medium
   desiredCapacity: 3
   volumeSize: 50
   ssh:
     publicKeyName: durgasoft
```

Go into the path of this file and execute this with the below command.
eksctl create cluster -f <filename>.yaml

After completion below is the command to delete the cluster.
eksctl delete cluster -f <file_name>.yaml
