

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

Advance AWS Cloud Computing With DevOps Fundamentals

Microsoft account

LETSUPGRAD | TRAINER: MRS. VINOLIN JERIMIAH

❖ Linux instance details:

The screenshot shows the AWS Management Console interface. On the left, the 'Instances' link is highlighted in the navigation menu. The main panel displays a table of instances with the following columns: Name, Instance ID, Instance state, Instance type, Status check, Alarm status, Availability Zone, and Public IP. One instance, 'LinuxTomcat' (ID: i-0f999cb9b70991fb8), is shown in a 'Running' state. Below the table, the 'Instance summary' section provides details for the selected instance. The 'Public IPv4 address' is 52.205.185.60, and the 'Private IPv4 addresses' are 172.31.91.140. The instance is running on the 't2.micro' type in the 'us-east-1a' availability zone.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IP
LinuxTomcat	i-0f999cb9b70991fb8	Running	t2.micro	2/2 checks ...	No alarms +	us-east-1a	ec2-52-205-185-60.compute-1.amazonaws.com

Instance summary for i-0f999cb9b70991fb8 (LinuxTomcat):

- Instance ID: i-0f999cb9b70991fb8 (LinuxTomcat)
- Instance state: Running
- Public IPv4 address: 52.205.185.60 | [open address](#)
- Private IPv4 addresses: 172.31.91.140
- Public IPv4 DNS: ec2-52-205-185-60.compute-1.amazonaws.com
- Private IPv4 DNS: ip-172-31-91-140.ec2.internal

Using following Public and Private IP for Jenkins and java installation:

Public IP Address	52.502.185.60
Private IP Address	172.31.91.140

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

Open the following path for downloading and updating packages.

The screenshot shows the 'Jenkins Redhat Packages' page. It provides instructions on how to use the repository. A warning message states that the gpg key used to sign the packages has been updated on 16th of April 2020, and users need to reimport it if they imported before this date. The page includes the following commands for installation:

```
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
```

If you've previously imported the key from Jenkins, the `rpm --import` will fail because you already have a key. Please ignore that and move on.

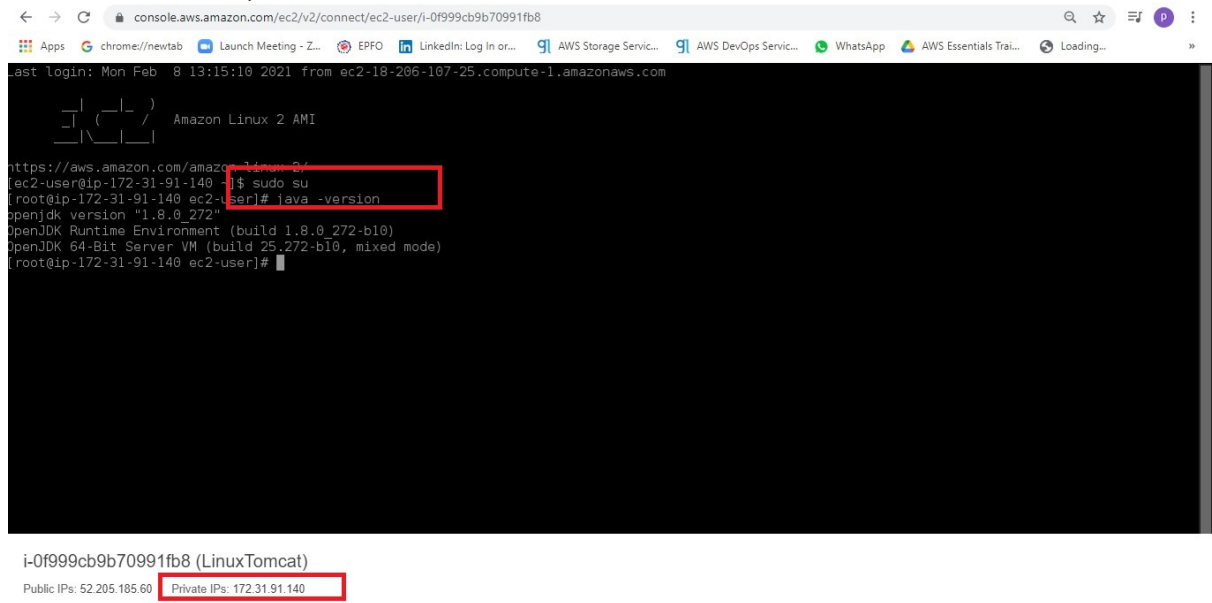
```
yum install jenkins
```

The rpm packages were signed using this key:

```
pub rsa4096 2020-03-30 [SC] [expires: 2023-03-30]
62A9756BF0780C377CF24BA8FCE32E745F2C3D5
```

❖ Done Installation java through following command:

- ❖ \$ sudo su
- ❖ Java -version



```

Last login: Mon Feb 8 13:15:10 2021 from ec2-18-206-107-25.compute-1.amazonaws.com

Amazon Linux 2 AMI

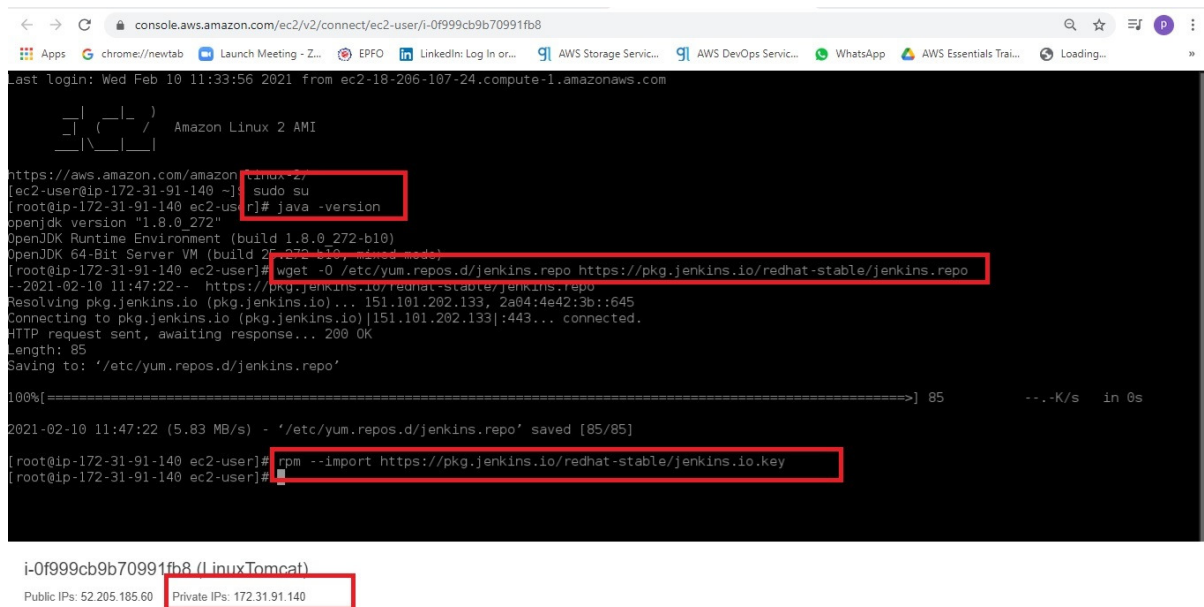
https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-91-140 ~]$ sudo su
[root@ip-172-31-91-140 ec2-user]# java -version
openjdk version "1.8.0_272"
OpenJDK Runtime Environment (build 1.8.0_272-b10)
OpenJDK 64-Bit Server VM (build 25.272-b10, mixed mode)
[root@ip-172-31-91-140 ec2-user]#
  
```

i-0f999cb9b70991fb8 (LinuxTomcat)

Public IPs: 52.205.185.60 Private IPs: 172.31.91.140

❖ Copy the following command for Jenkins downloading and updating through Linux command prompt :

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



```

Last login: Wed Feb 10 11:33:56 2021 from ec2-18-206-107-24.compute-1.amazonaws.com

Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-91-140 ~]$ sudo su
[root@ip-172-31-91-140 ec2-user]# java -version
openjdk version "1.8.0_272"
OpenJDK Runtime Environment (build 1.8.0_272-b10)
OpenJDK 64-Bit Server VM (build 25.272-b10, mixed mode)
[root@ip-172-31-91-140 ec2-user]# wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat-stable/jenkins.repo
--2021-02-10 11:47:22-- https://pkg.jenkins.io/redhat-stable/jenkins.repo
Resolving pkg.jenkins.io (pkg.jenkins.io)... 151.101.202.133, 2a04:4e42:3b::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

2021-02-10 11:47:22 (5.83 MB/s) - '/etc/yum.repos.d/jenkins.repo' saved [85/85]

[root@ip-172-31-91-140 ec2-user]# rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io.key
[root@ip-172-31-91-140 ec2-user]#
  
```

i-0f999cb9b70991fb8 (LinuxTomcat)

Public IPs: 52.205.185.60 Private IPs: 172.31.91.140

❖ Installation Jenkins from following commands:

❖ yum install Jenkins

```

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-91-140 ~]$ sudo su
[root@ip-172-31-91-140 ec2-user]# java -version
openjdk version "1.8.0_272"
OpenJDK Runtime Environment (build 1.8.0_272-b10)
OpenJDK 64-Bit Server VM (build 25.270-b10, mixed mode)
[root@ip-172-31-91-140 ec2-user]# wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat-stable/jenkins.repo
--2021-02-10 11:47:22-- https://pkg.jenkins.io/redhat-stable/jenkins.repo
Resolving pkg.jenkins.io (pkg.jenkins.io)... 151.101.202.133, 2a04:4e42:3b::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

2021-02-10 11:47:22 (5.83 MB/s) - '/etc/yum.repos.d/jenkins.repo' saved [85/85]

[root@ip-172-31-91-140 ec2-user]# rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io.key
[root@ip-172-31-91-140 ec2-user]# yum install jenkins
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
jenkins.noarch | 3.7 kB 00:00:00
jenkins/primary.db | 36 kB 00:00:00
Resolving Dependencies
--> Running transaction check
--> Package jenkins.noarch 0:2.263.3-1.1 will be installed

i-0f999cb9b70991fb8 (LinuxTomcat)
Public IPs: 52.205.185.60 Private IPs: 172.31.91.140

```

❖ Extract the password from the location (After Jenkins installation follows below process for verify the service Jenkins status)

❖ Service Jenkins status

❖ Active: currently status is inactive.

```

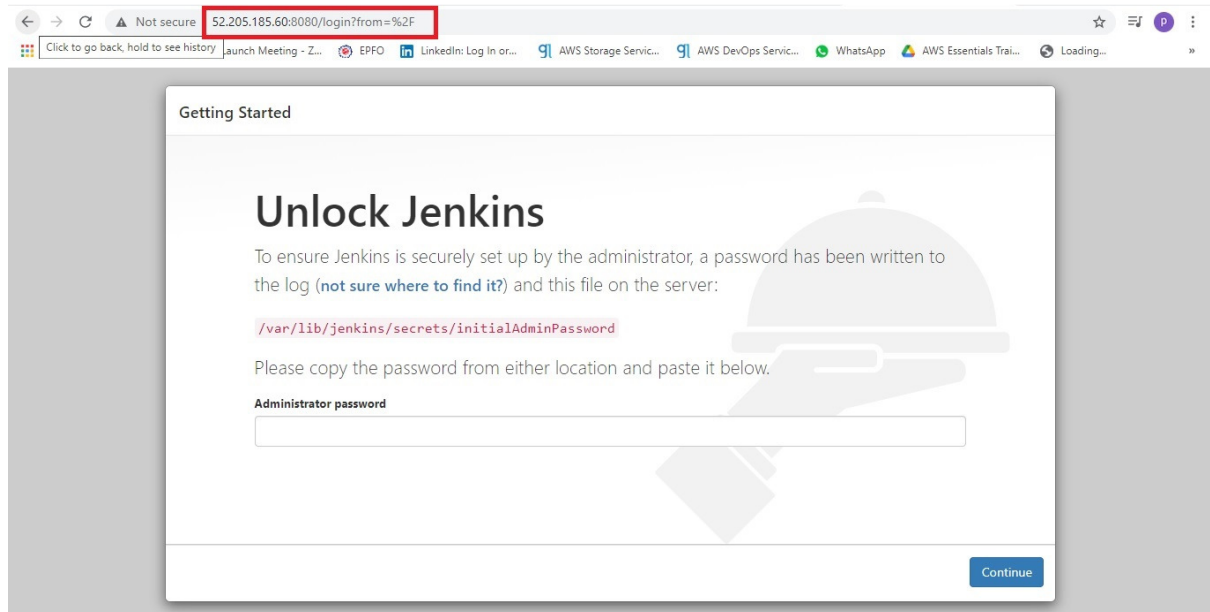
jenkins.noarch 2.263.3-1.1 jenkins 64 M
Transaction Summary
Install 1 Package
Total download size: 64 M
Installed size: 64 M
Is this ok [y/d/N]: y
Downloading packages:
jenkins-2.263.3-1.1.noarch.rpm | 64 MB 00:00:02
Running transaction check
Running transaction test
Transaction test succeeded
Running 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

[root@ip-172-31-91-140 ec2-user]# service jenkins status
service jenkins status
jenkins.service - LSB: Jenkins Automation Server
Loaded: loaded (/etc/systemd/system/jenkins.service; bad; vendor preset: disabled)
Active: inactive (dead)
Docs: man:systemd-sysv-generator(8)
[root@ip-172-31-91-140 ec2-user]#

i-0f999cb9b70991fb8 (LinuxTomcat)
Public IPs: 52.205.185.60 Private IPs: 172.31.91.140

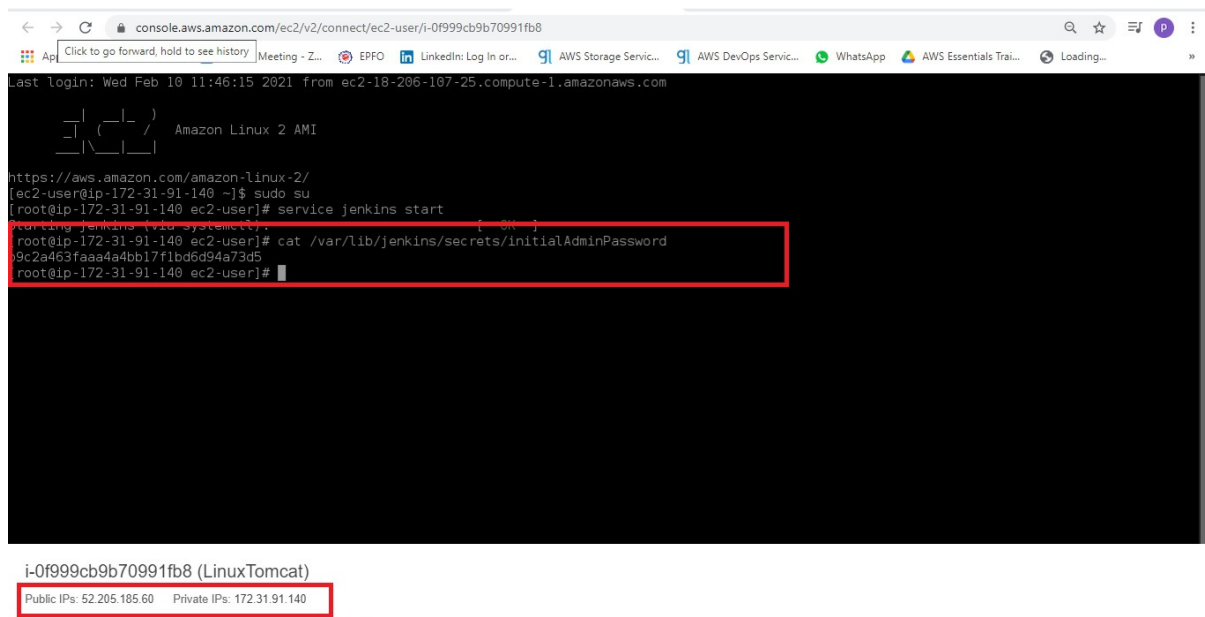
```

1. After start the service retrieve 52.205.185.60:8080/login jenkins windows and start the jenkins installation :

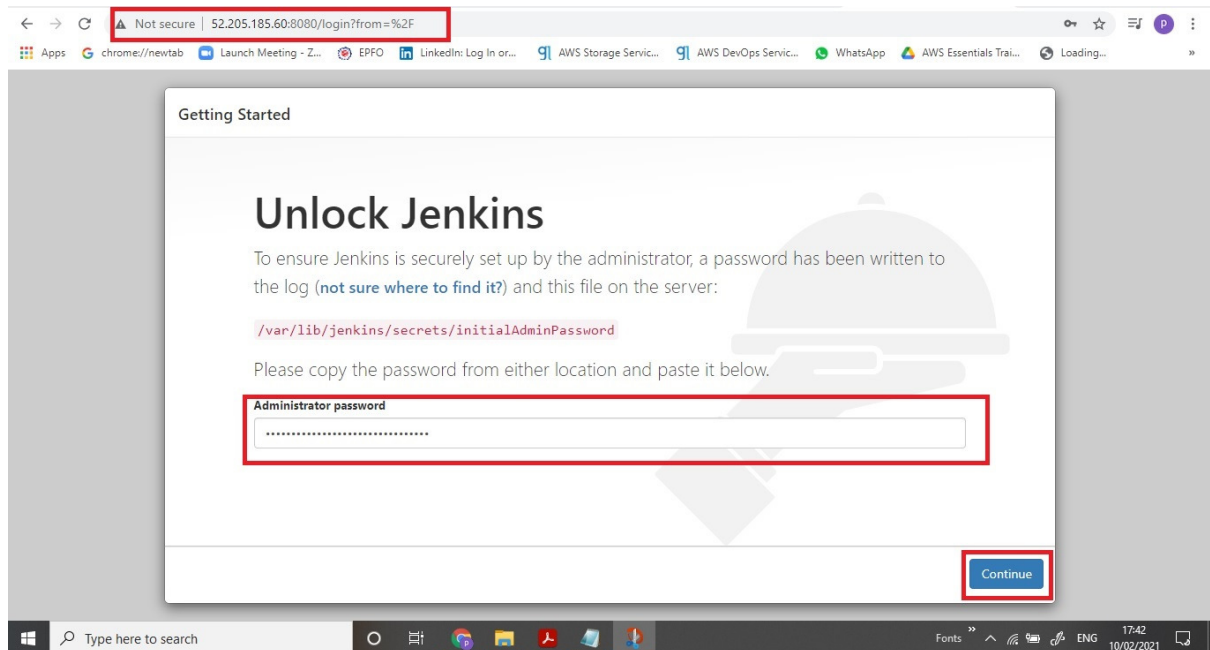


Extract following path form above screen path is as following command,

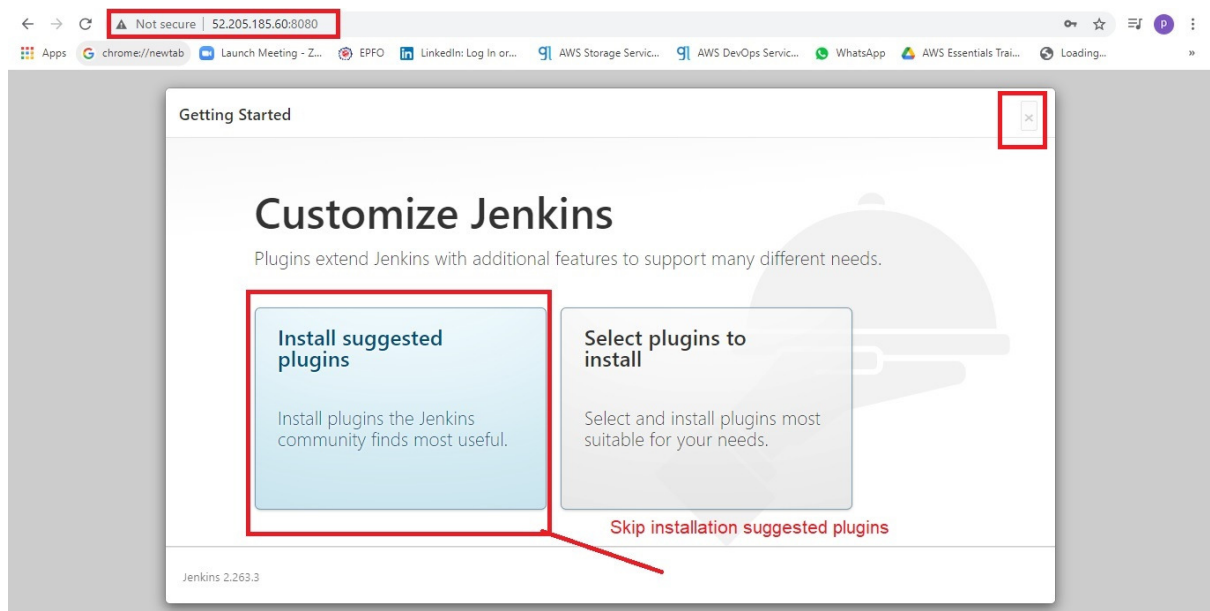
❖ `Cat /var/lib/Jenkins/secrets/initialAdminPassword`



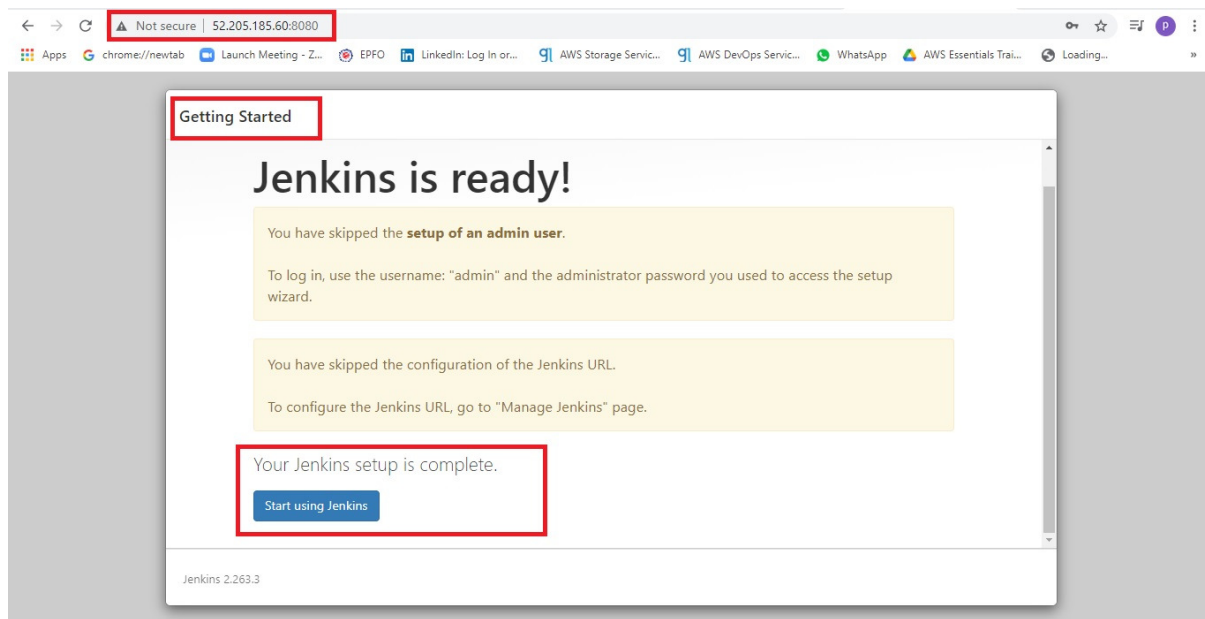
Copied selected password from above screen and past "Administrator" textbox " and select the continue button the setup is continue now.



❖ Skip installing plugins :

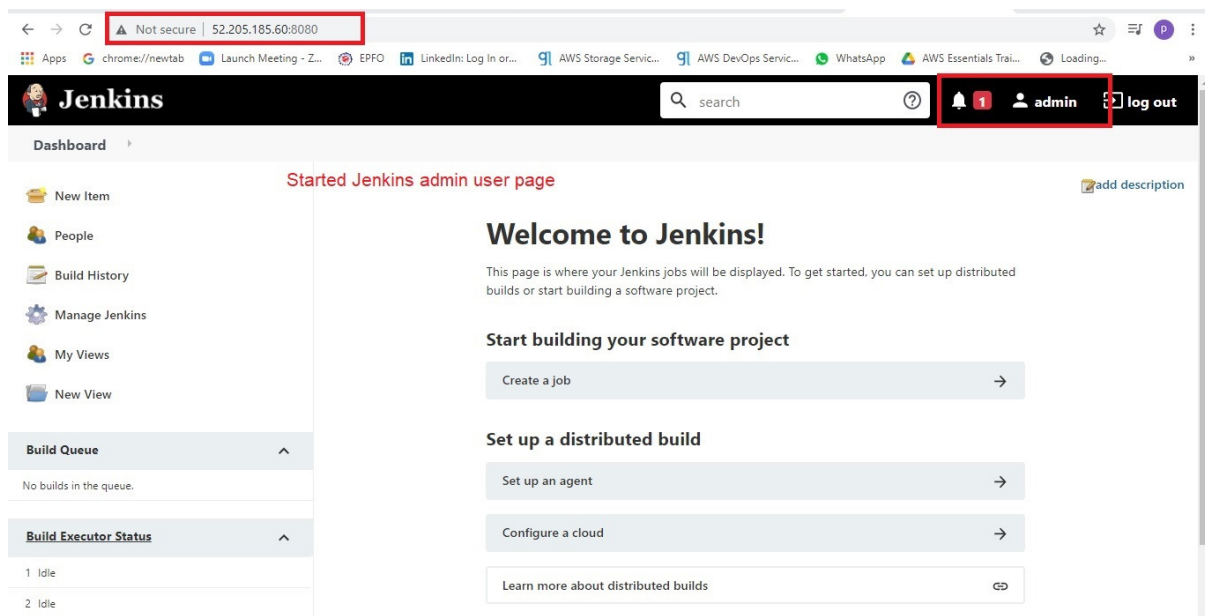


❖ Start using Jenkins : (select the selected “Start using Jenkins” button)

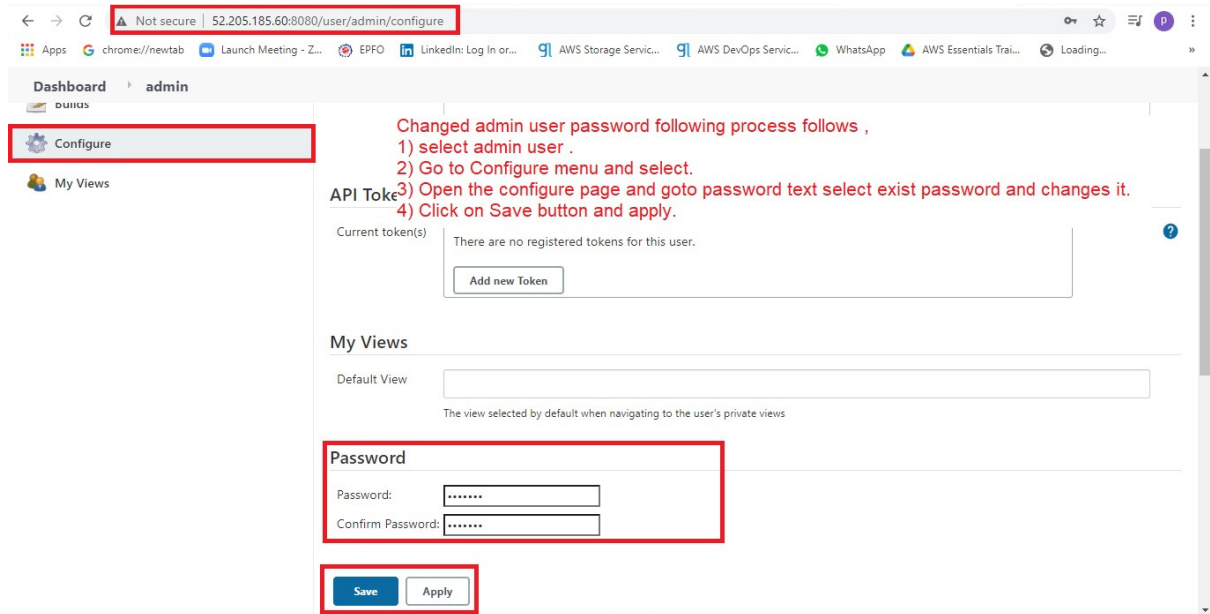


❖ Completed the Jenkins setup and start Jenkins admin user page on this link

❖ Link is -52.205.185.60:8080

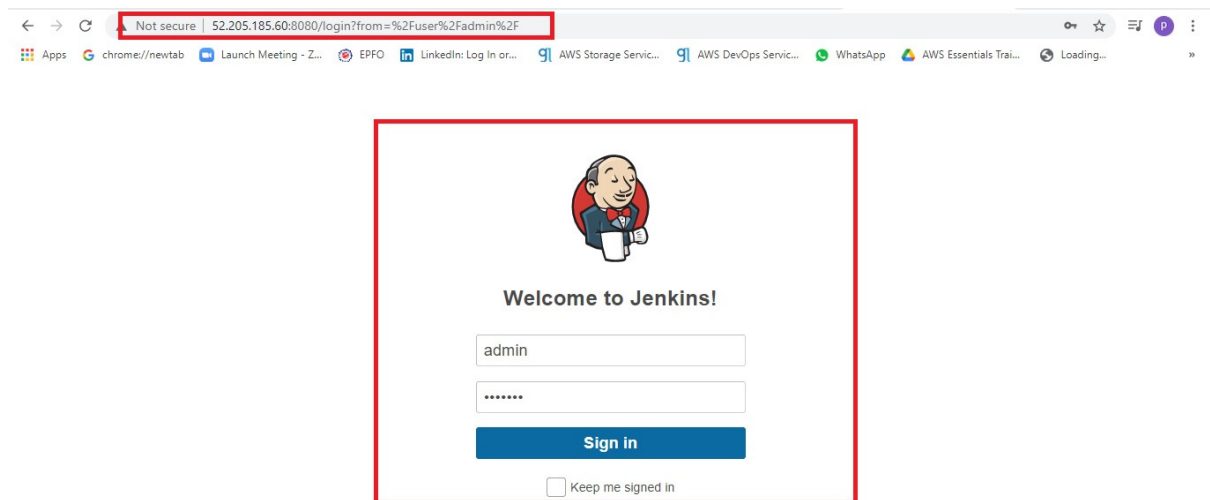


- ❖ After Completed Jenkins setup Change the admin password form select the admin user on Jenkins main page process follows is as on screen.



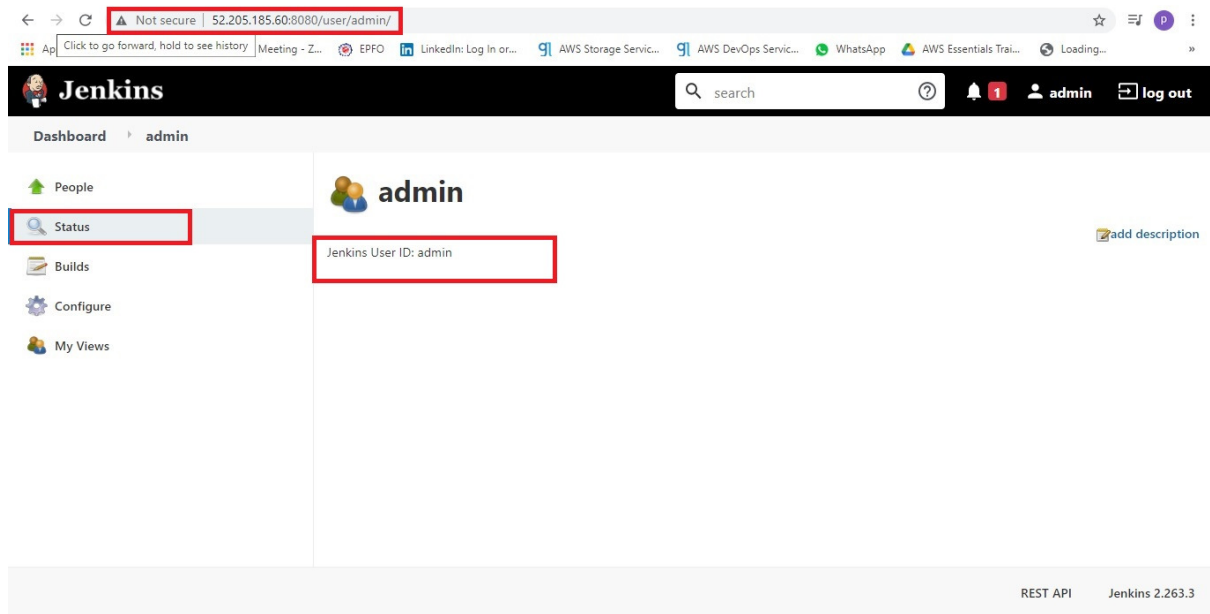
The screenshot shows the Jenkins Admin Configuration page for the 'admin' user. The browser address bar shows '52.205.185.60:8080/user/admin/configure'. The left sidebar has 'Configure' highlighted. The main content area has red text instructions: 'Changed admin user password following process follows , 1) select admin user . 2) Go to Configure menu and select. 3) Open the configure page and goto password text select exist password and changes it. 4) Click on Save button and apply.' The 'API Token' section shows 'There are no registered tokens for this user.' with an 'Add new Token' button. The 'My Views' section has a 'Default View' input field. The 'Password' section has 'Password:' and 'Confirm Password:' fields, both with masked text. At the bottom, there are 'Save' and 'Apply' buttons.

- ❖ New logins Welcome to Jenkins admin user and password:



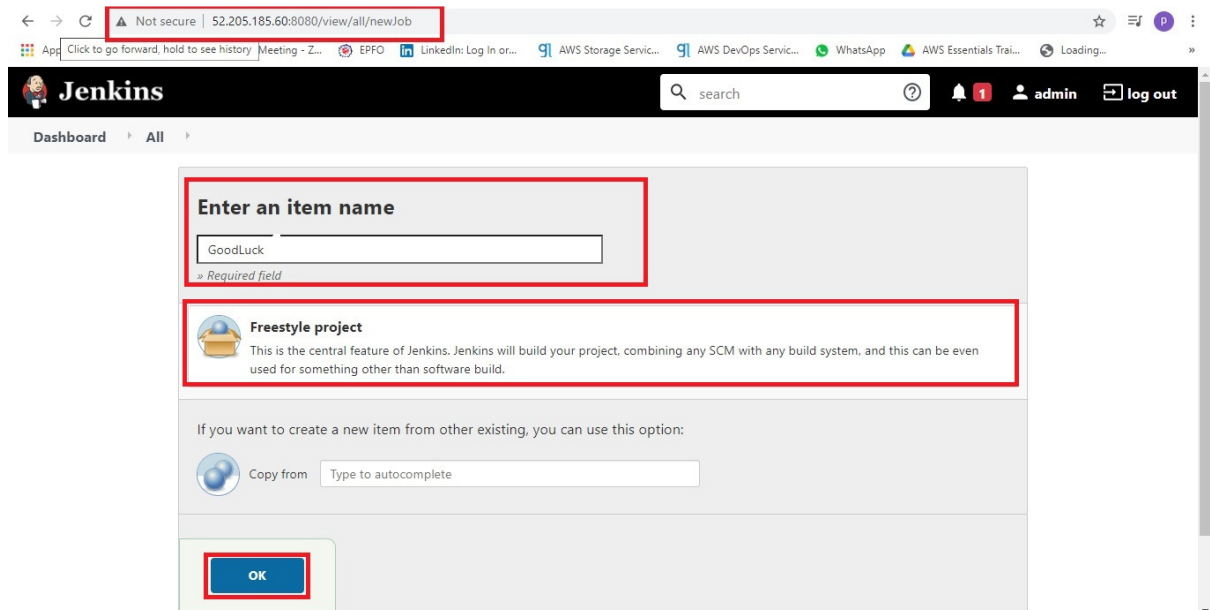
The screenshot shows the Jenkins 'Welcome to Jenkins!' login page. The browser address bar shows '52.205.185.60:8080/login?from=%2Fuser%2Fadmin%2F'. The page features the Jenkins logo, the text 'Welcome to Jenkins!', and a login form with 'admin' in the username field and masked text in the password field. A blue 'Sign in' button is below the password field. At the bottom, there is a checkbox labeled 'Keep me signed in'.

❖ Jenkins admin user login status :



The screenshot shows the Jenkins web interface. The browser address bar displays "Not secure | 52.205.185.60:8080/user/admin/". The Jenkins header includes a search bar, a notification bell, and the user "admin" with a "log out" button. The left sidebar shows navigation options: People, Status (highlighted with a red box), Builds, Configure, and My Views. The main content area displays the "admin" user profile with the text "Jenkins User ID: admin" (highlighted with a red box) and an "add description" link. The footer indicates "REST API" and "Jenkins 2.263.3".

❖ Create a new job on jenkins dashboard and enter the job name "GoodLuck" :



The screenshot shows the Jenkins "Create new job" form. The browser address bar displays "Not secure | 52.205.185.60:8080/view/all/newJob". The Jenkins header is consistent with the previous screenshot. The form contains the following elements: a text input field for "Enter an item name" with the value "GoodLuck" (highlighted with a red box) and a "Required field" label; a "Freestyle project" section (highlighted with a red box) with a description: "This is the central feature of Jenkins. Jenkins will build your project, combining any SCM with any build system, and this can be even used for something other than software build."; a section for creating a new item from an existing one, with a "Copy from" dropdown and a "Type to autocomplete" input field; and an "OK" button (highlighted with a red box) at the bottom left.

❖ Jenkins Dashboard is shown created job list :

The screenshot shows the Jenkins Dashboard in a web browser. The address bar indicates the URL is `52.205.185.60:8080`. The Jenkins logo and navigation menu are visible on the left. The main content area displays a table of jobs. A red box highlights the 'Dashboard' link in the left sidebar. A red arrow points to the 'GoodLuck' job name in the table. Below the table, there is a red text label 'Created jobList'.

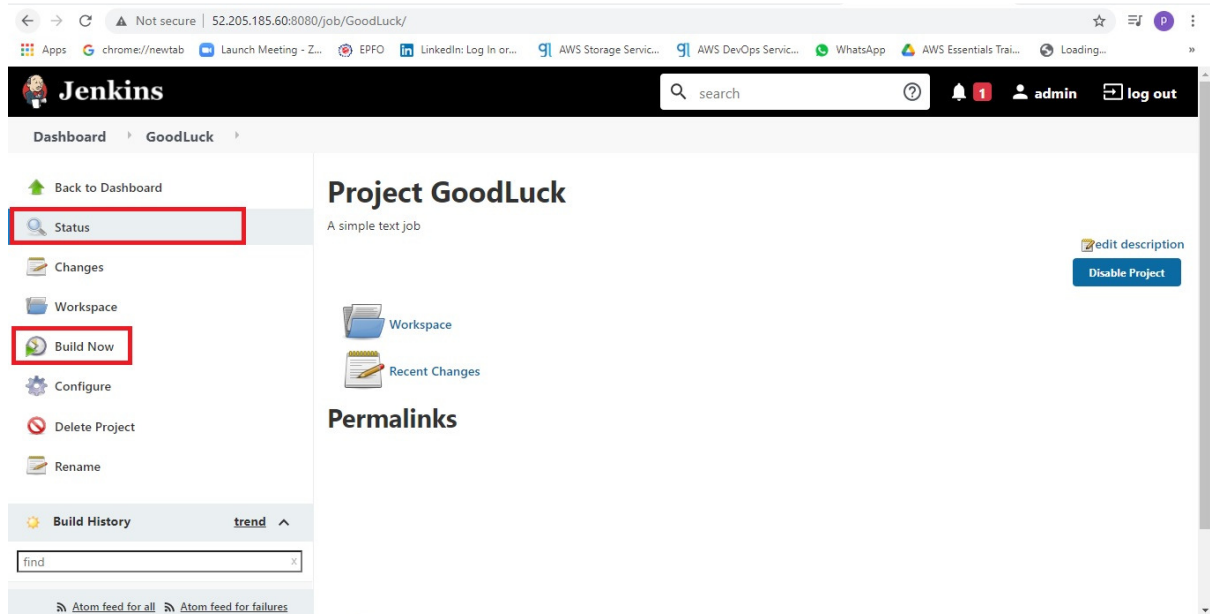
S	W	Name	Last Success	Last Failure	Last Duration
		GoodLuck	11 min - #1	N/A	0.12 sec

❖ Build step:execute shell : Entered the following shell command in execute shell box,

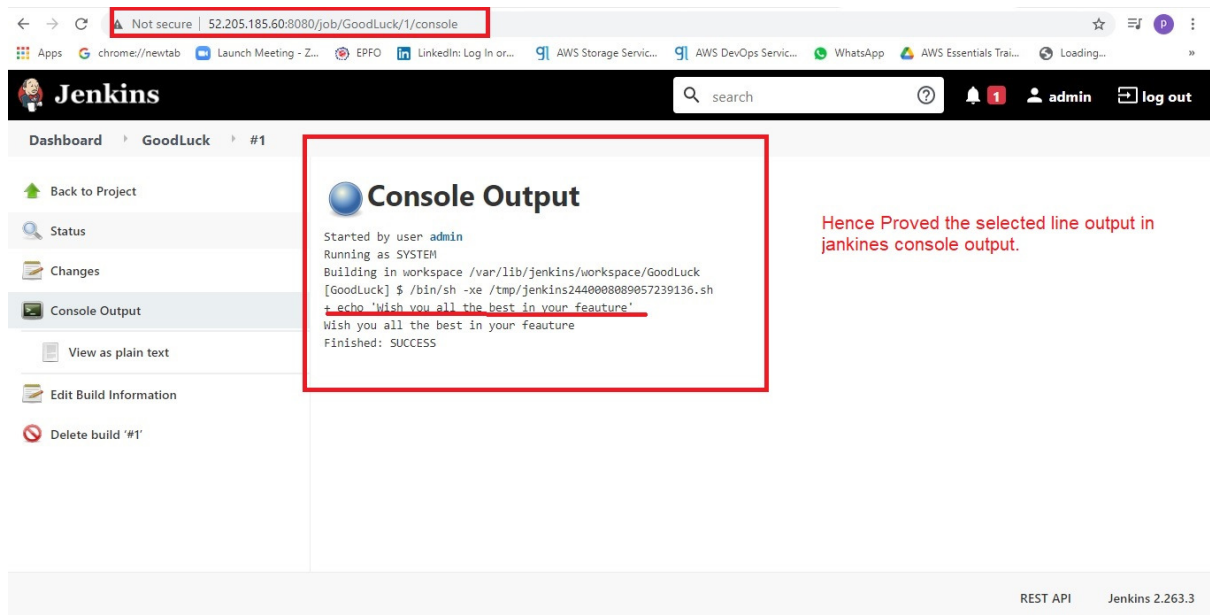
❖ Echo "Wish you all the best in your feature".

The screenshot shows the Jenkins configuration page for the 'GoodLuck' job. The 'Build' tab is selected. A red box highlights the 'Execute shell' build step. The command entered in the text area is `echo "Wish you all the best in your feature"`. Below the text area, there is a link 'See the list of available environment variables'. At the bottom, there are 'Save' and 'Apply' buttons, both highlighted with red boxes.

- ❖ Build the project job :
Selected Build Now button used for build the project.



- ❖ Finally Build the project output :



Using following Public and Private IP for Jenkins and java installation:

Public IP Address	52.502.185.60
Private IP Address	172.31.91.140

End of the Project

