

JENKINS

Jenkins is a Java-based open-source automation platform with plugins designed for continuous integration.

It is used to continually create and test software projects, making it easier for developers and DevOps engineers to integrate changes to the project and for consumers to get a new build.

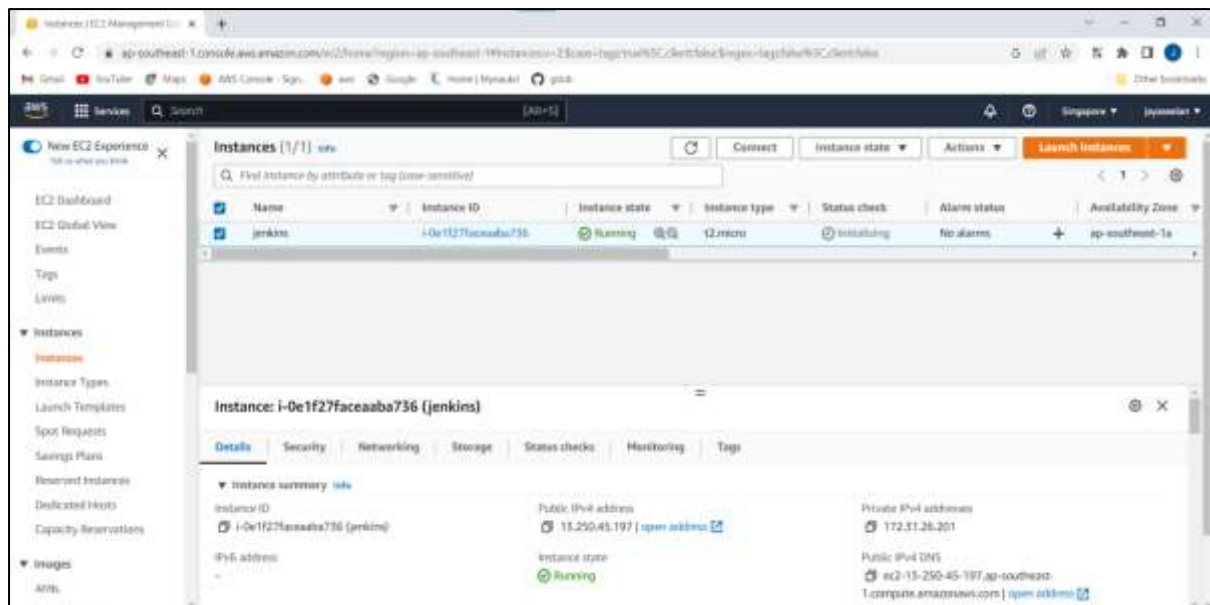
Jenkins support all cloud platform

- 2000 Pluggins available in Jenkins
- Jenkins default port number:8080
- Jenkins default path ---> /etc
- Jenkins job save directory ---->var/lib/Jenkins/workspace

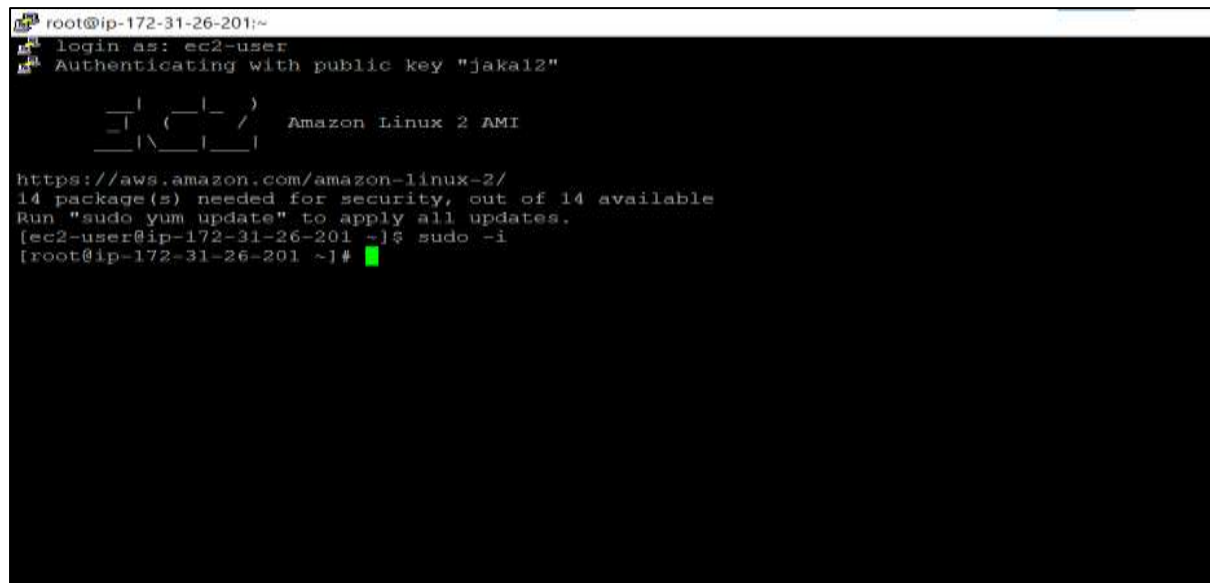
Steps To Create Jenkins

Step1:launch ec2 linux server

Security group(all traffic)---->storage(30gb)



Step2:login server and switch to root user(sudo -i)



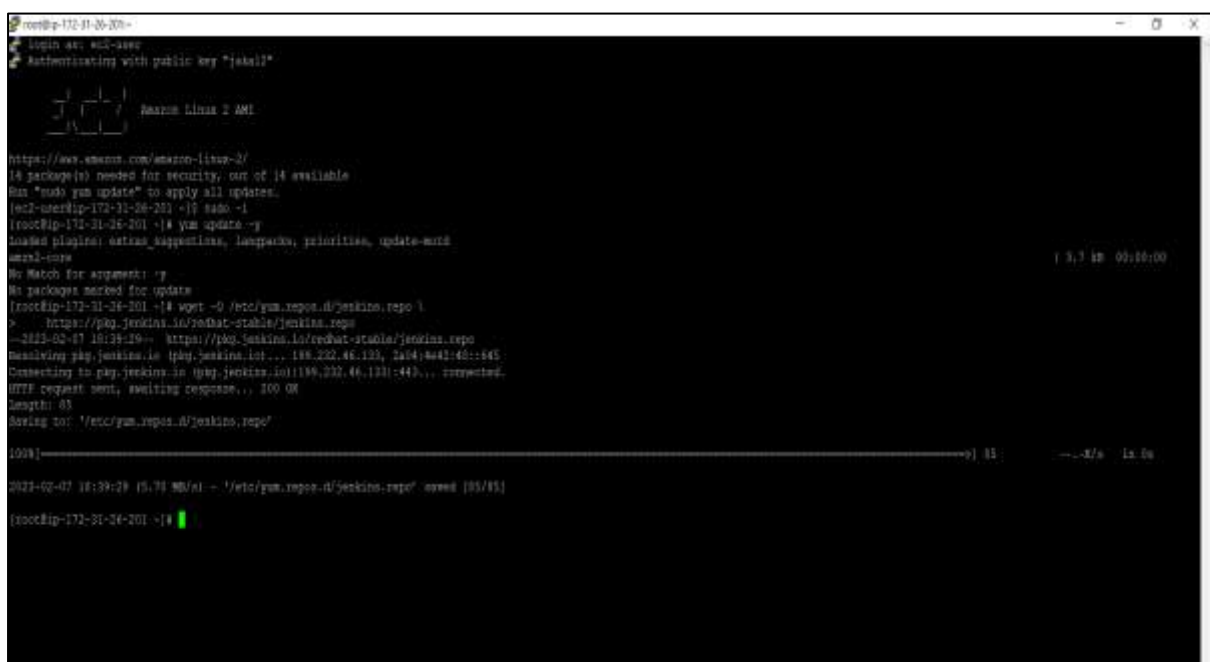
Step3:Java And Jenkins Install

---->Jenkins repo add:

```
# yum update -y
```

```
# wget -O /etc/yum.repos.d/jenkins.repo \
```

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



```
# sudo yum upgrade
```

[illegible]

```
#amazon-linux-extras install java-openjdk11 -y
```

```
root@ip-172-31-26-201:~#
22 GraphicsMagick 1.3.3 [ 1.3.30 =>1.3.32 =>1.3.34 =>stable ]
23 tomcat8.5 available [ 8.5.31 =>8.5.32 =>8.5.33 =>8.5.40 =>8.5.42 =>8.5.50 =>stable ]
24 epel available [ 7.11 =>stable ]
25 gcc56 available [ 1.0 =>stable ]
26 ecs available [ =>stable ]
27 corretto8 available [ 1.0.0_193 =>1.0.0_202 =>1.0.0_212 =>1.0.0_222 =>1.0.0_232 =>stable ]
28 golang1.11 available [ 1.11.3 =>1.11.11 =>1.11.19 =>stable ]
30 squid4 available [ 4 =>stable ]
32 lustre2.10 available [ 2.10.5 =>2.10.8 =>stable ]
33 java-openjdk8latest enabled [ 11 =>stable ]
34 lynx available [ =>stable ]
36 gcc available [ 0.8 =>stable ]
37 mono available [ 0.8 =>stable ]
38 nginx1 available [ =>stable ]
39 ruby2.6 available [ 2.6 =>stable ]
40 moco available [ =>stable ]
41 postgresql11 available [ 11 =>stable ]
43 livepatch available [ =>stable ]
44 python3.6 available [ =>stable ]
45 nagios4 available [ =>stable ]
46 ceph available [ =>stable ]
47 aws-nitro-enclaves-c1 available [ =>stable ]
48 R4 available [ =>stable ]
49 kernel-3.4 available [ =>stable ]
50 sailinux-ng available [ =>stable ]
51 rdp3.0 available [ =>stable ]
52 Tomcat8 available [ =>stable ]
53 unbound1.13 available [ =>stable ]
54 mariadb10.5 available [ =>stable ]
55 kernel-3.10latest available [ =>stable ]
56 redisc available [ =>stable ]
57 ruby3.0 available [ =>stable ]
58 postgresql12 available [ =>stable ]
59 postgresql13 available [ =>stable ]
60 noco2 available [ =>stable ]
61 shwaesg2.06 available [ =>stable ]
62 kernel-3.19 available [ =>stable ]
63 postgresql14 available [ =>stable ]
64 fine-tom available [ =>stable ]
65 lustre available [ =>stable ]
66 php8.1 available [ =>stable ]
67 awscli1 available [ =>stable ]
```

---->Install jenkins:

```
# yum install jenkins -y
```

```
root@ip-172-31-26-201 ~# yum install jenkins -y
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Resolving Dependencies
--> Running transaction check
--> Package jenkins.x86_64 0:2.375.2-1.1 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

=====================================================================================================================================
 Package               Arch                Version              Repository           Size
=====================================================================================================================================
Installing:
 jenkins               x86_64              2.375.2-1.1         jenkins              91 M

Transaction Summary
Install 1 package

Total download size: 91 M
Installed size: 91 M
Downloading packages:
 jenkins-2.375.2-1.1.x86_64.rpm | 91 MB 04:50:03
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
Installing : jenkins-2.375.2-1.1.x86_64
Verifying : jenkins-2.375.2-1.1.x86_64

Installed:
 jenkins.x86_64 0:2.375.2-1.1

Complete!
root@ip-172-31-26-201 ~#
```

```
# systemctl enable Jenkins
```

```
# systemctl start Jenkins
```

```
# systemctl status jenkins
```

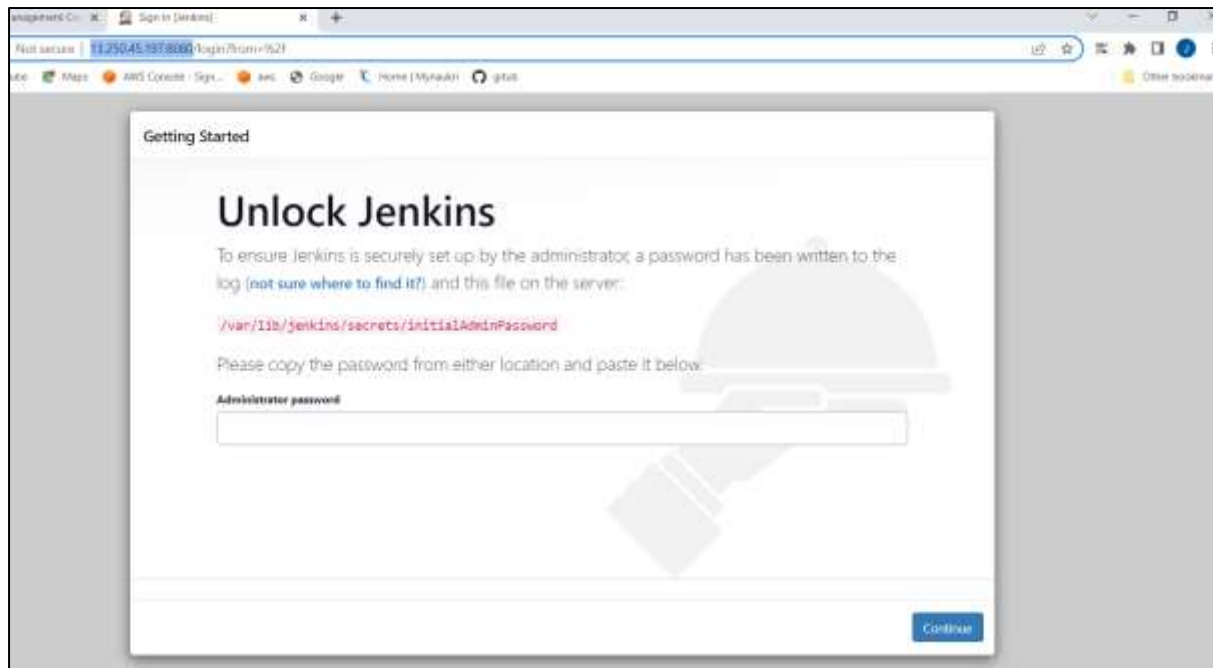
```
Running transaction test
Transaction test succeeded
Running transaction
Installing : jenkins-2.375.2-1.1.x86_64
Verifying : jenkins-2.375.2-1.1.x86_64

Installed:
 jenkins.x86_64 0:2.375.2-1.1

Complete!
root@ip-172-31-26-201 ~# systemctl enable jenkins
Failed to execute operation: No such file or directory
root@ip-172-31-26-201 ~# systemctl enable jenkins
Created symlink from /etc/systemd/system/multi-user.target.wants/jenkins.service to /usr/lib/systemd/system/jenkins.service.
root@ip-172-31-26-201 ~# systemctl start jenkins
root@ip-172-31-26-201 ~# systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
   Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled; vendor preset: disabled)
   Active: active (running) since Tue 2023-02-07 18:47:25 UTC; 28s ago
     Main PID: 5295 (java)
    CGroup: /system.slice/jenkins.service
            └─5295 /usr/java/jre8 -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/usr/share/jenkins/war --httpPort=8080

Feb 07 18:46:49 ip-172-31-26-201.ap-southeast-1.compute.internal jenkins[5295]: cc68aa6451d6b2d64ee5a1093926c5
Feb 07 18:46:49 ip-172-31-26-201.ap-southeast-1.compute.internal jenkins[5295]: This may also be found at: /usr/lib/jenkins/secrets/initialAdminPassword
Feb 07 18:46:49 ip-172-31-26-201.ap-southeast-1.compute.internal jenkins[5295]: *****
Feb 07 18:46:49 ip-172-31-26-201.ap-southeast-1.compute.internal jenkins[5295]: *****
Feb 07 18:46:49 ip-172-31-26-201.ap-southeast-1.compute.internal jenkins[5295]: *****
Feb 07 18:47:25 ip-172-31-26-201.ap-southeast-1.compute.internal jenkins[5295]: 2023-02-07 18:47:25.847+0000 [id=30] INFO jenkins.InitReactorRunner$1:WebAttained: Co...lization
Feb 07 18:47:25 ip-172-31-26-201.ap-southeast-1.compute.internal jenkins[5295]: 2023-02-07 18:47:25.874+0000 [id=29] INFO hudson.lifecycle.Lifecycle$notReady: Jenkins... running
Feb 07 18:47:25 ip-172-31-26-201.ap-southeast-1.compute.internal system[1]: Started Jenkins Continuous Integration Server.
Feb 07 18:47:25 ip-172-31-26-201.ap-southeast-1.compute.internal jenkins[5295]: 2023-02-07 18:47:25.964+0000 [id=43] INFO h.s.downloadService$download$install: chr...ntaller
Feb 07 18:47:25 ip-172-31-26-201.ap-southeast-1.compute.internal jenkins[5295]: 2023-02-07 18:47:25.965+0000 [id=45] INFO hudson.util.Secret$start: Performed the a...tempt #1
Note: Some lines were ellipsized, use -l to show in full.
root@ip-172-31-26-201 ~#
```

Now server public ip:8080 put chrome --->13.250.45.197:8080



copy this path from jenkins page `/var/lib/jenkins/secrets/initialAdminPassword`

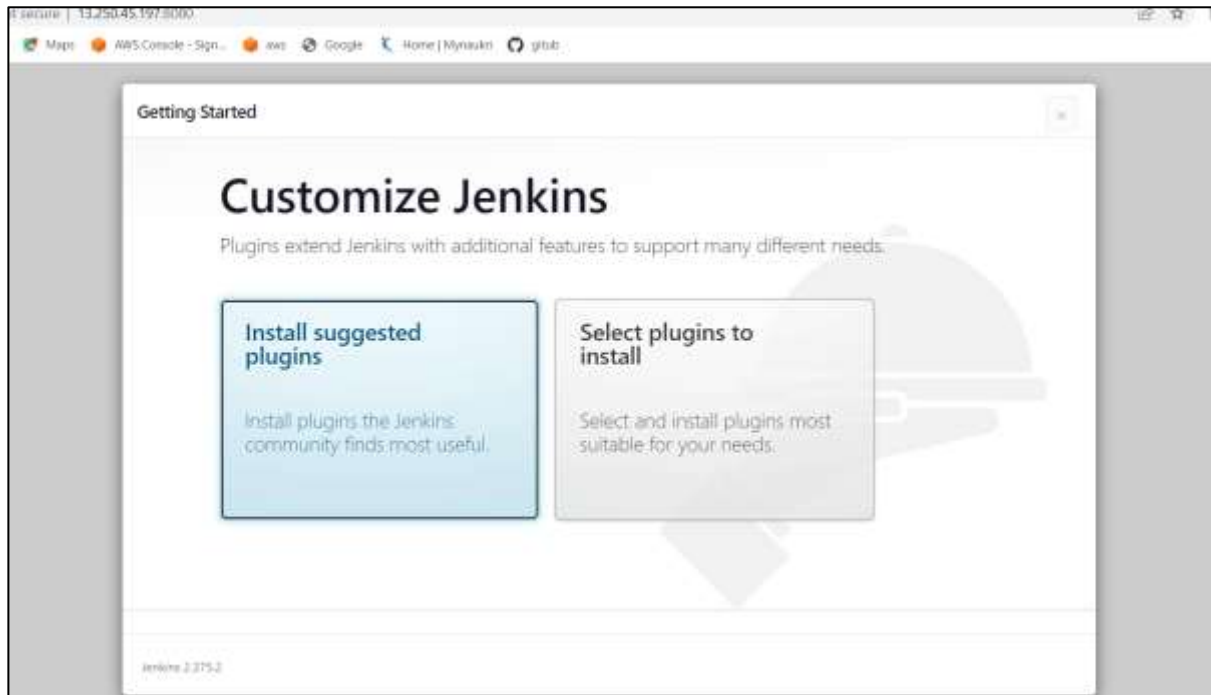
`cat /var/lib/jenkins/secrets/initialAdminPassword`

```
active: active (running) since Tue 2023-02-07 18:47:25 UTC; 10s ago
Main PID: 5255 (java)
CGroup: /system.slice/jenkins.service
└─5255 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=%C/jenkins/war

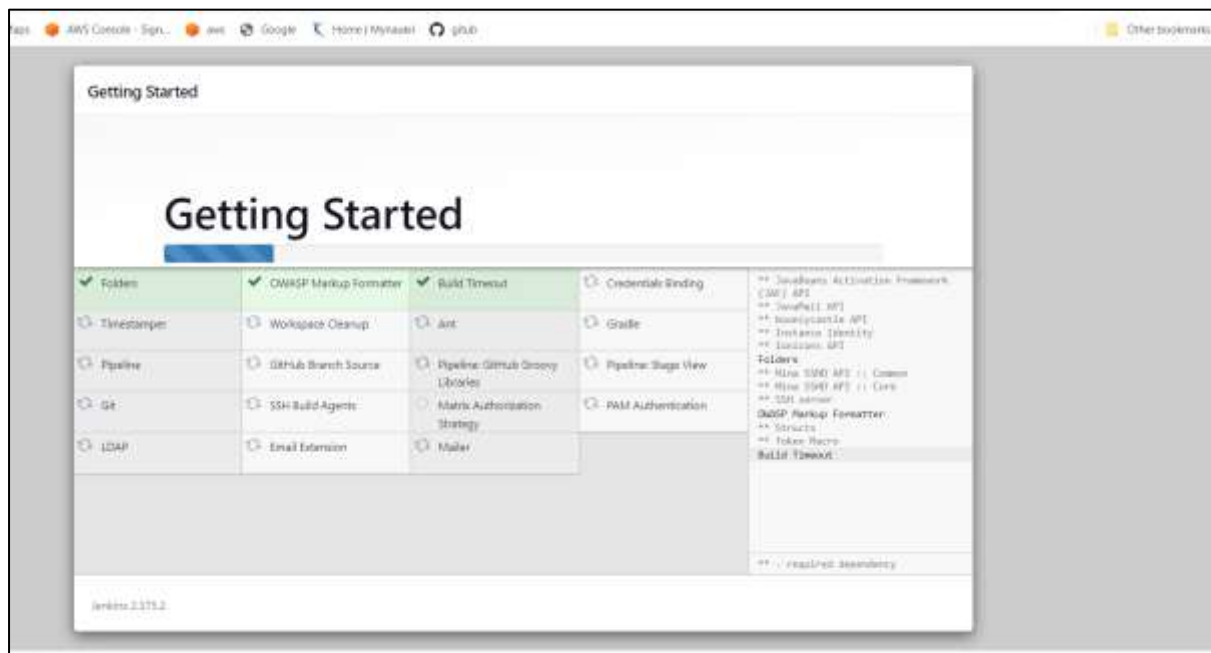
Feb 07 18:46:49 ip-172-31-26-201.ap-southeast-1.compute.internal jenkins[5255]: cc40baa0451d4bd9b84ee5a1093926c7
Feb 07 18:46:49 ip-172-31-26-201.ap-southeast-1.compute.internal jenkins[5255]: This may also be found at: /var/li
Feb 07 18:46:49 ip-172-31-26-201.ap-southeast-1.compute.internal jenkins[5255]: *****
Feb 07 18:46:49 ip-172-31-26-201.ap-southeast-1.compute.internal jenkins[5255]: *****
Feb 07 18:47:25 ip-172-31-26-201.ap-southeast-1.compute.internal jenkins[5255]: 2023-02-07 18:47:25.047+0000 [id=3
Feb 07 18:47:25 ip-172-31-26-201.ap-southeast-1.compute.internal jenkins[5255]: 2023-02-07 18:47:25.074+0000 [id=2
Feb 07 18:47:25 ip-172-31-26-201.ap-southeast-1.compute.internal systemd[1]: Started Jenkins Continuous Integratio
Feb 07 18:47:25 ip-172-31-26-201.ap-southeast-1.compute.internal jenkins[5255]: 2023-02-07 18:47:25.964+0000 [id=4
Feb 07 18:47:25 ip-172-31-26-201.ap-southeast-1.compute.internal jenkins[5255]: 2023-02-07 18:47:25.965+0000 [id=4
Hint: Some lines were ellipsized, use -l to show in full.
[root@ip-172-31-26-201 ~]# cat /var/lib/jenkins/secrets/initialAdminPassword
cc40baa0451d4bd9b84ee5a1093926c7
[root@ip-172-31-26-201 ~]#
```

copy this password and paste to jenkins and click continue.

Select insall suggested plugins



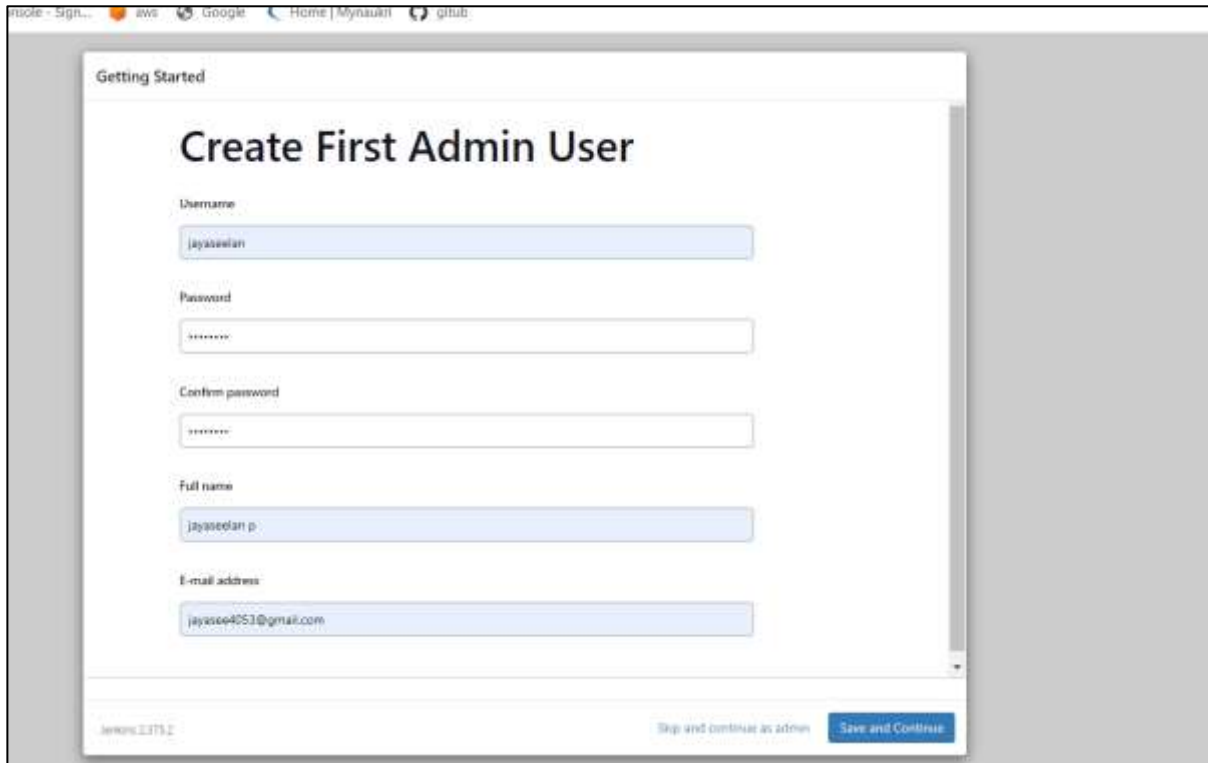
Jenkins started for all components are install to wait 5 min



Step4: Now Set Username And Password For This Admin User

Username: jayaseelan

Password: jaya1234

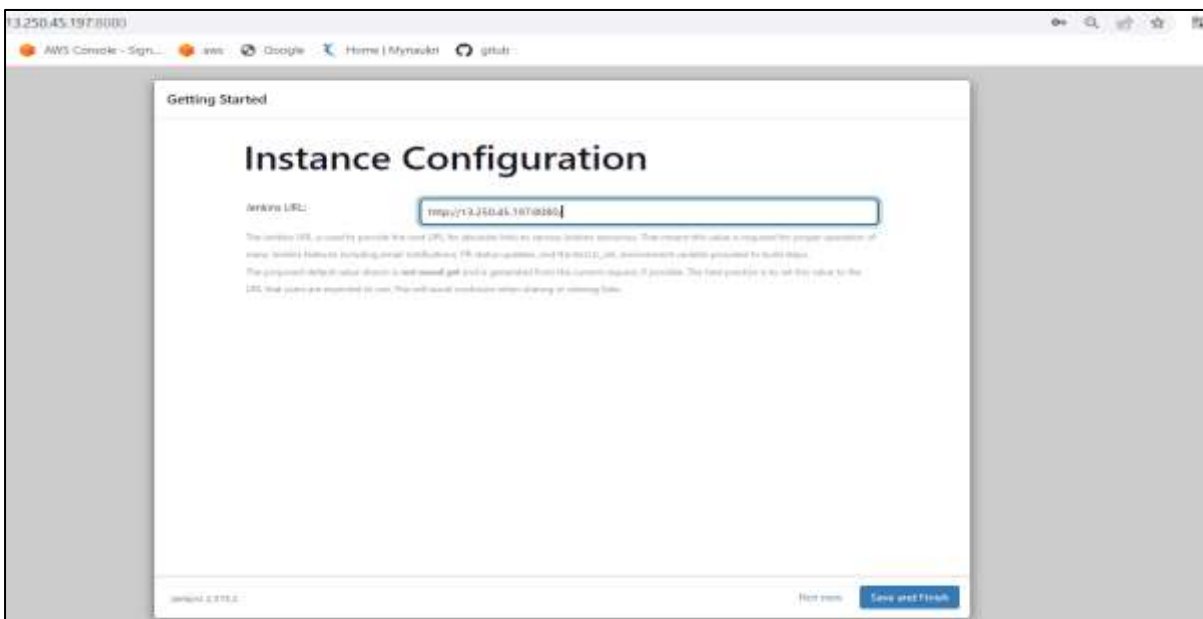


The screenshot shows the 'Getting Started' page of Jenkins with the 'Create First Admin User' form. The form fields are filled with the following information:

- Username: jayaseelan
- Password: jaya1234
- Confirm password: jaya1234
- Full name: jayaseelan p
- E-mail address: jayaseelan@gmail.com

At the bottom of the form, there are two buttons: 'Skip and continue as admin' and 'Save and Continue'.

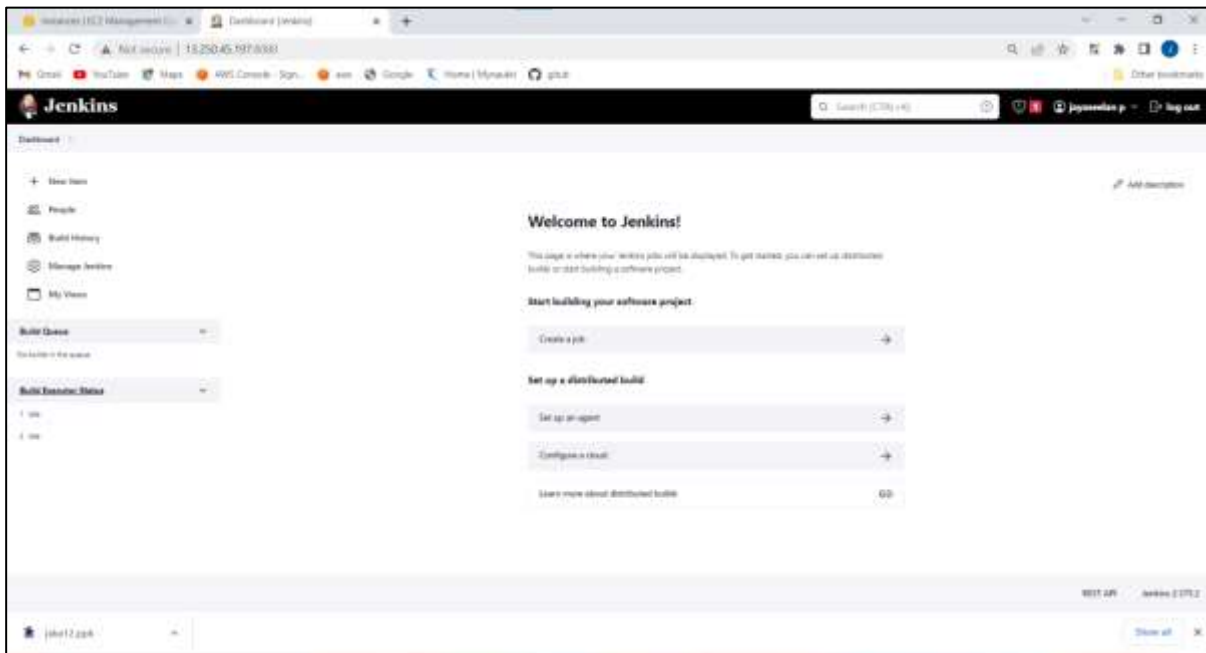
It's shown ur Jenkins url



The screenshot shows the 'Getting Started' page of Jenkins with the 'Instance Configuration' form. The 'Jenkins URL' field is filled with the following information:

Jenkins URL: <http://13.250.45.197:8080>

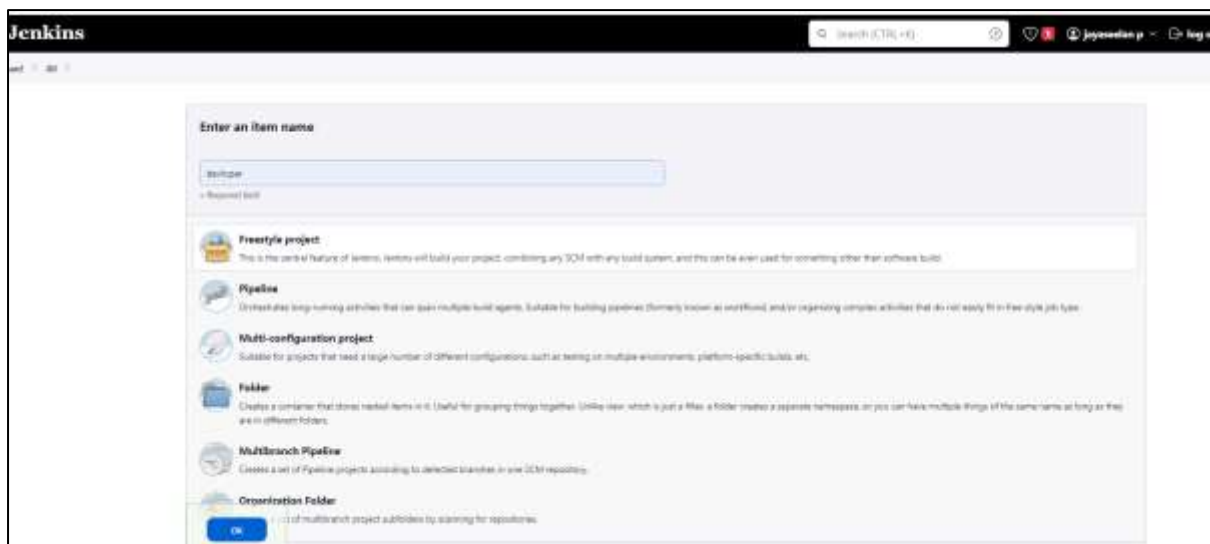
Below the field, there is a note: "The Jenkins URL is used by Jenkins to provide the user (UI) for accessing Jenkins via various Jenkins resources. This property is required for the proper operation of many Jenkins features including global configuration, PR status updates, and the Jenkins UI. The recommended value is the Jenkins URL that you are expecting to use. The Jenkins URL should be the same as the Jenkins URL that you are expecting to use. The Jenkins URL should be the same as the Jenkins URL that you are expecting to use." At the bottom of the form, there are two buttons: 'Next step' and 'Save and Finish'.



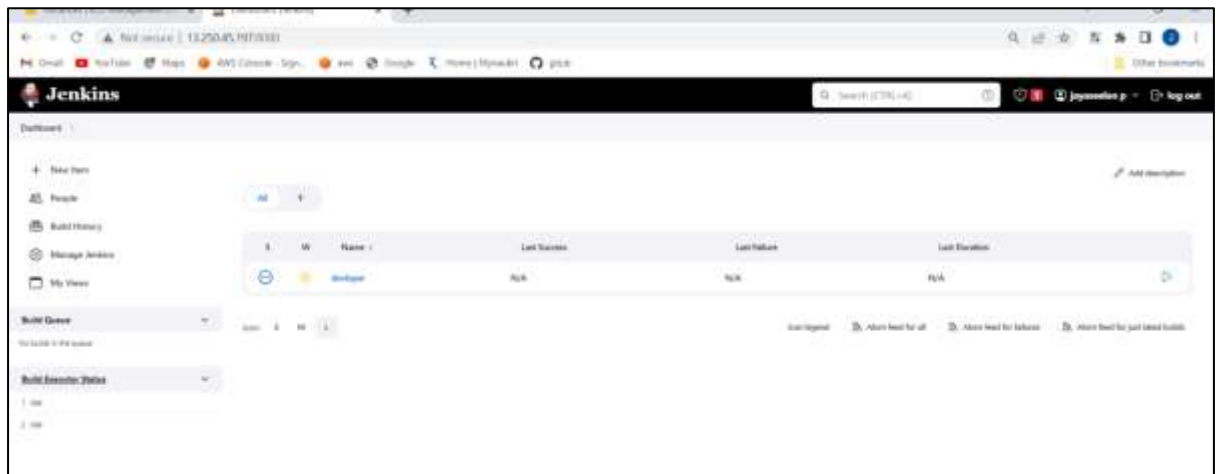
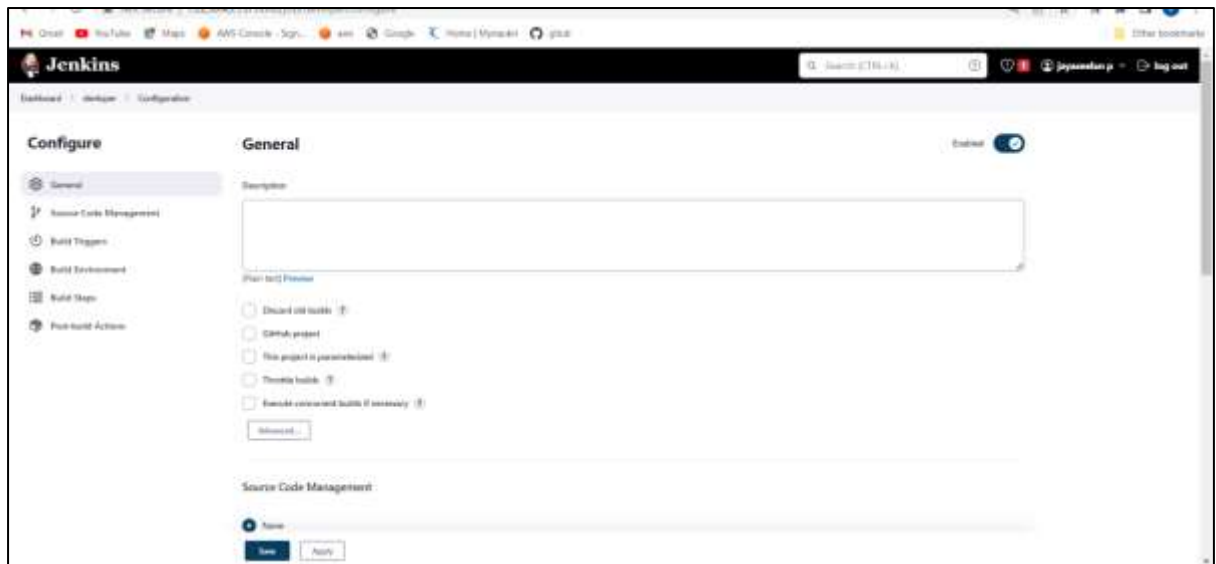
Finally Jenkins will open.

Step5:create 2 jobs developer and tester

Dashboard --->new item --->job name(developer)--->click Freestyle project --->ok



Next page --->save



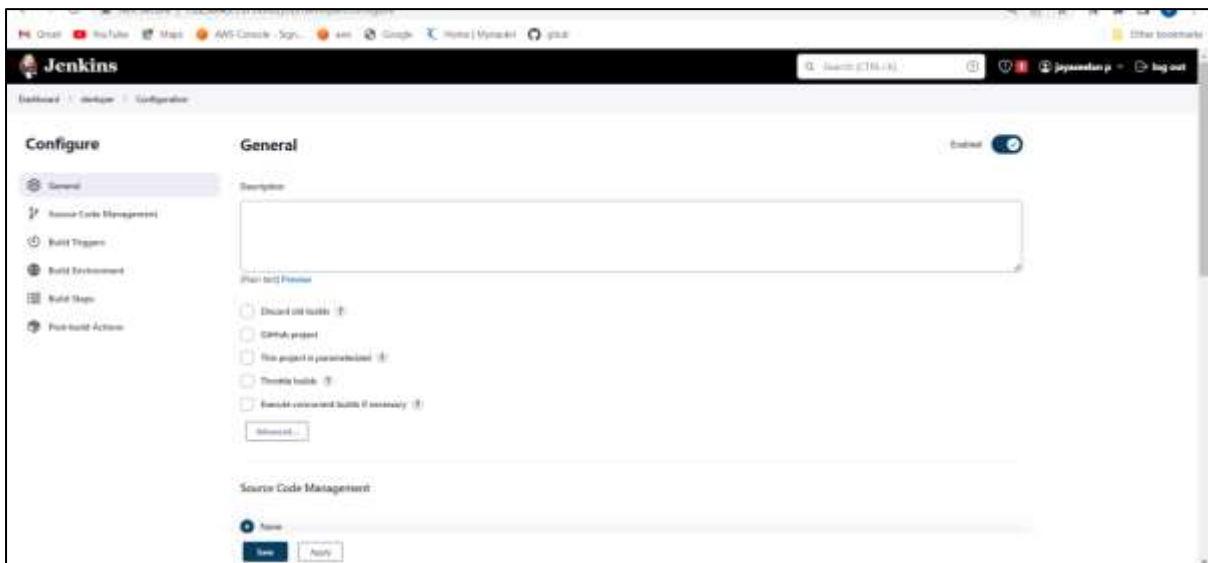
Developer job created..

Now create tester job

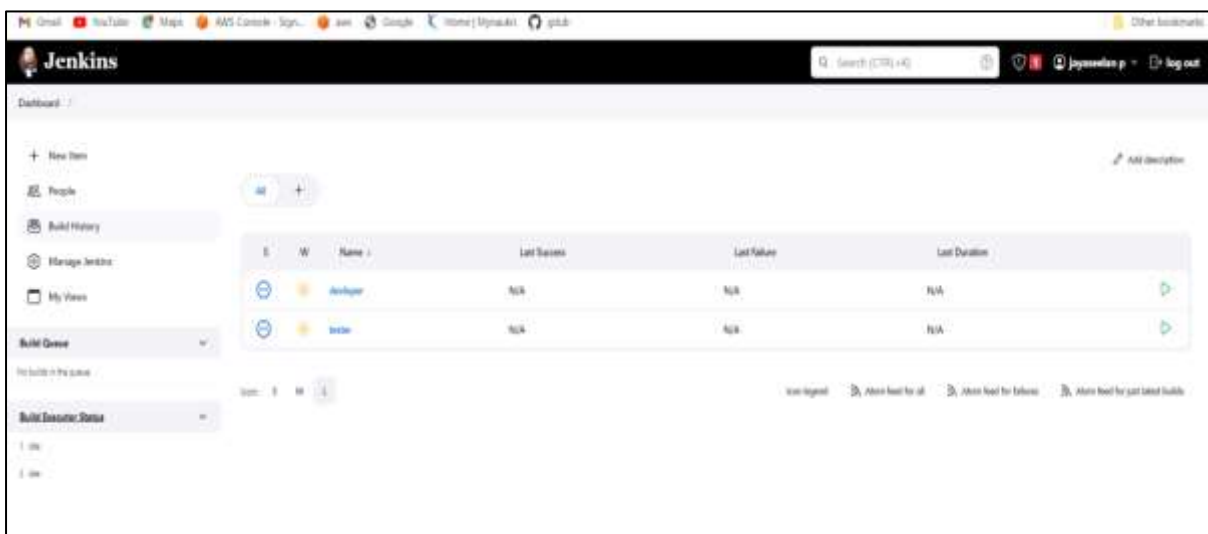
Dashboard --->new item --->job name(tester)--->click Freestyle project --->ok



Next page --->save



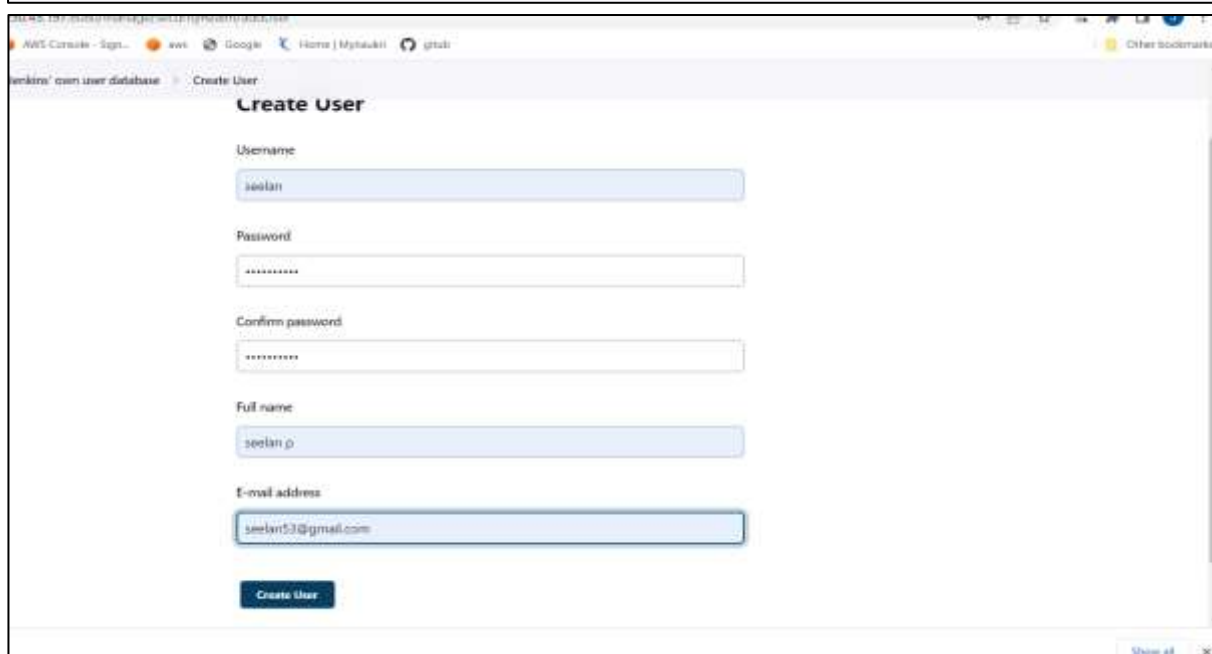
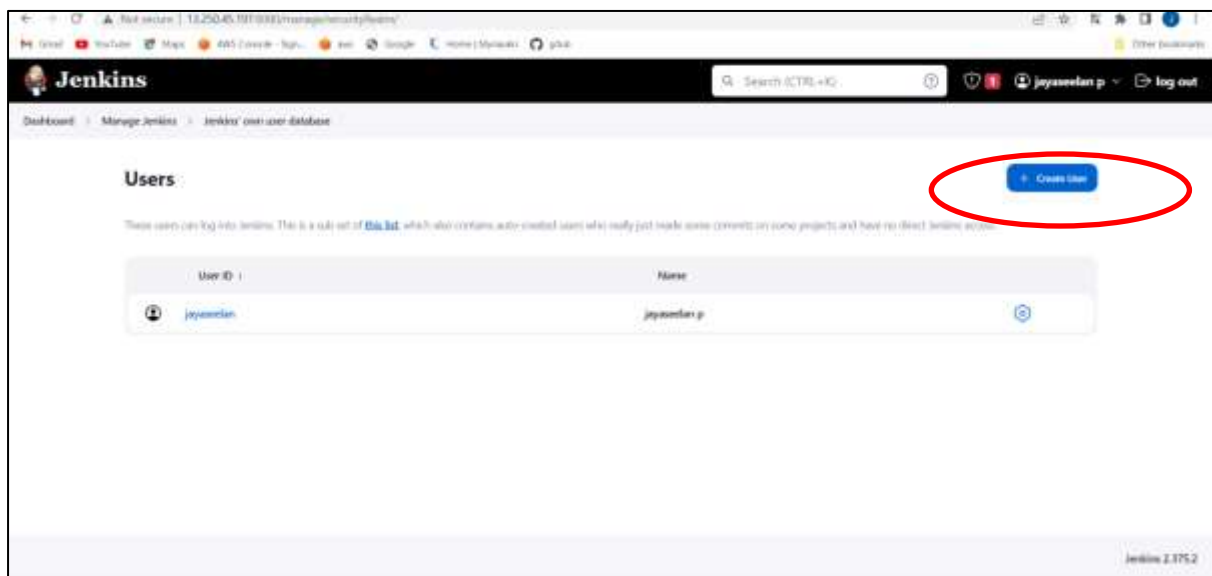
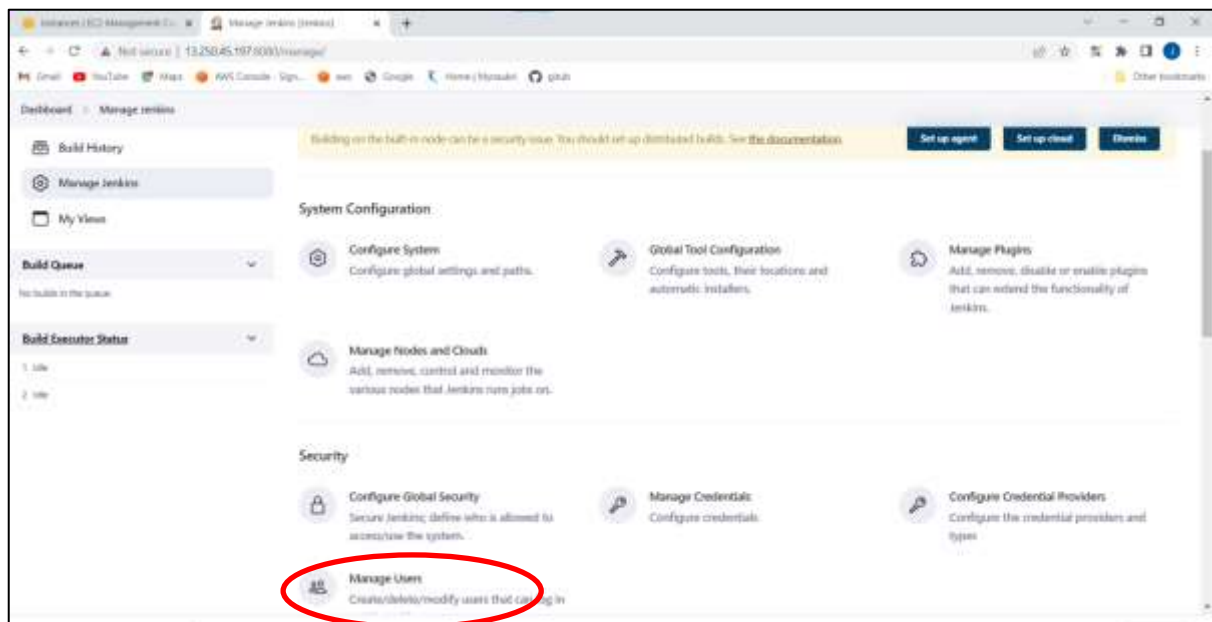
developer and tester jobs can created.



Step6:create two users

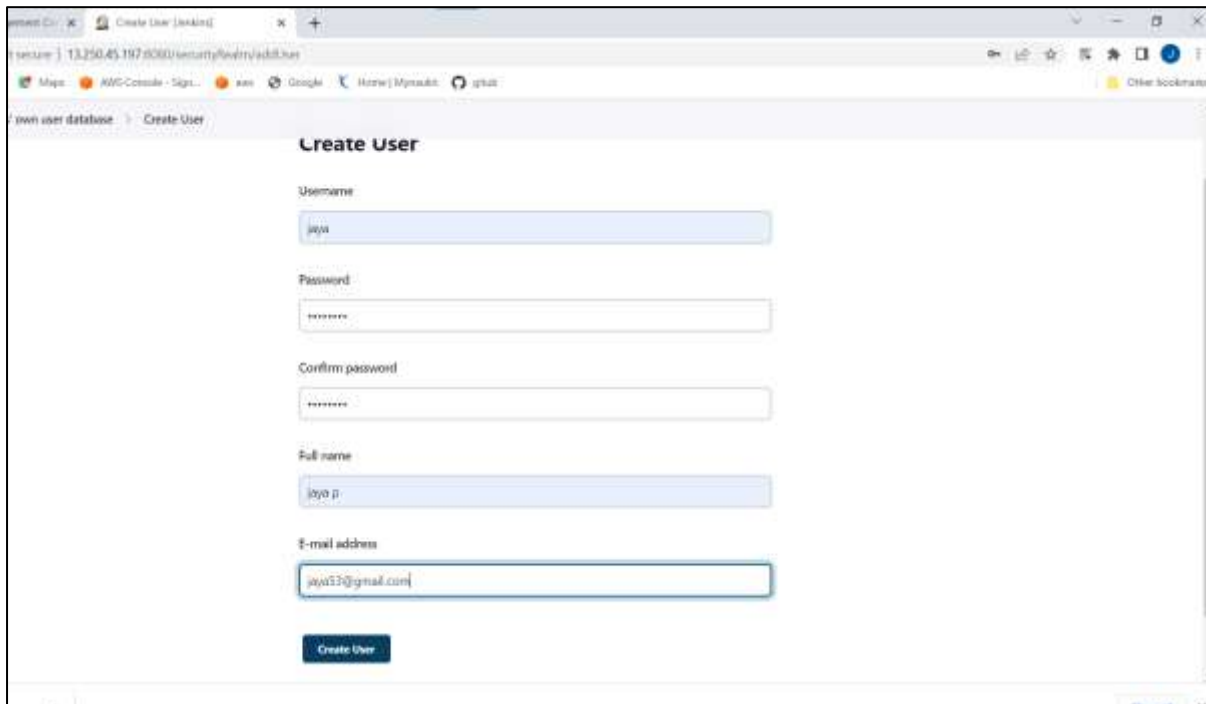
Create 1st user(**seelan**)--->Dashboard--->manage Jenkins ---->manage users--->create users---> give

username(**seelan**),password(**seelan1234**) and mail id(**seelan53@gmail.com**)



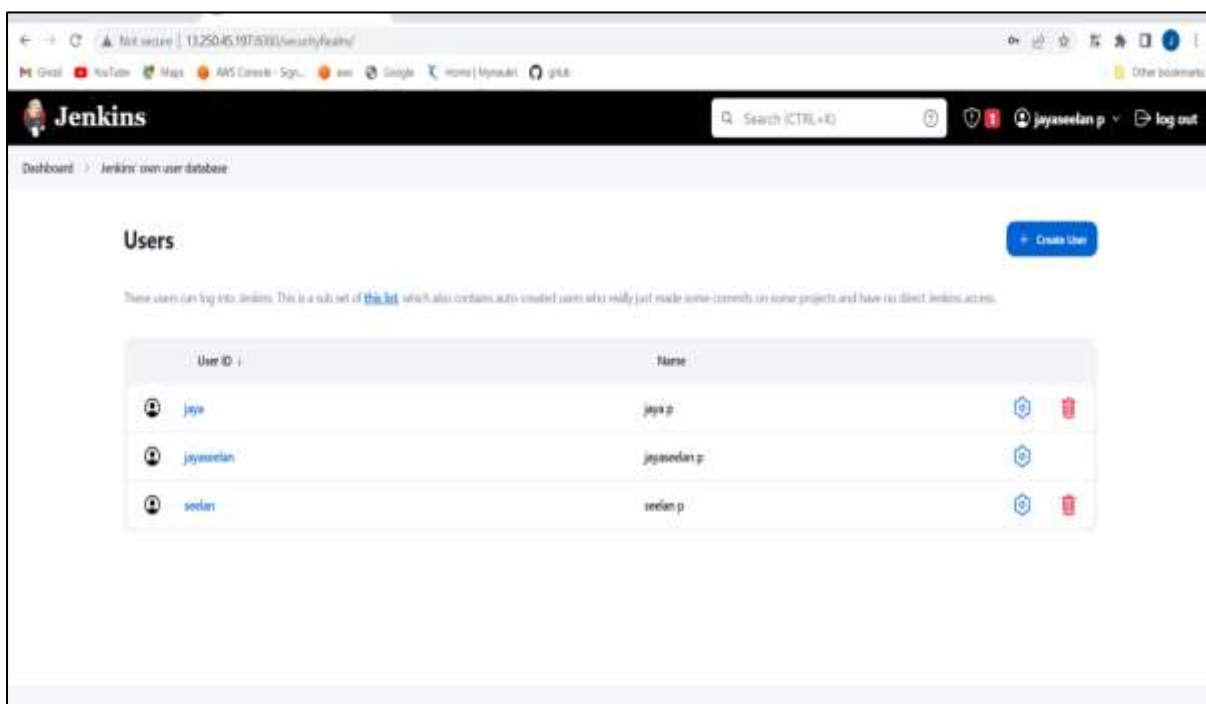
Create 2nd user(**jaya**)--->Dashboard--->manage Jenkins ---->-
manage users--->create users---> give

username(**jaya**),password(**jaya1234**) and mail
id(**jaya53@gmail.com**)



The screenshot shows the 'Create User' form in the Jenkins web interface. The form is titled 'Create User' and has a 'Create User' button at the bottom. The fields are filled with the following information:

- Username: jaya
- Password: jaya1234
- Confirm password: jaya1234
- Full name: jaya p
- E-mail address: jaya53@gmail.com



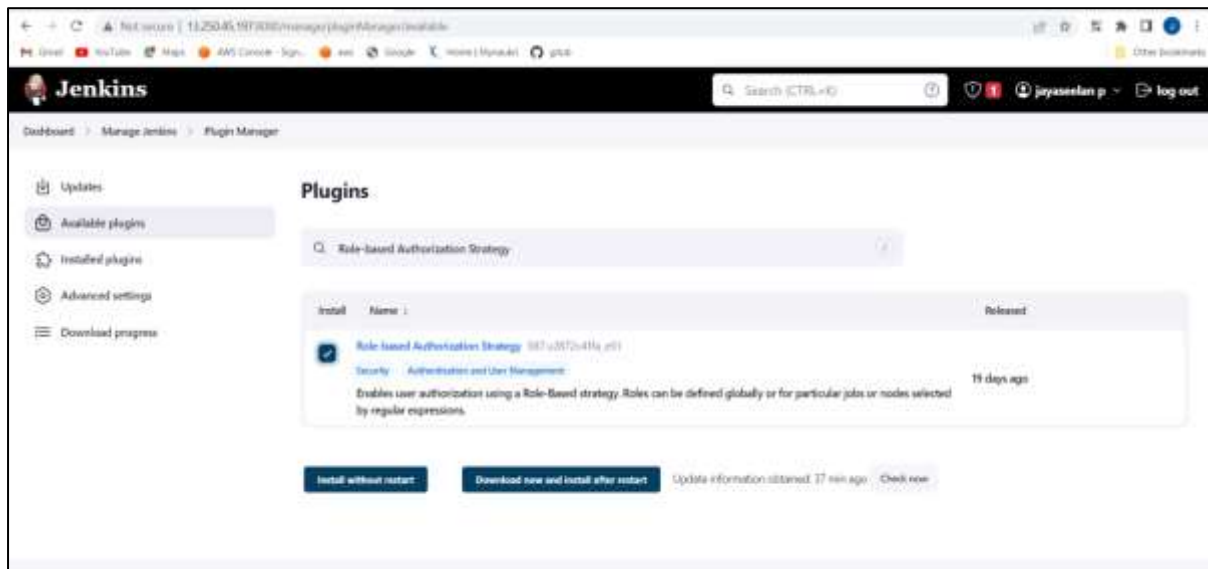
The screenshot shows the 'Users' page in the Jenkins web interface. The page title is 'Users' and there is a 'Create User' button. Below the title, there is a table listing the users created. The table has two columns: 'User ID' and 'Name'. The table contains three rows of data:

User ID	Name
jaya	jaya p
jayaseelan	jayaseelan p
seelan	seelan p

Two users created..

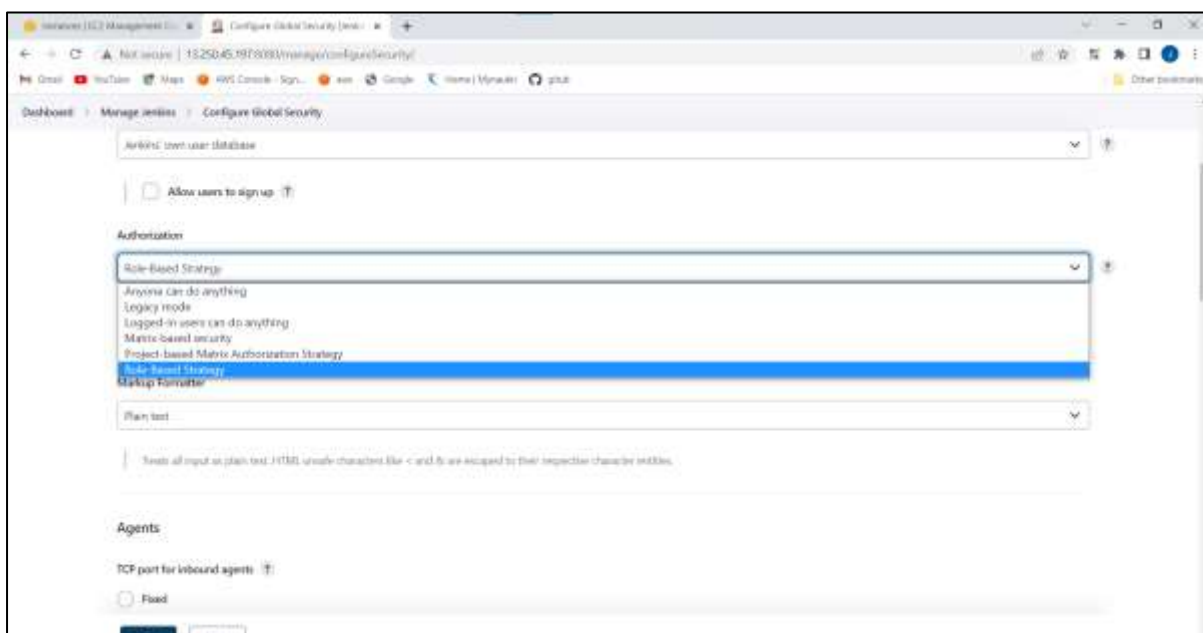
Step7:install plugins

Dashboard--->manage Jenkins ---->available plugins---->-search(Role-based Authorization Strategy)--->click box ---->install without restart

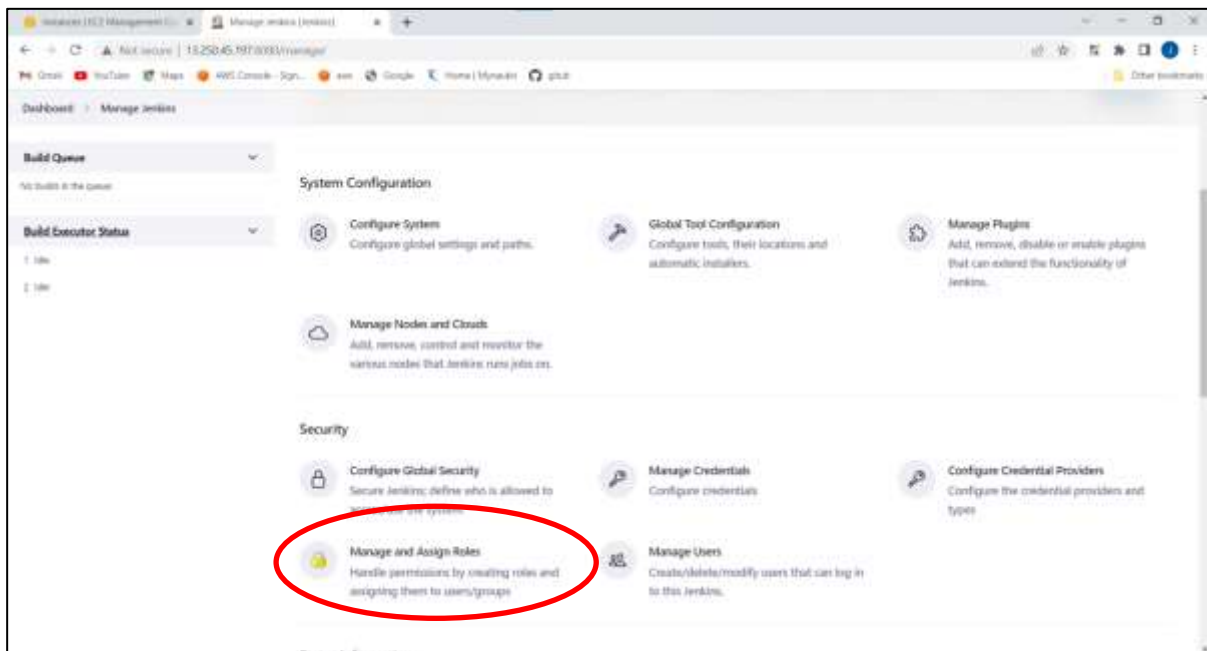


Step8:Configure Global Security

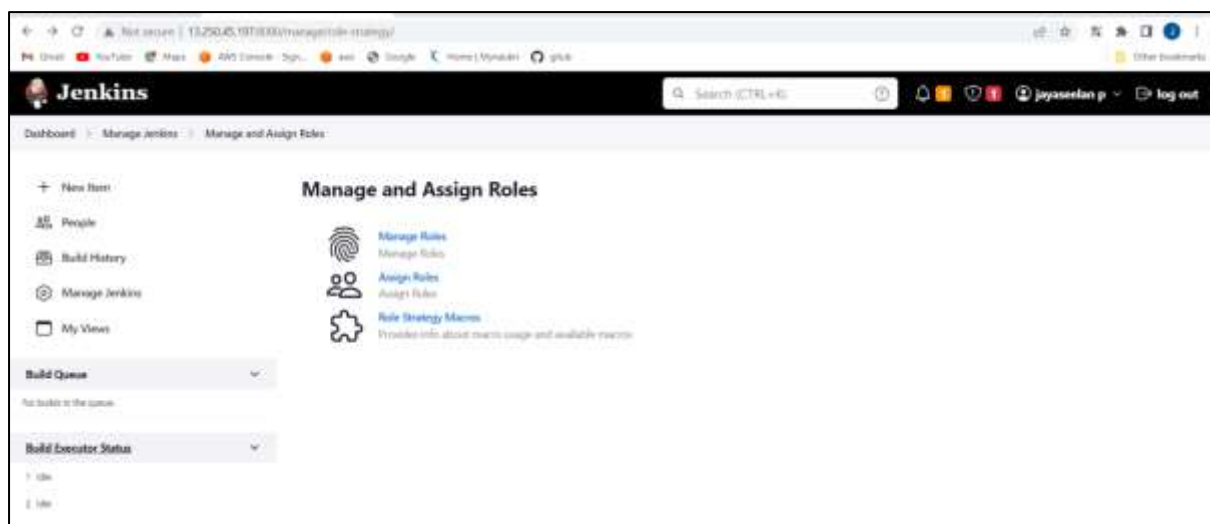
Dashboard--->manage Jenkins--->security--->configure global security--->authorization----->select role-based strategy--->save



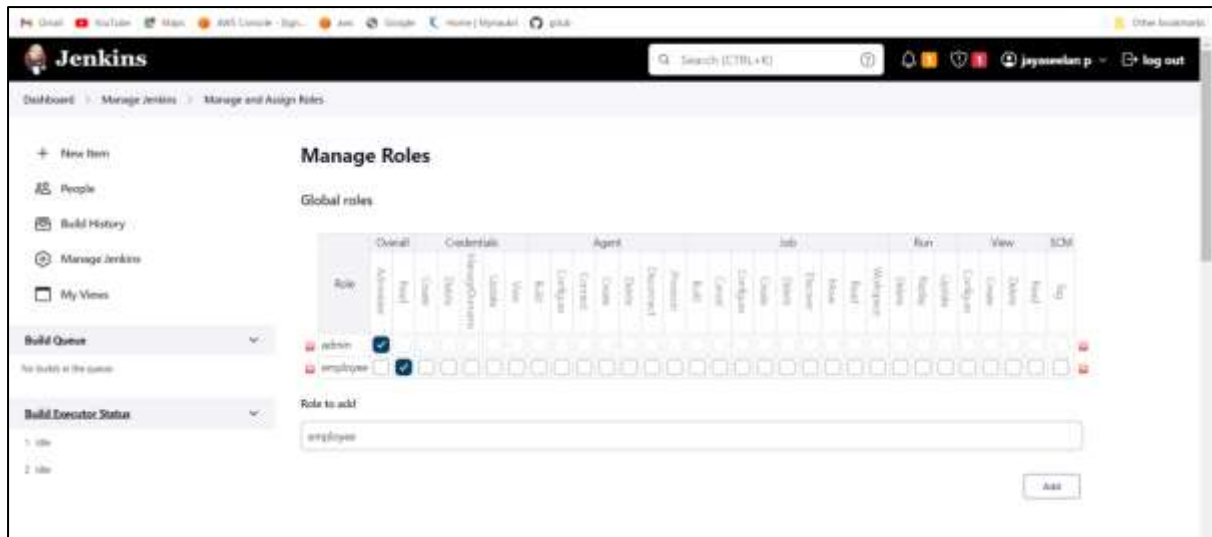
Now shown manage and assign roles



Step9:Manage Global Role And Item Role for developer and tester



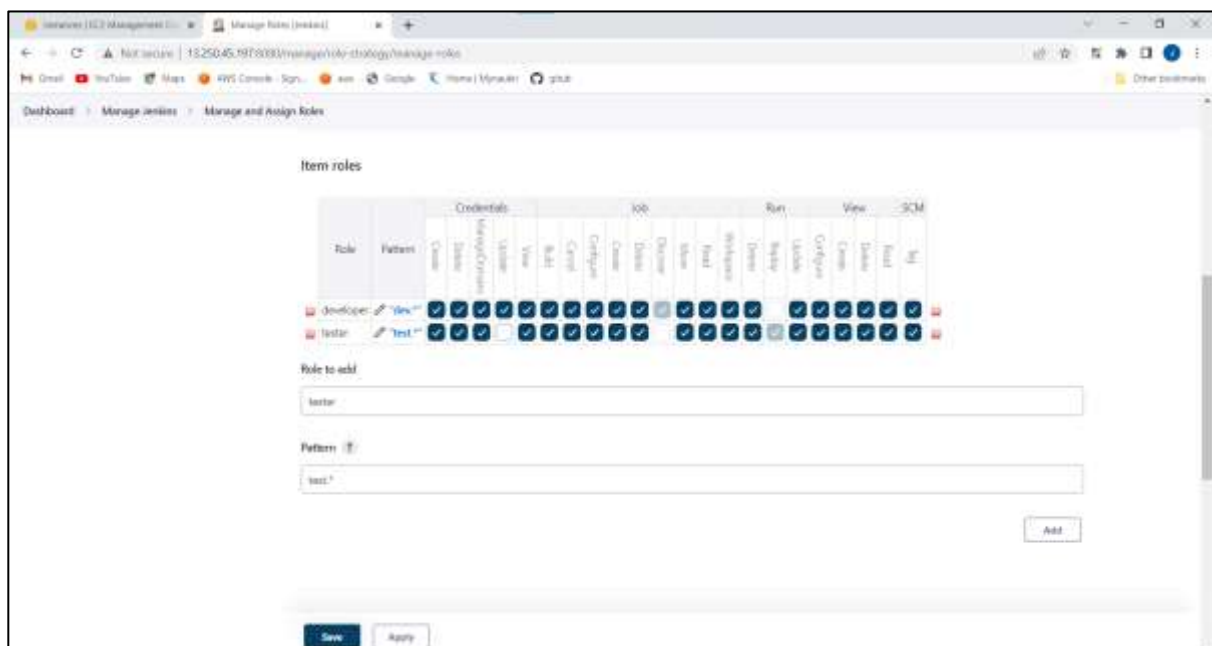
Manage role---->global role--->Role to add (employee)--->add -->-
permission (read) only give



Global role assignd..

Now item role assign

Manage role---->item role--->Role to add 1.(developer)----->-
pattern(dev.*)---->add -->-permission (all permission) give--->role
to add 2.(tester)---->pattern(test.*)---> add -->-permission (all
permission) give

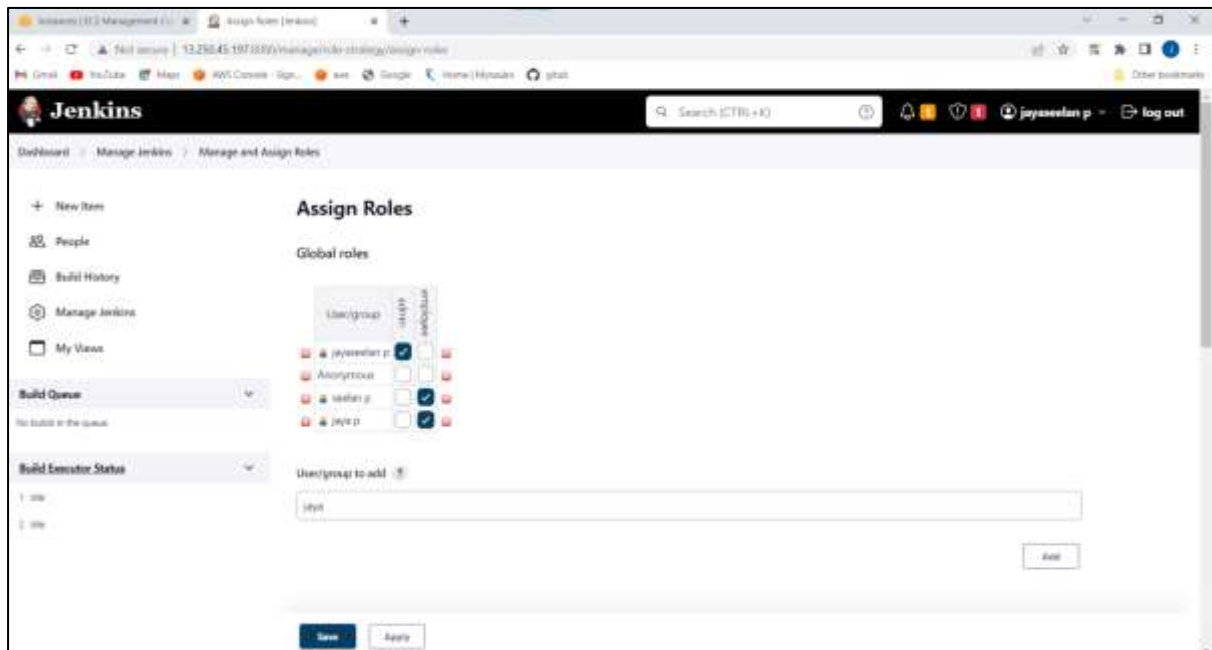


Finally save.

Step10:Assign Global Role And Item Role for users

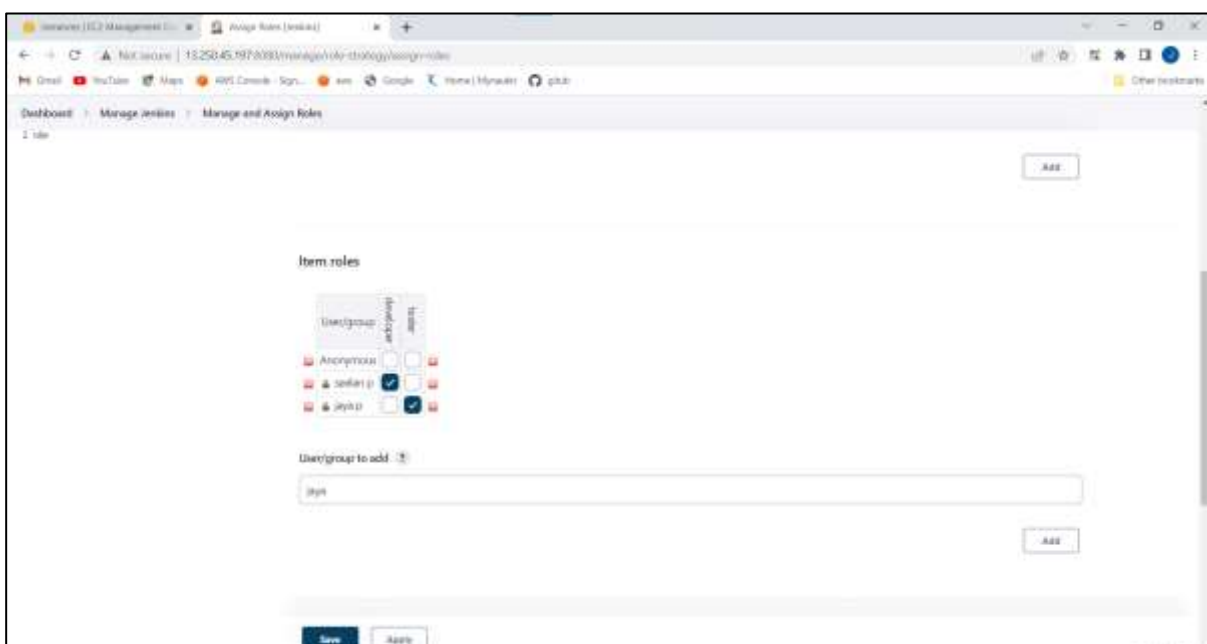
Dashboard--->manage Jenkins--->assign role

Global role--->user/group add--->1.user--->seelan --->add -->give employee permission----->2.user--->jaya --->add --> give employee permission



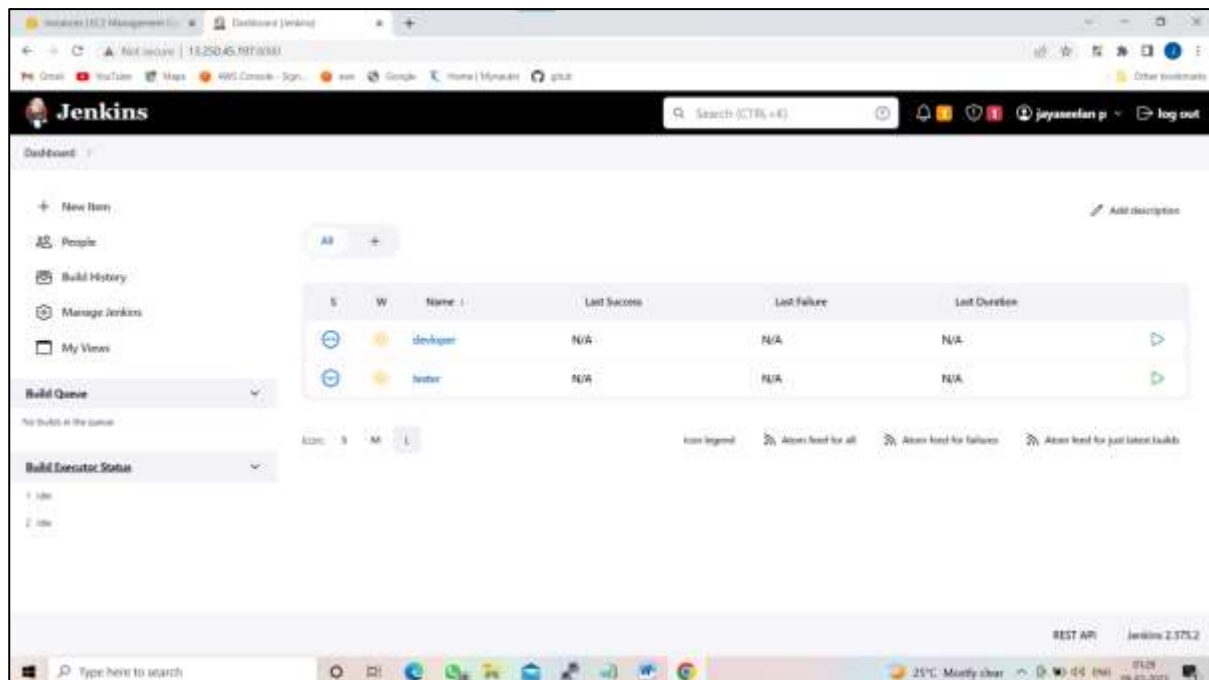
Dashboard--->manage Jenkins--->assign role

Item role---> user/group add--->1.user--->seelan --->add -->-
assignd developer----->2.user--->jaya --->add --> assignd tester



Save..

Finally it shown developer and tester

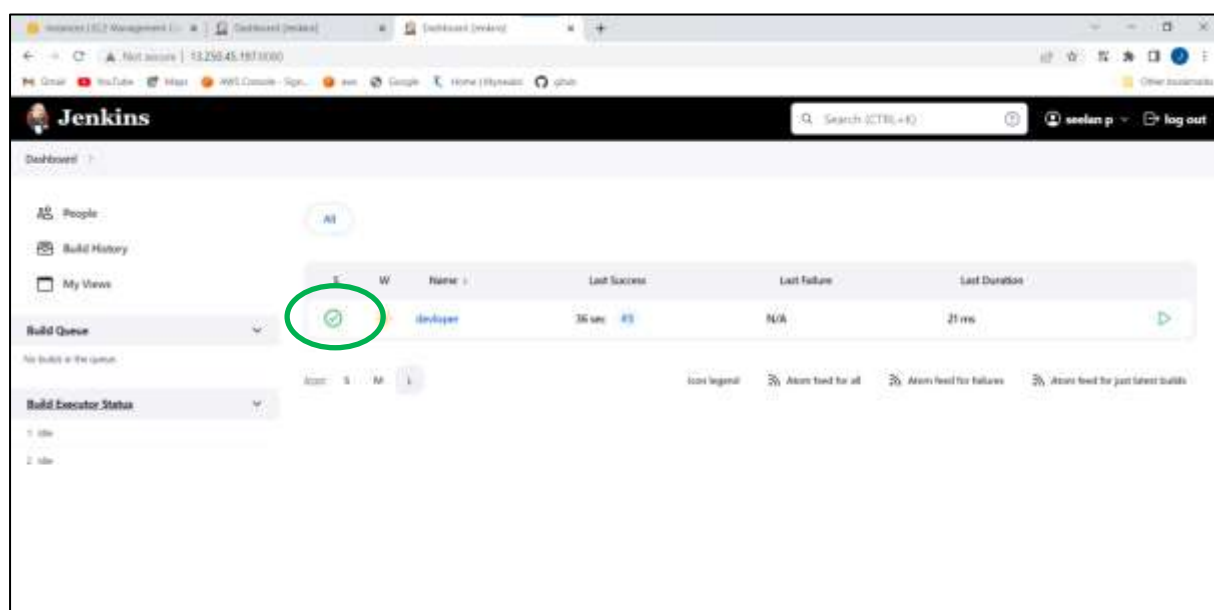


Step11:now login seelan user

Public ip:8080 put another chrome page--->13.250.45.197:8080

Username:seelan

Password:seelan1234



It will shown developer for seelan

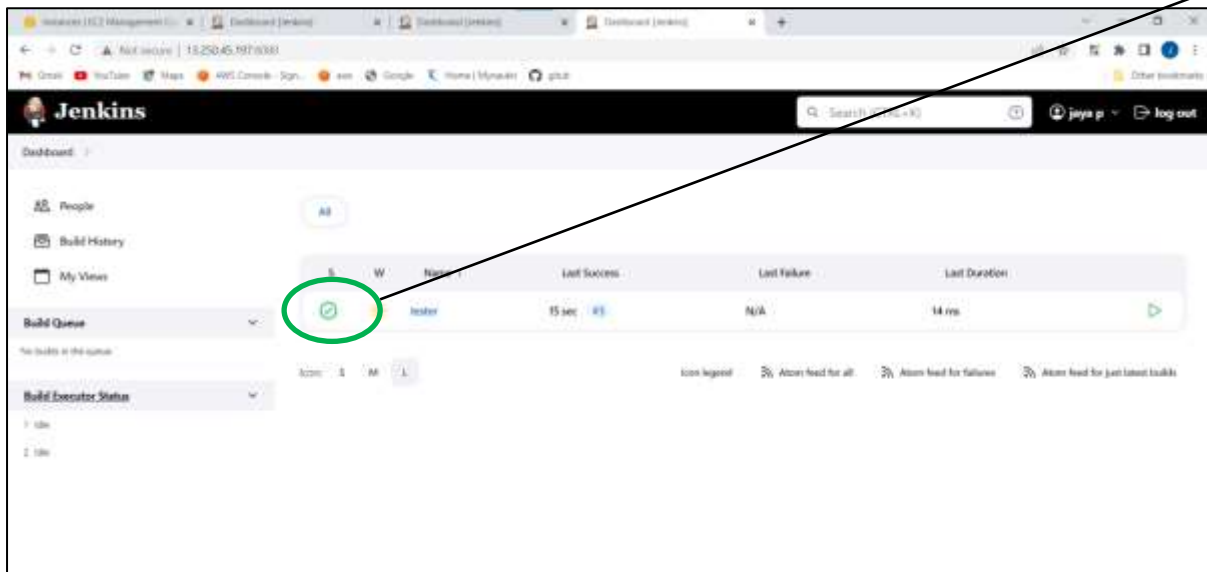
Step12:now login jaya user

Public ip:8080 put another chrome page--->13.250.45.197:8080

Username:jaya

Password:jaya1234

This green tick
shown only thi job
is active



admin --->jayaseelan server--->both 2 jobs can saw

