

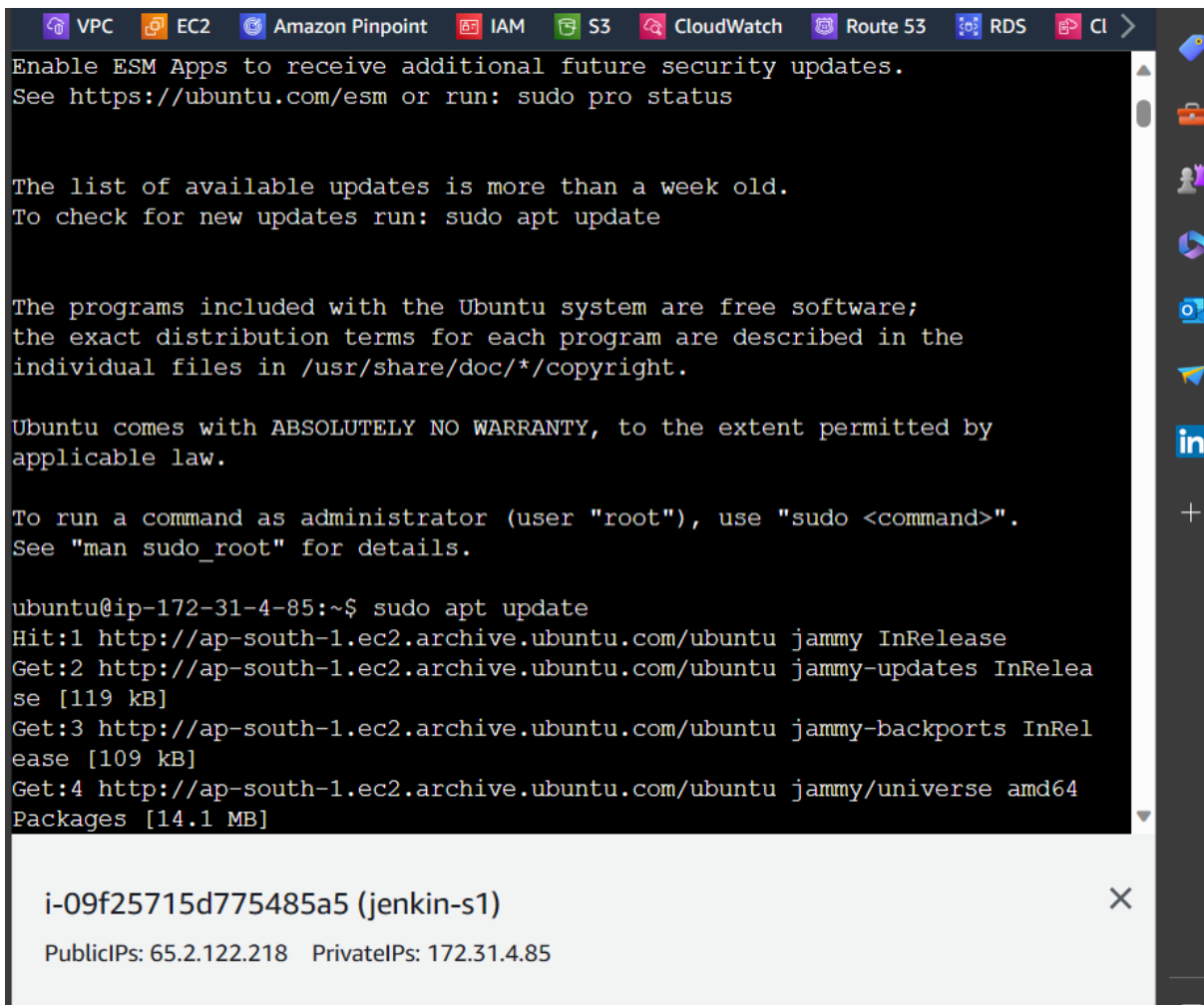
# Jenkin assignment

## Test:1

Tasks To Be Performed:

1. Trigger a pipeline using Git when push on develop branch
2. Pipeline should pull Git content to a folder

Sudo apt update



```
VPC EC2 Amazon Pinpoint IAM S3 CloudWatch Route 53 RDS CI >
Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-4-85:~$ sudo apt update
Hit:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Get:3 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease [109 kB]
Get:4 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 Packages [14.1 MB]
```

i-09f25715d775485a5 (jenkin-s1) ×

PublicIPs: 65.2.122.218 PrivateIPs: 172.31.4.85

Then install java

```
sudo apt install openjdk-11-jdk -y
```

[Linux \(jenkins.io\)](https://pkg.jenkins.io/debian/jenkins.io-2023.key)

```
curl -fsSL https://pkg.jenkins.io/debian/jenkins.io-2023.key | sudo tee \
  /usr/share/keyrings/jenkins-keyring.asc > /dev/null
```

```
echo deb [signed-by=/usr/share/keyrings/jenkins-keyring.asc] \
  https://pkg.jenkins.io/debian binary/ | sudo tee \
  /etc/apt/sources.list.d/jenkins.list > /dev/null
```

```
sudo apt-get update
```

```
sudo apt-get install jenkins
```

```
No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-0-64:~$ curl -fsSL https://pkg.jenkins.io/debian/jenkins.i
o-2023.key | sudo tee \
  /usr/share/keyrings/jenkins-keyring.asc > /dev/null
ubuntu@ip-172-31-0-64:~$ echo deb [signed-by=/usr/share/keyrings/jenkins-ke
yring.asc] \
  https://pkg.jenkins.io/debian binary/ | sudo tee \
  /etc/apt/sources.list.d/jenkins.list > /dev/null
ubuntu@ip-172-31-0-64:~$ sudo apt-get update
Hit:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelea
se
Hit:3 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRel
ease
Ign:4 https://pkg.jenkins.io/debian binary/ InRelease
Get:5 https://pkg.jenkins.io/debian binary/ Release [2044 B]
Get:6 https://pkg.jenkins.io/debian binary/ Release.gpg [833 B]
Hit:7 http://security.ubuntu.com/ubuntu jammy-security InRelease
Get:8 https://pkg.jenkins.io/debian binary/ Packages [56.9 kB]
Fetched 59.8 kB in 2s (35.1 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-0-64:~$ sudo apt-get install jenkins
```

i-0e678b6efb57611c6 (jenkin-m)

PublicIPs: 3.110.50.11 PrivateIPs: 172.31.0.64

the list of available updates is more than a week old.  
to check for new updates run: `sudo apt update`

the programs included with the Ubuntu system are free software;  
the exact distribution terms for each program are described in the  
individual files in `/usr/share/doc/*/copyright`.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by  
applicable law.

to run a command as administrator (user "root"), use "`sudo <command>`".  
see "`man sudo_root`" for details.

```
ubuntu@ip-172-31-0-64:~$ sudo apt update
Hit:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Get:3 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease [109 kB]
Get:4 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 Packages [14.1 MB]
Get:5 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Get:6 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy/universe Translation-en [5652 kB]
Get:7 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64
```

i-0e678b6efb57611c6 (jenkin-m)

PublicIPs: 3.110.50.11 PrivateIPs: 172.31.0.64

```
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jstatd to
provide /usr/bin/jstatd (jstatd) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/rmic to p
rovide /usr/bin/rmic (rmic) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/serialver
to provide /usr/bin/serialver (serialver) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jaotc to
provide /usr/bin/jaotc (jaotc) in auto mode
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jhsdb to
provide /usr/bin/jhsdb (jhsdb) in auto mode
Setting up openjdk-11-jdk:amd64 (11.0.20.1+1-0ubuntu1~22.04) ...
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jconsole
to provide /usr/bin/jconsole (jconsole) in auto mode
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-3-32:~$
```

i-0140053c9e0fd7365 (jenkin-s2) ×

PublicIPs: 43.204.143.86 PrivateIPs: 172.31.3.32

Getting Started

## Unlock Jenkins

To ensure Jenkins is securely set up by the administrator, a password has been written to the log ([not sure where to find it?](#)) and this file on the server:

```
/var/lib/jenkins/secrets/initialAdminPassword
```

Please copy the password from either location and paste it below.

**ERROR:** The password entered is incorrect, please check the file for the correct password

Administrator password

Continue

# Customize Jenkins

Plugins extend Jenkins with additional features to support many different needs.

## Install suggested plugins

Install plugins the Jenkins community finds most useful.

## Select plugins to install

Select and install plugins most suitable for your needs.

Jenkins 2.411

## Getting Started




✓ Folders	✓ OWASP Markup Formatter	✓ Build Timeout	✓ Credentials Binding
✓ Timestamper	⌚ Workspace Cleanup	⌚ Ant	⌚ Gradle
⌚ Pipeline	⌚ GitHub Branch Source	⌚ Pipeline: GitHub Groovy Libraries	⌚ Pipeline: Stage View
⌚ Git	⌚ SSH Build Agents	⌚ Matrix Authorization	⌚ PAM Authentication
⌚ LDAP	⌚ Email Extension	⌚ Mailer	


```
** SSH Credentials
Credentials Binding
** SCM API
** Pipeline: API
** commons-lang3 v3.x Jenkins API
Timestamper
** Caffeine API
** Script Security
** JAXB
** SnakeYAML API
** Jackson 2 API
** commons-text API
** Pipeline: Supporting APIs
** - required dependency
```





Dashboard >

+ New Item

 People

 Build History

 Manage Jenkins

 My Views

## Build Queue




No builds in the queue.

## Build Executor Status



1 Idle

2 Idle

 Add description

## Welcome to Jenkins!

Build Executor Status

 Built-In Node

1 Idle

2 Idle

 salve1

1 Idle

 slave2

1 Idle







Nodes

+ New Node

52 ms

Node Monitoring



S	Name ↓	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space
	Built-In Node	Linux (amd64)	In sync	4.85 GB	 0 B	4.85 GB
	salve1	Linux (amd64)	In sync	5.32 GB	 0 B	5.32 GB
	slave2	Linux (amd64)	In sync	5.32 GB	 0 B	5.32 GB

Dashboard > job2 >


 Changes

 Workspace

 Build Now

 Configure

 Delete Project

 GitHub Hook Log

 Rename



## Build History

trend ▾


 Filter builds...


/

 #1




| (pending—There are no nodes with the label '[salve2](#)' )

 [Atom feed for all](#)

 [Atom feed for failures](#)

# job2

 Add description





Dashboard > job1 > #1 > Console Output



Status



Changes



Console Output



View as plain text



Edit Build Information



Delete build '#1'



## Console Output

Started by user [Mukesh Pandit](#)


Running as SYSTEM


Building remotely on [salve](#) in workspace /home/ubuntu/jenkins/workspace/job1


Finished: SUCCESS


Dashboard >


+ New Item


 People

 Build History

 Project Relationship







 Check File Fingerprint

 Manage Jenkins

 My Views

All

+

S	W	Name ↓	Last Success	Last Failure	Last Duration
		job-1	N/A	24 min <a href="#">#1</a>	4.6 sec
		job1	2 min 48 sec <a href="#">#3</a>	N/A	54 ms
		job2	1.9 sec <a href="#">#5</a>	N/A	0.66 sec


Icon: 


S


M


L

Icon legend

 Atom feed for all

 Atom feed for failures

 Atom feed for just latest builds

 Add description

Build Queue

No builds in the queue.

Build Executor Status

built-in node + 2 agents (1 of 4 executors busy)

# Assignment 2

## Test :2

Tasks To Be Performed:

1. Add 2 nodes to Jenkins master
2. Create 2 jobs with the following jobs:
  - a. Push to test
  - b. Push to prod
3. Once a push is made to test branch, copy Git files to test server
4. Once a push is made to master branch, copy Git files to prod server

Let creat ec2 istance master and slave

Connect with java jdk +Jenkins to push the job

```
sudo apt-get install openjdk-11-jdk -y
```

```
sudo apt-get install openjdk-11-jdk -y
```

---

---

Nano install jenkins .sh

```
curl -fsSL https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key | sudo tee \
```

```
  /usr/share/keyrings/jenkins-keyring.asc > /dev/null
```

```
echo deb [signed-by=/usr/share/keyrings/jenkins-keyring.asc] \
```

```
  https://pkg.jenkins.io/debian-stable binary/ | sudo tee \
```

```
  /etc/apt/sources.list.d/jenkins.list > /dev/null
```

```
sudo apt-get update
```

```
sudo apt-get install Jenkins -y
```

```
VPC EC2 Amazon Pinpoint IAM S3 CloudWatch Route 53 RDS CloudFormation CodeCommit Elastic
ubuntu@ip-172-31-46-163:~/floder$ ls
develop.txt  file1
ubuntu@ip-172-31-46-163:~/floder$ history
 1  bash install.sh
 2  which jenkins
 3  sudo apt-get install openjdk-11-jdk -y
 4  clear
 5  sudo cat /var/lib/jenkins/secrets/initialAdminPassword
 6  mkdir floder
 7  cd floder
 8  git remote add origin https://github.com/mukesh1998hyd/jenkins-assignment.git
 9  touch file1
10  git add . && git commit -m "master branch commit"
11  git init
12  git remote add origin https://github.com/mukesh1998hyd/jenkins-assignment.git
13  touch file1
14  git add . && git commit -m "master branch commit"
15  git branch
16  git branch develop
17  git checkout develop
18  ls
19  touch develop.txt
20  git add . && git commit -m "main branch to develop"
21  git push --all
22  git branch
23  git checkout develop

i-Ofed3c2b42a9539fe (jenkin-master)
```

Checkout

Jenkins master

Commit the file of floder


Spring Initializ...

Instances


ndnm.gov.in - Bing

Home | e-SFRAM

https://www.revisi...

 master had recent pushes 26 minutes ago


Compare & pull request


 develop ▾

Go to file


Add file ▾


<> Code ▾


 Branches





 Tags

This branch is 3 commits ahead, 1 commit behind main.

 Contribute ▾

 mukesh1998hyd

Create new file.txt ... yesterday  4


 base.txt	Create base.txt	yesterday
 job1	Create job1	yesterday
 main.txt	Create main.txt	yesterday
 new file.txt	Create new file.txt	yesterday


Help people interested in this repository understand your project by adding a README.


Add a README


About

assignment

 Activity

 0 stars

 1 watching

 0 forks

Releases

No releases published  
[Create a new release](#)

Packages

No packages published  
[Publish your first package](#)

**jenkin-assignment**
Public

Pin
Unwatch 1
Fork 0
Star 0

**master** had recent pushes 2 minutes ago
 Compare & pull request

main
Go to file
Add file
<> Code

Switch branches/tags

Find or create a branch...

Branches

Tags

✓ main default

develop

master

View all branches

yesterday 2

yesterday

yesterday

Add a README

README.

**About**

assignment

Activity

0 stars

1 watching

0 forks

**Releases**

No releases published

Create a new release

**Packages**

No packages published

Publish your first package

**Jenkins**

1
1
mukesh
log

Dashboard

+ New Item

People

Build History

Project Relationship

Check File Fingerprint

Manage Jenkins

My Views

Build Queue

No builds in the queue.

Build Executor Status

Built-in Node

1 idle

All

+

S	W	Name ↓	Last Success	Last Failure	Last Duration
✓	☀	job1	3 min 28 sec #6	N/A	0.75 sec

Icon: S M L

Icon legend

Atom feed for all

Atom feed for failures

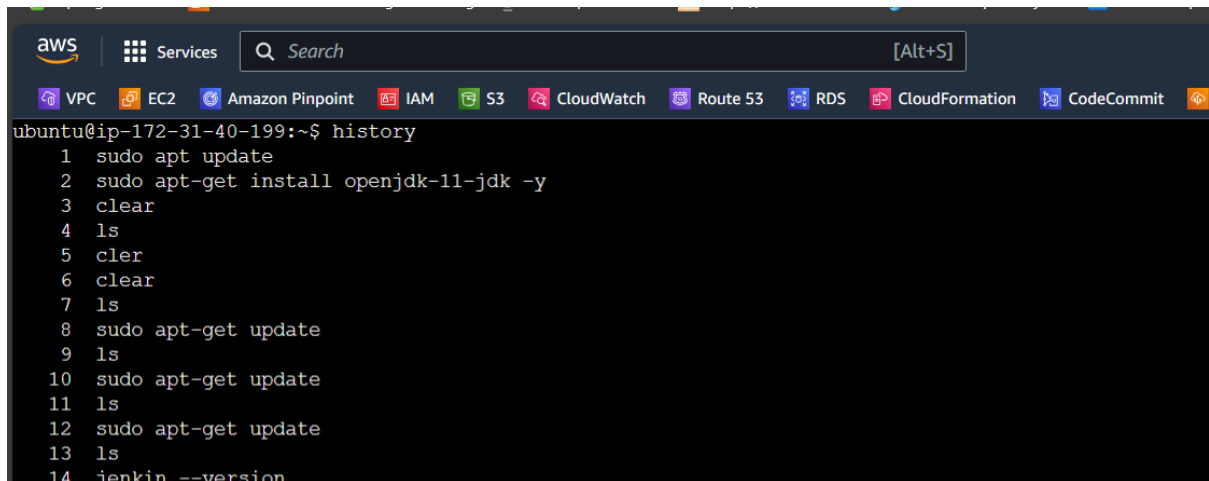
Atom feed for just latest builds

Add description

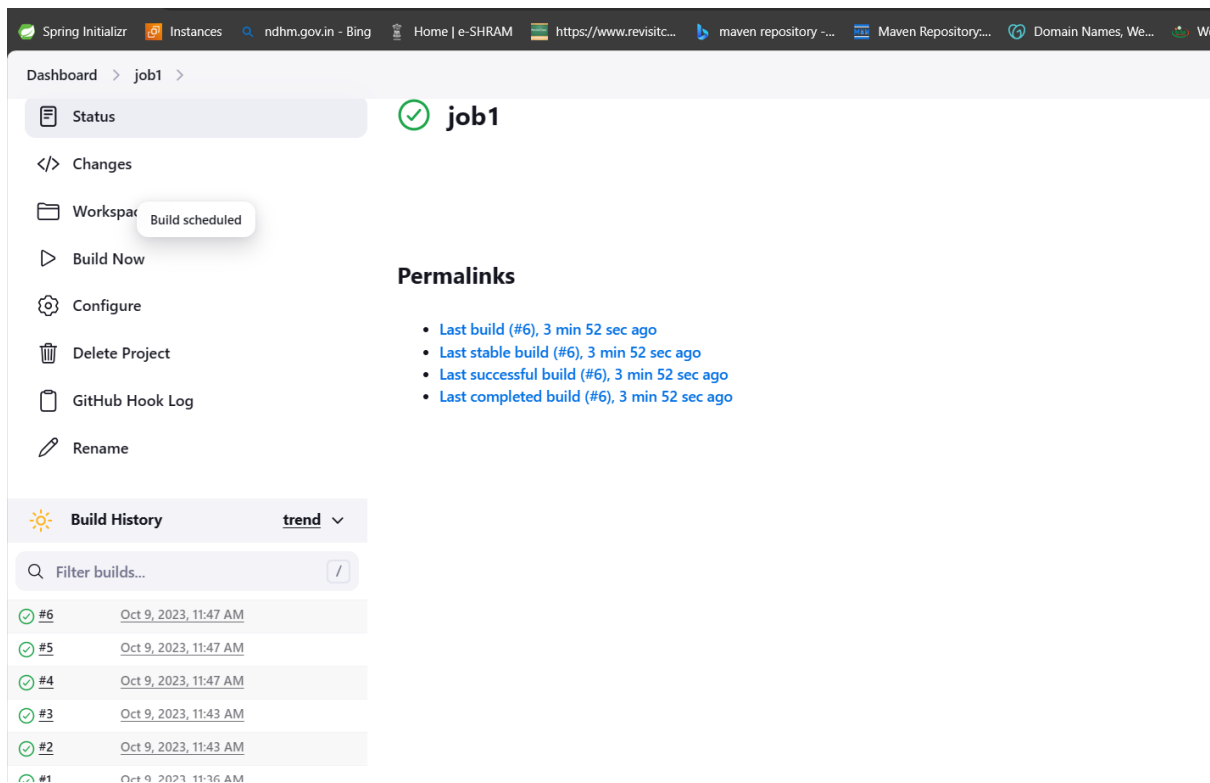
Then creat the job and slave file

Push all in master

Checkout




```
aws
Services
Search [Alt+S]
VPC EC2 Amazon Pinpoint IAM S3 CloudWatch Route 53 RDS CloudFormation CodeCommit
ubuntu@ip-172-31-40-199:~$ history
1 sudo apt update
2 sudo apt-get install openjdk-11-jdk -y
3 clear
4 ls
5 cler
6 clear
7 ls
8 sudo apt-get update
9 ls
10 sudo apt-get update
11 ls
12 sudo apt-get update
13 ls
14 jenkins --version
```



Spring Initializr Instances ndhm.gov.in - Bing Home | e-SHRAM https://www.revisitsc... maven repository ... Maven Repository... Domain Names, We...

Dashboard > job1 >

Status  **job1**

</> Changes

Workspace **Build scheduled**

Build Now

Configure

Delete Project

GitHub Hook Log

Rename

### Permalinks

- [Last build \(#6\), 3 min 52 sec ago](#)
- [Last stable build \(#6\), 3 min 52 sec ago](#)
- [Last successful build \(#6\), 3 min 52 sec ago](#)
- [Last completed build \(#6\), 3 min 52 sec ago](#)

### Build History

trend ▾

Filter builds...

Build ID	Time
#6	Oct 9, 2023, 11:47 AM
#5	Oct 9, 2023, 11:47 AM
#4	Oct 9, 2023, 11:47 AM
#3	Oct 9, 2023, 11:43 AM
#2	Oct 9, 2023, 11:43 AM
#1	Oct 9, 2023, 11:36 AM

# Project 1

## Capstone project

You have been hired as a Sr. DevOps Engineer in Abode Software. They want to implement DevOps Lifecycle in their company. You have been asked to implement this lifecycle as fast as possible. Abode Software is a product-based company and their product is available on this GitHub link.

<https://github.com/hshar/website.git>

Following are the specifications of the lifecycle

- : 1. Install the necessary software on the machines using a configuration management tool
2. Git workflow has to be implemented
3. CodeBuild should automatically be triggered once a commit is made to master branch or develop branch. a. If a commit is made to master branch, test and push to prod b. If a commit is made to develop branch, just test the product, do not push to prod
4. The code should be containerized with the help of a Dockerfile. The Dockerfile should be built every time there is a push to GitHub. Use the following pre-built container for your application: hshar/webapp The code should reside in '/var/www/html'
5. The above tasks should be defined in a Jenkins Pipeline with the following jobs:
  - a. Job1 : build
  - b. Job2 : test
  - c. Job3:prod

let create a master :git ,ansible,Jenkins,docker,java

connect to slaves1 : java,docker (ansible use)

slaves2 : java ,docker(ansible use)

Ansible installation commands

-----

sudo apt update

sudo apt install software-properties-common

sudo add-apt-repository --yes --update ppa:ansible/ansible

sudo apt install ansible



aws

Services

Mumbai

Mukesh Pandit

VPC

EC2

Amazon Pinpoint

IAM

S3

CloudWatch

Route 53

RDS

CL

Swap usage: 0%

\* Ubuntu Pro delivers the most comprehensive open source security and compliance features.

<https://ubuntu.com/aws/pro>

Expanded Security Maintenance for Applications is not enabled.

31 updates can be applied immediately.

6 of these updates are standard security updates.

To see these additional updates run: `apt list --upgradable`

An additional security update can be applied with ESM Apps.

Learn more about enabling ESM Apps service at <https://ubuntu.com/esm>

Last login: Mon Oct 9 03:14:37 2023 from 13.233.177.4

ubuntu@ip-172-31-10-116:~\$ ls

install.sh

ubuntu@ip-172-31-10-116:~\$ ssh-keygen

Generating public/private rsa key pair.

Enter file in which to save the key (/home/ubuntu/.ssh/id\_rsa):

/home/ubuntu/.ssh/id\_rsa already exists.

Overwrite (y/n)?

ubuntu@ip-172-31-10-116:~\$ ssh-keygen

i-009f8018c1aa41d67 (master)

PublicIPs: 43.204.144.110 PrivateIPs: 172.31.10.116

Feedback

Privacy

Terms

Cookie preference

Master1

The screenshot shows the AWS CLI interface with a terminal window displaying the output of the `doctl sysctl apply` command. The terminal output indicates that the `docker` group (GID 122) was added successfully, and various systemd symlinks were created. It also shows that no services, containers, or user sessions need to be restarted. The user then attempts to run `cd.ssh` and `cd .ssh`, both of which fail with "command not found". Finally, the user runs `sudo nano authorized_keys` and `bash`. Below the terminal window, a pop-up box displays the instance ID `i-02b20acf74a378057 (slave1)` and its IP addresses: PublicIPs: 13.233.17.26 and PrivateIPs: 172.31.10.165.

```
aws | Services | Search | [Icons] | Mumbai | Mukesh Pandit
VPC | EC2 | Amazon Pinpoint | IAM | S3 | CloudWatch | Route 53 | RDS | CI >

Adding group `docker' (GID 122) ...
Done.
Created symlink /etc/systemd/system/multi-user.target.wants/docker.service →
/lib/systemd/system/docker.service.
Created symlink /etc/systemd/system/sockets.target.wants/docker.socket → /lib
/systemd/system/docker.socket.
Processing triggers for dbus (1.12.20-2ubuntu4.1) ...
Processing triggers for man-db (2.10.2-1) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-10-165:~$ cd.ssh
cd.ssh: command not found
ubuntu@ip-172-31-10-165:~$ cd .ssh
ubuntu@ip-172-31-10-165:~/.ssh$ sudo nano authorized_keys
ubuntu@ip-172-31-10-165:~/.ssh$ bash
ubuntu@ip-172-31-10-165:~/.ssh$

i-02b20acf74a378057 (slave1)
PublicIPs: 13.233.17.26 PrivateIPs: 172.31.10.165
```

Slave1 and slave 2 create EC2 instance

Some command to write install in slave1 and 2

(create file slave.sh and paste commands present below)

`sudo apt-get update`

`sudo apt-get install openjdk-11-jdk -y`

`sudo apt-get install docker.io -y`

(create file master.sh and paste commands present below)

(please check the latest jenkins installation commands if you are using weekly release commands)

```
sudo apt-get update
```

```
sudo apt-get install openjdk-11-jdk -y
```

```
sudo apt-get install docker.io -y
```

```
curl -fsSL https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key | sudo tee \
```

```
/usr/share/keyrings/jenkins-keyring.asc > /dev/null
```

```
echo deb [signed-by=/usr/share/keyrings/jenkins-keyring.asc] \
```

```
https://pkg.jenkins.io/debian-stable binary/ | sudo tee \
```

```
/etc/apt/sources.list.d/jenkins.list > /dev/null
```

```
sudo apt-get update
```

```
sudo apt-get install jenkins -y
```

```
PLAY RECAP *****
*****
localhost                : ok=1    changed=0    unreachable=0    failed=0
  skipped=1    rescued=0    ignored=0
slave1                   : ok=1    changed=0    unreachable=0    failed=0
  skipped=1    rescued=0    ignored=0
slave2                   : ok=1    changed=0    unreachable=0    failed=0
  skipped=1    rescued=0    ignored=0

ubuntu@ip-172-31-10-116:~$ ansible-playbook ply1.yaml

PLAY [installing tools on master] *****
*****

TASK [Gathering Facts] *****
*****
ok: [localhost]

TASK [executing master.sh script] *****
*****
```

i-009f8018c1aa41d67 (master)

PublicIPs: 43.204.144.110 PrivateIPs: 172.31.10.116

Install all yaml file

---

- name: installing tools on master

hosts: localhost

become: true

tasks:

- name: executing master.sh script

script: master.sh

- name: installing tools on slaves

hosts: slave1

become: true

tasks:

- name: executing slave.sh script

script: slave.sh

- name: installing tools on slaves

hosts: slave2

become: true

tasks:

- name: executing slave.sh script

script: slave.sh

```
VPC EC2 Amazon Pinpoint IAM S3 CloudWatch Route 53 RDS CI >
TASK [executing slave.sh script] *****
*****
changed: [slave2]

PLAY RECAP *****
*****
localhost : ok=2 changed=1 unreachable=0 failed=0
skipped=0 rescued=0 ignored=0
slave1 : ok=2 changed=1 unreachable=0 failed=0
skipped=0 rescued=0 ignored=0
slave2 : ok=2 changed=1 unreachable=0 failed=0
skipped=0 rescued=0 ignored=0

ubuntu@ip-172-31-10-116:~$ which jenkins
/usr/bin/jenkins
ubuntu@ip-172-31-10-116:~$ java --version
openjdk 11.0.20.1 2023-08-24
OpenJDK Runtime Environment (build 11.0.20.1+1-post-Ubuntu-0ubuntu122.04)
OpenJDK 64-Bit Server VM (build 11.0.20.1+1-post-Ubuntu-0ubuntu122.04, mixed
mode, sharing)
ubuntu@ip-172-31-10-116:~$
ubuntu@ip-172-31-10-116:~$ docker --version
Docker version 24.0.5, build 24.0.5-0ubuntu1~22.04.1
ubuntu@ip-172-31-10-116:~$
```

i-009f8018c1aa41d67 (master) X  
PublicIPs: 43.204.144.110 PrivateIPs: 172.31.10.116

Check it all install successful in master,slave1 and slave2

Jenkins Execute shell commands:

=====

sudo docker build . -t finalrelease

sudo docker run -itd -p 80:80 finalrelease

=====

Running for second time:

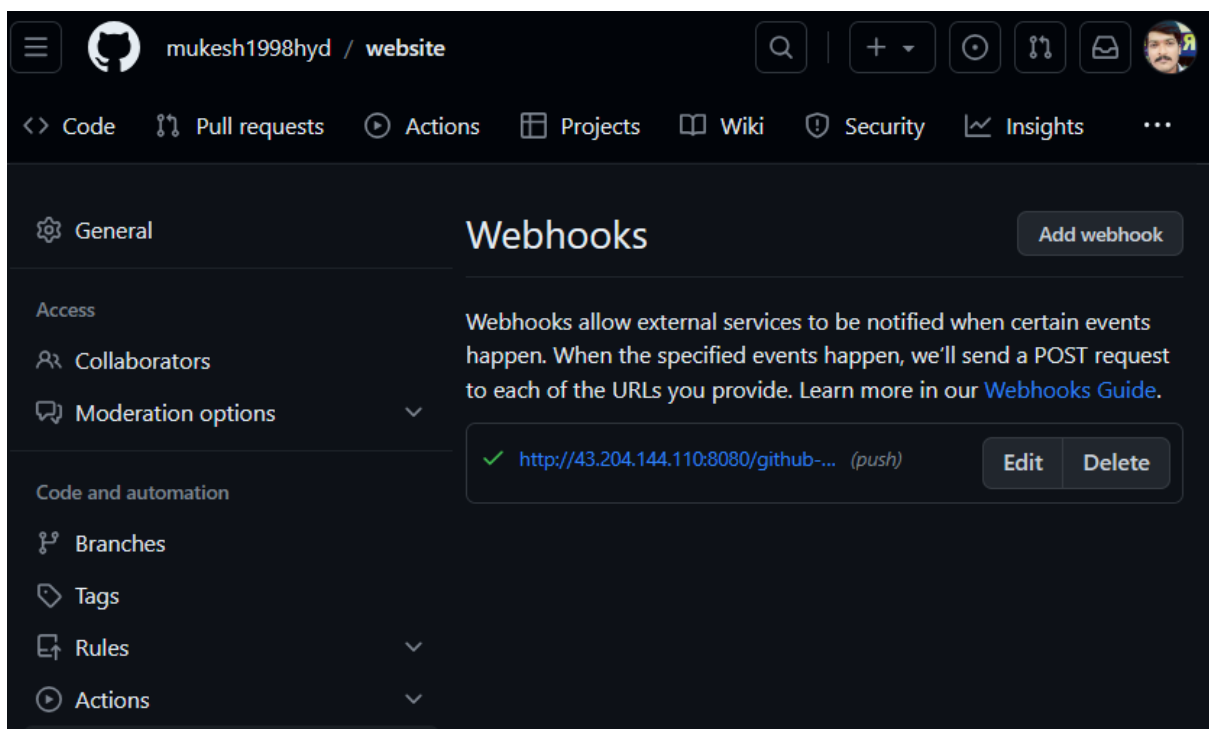
=====

```
sudo docker rm -f $(sudo docker ps -a -q)
```

copy the ip address then paste and  
out put



Afterwards go github to webhook to instance  
To manual setting



\*\*\*\*\*completed project\*\*\*\*\*