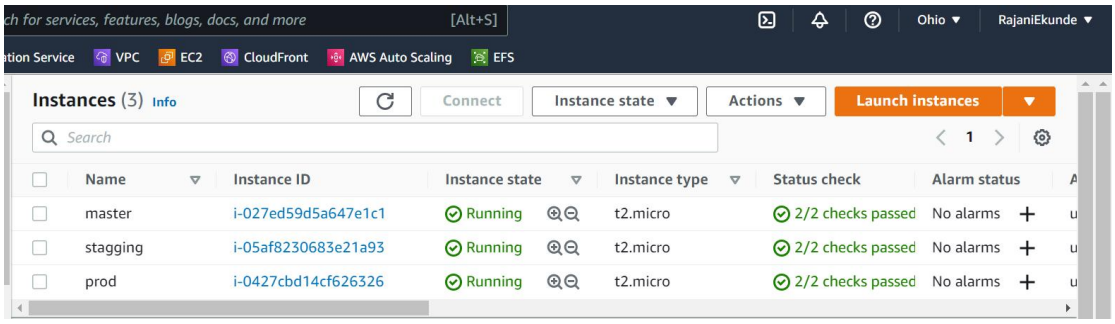
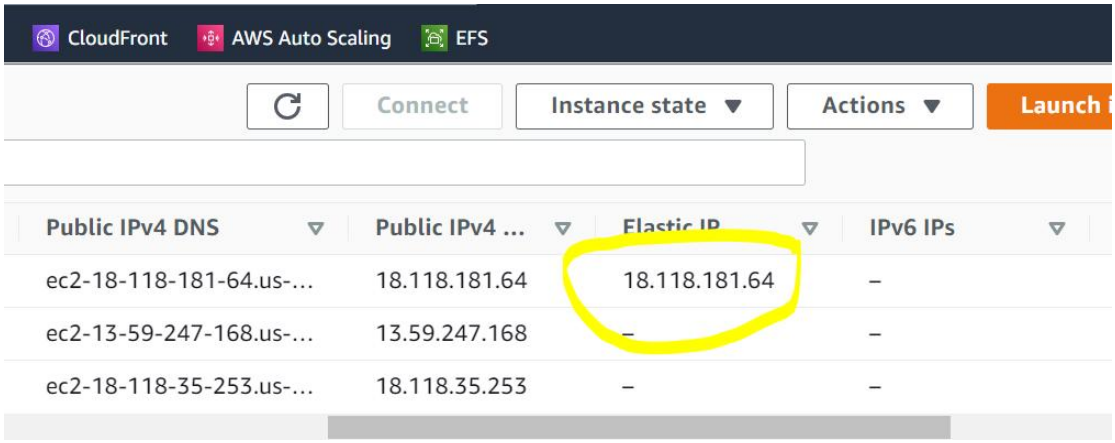
A guide to build a CICD pipeline for automated deployment of web application using Git and Jenkins.
I have used docker as a containerization tool here. Fetched the code from GitHub (Version Control Web Based Platform).
Need to add all the dependencies required .

Created 3 Ubuntu 20.04 instances, assigned elastic IP to master instance





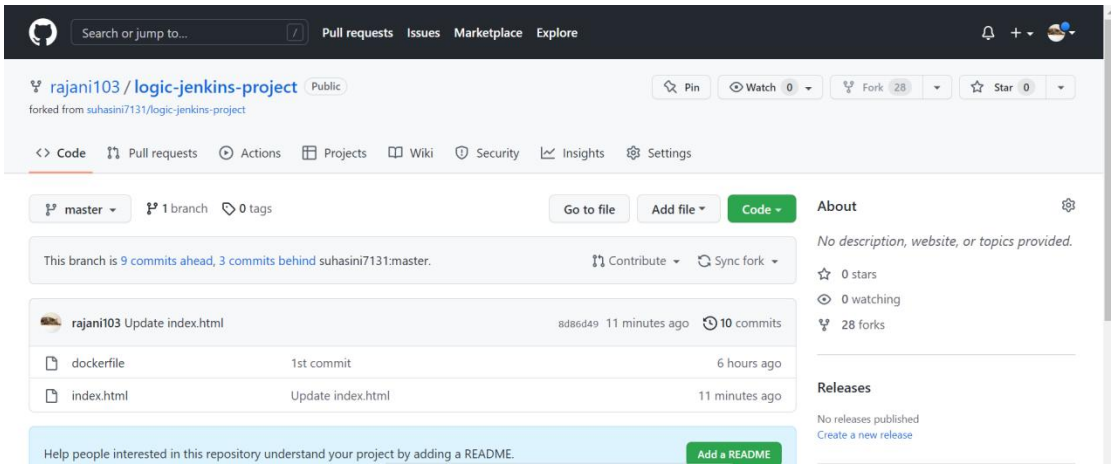
Install java jdk on all three instances and install Jenkins on only master and apt-get update -y

Using the commands connected the nodes to Jenkins

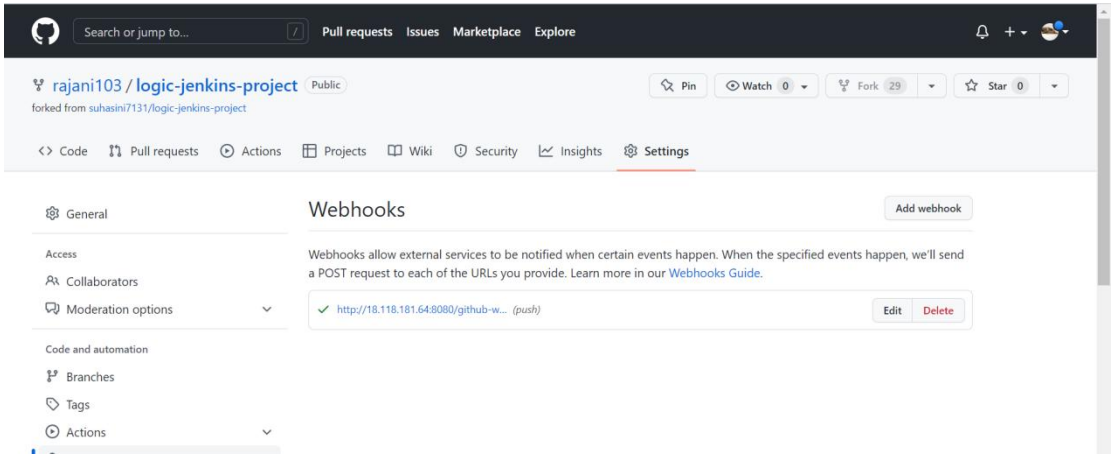
Referred this link for commands :

https://linuxize.com/post/how-to-install-jenkins-on-ubuntu-20-04/

Git configuration:



Added a web hook:



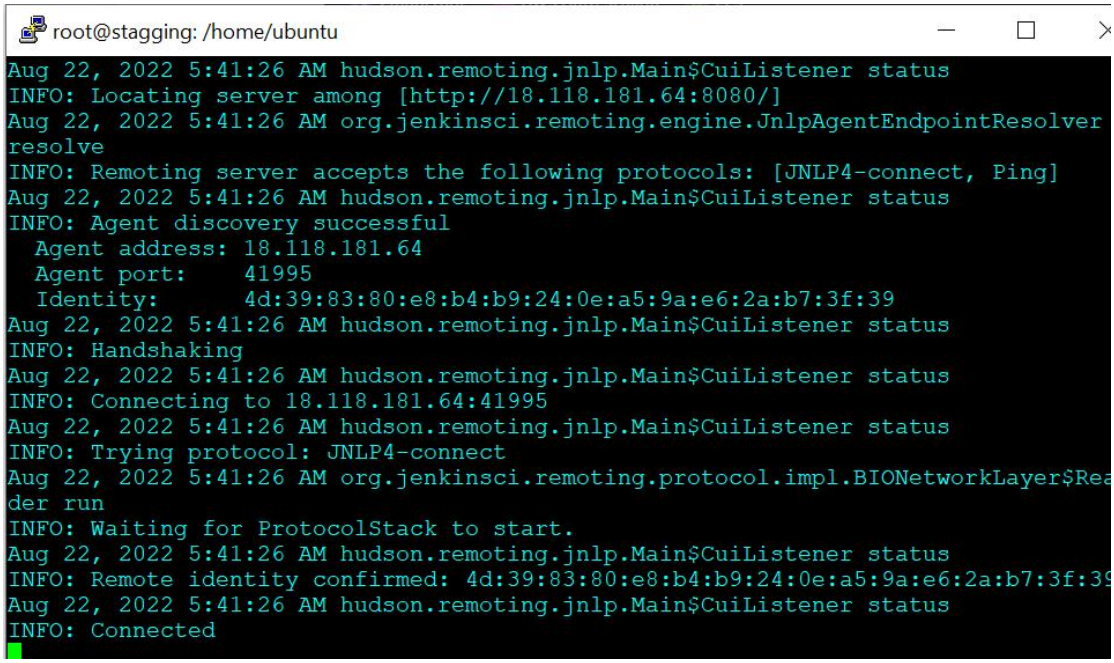
Jobs configuration :

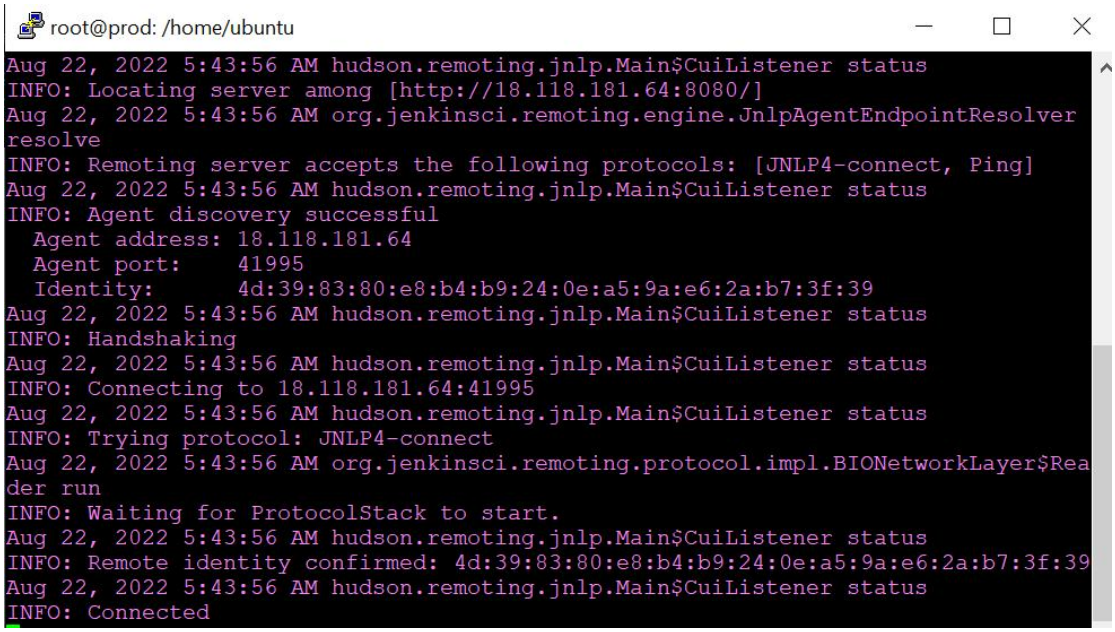
Manage nodes and clouds

Refresh status

S	Name ↓	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
	Built-In Node	Linux (amd64)	In sync	26.23 GB	0 B	26.23 GB	0ms
	prod	Linux (amd64)	In sync	26.65 GB	0 B	26.65 GB	35ms
	stagging	Linux (amd64)	In sync	26.66 GB	0 B	26.66 GB	19ms
	Data obtained	**2 min 0 sec**	**2 min 0 sec**	**2 min 0 sec**	**2 min 0 sec**	**2 min 0 sec**	**2 min 0 sec**

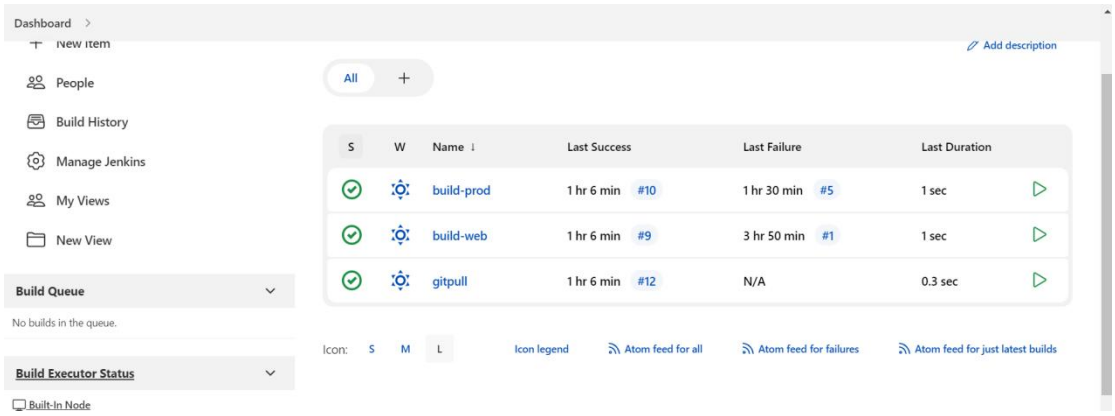
Connected the servers(stagging and prod):





Connect Jenkins through public IP of master and :8080 on browser and use password from master putty

Added nodes for Stagging and prod and configured them



Shell code for build-web

Shell code for build-prod

Containers created :

On stagging:

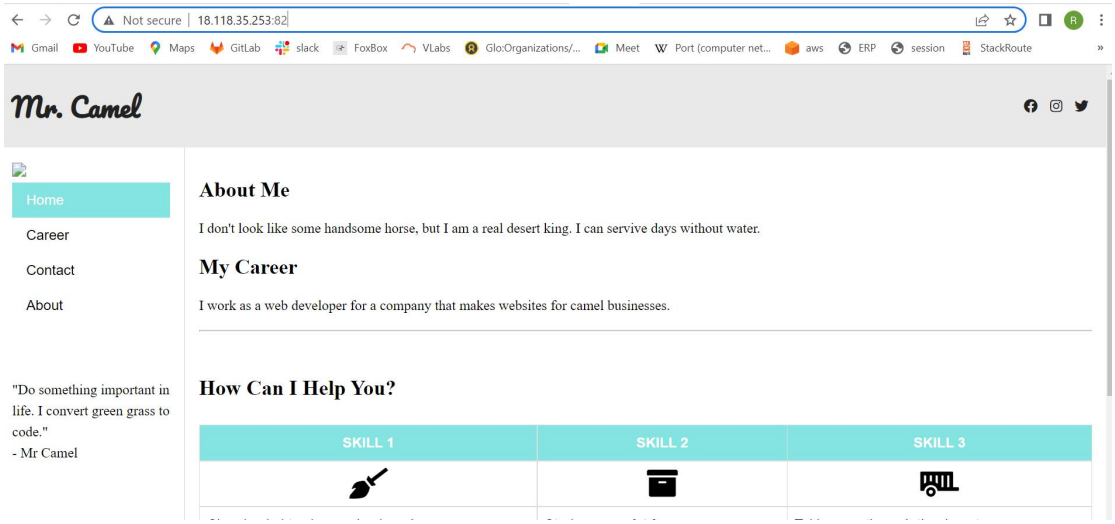
```
root@stagging:/home/ubuntu/jenkins/workspace/build-web# docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED          STATUS
   PORTS                                  NAMES
697e45d14123   website   "/bin/sh -c 'apachec…"   25 minutes ago   Up 25 minutes
   0.0.0.0:82->80/tcp, :::82->80/tcp   heuristic_wu
```

On prod:

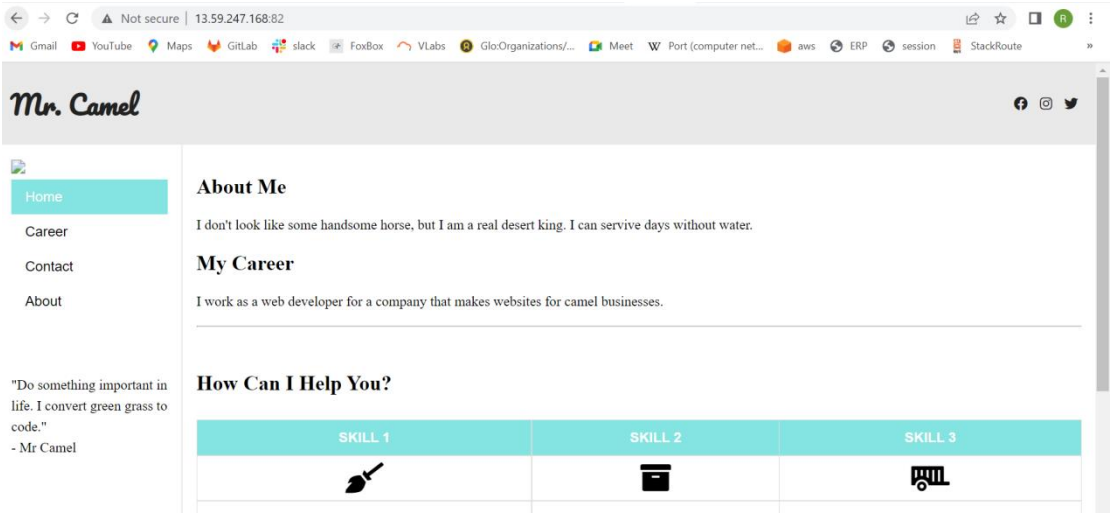
```
root@prod:/home/ubuntu/jenkins/workspace# docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED          STATUS
   PORTS                                  NAMES
be2e9c7dbd85   website   "/bin/sh -c 'apachec…"   27 minutes ago   Up 27 minutes
   0.0.0.0:82->80/tcp, :::82->80/tcp   relaxed_goldberg
root@prod:/home/ubuntu/jenkins/workspace#
```

Output on both the ports, able to access the webpage:

On stagging



On prod:



Design view of complete pipeline: