Setting up EKS CTL command line and dependencies

- Download the Amazon EKS-vended kubectl binary from Amazon S3:

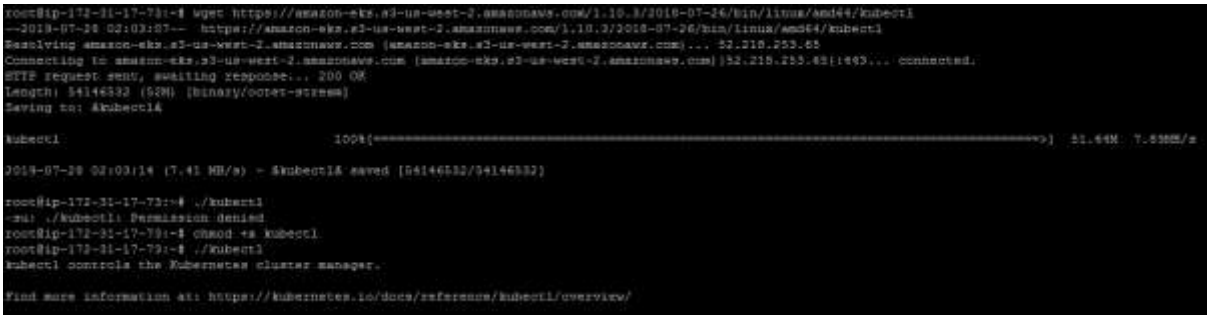
Linux: https://amazon-eks.s3-us-west-2.amazonaws.com/1.10.3/2018-07-26/bin/linux/amd64/kubectl

- Follow the steps shown below in the screenshot.

wget https://amazon-eks.s3-us-west-2.amazonaws.com/1.10.3/2018-07-26/bin/linux/amd64/kubectl

chmod +x kubectl

./kubectl



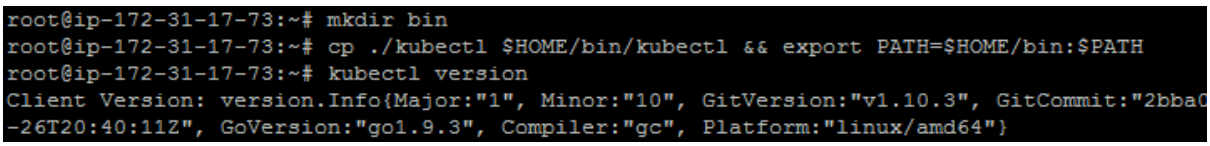
- Configure **kubectl** in PATH variable to call **kubectl** command globally. Follow the set of commands given below to configure PATH variable:

mkdir bin

cp ./kubectl $HOME/bin/kubectl && export PATH=$HOME/bin:$PATH

kubectl version

kubectl version --short --client



- Configure AWS CLI and aws-iam-authenticator. Follow the set of commands given below to install these command lines. Download the Amazon EKS-vended aws-iam-authenticator binary from Amazon S3:

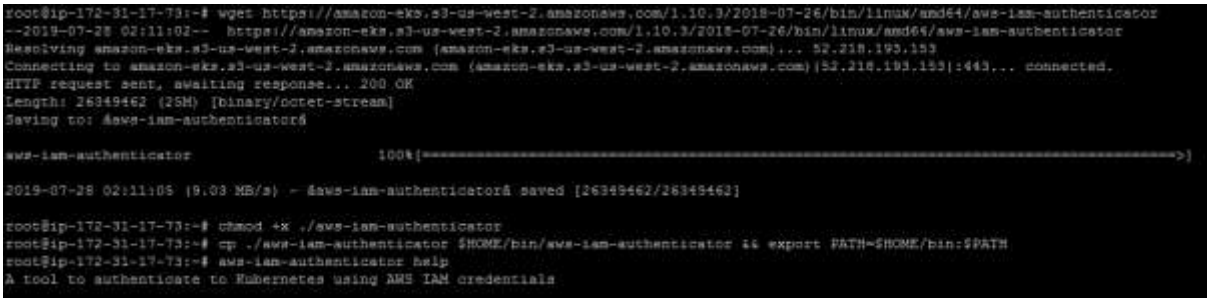
Linux: https://amazon-eks.s3-us-west-2.amazonaws.com/1.10.3/2018-07-26/bin/linux/amd64/aws-iam-authenticator

wget https://amazon-eks.s3-us-west-2.amazonaws.com/1.10.3/2018-07-26/bin/linux/amd64/aws-iam-authenticator

chmod +x ./aws-iam-authenticator

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

aws-iam-authenticator help

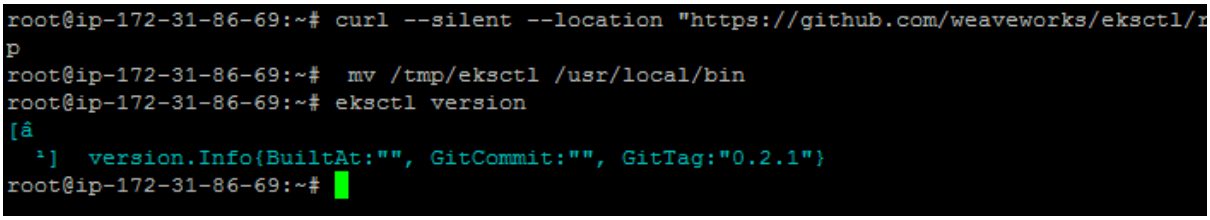


- Install **EKS CTL command line** to create an EKS cluster.

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

mv /tmp/eksctl /usr/local/bin

eksctl version



- Install AWS CLI using the sequence of commands given below.

apt install python-pip

pip install awscli

aws --version

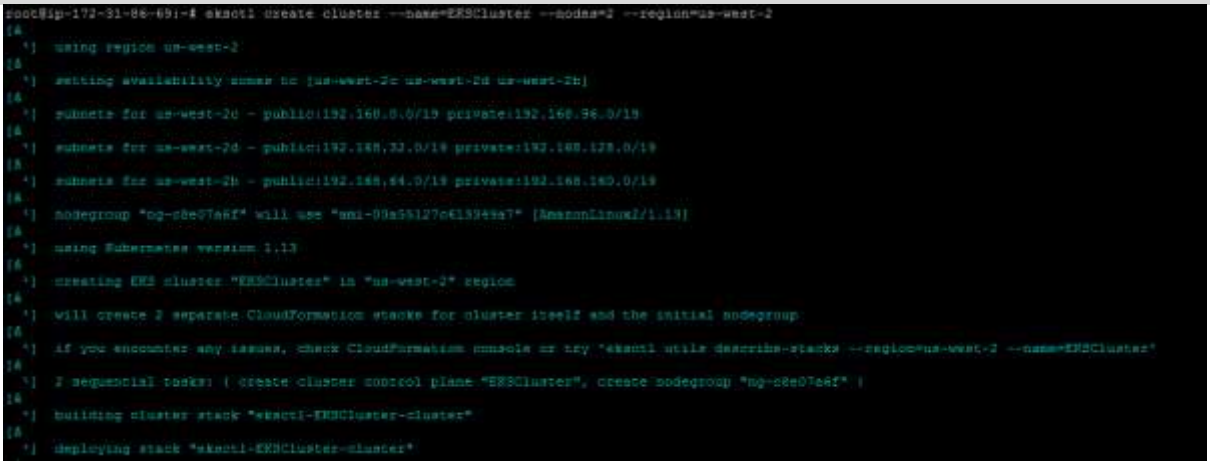
- Configure AWS CLI and provide **Access Keys and Secret Access Keys** while configuring AWS CLI.

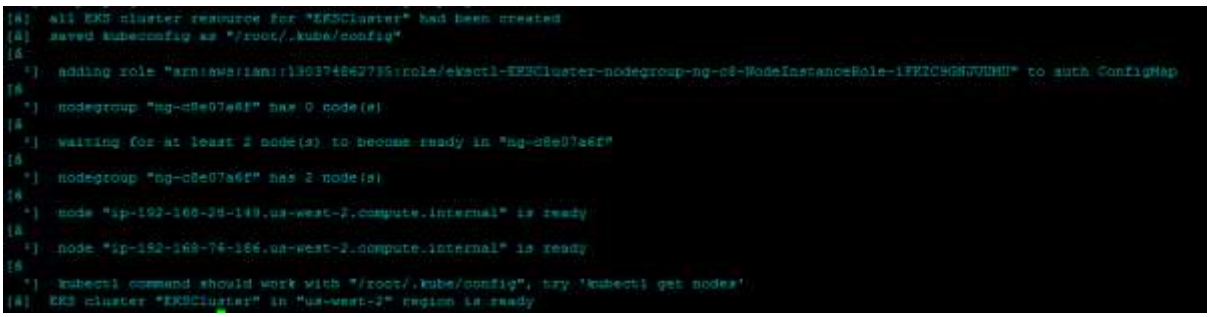
```
root@ip-172-31-17-73:~# aws configure
AWS Access Key ID [None]: AKIAVORWYFFGE3YTFZFZ
AWS Secret Access Key [None]: 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
Default region name [None]: us-east-1
Default output format [None]: json
root@ip-172-31-17-73:~#
```

Step 5.4.2: Creating an EKS cluster using eksctl command line

- Create an EKS Cluster using the command below:

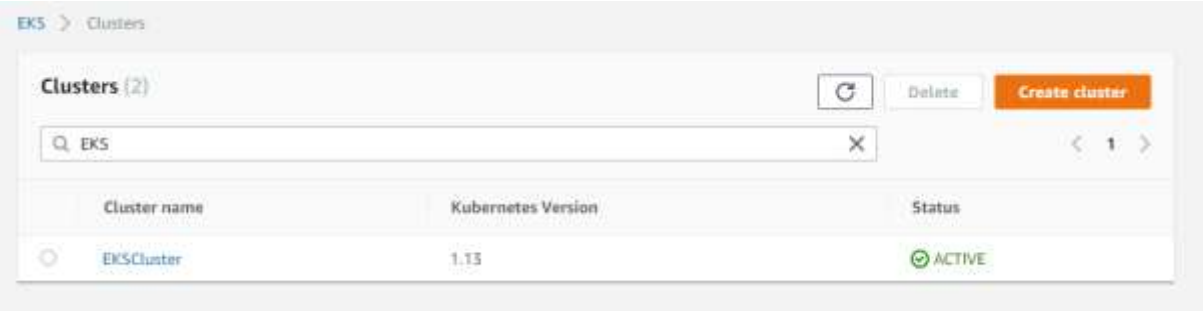
eksctl create cluster --name=EKSCluster --nodes=2 --region=us-west-2





- Validate the cluster using **kubectl get node** command through AWS Console.

```
root@ip-172-31-86-69:~# kubectl get node
NAME                                          STATUS    ROLES     AGE       VERSION
ip-192-168-28-149.us-west-2.compute.internal   Ready     <none>    5m        v1.13.7-eks-c57ff8
ip-192-168-76-186.us-west-2.compute.internal   Ready     <none>    5m        v1.13.7-eks-c57ff8
root@ip-172-31-86-69:~#
```



Deploying an application to AWS EKS cluster

- Create Kubernetes deployment and service using the set of commands mentioned below:

kubectl run kubernetes-bootcamp --image=docker.io/jocatalin/kubernetes-bootcamp:v1 --port=8080

kubectl expose deployment/kubernetes-bootcamp --port=8080 --target-port=8080 --type=NodePort

```
root@ip-172-31-86-69:~# kubectl run kubernetes-bootcamp --image=docker.io/jocatalin/kubernetes-bootcamp:v1 --port=8080
deployment.apps "kubernetes-bootcamp" created
root@ip-172-31-86-69:~# kubectl expose deployment/kubernetes-bootcamp --port=8080 --target-port=8080 --type=NodePort
service "kubernetes-bootcamp" exposed
root@ip-172-31-86-69:~# kubectl get pods
NAME                                  READY     STATUS              RESTARTS   AGE
kubernetes-bootcamp-6c5cfd894b-9jqzf   0/1       ContainerCreating   0          6s
root@ip-172-31-86-69:~# kubectl get deployments
NAME                  DESIRED   CURRENT   UP-TO-DATE   AVAILABLE   AGE
kubernetes-bootcamp   1         1         1            1           15s
root@ip-172-31-86-69:~# kubectl get pods
NAME                                  READY     STATUS    RESTARTS   AGE
kubernetes-bootcamp-6c5cfd894b-9jqzf   1/1       Running   0          19s
root@ip-172-31-86-69:~# kubectl get services
NAME                  TYPE        CLUSTER-IP       EXTERNAL-IP   PORT(S)          AGE
kubernetes            ClusterIP   10.100.0.1       <none>        443/TCP          44m
kubernetes-bootcamp   NodePort    10.100.33.238    <none>        8080:30306/TCP   1m
root@ip-172-31-86-69:~#
```