**Kubernates**

valaxy referance for k8s

https://devopsrealtime.com/how-to-install-and-setup-kubernetes-cluster-kops-eksctl-kubeadm/

# This file is venkat k8s practice

setup bootstrap server with kops method.

Create bootstrap server

1. create EC2 server

2. install aws cli in EC2 and check version (aws --version)

Install kubectl

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

2. chmod +x kubectl

3. mv kubectl /usr/local/bin/

4. kubectl version

Install kops

1. curl -Lo kops https://github.com/kubernetes/kops/releases/download/$(curl -s https://api.github.com/repos/kubernetes/kops/releases/latest | grep tag\_name | cut -d '"' -f 4)/kops-linux-amd64

2. chmod +x kops

3. sudo mv kops /usr/local/bin/kops

kops version

Create IAM Role

Create IAM Role and attach the role to bootstrap server. IAM Role must have below policies attached.

AmazonEC2FullAccess

AmazonRoute53FullAccess

AmazonS3FullAccess

IAMFullAccess

AmazonVPCFullAccess

AmazonEventBridgeFullAccess

AmazonSQSFullAccess

Configure Route53

route53 hosted zone need to add ex (kloudking.in)

add route 53 hostnames in godaddy

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1. Create a S3 bucket

bucket name : venkata-k8s-config

Setup SSH Keys

Create SSH Keys by running “#

ssh-keygen -t rsa

export NAME=venkat.kloudking.in

export KOPS\_STATE\_STORE=s3://venkata-k8s-config

for single hosted zone

kops create cluster –zones=us-east-1a ${NAME}

for multiple hosted zones

kops create cluster -–zones=us-east-1a,us-east-1b ${NAME}

Suggestions:

\* list clusters with: kops get cluster

\* edit this cluster with: kops edit cluster venkat.kloudking.in

\* edit your node instance group: kops edit ig --name=venkat.kloudking.in nodes-us-east-1a

\* edit your master instance group: kops edit ig --name=venkat.kloudking.in master-us-east-1a

kops update cluster --name venkat.kloudking.in --yes --admin

to check cluster status

kops validate cluster --wait 10m

After success full result like below

#########################

NODE STATUS

NAME ROLE READY

ip-172-20-36-125.ec2.internal master True

ip-172-20-40-133.ec2.internal node True

ip-172-20-65-198.ec2.internal node True

Your cluster venkat.kloudking.in is ready

it will create EC2 instalnces t3.medium those are billable, Terminate EC2 instances ASAP to reduce pricing

to Terminate EC2 instances use below command

kops delete cluster -–name ${NAME} -–yes

to create again same

export NAME=venkat.kloudking.in

export KOPS\_STATE\_STORE=s3://venkata-k8s-config

kops update cluster ${NAME} –yes –admin

#################

kubectl run web-server --image=httpd - to create a pod

to see number of of pods

#kubectl get pods

to see number of pods with full info

#kubectl get pods -o wide

to see full info of pod

#kubectl describe pod web-server

to enter to pod with interactive mode

kubectl exec -it web-server -- /bin/bash

exit ->to comout

to delete pod

kubectl delete pod web-server

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kubectl commands

https://kubernetes.io/docs/reference/generated/kubectl/kubectl-commands

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to delete cluster servers

kops delete cluster –name ${NAME} –yes

Create Cluster State Storage (S3 Bucket)

Setup SSH Keys

Create cluster configuration

Modify cluster configuration(Optional)

Build cluster

Validate cluster

Delete cluster