**Script for Kubernetes Cluster in EKS :**

**Pre-requistes:**

This Lab is using Jenkins EC2 instance. Jenkins EC2 instance needs to have following configured:

* [**Install AWS CLI**](https://www.coachdevops.com/2020/10/install-aws-cli-version-2-on-linux-how.html) – Command line tools for working with AWS services, including Amazon EKS.
* [**Install eksctl**](https://www.coachdevops.com/2020/10/install-eksctl-on-linux-instance-how-to.html)– A command line tool for working with EKS clusters that automates many individual tasks.
* [**Install kubectl** – A command line tool for working with Kubernetes clusters.](https://www.coachdevops.com/2022/05/install-kubectl-on-ubuntu-instance-how.html)

**Install the AWS CLI version 2 on Linux | How to Install the AWS CLI version 2 on Linux**

Follow these steps from the command line to install the AWS CLI on Linux.

curl "https://awscli.amazonaws.com/awscli-exe-linux-x86\_64.zip" -o "awscliv2.zip"

sudo apt install unzip

sudo unzip awscliv2.zip

sudo ./aws/install

aws --version

it should display the below outout.

https://1.bp.blogspot.com/--Wc6wYpYHSY/YSW31MZJSlI/AAAAAAAADpc/AQ63yvYcJR8Ymkk9UpryTQK75Y6SptfqQCLcBGAsYHQ/s807/Screen%2BShot%2B2021-08-24%2Bat%2B10.23.39%2BPM.png

Now Configure AWS account with Access ID & Secret Access Key in our Instance :

Aws configure

Access Key ID:

AKIAR4TCQLTZAELJI655

Secret Access Key:

Tig++7jMSlfYaYxQMnPo3lV/ufoltDQI4jHrSQON

Now check if your aws account configuration done :

aws s3 ls

(In output must show ur aws s3 bucket name)

**Install eksctl on Linux Instance | How to install eksctl in Ubuntu**

eksctl is a command line tool for working with EKS clusters that automates many individual tasks.

The eksctl tool uses CloudFormation under the hood, creating one stack for the EKS master control plane and another stack for the worker nodes.

Download and extract the latest release of eksctl with the following command.

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

Move the extracted binary to /usr/local/bin.

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

eksctl version

**Install kubectl on Ubuntu Instance | How to install kubectl in Ubuntu | Install kubectl on Linux Instance**

Kubernetes uses a command line utility called kubectl for communicating with the cluster API server. It is tool for controlling Kubernetes clusters. kubectl looks for a file named config in the $HOME directory.

sudo curl --silent --location -o /usr/local/bin/kubectl https://s3.us-west-2.amazonaws.com/amazon-eks/1.22.6/2022-03-09/bin/linux/amd64/kubectl

sudo chmod +x /usr/local/bin/kubectl

Verify if kubectl got installed

kubectl version --short –client

**Create EKS Cluster with two worker nodes using eksctl**

eksctl create cluster --name techno --region us-east-1 --nodegroup-name my-nodes --node-type t3.small --managed --nodes 2

the above command should create a EKS cluster in AWS, it might take 15 to 20 mins. The eksctl tool uses CloudFormation under the hood, creating one stack for the EKS master control plane and another stack for the worker nodes.

After creating cluster verify cluster :

eksctl get cluster

kubectl get nodes -o wide

**Delete Cluster**

eksctl delete cluster ekscluster

Terminate master and worker node Ec2 Instance from aws

After terminating check vpc and delete Nat gateway and then release elastic ip

Delete vpc created for cluster

Delete extra subnet created for cluster.