

# Advance AWS

## AWS Assessment Project 7

Student:

Kishore Shinde

Teacher:

Mrs. Vinolin Jeremiah

Course:

Advance AWS Cloud Computing with DevOps  
Fundamentals

Institute:

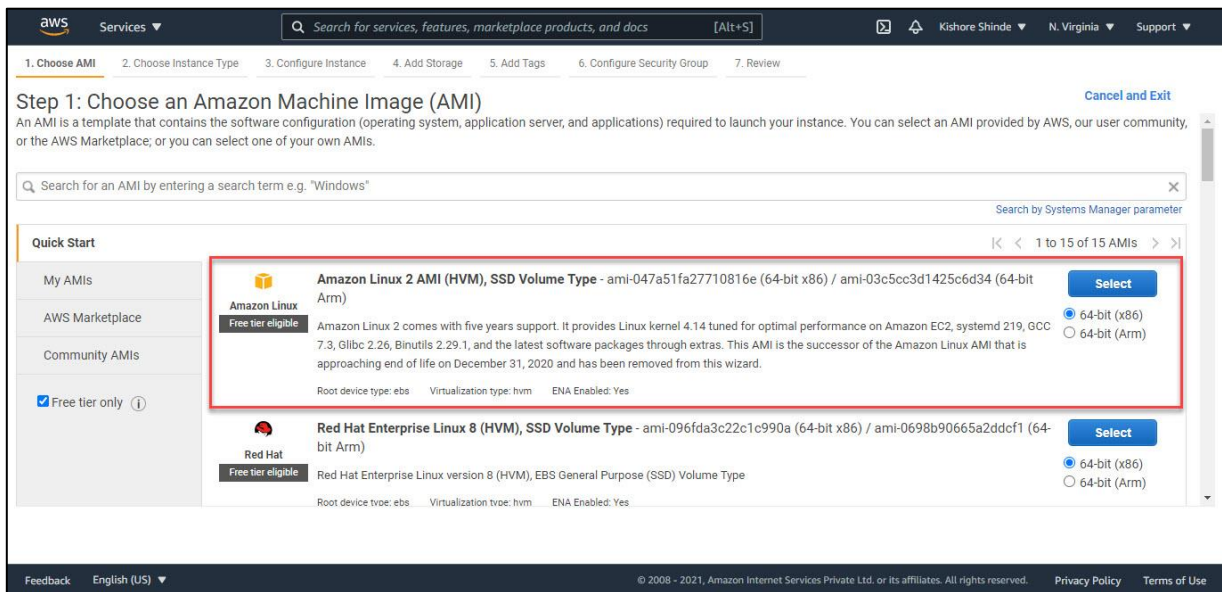
Lets Upgrade

## Project: DevOps-Jenkins-Installation and Configuration on Linux

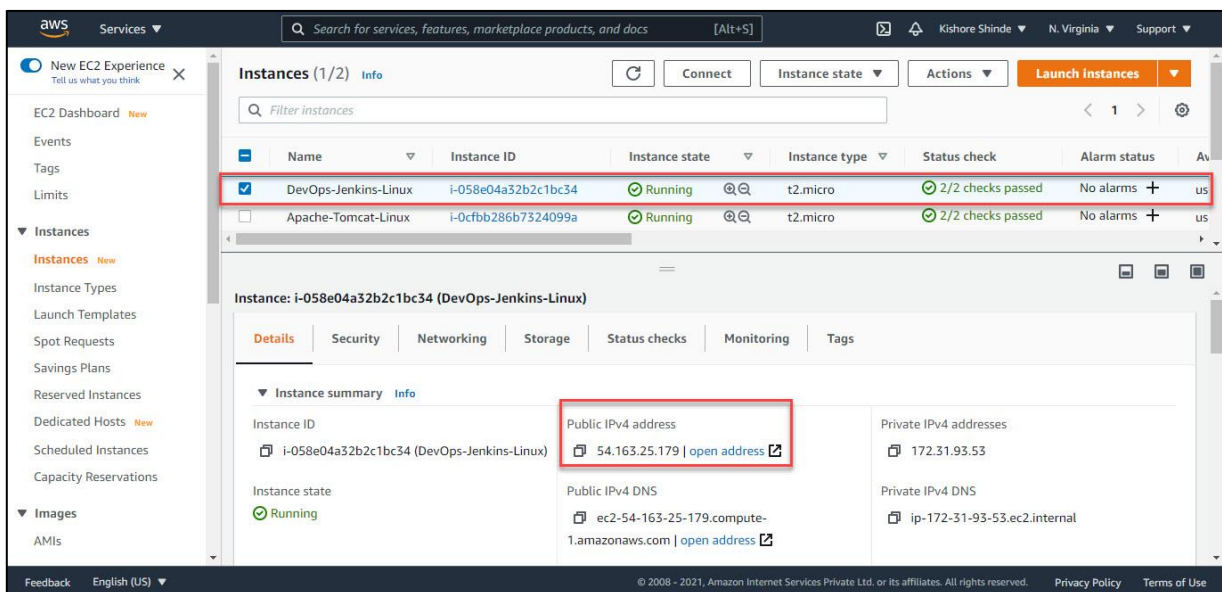
Task 1	Create Linux Instance
Task 2	Install Java
Task 3	Install Jenkins
Task 4	Configure Admin Password
Task 5	Create a New Job & Build the job

## TASK 1: Create a Linux Instance

- Select Amazon Linux 2 AMI & Create Instance



- Instance Details



- Instance Name: DevOps-Jenkins-Linux
- Public IP: 54.163.25.179
- Private IP: 172.31.93.53

## TASK 2: Install Java

Now connect to instance created:

```
Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-93-53 ~]$ sudo su
[root@ip-172-31-93-53 ec2-user]# yum install java-1.8.*
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core | 3.7 kB 00:00:00
Resolving Dependencies
--> Running transaction check
--> Package java-1.8.0-openjdk.x86_64 1:1.8.0.272.b10-1.amzn2.0.1 will be installed
--> Processing Dependency: xorg-x11-fonts-Type1 for package: 1:java-1.8.0-openjdk-1.8.0.272.b10-1.amzn2.0.1.x86_64
--> Processing Dependency: libasound.so.2(ALSA_0.9.0rc4) (64bit) for package: 1:java-1.8.0-openjdk-1.8.0.272.b10-1.amzn2.0.1.x86_64
--> Processing Dependency: libasound.so.2(ALSA_0.9) (64bit) for package: 1:java-1.8.0-openjdk-1.8.0.272.b10-1.amzn2.0.1.x86_64
--> Processing Dependency: libXcomposite(x86-64) for package: 1:java-1.8.0-openjdk-1.8.0.272.b10-1.amzn2.0.1.x86_64
--> Processing Dependency: gtk2(x86-64) for package: 1:java-1.8.0-openjdk-1.8.0.272.b10-1.amzn2.0.1.x86_64
--> Processing Dependency: fontconfig(x86-64) for package: 1:java-1.8.0-openjdk-1.8.0.272.b10-1.amzn2.0.1.x86_64
--> Processing Dependency: libgif.so.4()(64bit) for package: 1:java-1.8.0-openjdk-1.8.0.272.b10-1.amzn2.0.1.x86_64
--> Processing Dependency: libasound.so.2()(64bit) for package: 1:java-1.8.0-openjdk-1.8.0.272.b10-1.amzn2.0.1.x86_64
--> Processing Dependency: libXtst.so.6()(64bit) for package: 1:java-1.8.0-openjdk-1.8.0.272.b10-1.amzn2.0.1.x86_64
--> Processing Dependency: libXrender.so.1()(64bit) for package: 1:java-1.8.0-openjdk-1.8.0.272.b10-1.amzn2.0.1.x86_64
--> Processing Dependency: libXi.so.6()(64bit) for package: 1:java-1.8.0-openjdk-1.8.0.272.b10-1.amzn2.0.1.x86_64

i-058e04a32b2c1bc34 (DevOps-Jenkins-Linux)
Public IPs: 54.163.25.179 Private IPs: 172.31.93.53
```

- ***sudo su*** – Become Super user
- ***yum install java-1.8.\**** – Will install Java

## TASK 3: Install Jenkins

Go to the below link to access the Jenkins repository and install it:

- <https://pkg.jenkins.io/redhat-stable/>

The screenshot shows a web browser window with the URL <https://pkg.jenkins.io/redhat-stable/>. The page title is "Jenkins Redhat Packages". It provides instructions on how to use the repository, including a warning about a gpg key update and the commands to install Jenkins.

```
sudo wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat-stable/jenkins.repo
sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io.key

yum install jenkins
```

- Get Jenkins repository :
  - `wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat-stable/jenkins.repo`

```
[root@ip-172-31-93-53 ec2-user]# wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat-stable/jenkins.repo
--2021-02-02 13:51:02-- https://pkg.jenkins.io/redhat-stable/jenkins.repo
Resolving pkg.jenkins.io (pkg.jenkins.io)... 151.101.202.133, 2a04:4e42:2f::645
Connecting to pkg.jenkins.io (pkg.jenkins.io)|151.101.202.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 85
Saving to: '/etc/yum.repos.d/jenkins.repo'

100%[=====] 85          --.-K/s   in 0s

2021-02-02 13:51:02 (5.19 MB/s) - '/etc/yum.repos.d/jenkins.repo' saved [85/85]

[root@ip-172-31-93-53 ec2-user]#
```

- Import the Jenkins key :
  - `rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io.key`

```
[root@ip-172-31-93-53 ec2-user]# wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat-stable/jenkins.repo
--2021-02-02 13:51:02-- https://pkg.jenkins.io/redhat-stable/jenkins.repo
Resolving pkg.jenkins.io (pkg.jenkins.io)... 151.101.202.133, 2a04:4e42:2f::645
Connecting to pkg.jenkins.io (pkg.jenkins.io)|151.101.202.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 85
Saving to: '/etc/yum.repos.d/jenkins.repo'

100%[=====] 85          --.-K/s   in 0s

2021-02-02 13:51:02 (5.19 MB/s) - '/etc/yum.repos.d/jenkins.repo' saved [85/85]

[root@ip-172-31-93-53 ec2-user]# rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io.key
[root@ip-172-31-93-53 ec2-user]#
```

- Install Jenkins :
  - `yum install jenkins`

```
[root@ip-172-31-93-53 ec2-user]# wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat-stable/jenkins.repo
--2021-02-02 13:51:02-- https://pkg.jenkins.io/redhat-stable/jenkins.repo
Resolving pkg.jenkins.io (pkg.jenkins.io)... 151.101.202.133, 2a04:4e42:2f::645
Connecting to pkg.jenkins.io (pkg.jenkins.io)|151.101.202.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 85
Saving to: '/etc/yum.repos.d/jenkins.repo'

100%[=====] 85          --.-K/s   in 0s

2021-02-02 13:51:02 (5.19 MB/s) - '/etc/yum.repos.d/jenkins.repo' saved [85/85]

[root@ip-172-31-93-53 ec2-user]# rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io.key
[root@ip-172-31-93-53 ec2-user]# yum install jenkins
```

```
Package Arch Version Repository Size
-----
Installing:
jenkins noarch 2.263.3-1.1 jenkins 64 M

Transaction Summary
-----
Install 1 Package

Total download size: 64 M
Installed size: 64 M
Is this ok [y/d/N]: y
Downloading packages:
jenkins-2.263.3-1.1.noarch.rpm | 64 MB 00:00:05
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
Installing : jenkins-2.263.3-1.1.noarch 1/1
Verifying : jenkins-2.263.3-1.1.noarch 1/1

Installed:
jenkins.noarch 0:2.263.3-1.1
Complete!
[root@ip-172-31-93-53 ec2-user]#
```

- After installing the Jenkins, check Jenkins status
  - *service jenkins status*

```
Transaction test succeeded
Running transaction
Installing : jenkins-2.263.3-1.1.noarch
Verifying : jenkins-2.263.3-1.1.noarch

Installed:
jenkins.noarch 0:2.263.3-1.1
Complete!
[root@ip-172-31-93-53 ec2-user]# service jenkins status
service jenkins status
• jenkins.service - LSB: Jenkins Automation Server
  Loaded: loaded (/etc/rc.d/init.d/jenkins; bad; vendor preset: disabled)
  Active: inactive (dead)
  Docs: man:systemd-sysv-generator(8)
[root@ip-172-31-93-53 ec2-user]#
```

i-058e04a32b2c1bc34 (DevOps-Jenkins-Linux)

Public IPs: 54.163.25.179 Private IPs: 172.31.93.53

You can see in the above image that the Jenkins service is inactive.

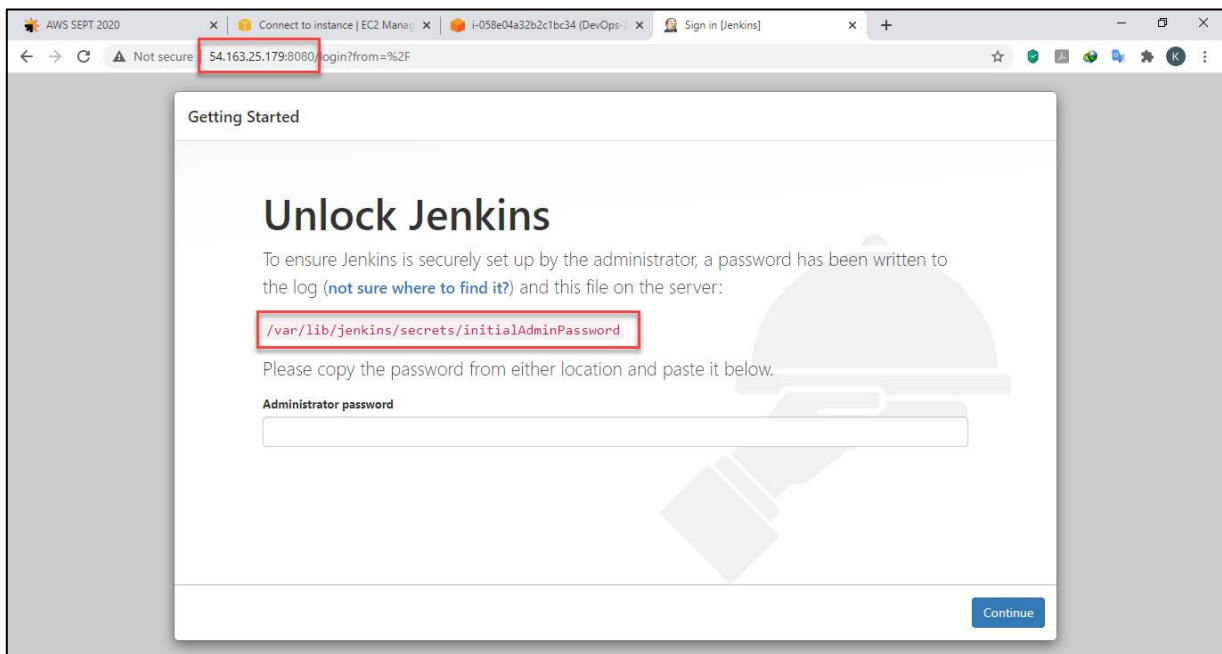
- Start the Jenkins service:
  - `service jenkins start`

```
Complete!
[root@ip-172-31-93-53 ec2-user]# service jenkins status
service jenkins status
• jenkins.service - LSB: Jenkins Automation Server
   Loaded: loaded (/etc/rc.d/init.d/jenkins; bad; vendor preset: disabled)
   Active: inactive (dead)
   Docs: man:systemd-sysv-generator(8)
[root@ip-172-31-93-53 ec2-user]# service jenkins start
Starting jenkins (via systemctl): [ OK ]
[root@ip-172-31-93-53 ec2-user]#
```

i-058e04a32b2c1bc34 (DevOps-Jenkins-Linux)

Public IPs: 54.163.25.179 Private IPs: 172.31.93.53

- To continue jenkins installation, go to the browser and access the instance using the public ip along with the port number (i.e., 54.163.27.179:8080)



You can see the Unlock Jenkins page asking for Administrator password.

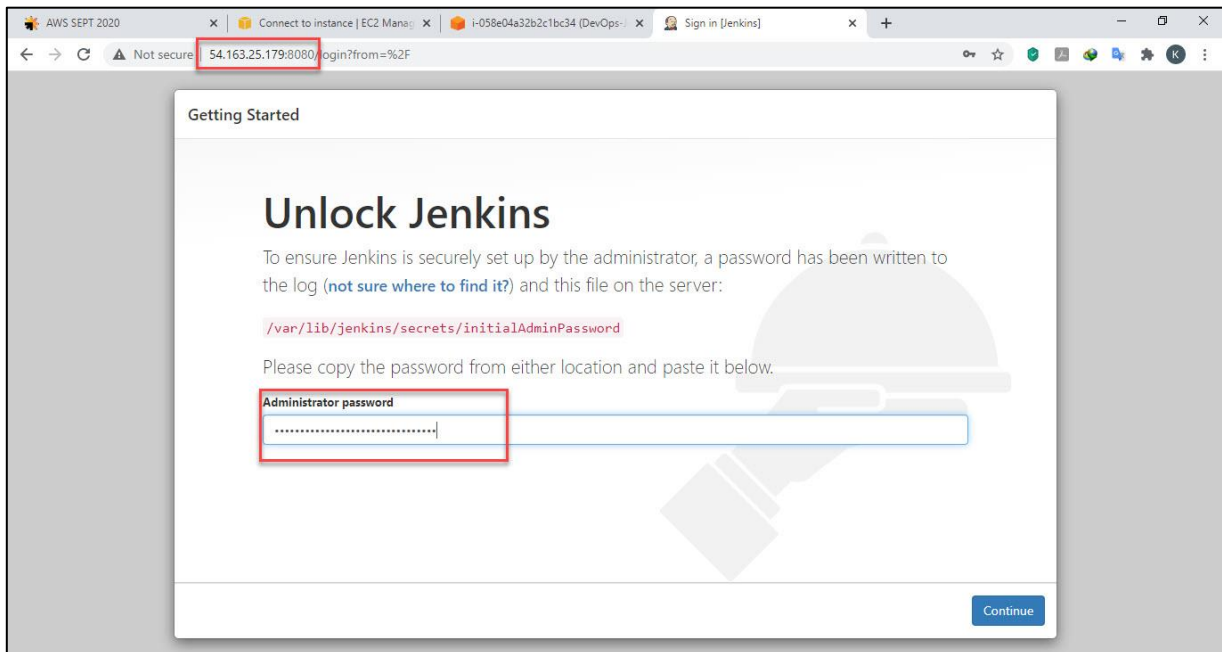
- Copy the path/location of password file mentioned, which we will use to get the administrator password Go back to the instance you connected.
- Path / Location:
  - `/var/lib/jenkins/secrets/initialAdminPassword`



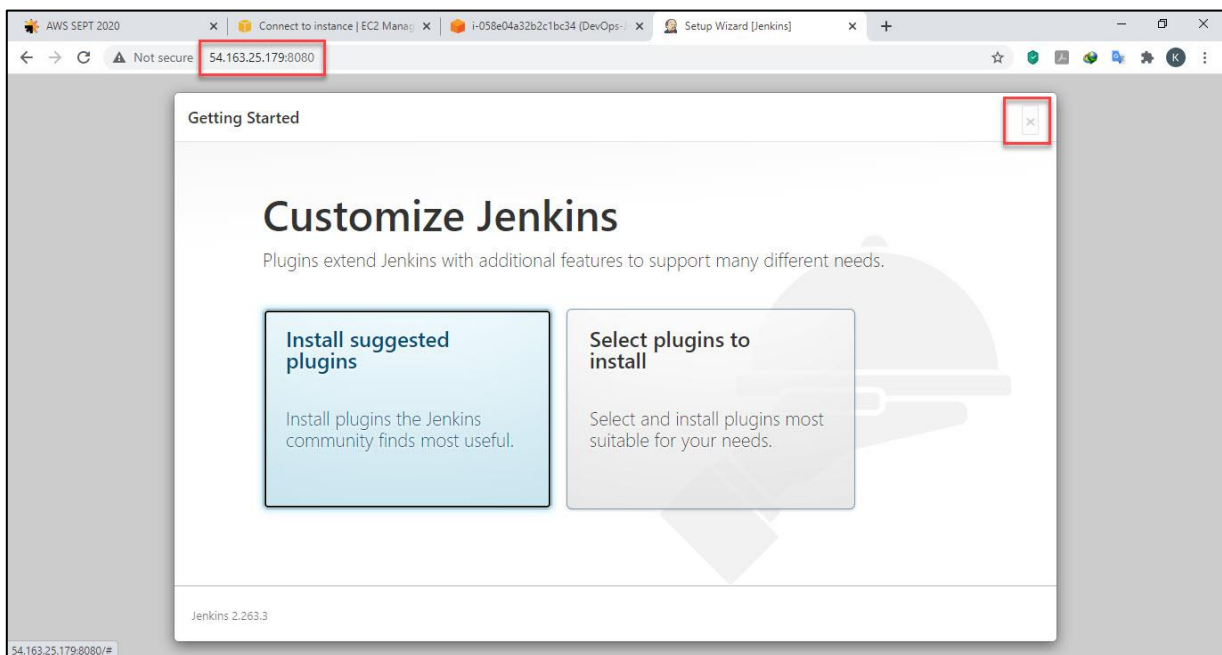
- Open the file with the copied path:
  - `cat /var/lib/jenkins/secrets/initialAdminPassword`

```
[root@ip-172-31-93-53 ec2-user]# cat /var/lib/jenkins/secrets/initialAdminPassword
ab76387fa5f740bca87ba7dfed6ba3b6
[root@ip-172-31-93-53 ec2-user]#
```

- Copy the password and go back to the *Unlock Jenkins* page and paste it



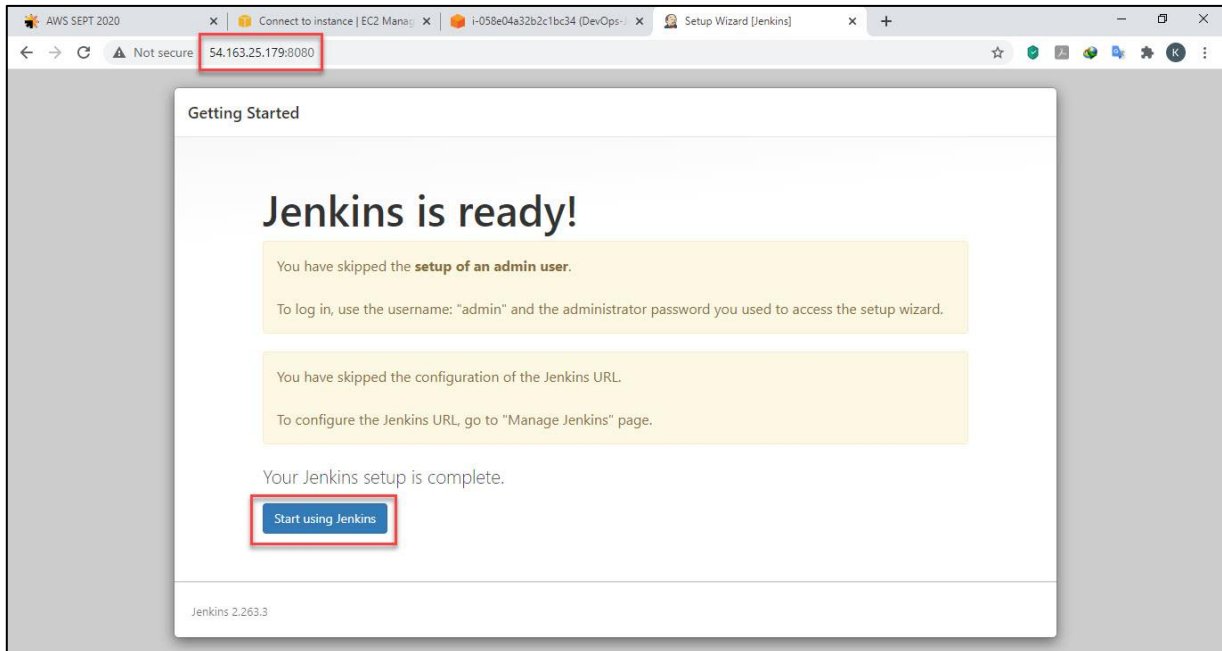
- Click on *Continue*



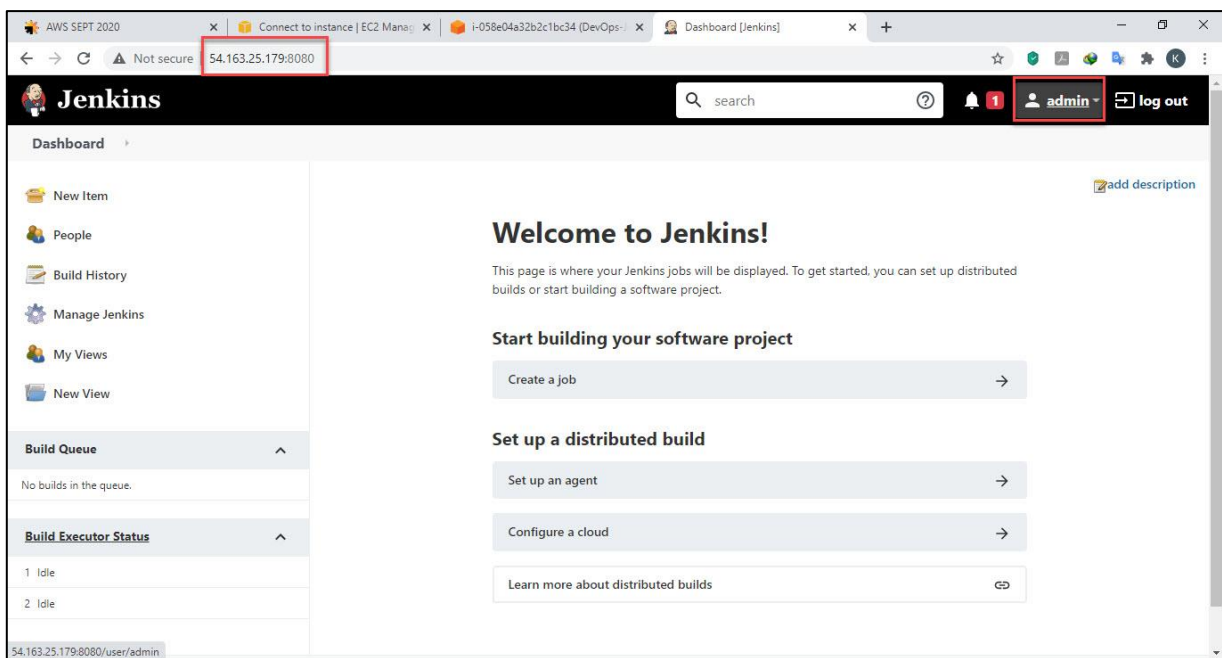
- On the *Customize Jenkins* page skip the plugins installation & close it



- You can see a message *"Jenkins is ready!"*. Click on *Start using Jenkins*



- You can see Jenkins Dashboard showing *Welcome to Jenkins!*

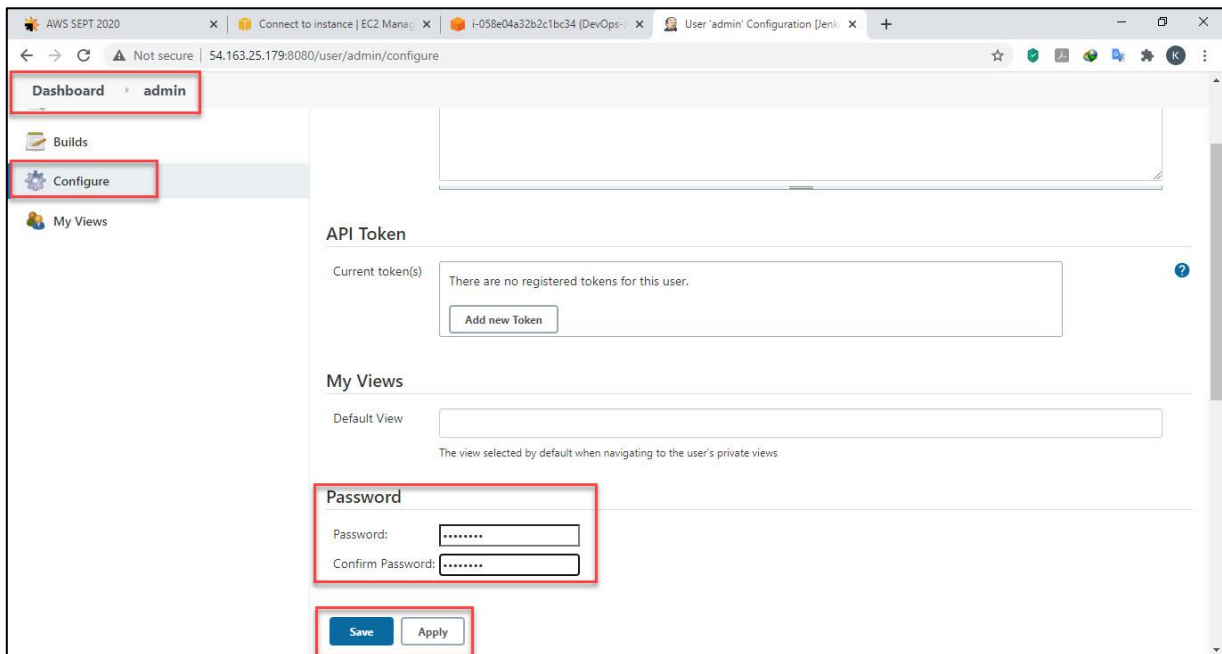


So, you have successfully installed Jenkins.

## TASK 4: Configure Admin Password

Now we will change the machine generated Admin Password and set our own password

- Click on **admin** as shown in the above image



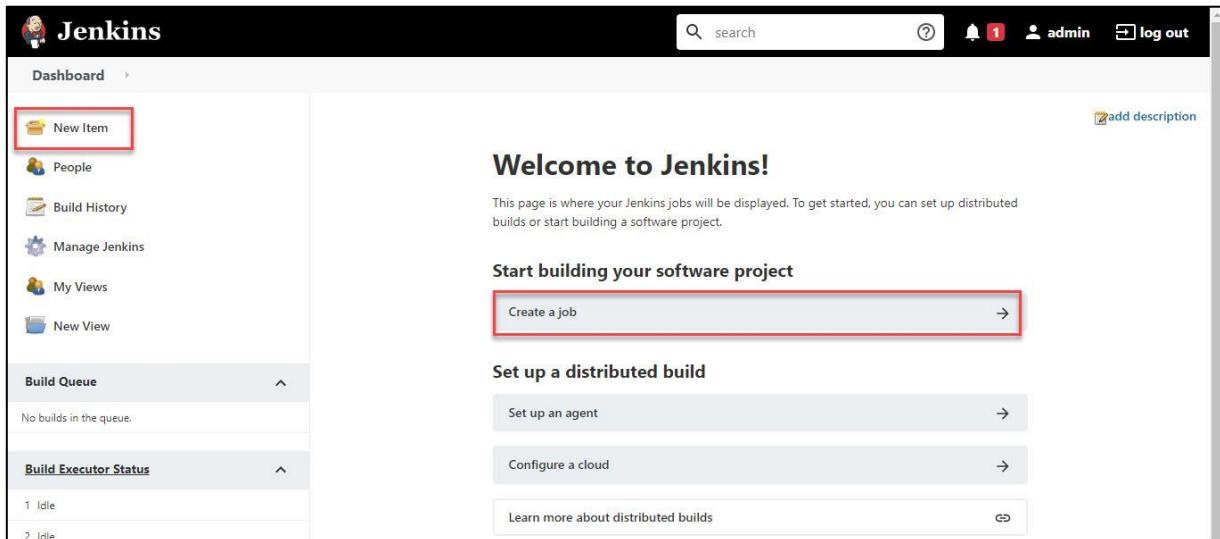
- In **Dashboard** -> **admin** click on **Configure**
- In the password section below type in the new password. Click on **Save** and then **Apply**.

You have successfully updated the new password.

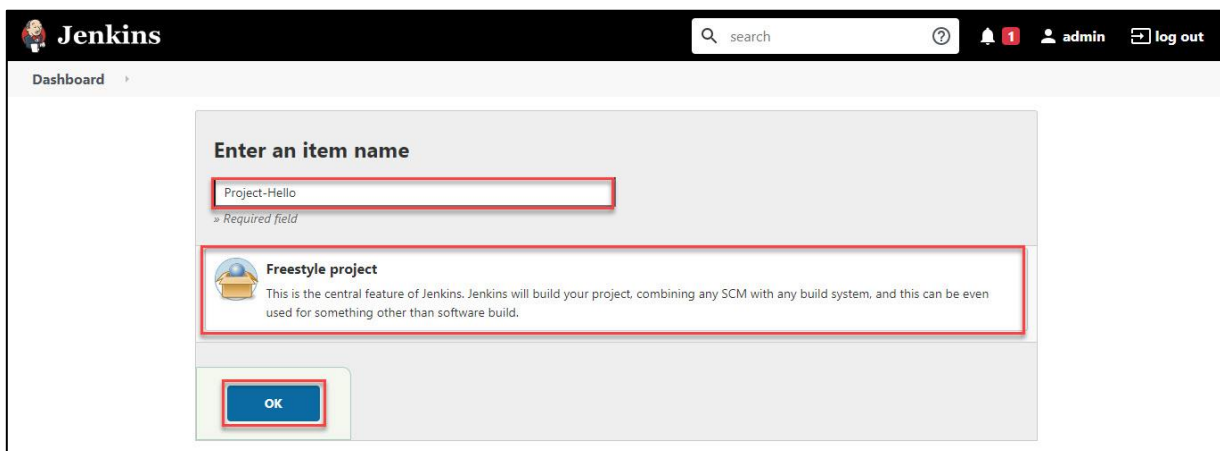
## TASK 5: Create a new Job & Build the job

### Create a new Job

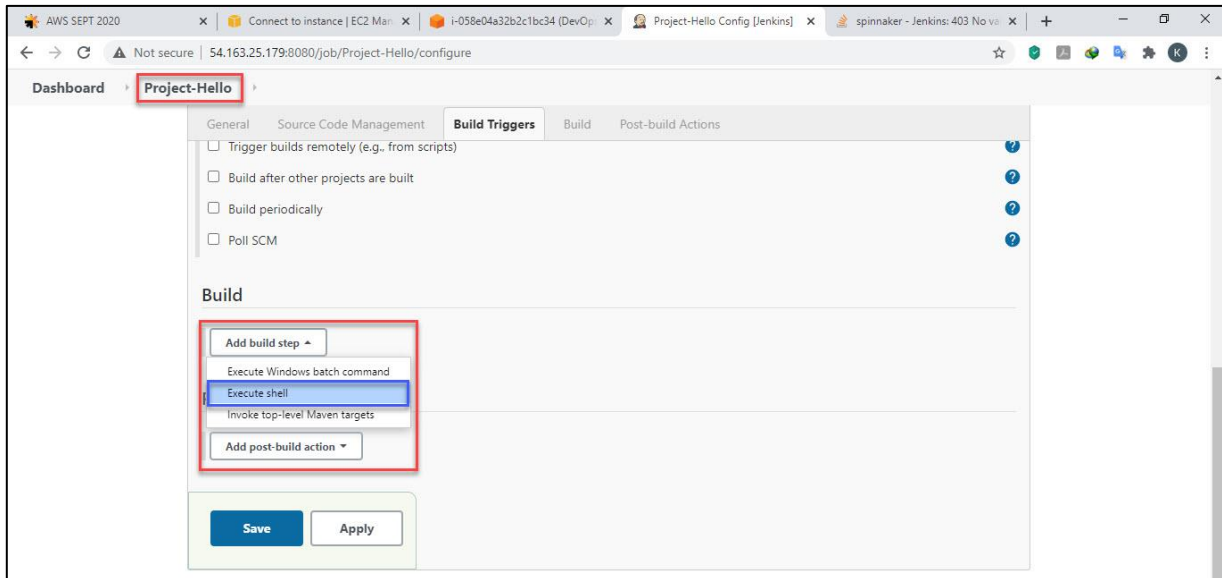
- In the Jenkins Dashboard click on **New Item** and then click on **Create a job**



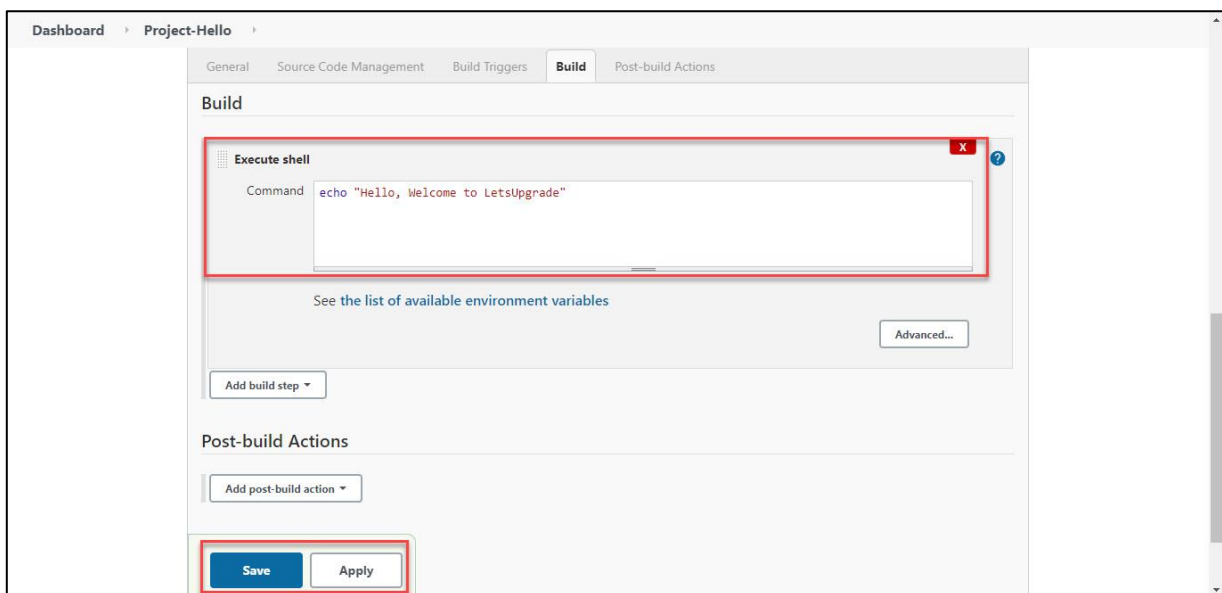
- Enter an item name: **Project-Hello**
- Select **Freestyle project** and click on **OK**



- Build Triggers settings
  - In Dashboard -> Project-Hello
  - Click on Build Triggers tab then click on Add build step
  - Select Execute shell



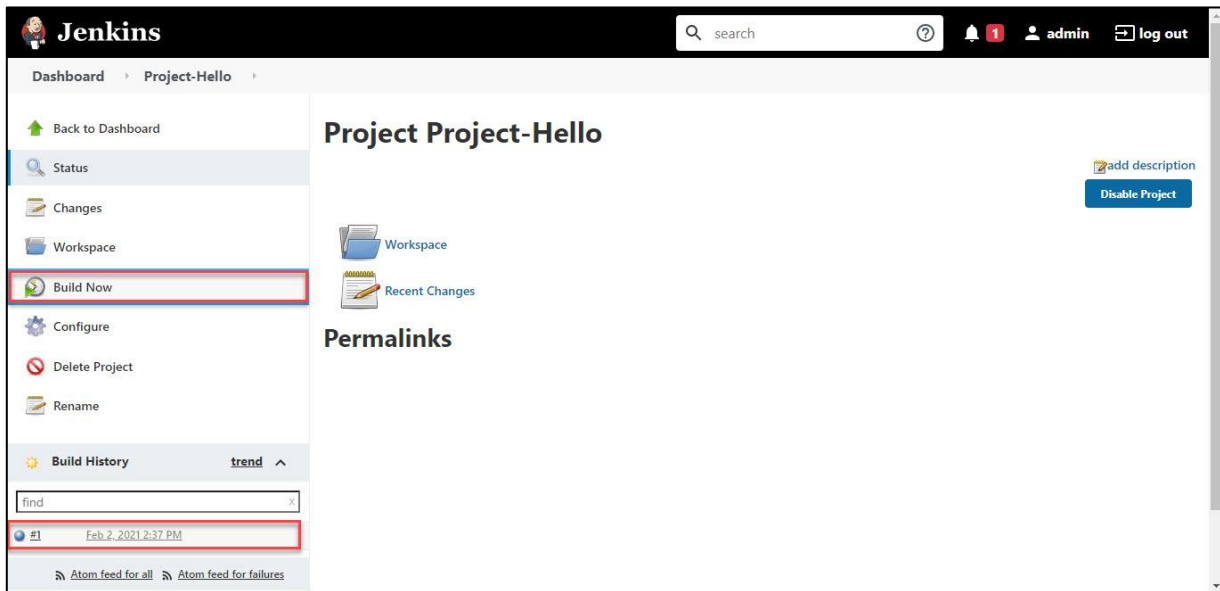
- Build settings
  - Under Execute shell in Command field enter following command:
    - `echo "Hello, Welcome to LetsUpgrade"`



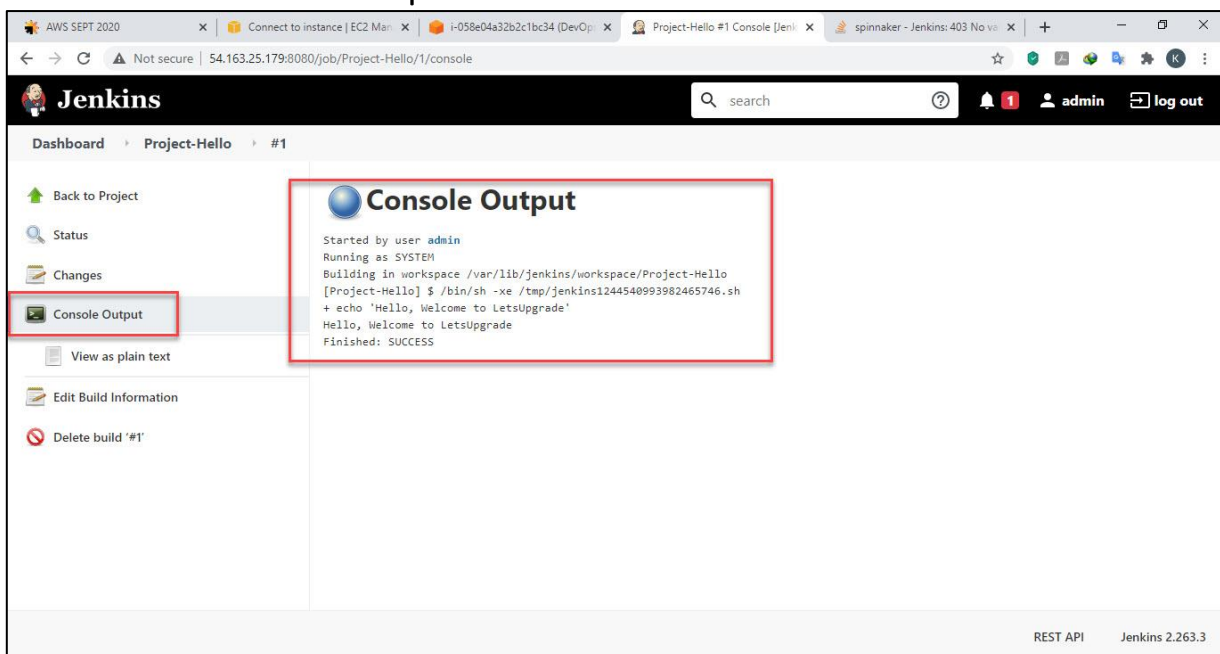
- Click on Save and then Apply

## Build the Job

- On the **Dashboard - Project-Hello** click on **Build Now**



- Once the build is complete, click on the Build number (e.g., #1) under **Build History** Section
- Click on **Console Output**



- You can see the output of the job with **SUCCESS** status

So, you have completed the **Project-DevOps-Jenkins** on **Linux** instance

xxx---AWS Assessment Project 7 Ends Here---xxx