1. Create EC2 Instance with Ubuntu AMI with t2.large
2. Login to EC2 from your Terminal
3. Become root user
   1. sudo -i

**Install the IAM Authenticator**

curl -o aws-iam-authenticator https://amazon-eks.s3-us-west-2.amazonaws.com/1.14.6/2019-08-22/bin/linux/amd64/aws-iam-authenticator

chmod +x ./aws-iam-authenticator

mkdir -p $HOME/bin && cp ./aws-iam-authenticator $HOME/bin/aws-iam-authenticator && export PATH=$PATH:$HOME/bin

echo 'export PATH=$PATH:$HOME/bin' >> ~/.bashrc

aws-iam-authenticator help

**Installing the EKS Cluster**

1. Setup kubectl  
   a. Download kubectl version 1.20  
   b. Grant execution permissions to kubectl executable  
   c. Move kubectl onto /usr/local/bin  
   d. Test that your kubectl installation was successful

curl -o kubectl <https://amazon-eks.s3.us-west-2.amazonaws.com/1.19.6/2021-01-05/bin/linux/amd64/kubectl>

chmod +x ./kubectl

mv ./kubectl /usr/local/bin

kubectl version --short --client

1. Setup eksctl  
   a. Download and extract the latest release  
   b. Move the extracted binary to /usr/local/bin  
   c. Test that your eksclt installation was successful

curl --silent --location "https://github.com/weaveworks/eksctl/releases/latest/download/eksctl\_$(uname -s)\_amd64.tar.gz" | tar xz -C /tmp

sudo mv /tmp/eksctl /usr/local/bin

eksctl version

1. Create an IAM Role and attach it to EC2 instance  
     
   Atach AdministratorAccess Policy to IAM Role
2. Create your cluster and nodes

eksctl create cluster --name my-cluster --region us-east-2 --node-type t2.small

1. Update Packages and install aws cli

apt update -y

apt install awscli -y

1. Create IAM User, Attach AdministratorAccessPolicy and Generate Access Keys

aws confifure

Provide Access Keys, Secret Access Keys, Regions and Default Output Format as table

1. Once the Cluster is created, Verify it by executing below commands

* kubectl get nodes
* kubectl get svc

If you receive the Error like the below

**error: You must be logged in to the server (Unauthorized)**

Then execute below Commands

rm ~/.aws/credentials

touch ~/.aws/credentials

1. Launch the application
   1. Create Manifest file (nginx.yaml)
   2. kubectl create -f nginx.yaml
2. kubectl get service and copy the External IP for nginx-service and access it from browser