

Project GOALS:

“Containerized Shopping app deployment in AWS with ELB and Autoscaling with CI/CD(Continuous Delivery)”

DevOPS Tools used: Terraform, Ansible and Jenkins.

Steps:

1.launch an instance with this conf from aws console:

t2.medium ec2 -> Name: Jenkins , ssh into it.

(this acts as your Jenkins/ansible server—acts as your base system/laptop)

2.Go to your Jenkins instance shell/terminal:

```
$ sudo useradd jenkins-m -s /bin/bash
```

```
$ ls /home
```

```
jenkins ubuntu
```

```
$ sudo passwd jenkins
```

```
$ sudo visudo
```

```
jenkins ALL=(ALL) NOPASSWD: ALL
```

```
$ su -jenkins
```

a.<jenkins user>~ \$ ssh-keygen Distribute it to worker nodes-> Copy the content of ssh-pub key using -<Jenkins-user> \$cat ~/.ssh/id_rsa.pub and put it into/replace last line user-data.sh like echo “~/.ssh/id_rsa.pub content” >> /home/ubuntu/.ssh/authorized_keys

b.Run <Jenkins user>~ bash terraform.sh and bash ansible.sh and Jenkins.sh

c.Put aws_ec2.yaml in to /home/jenkins/ and ansible.cfg contents in /etc/ansible/ansible.cfg

3.Inside Jenkins:

-Access Jenkins in Browser and do the following: <http://jenkinspubIP:8080>

-In Jenkinsplugin install: Ansible<-only 1 plugin required

-Global Path Setup Automatic Installer: which ansible (/usr/bin/ansible)

4.Go back to your Jenkins instance shell/terminal:

Now run Terraform script:

```
$ terraform init
```

```
$ terraform plan
```

\$ terraform apply

<wait around 10 to 15 mins (first time) for servers to be ready and check targets' health in ec2 target group, only if and once healthy then move to next step>

5.Create Freestyle job in Jenkins server:

test connectivity(optional):

create a freestyle job -> Name: Test

execute shell ->

cd /home/jenkins

ansible-inventory --graph

ansible _Demo_ASG_tf -m ping

ansible _Demo_ASG_tf -m shell -a "docker info"

Final: customer-apps-prod-deployment:(choose one)

Put it in new freestyle job -> Name: Shopme-prod

Execute shell ->

(recommended) \$ ansible _Demo_ASG_tf -m shell -a "docker run -d -p 80:3000 bkimminich/juice-shop"

\$ ansible _Demo_ASG_tf -m shell -a "docker run -d -p 80:80 bkimminich/juice-shop:latest "

Now our app is on prod!

Verify- Access http://<elb dns name>:80 in browser on lappy/mobile

Notes:

[no need of docker in jenkins server]