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kOps - Kubernetes Operations

1) Create IAM role with admin police as kops

2) Create IAM admin user as kops
3) EC2 Instance Create with role assign

Download and note access key and secret key

4) apt install awscli
   sudo snap install aws-cli --classic
   aws --version

```
root@ip-172-31-15-74:~# aws --version
aws-cli/1.15.58 Python/3.5.2 Linux/5.4.0-1092-aws botocore/1.10.57
```

5) `aws configure`   # Use your new access and secret
key here

Enter actress key and secret key
Region us-west-2
Output format - dont give any press enter

6) `aws iam list-users` # you should see a list of all your
IAM users here

Cluster State storage
   Create persistence storage for our cluster

aws s3 mb s3://nitindevops6dec22 --region us-west-2

7) Install KOPS

curl -LO
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

```
# chmod +x kops-linux-amd64

# sudo mv kops-linux-amd64 /usr/local/bin/kops

# kops version
```

8) Install kubectl

```
# curl -LO https://storage.googleapis.com/kubernetes-release/release/$(curl -s
https://storage.googleapis.com/kubernetes-release/release/stable.txt)/bin/linu
x/amd64/kubectl

# chmod +x ./kubectl

# sudo mv ./kubectl /usr/local/bin/kubectl
```

9) As root user set class path

```
vi ~/.bashrc
```

Create DNS namespaces using R53 with name **gayatriinfotech.in**
Copy 4 namespaces from R53 and past in godaddy domain name

```
export KOPS_CLUSTER_NAME=gayatriinfotech.in
export KOPS_STATE_STORE=s3://nitindevops6dec22
```

10) source ~/.bashrc

```
11) ssh-keygen

kops create cluster \
--state=${KOPS_STATE_STORE} \
--node-count=2 \
--master-size=t2.medium \
--node-size=t2.medium \
--zones=us-west-2a,us-west-2b \
--name=${KOPS_CLUSTER_NAME} \
--dns public \
--master-count 1
```

12. Cluster will be create with one master and two nodes

Cluster configuration has been created.

Suggestions:
 * list clusters with: kops get cluster
 * edit this cluster with: kops edit cluster gayatriinfotech.in
 * edit your node instance group: kops edit ig
--name=gayatriinfotech.in nodes-us-west-2a
 * edit your master instance group: kops edit ig
--name=gayatriinfotech.in master-us-west-2a

13) Finally configure your cluster with command:

kops update cluster --name gayatriinfotech.in --yes --admin

16)validate cluster: kops validate cluster --wait 15m

17)After 15 min run following command whether cluster is
created or not

kubectl get nodes

kops edit cluster --name maha4devops.in --yes --admin
kops update cluster --name maha4devops.in --yes --admin
kops validate cluster --wait 10m

18) To delete KOPS use
kops delete cluster --yes