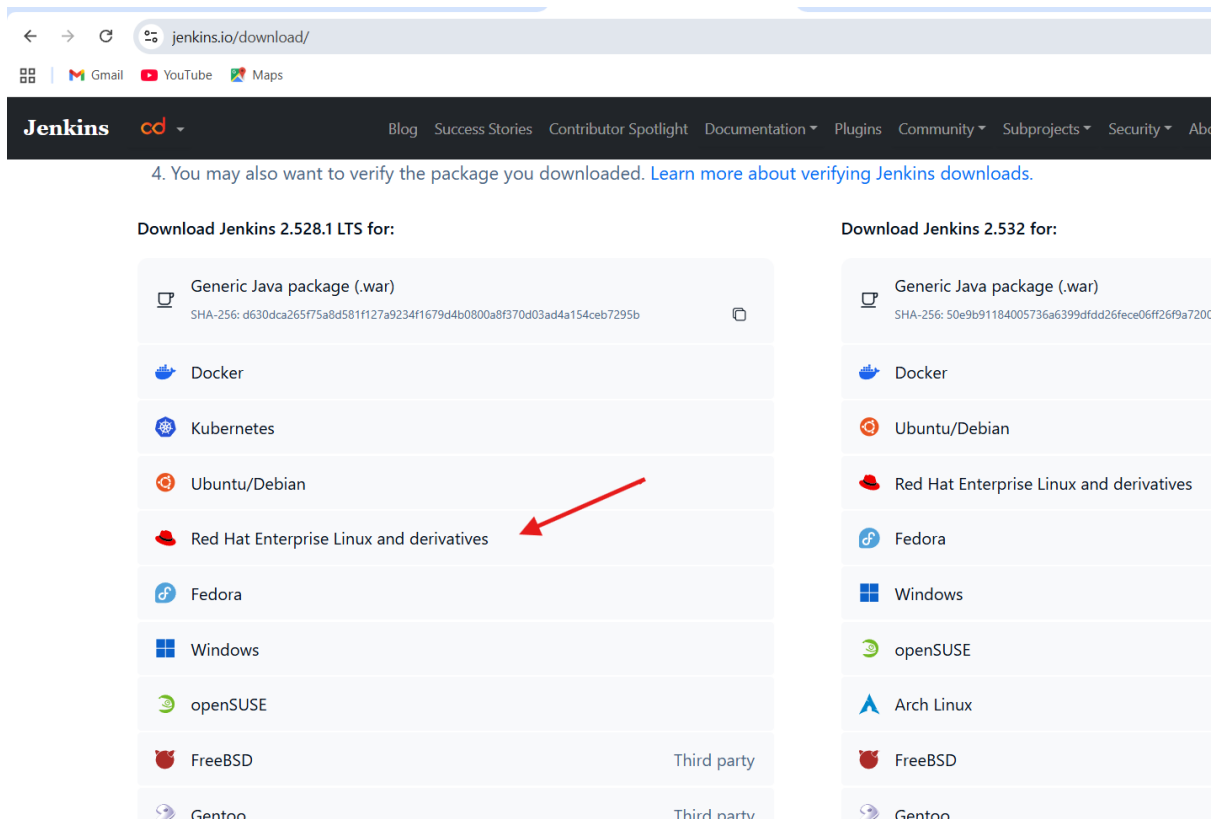


Go to browser and search download jenins select redhat enterprises linux.



## Download java

- `sudo dnf install -y java-17-amazon-corretto-devel`

Add Jenkins repository and packages.

- `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`

install Jenkins.

`sudo install -y Jenkins`

```
[root@ip-172-31-60-147 ~]# sudo dnf install -y jenkins
Last metadata expiration check: 0:22:11 ago on Thu Oct 16 09:28:04 2025.
Package jenkins-2.528.1-1.1.noarch is already installed.
Dependencies resolved.
Nothing to do.
complete!
```

- systemctl start Jenkins.
- Systemctl status Jenkins

```
[root@ip-172-31-60-147 ~]# sudo systemctl daemon-reload
[root@ip-172-31-60-147 ~]# sudo systemctl enable --now jenkins
Created symlink /etc/systemd/system/multi-user.target.wants/jenkins.service → /usr/lib/systemd/system/jenkins.service.
[root@ip-172-31-60-147 ~]# sudo systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
   Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled; preset: disabled)
   Active: active (running) since Thu 2025-10-16 09:50:59 UTC; 29s ago
     Main PID: 26976 (java)
       Tasks: 43 (limit: 1053)
      Memory: 366.6M
         CPU: 20.175s
    CGroup: /system.slice/jenkins.service
            └─26976 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/

Oct 16 09:50:54 ip-172-31-60-147.ec2.internal jenkins[26976]: [LF]>
Oct 16 09:50:54 ip-172-31-60-147.ec2.internal jenkins[26976]: [LF]> *****
Oct 16 09:50:54 ip-172-31-60-147.ec2.internal jenkins[26976]: [LF]> *****
Oct 16 09:50:54 ip-172-31-60-147.ec2.internal jenkins[26976]: [LF]> *****
Oct 16 09:50:59 ip-172-31-60-147.ec2.internal jenkins[26976]: 2025-10-16 09:50:59.258+0000 [id=31] INFO jenk
Oct 16 09:50:59 ip-172-31-60-147.ec2.internal jenkins[26976]: 2025-10-16 09:50:59.274+0000 [id=23] INFO huds
Oct 16 09:50:59 ip-172-31-60-147.ec2.internal systemd[1]: Started jenkins.service - Jenkins Continuous Integration Server.
Oct 16 09:50:59 ip-172-31-60-147.ec2.internal jenkins[26976]: 2025-10-16 09:50:59.355+0000 [id=49] INFO h.m.t
Oct 16 09:50:59 ip-172-31-60-147.ec2.internal jenkins[26976]: 2025-10-16 09:50:59.357+0000 [id=49] INFO huds
Oct 16 09:51:04 ip-172-31-60-147.ec2.internal jenkins[26976]: 2025-10-16 09:51:04.333+0000 [id=68] WARNING h
```

Stop the Jenkins by using systemctl stop Jenkins

Execute this command to change port number: sudo vi  
/usr/lib/systemd/system/jenkins.service

There is 8080 port in the environment change to 8081.

- Systemctl daemon-reload
- Systemctl start Jenkins
- Go to browser and search with the public ip and port number 8081.

```

# Directory where Jenkins stores its configuration and workspaces
Environment="JENKINS_HOME=/var/lib/jenkins"
WorkingDirectory=/var/lib/jenkins

# Location of the Jenkins WAR
#Environment="JENKINS_WAR=/usr/share/java/jenkins.war"

# Location of the exploded WAR
Environment="JENKINS_WEBROOT=%C/jenkins/war"

# Location of the Jenkins log. By default, systemd-journal(8) is used.
#Environment="JENKINS_LOG=%L/jenkins/jenkins.log"

# The Java home directory. When left empty, JENKINS_JAVA_CMD and PATH are consulted.
#Environment="JAVA_HOME=/usr/lib/jvm/java-17-openjdk-amd64"

# The Java executable. When left empty, JAVA_HOME and PATH are consulted.
#Environment="JENKINS_JAVA_CMD=/etc/alternatives/java"

# Arguments for the Jenkins JVM
Environment="JAVA_OPTS=-Djava.awt.headless=true"

# Unix Domain Socket to listen on for local HTTP requests. Default is disabled.
#Environment="JENKINS_UNIX_DOMAIN_PATH=/run/jenkins/jenkins.socket"

# IP address to listen on for HTTP requests.
# The default is to listen on all interfaces (0.0.0.0).
#Environment="JENKINS_LISTEN_ADDRESS="

# Port to listen on for HTTP requests. Set to -1 to disable.
# To be able to listen on privileged ports (port numbers less than 1024),
# add the CAP_NET_BIND_SERVICE capability to the AmbientCapabilities
# directive below.
Environment="JENKINS_PORT=8081"

# IP address to listen on for HTTPS requests. Default is disabled.
#Environment="JENKINS_HTTPS_LISTEN_ADDRESS="

```

← → ↻ Not secure 35.173.219.195:8081/login?from=%2F

📁 Gmail YouTube Maps

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.

Administrator password

Continue

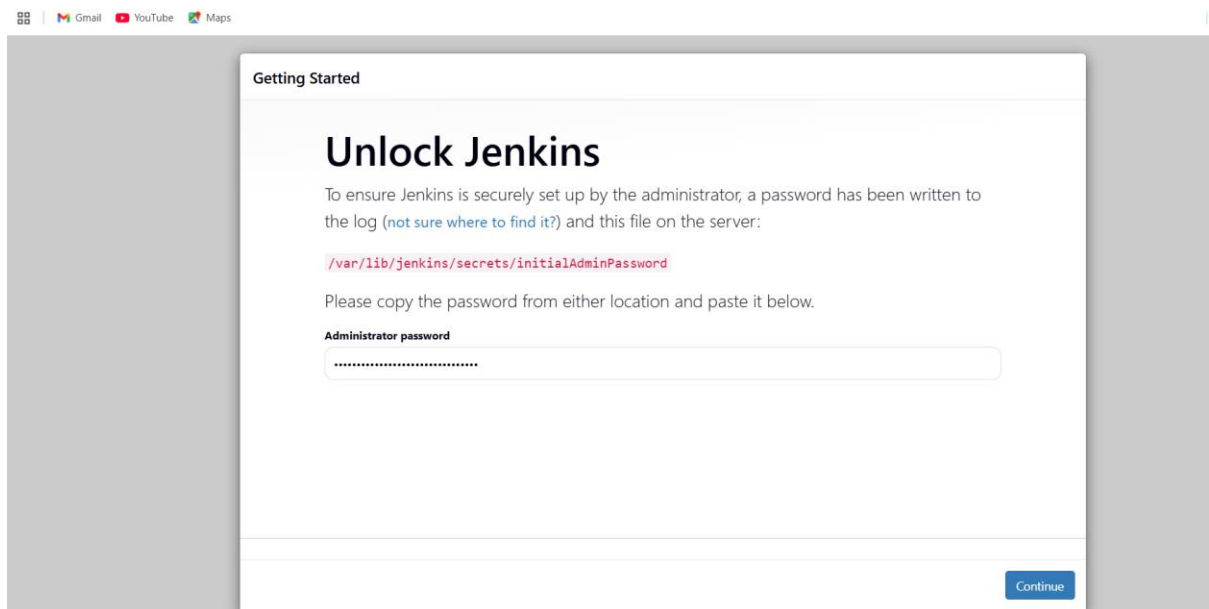
## 2. Secure Jenkins server

Go to ssh and cat

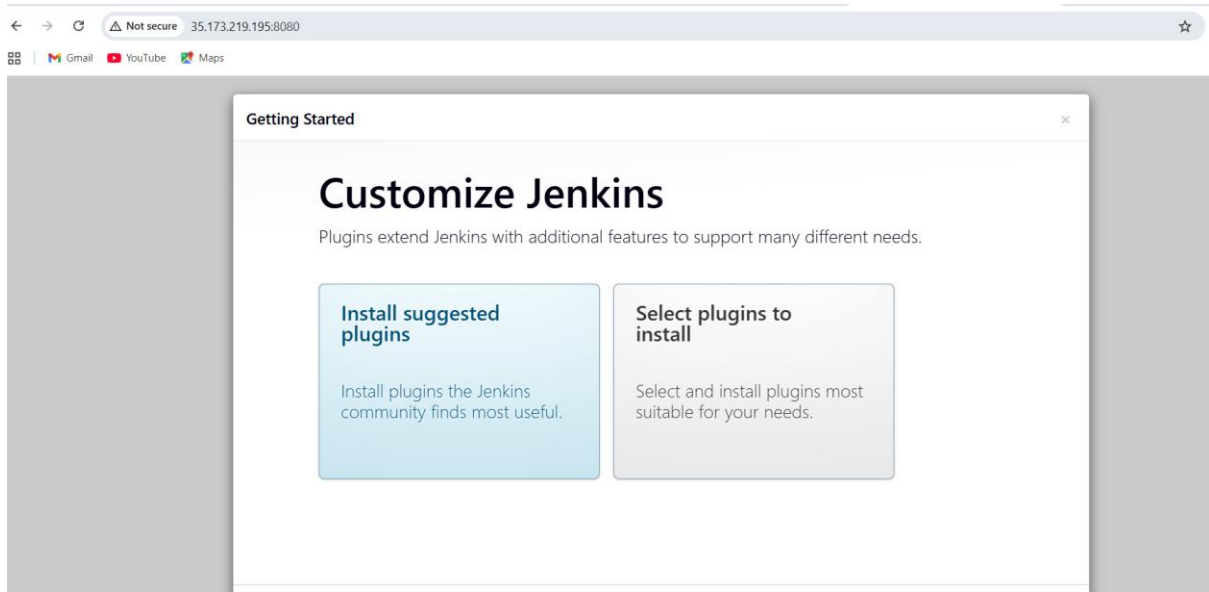
/var/lib/Jenkins/secrets/initialAdminPassword

Copy the password and paste in the website.

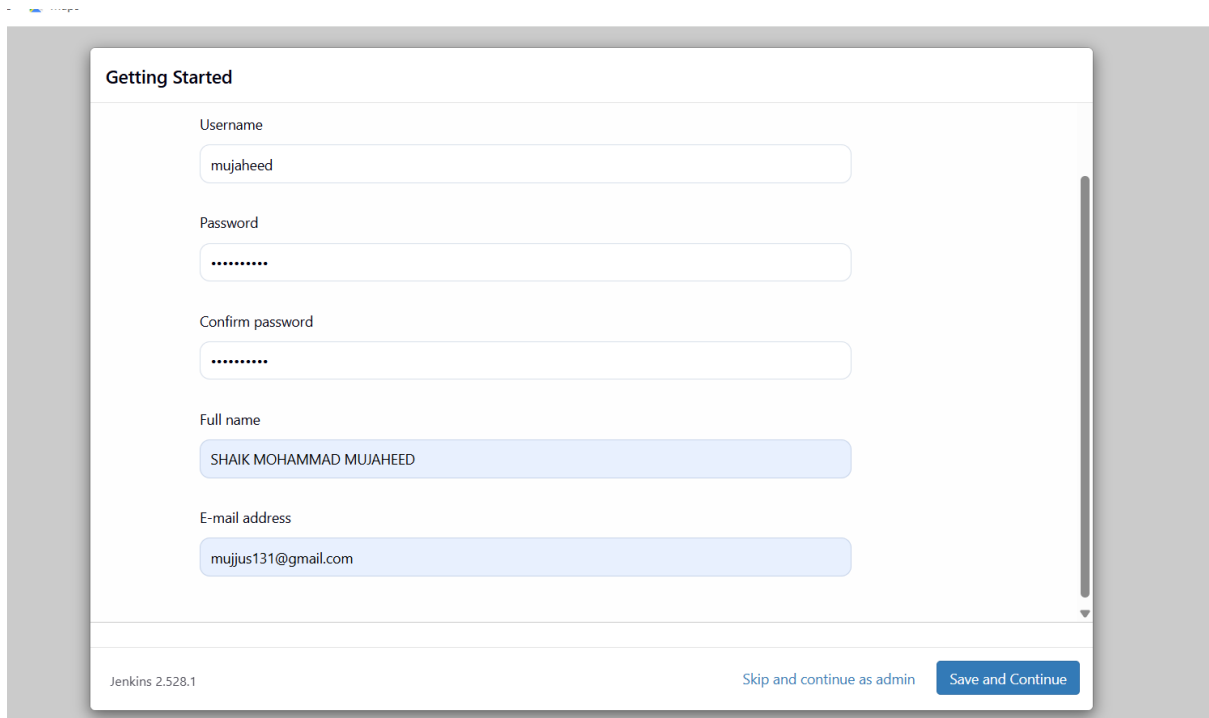
```
[root@ip-172-31-60-147 jenkins]# cat /var/lib/jenkins/secrets/initialAdminPassword
ad517e0a42dc4ff5a2c81052f9dedeb9
[root@ip-172-31-60-147 jenkins]# |
```



Click on install suggested plugins.



Give you details and create own password.



The image shows the Jenkins 2.528.1 'Getting Started' configuration page. It contains several input fields for user information: Username (mujahed), Password (masked with dots), Confirm password (masked with dots), Full name (SHAIK MOHAMMAD MUJAHEED), and E-mail address (mujjus131@gmail.com). At the bottom, there are two links: 'Skip and continue as admin' and a blue 'Save and Continue' button. The Jenkins version 'Jenkins 2.528.1' is displayed in the bottom left corner.

Getting Started

Username  
mujahed

Password  
.....

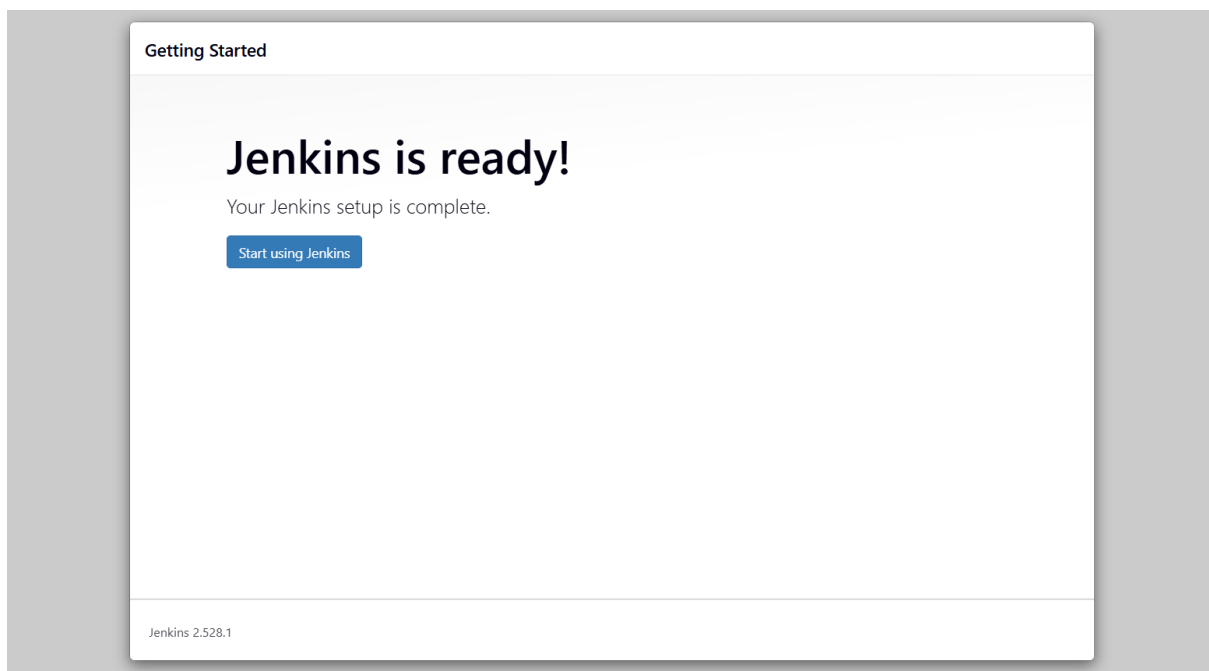
Confirm password  
.....

Full name  
SHAIK MOHAMMAD MUJAHEED

E-mail address  
mujjus131@gmail.com

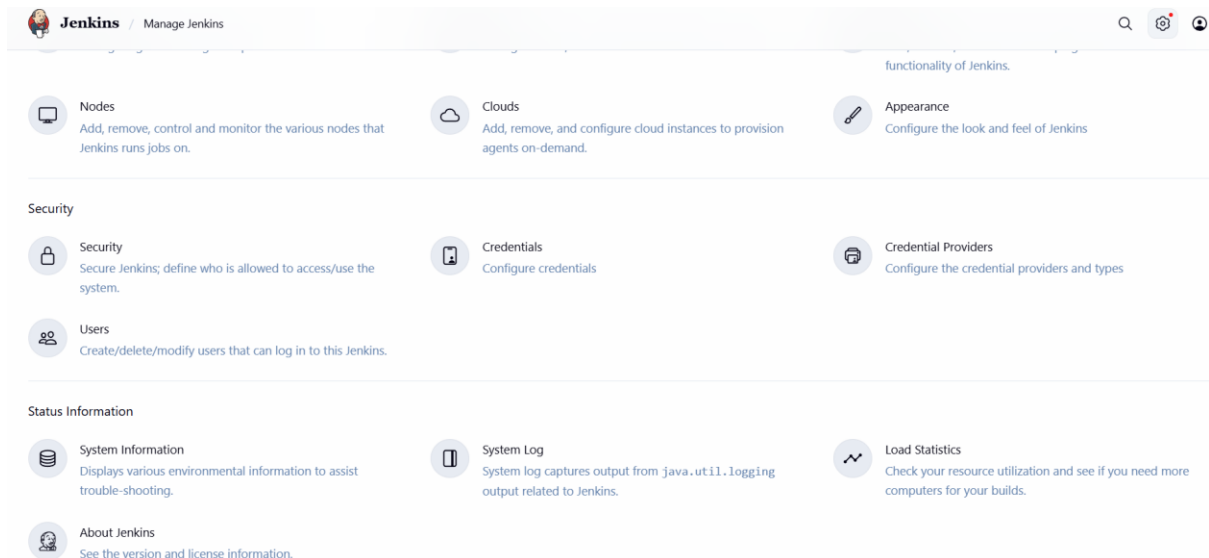
Jenkins 2.528.1

[Skip and continue as admin](#) [Save and Continue](#)

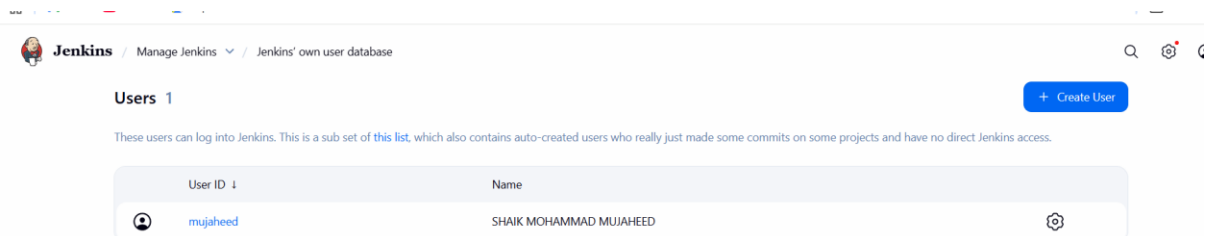


### 3. Create users called DevOps, Testing in Jenkins with Limited access.

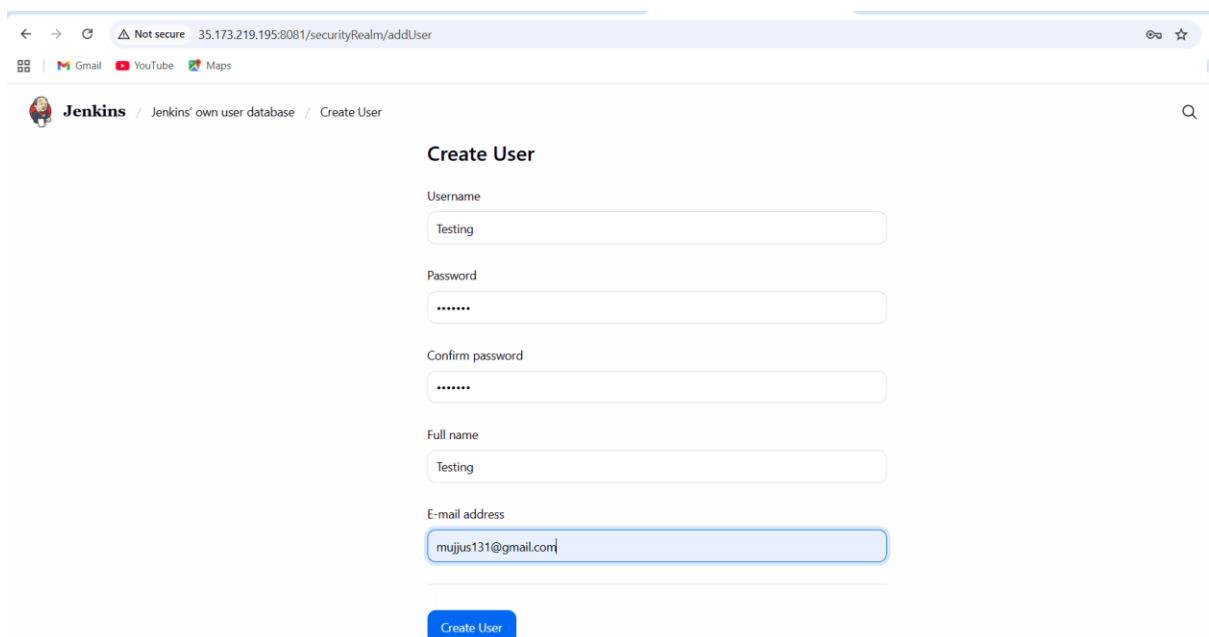
Go to the Jenkins account and select managed Jenkins.



## Click on create user

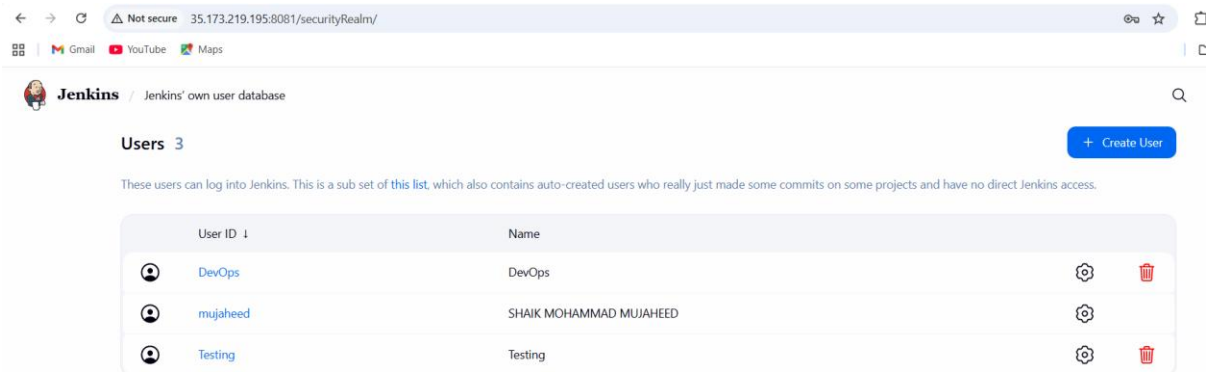


give the name called DevOps and give the password, email and create user.

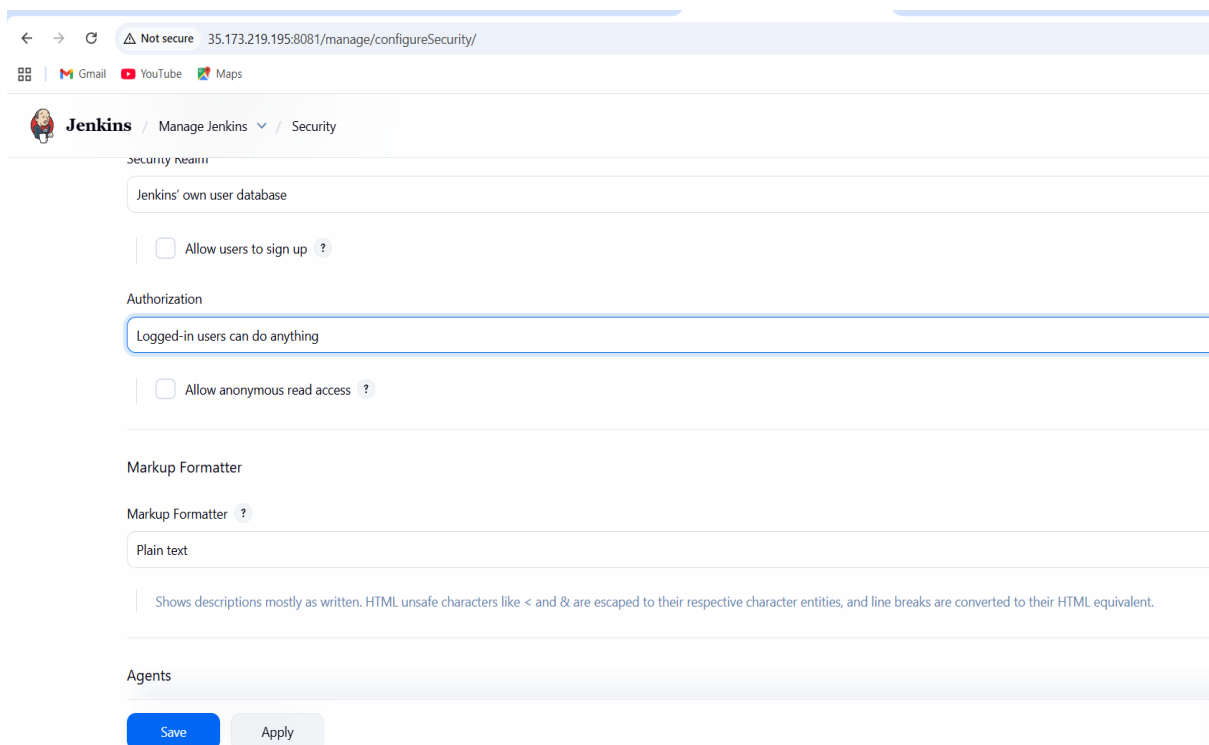




Create another user named as Testing and provide password, email and click on create user.



Go to managed Jenkins and click on security and see the authorization in that select “project metrics-authorization strategy”.



Add the users and give limited access.

The screenshot shows the Jenkins Security Configuration page. The authorization strategy is set to "Project-based Matrix Authorization Strategy". Below this is a table with columns for "User/group", "Overall", "Credentials", "Agent", "Job", "Run", "View", "SCM", and "Metrics". Each of these main categories has several sub-columns for specific actions. The table lists three user groups: "Anonymous", "Authenticated Users", and "DevOps". The "DevOps" group has blue checkmarks in the "Read" column under "Overall", "View" under "View", and "Read" under "Run". The "Testing" group has blue checkmarks in the "Read" column under "Overall", "View" under "View", and "Read" under "Run". At the bottom, there is a "Markup Formatter" section with a "Save" button and an "Apply" button.

User/group	Overall	Credentials			Agent				Job				Run		View		SCM		Metrics											
	Administer	Read	Create	Delete	ManageDomains	Update	View	Configure	Connect	Create	Delete	Provision	Disconnect	Cancel	Configure	Create	Delete	Move	Read	Workspace	Replay	Update	Configure	Create	Delete	Read	Tag	HealthCheck	ThreadDump	View
Anonymous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Authenticated Users	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DevOps	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Testing	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Buttons: Add user... Add group... ?

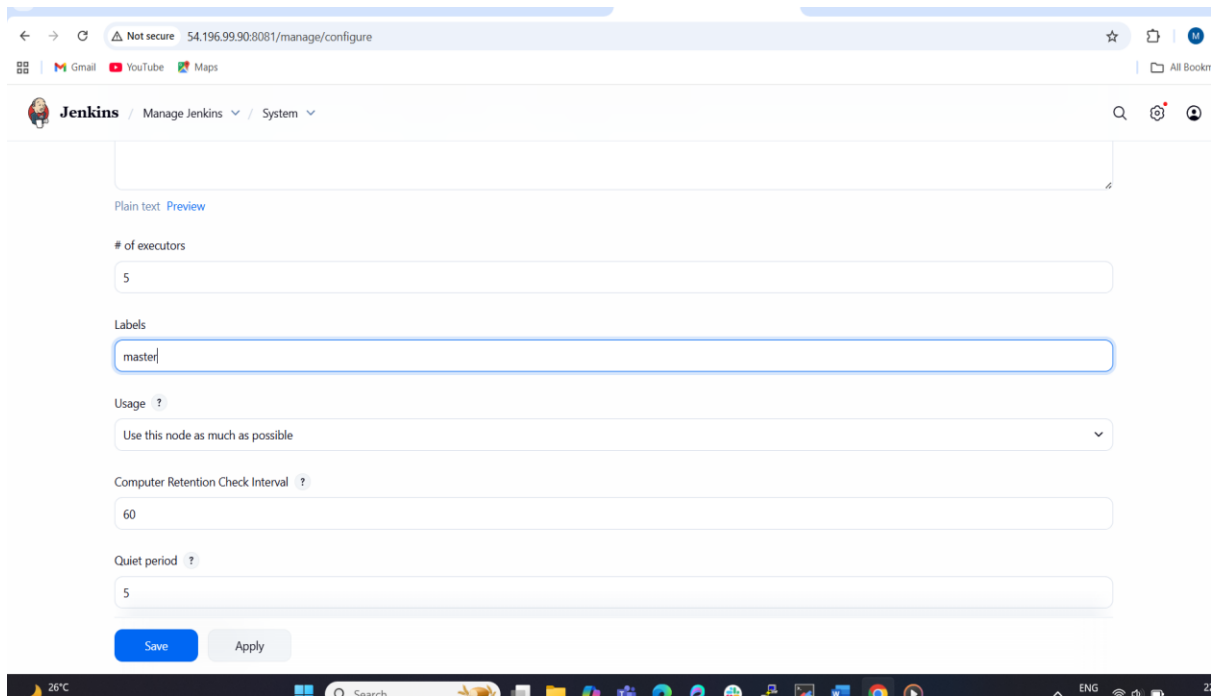
Markup Formatter

Markup Formatter ?

Buttons: Save Apply

#### 4. Configure labels and restrict the jobs to execute based on label only.

Go to managed Jenkins and go to systems and select label give the name as master.



Jenkins / Manage Jenkins / System

Plain text [Preview](#)

# of executors

5

Labels

master

Usage ?

Use this node as much as possible

Computer Retention Check Interval ?

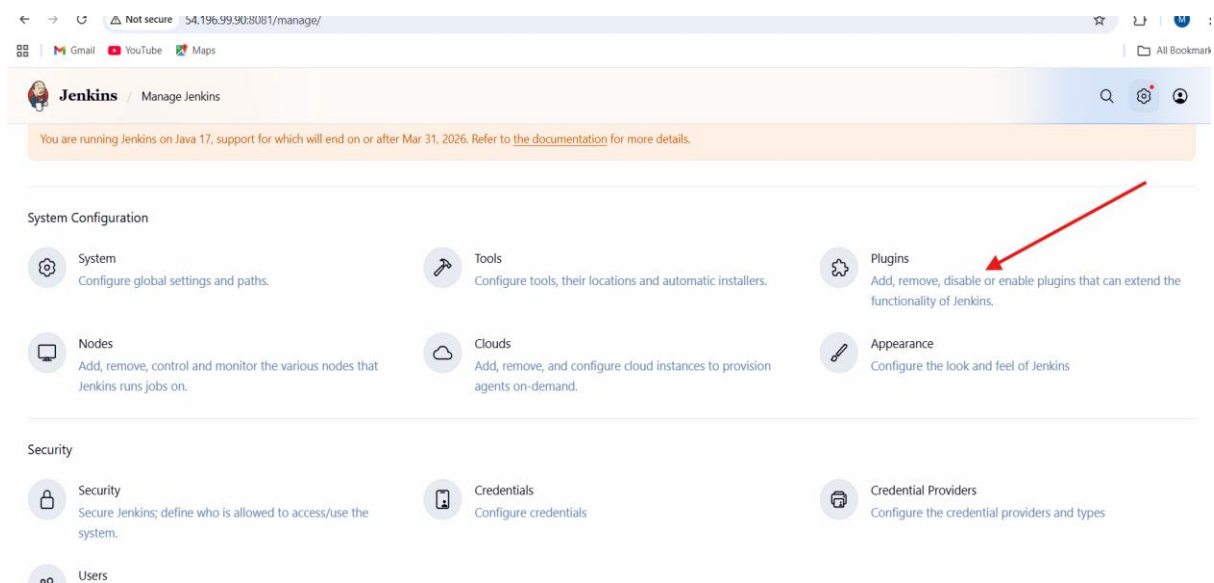
60

Quiet period ?

5

Save Apply

Go to managed Jenkins and select plugins.



Go to available plugins and search for nodes and select node and label parameter.

The screenshot shows the Jenkins Plugin Manager interface. A search bar at the top contains the text 'node'. Below the search bar, a list of plugins is displayed. A red arrow points to the 'Node and Label parameter' plugin. The left sidebar shows navigation options: Updates, Available plugins (selected), Installed plugins, and Advanced settings.

Plugin Name	Version	Update Info	Score
built-on-column	1.5	2 mo 9 days ago	100
Node and Label parameter	759.v0.b_e95db_f3251	8 mo 14 days ago	94
Node Iterator API	72.vc90e81737df1	7 mo 18 days ago	96
Build Blocker	166.vc82fc20b_a_ed6	1 yr 4 mo ago	86

## Install that node

The screenshot shows the 'Download progress' page in the Jenkins Plugin Manager. The progress bar is at 100%. The left sidebar shows navigation options: Updates, Available plugins, Installed plugins, Advanced settings, and Download progress (selected). The right sidebar shows the download progress details.

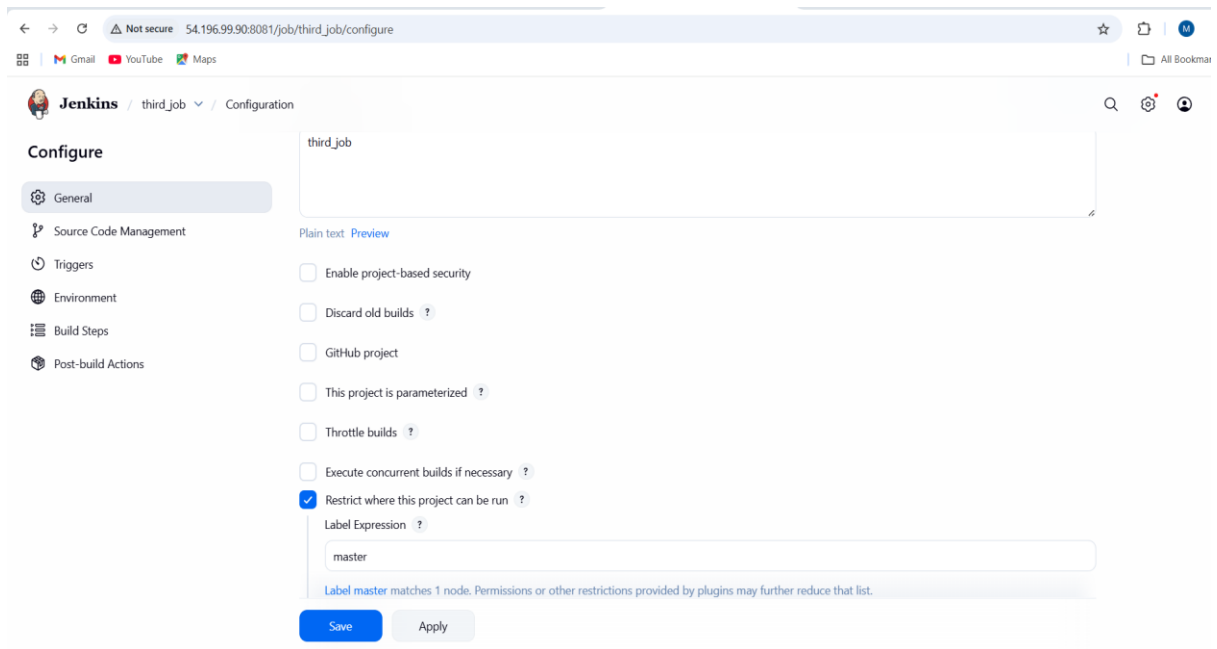
**Download progress**

- Preparation
  - Checking internet connectivity
  - Checking update center connectivity
  - Success
- Node and Label parameter Success
- Loading plugin extensions Success

→ [Go back to the top page](#)  
(you can start using the installed plugins right away)

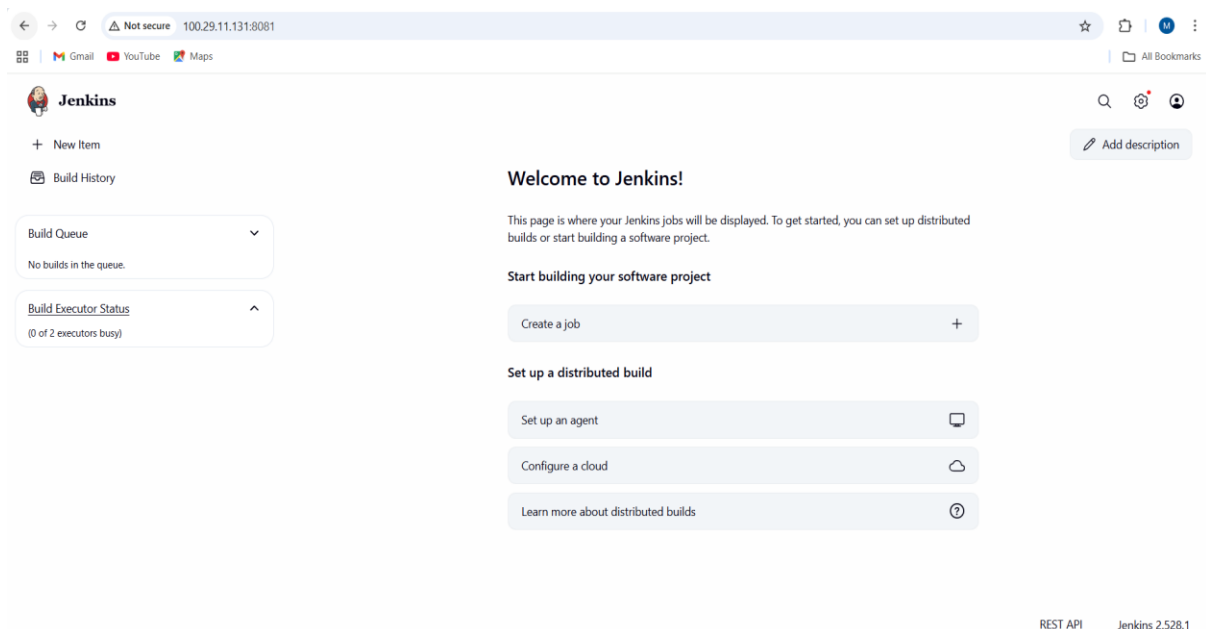
→ ☐ Restart Jenkins when installation is complete and no jobs are running

Select any job and go to configure and give restrict where the project can be run and select label. save the configurations.



**5. Create Three sample jobs using the below URL. [https://github.com/betawins/Techie horizon Login a pp.git](https://github.com/betawins/Techie_horizon_Login_a_pp.git)**


**Click on create job**



**Give the name and select freestyle project.**

← → ↻ Not secure 100.29.11.131:8081/newJob ☆

📧 Gmail 📺 YouTube 🗺 Maps


 **Jenkins** / New Item C


## New Item


Enter an item name


first-item

Select an item type

 **Freestyle project**  
Classic, general-purpose job type that checks out from up to one SCM, executes build steps serially, followed by post-build steps like archiving artifacts and sending email notifications.

 **Pipeline**  
Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.

 **Multi-configuration project**  
Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc.


 **Folder**  
Creates a container that stores nested items in it. Useful for grouping things together. Unlike view, which is just a filter, a folder creates a separate namespace, so you can have multiple things of the same name as long as they are in different folders.

OK


Give the description and select git option provide the git URL and save it.


← → ↻ Not secure 100.29.11.131:8081/job/first-item/configure


📧 Gmail 📺 YouTube 🗺 Maps


 **Jenkins** / first-item ▾ / Configuration


## Configure


 General

 Source Code Management


 Triggers

 Environment

 Build Steps

 Post-build Actions

## General

Enabled 

Description

first job

Plain text [Preview](#)

☐ Enable project-based security

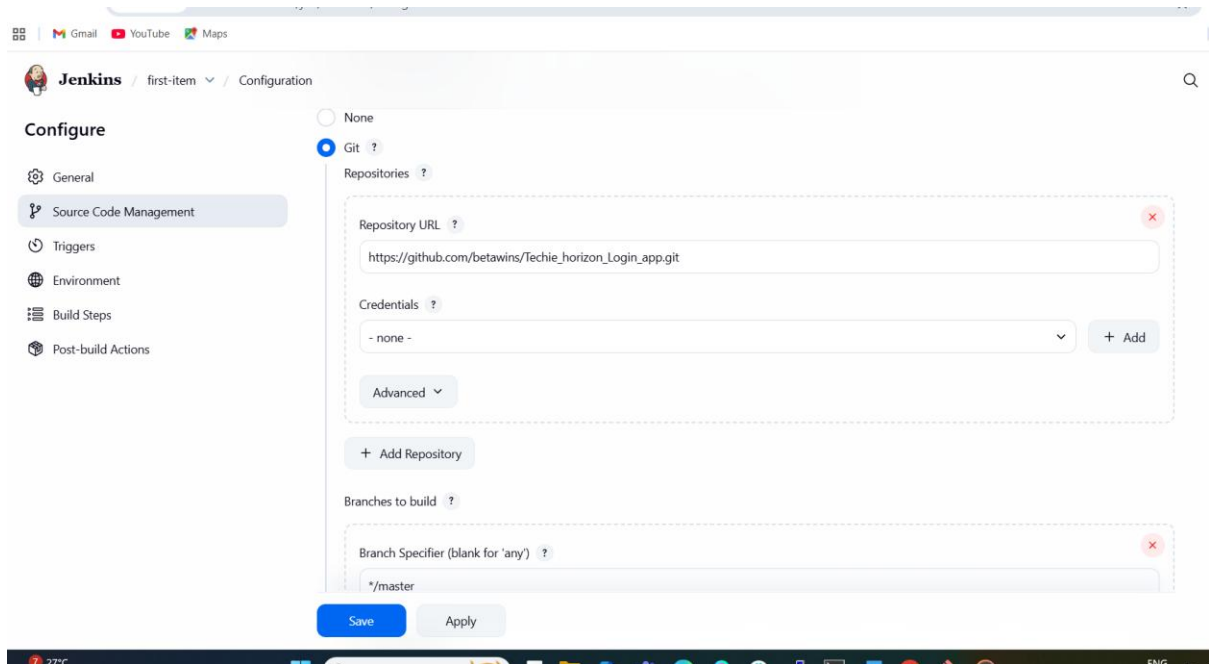
☐ Discard old builds ?

☐ GitHub project

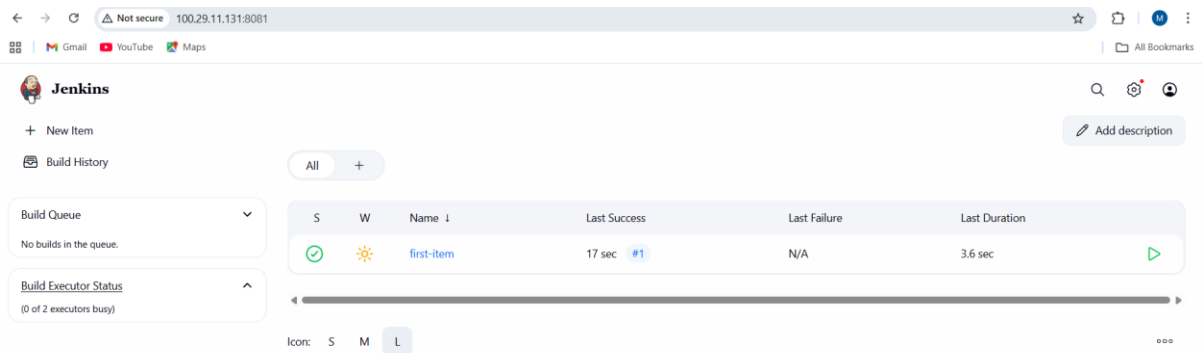
☐ This project is parameterized ?

☐ Throttle builds ?

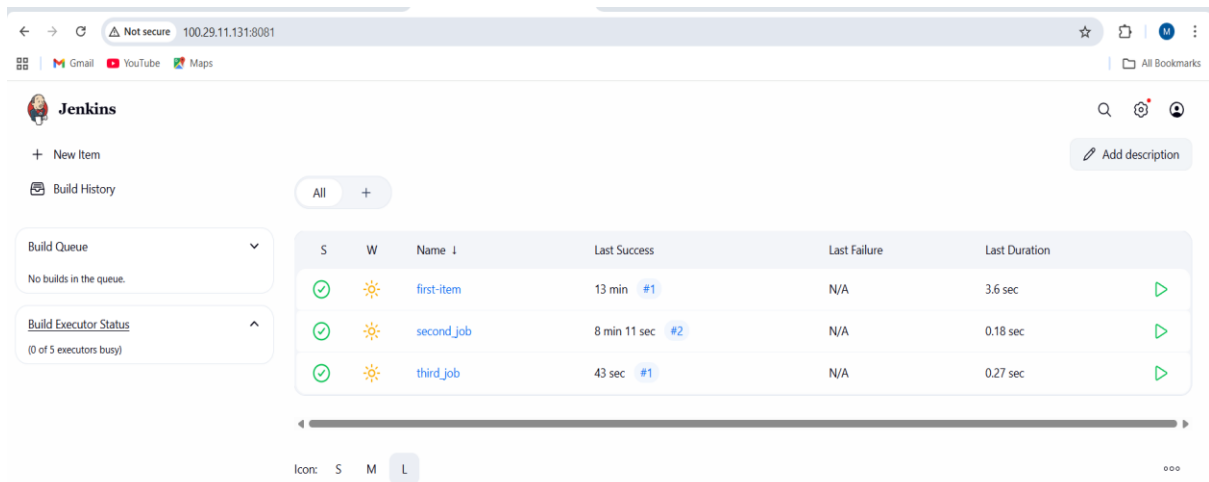
☐ Execute concurrent builds if necessary ?



Click on build now to run the job.

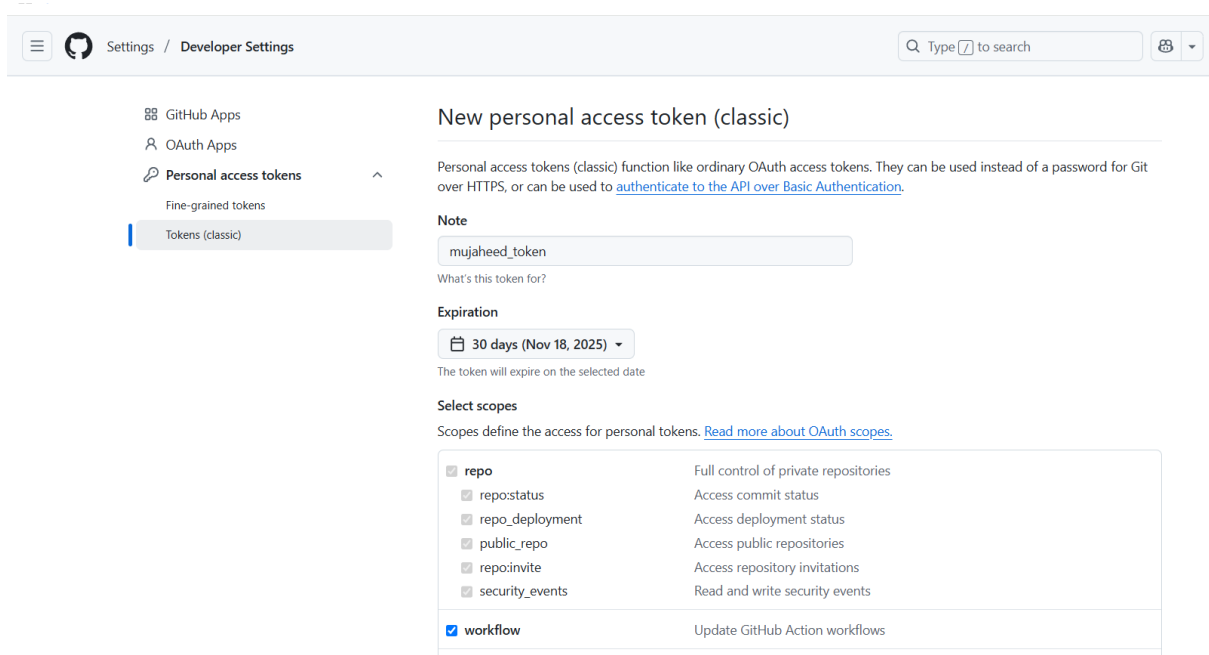


Do the same process for another two jobs for creation.



## 6. Create one Jenkins job using git hub Private repository.

Go to git hub and select your repository and go to settings and click on create tokens and create classic token.



Go to managed Jenkins and click on credentials and select system create credentials and save it.



← → ↻ ⚠ Not secure 18.212.144.98:8080/manage/ ☆ 📄

🗄 | 📧 Gmail | 📺 YouTube | 📍 Maps


**Jenkins** / Manage Jenkins 🔍 ⚙


## Manage Jenkins


🔍 Search settings


Building on the built-in node can be a security issue. You should set up distributed builds. See [the documentation](#). [Set up agent](#) [Set up cloud](#) [Dismiss](#)


### System Configuration


**System**  
Configure global settings and paths.

**Tools**  
Configure tools, their locations and automatic installers.


**Plugins**  
Add, remove, disable or enable plugins that can extend functionality of Jenkins.


**Nodes**  
Add, remove, control and monitor the various nodes that Jenkins runs jobs on.


**Clouds**  
Add, remove, and configure cloud instances to provision agents on-demand.

**Appearance**  
Configure the look and feel of Jenkins

### Security

**Security**  
Secure Jenkins; define who is allowed to access/use the system.

**Credentials**  
Configure credentials

**Credential Providers**  
Configure the credential providers and types

👤 User


← → ↻ ⚠ Not secure 18.212.144.98:8080/manage/credentials/ 🗄 | 📧 Gmail | 📺 YouTube | 📍 Maps

**Jenkins** / Manage Jenkins ▾ / Credentials

## Credentials

T	P	Store ▾	Domain	ID	Name
---	---	---------	--------	----	------

### Stores scoped to Jenkins

P	Store ▾	Domains
	System	(global)


Icon: S M L

← → ↻ ⚠ Not secure 18.212.144.98:8080/manage/credentials/store/system/ 🗄 | 📧 Gmail | 📺 YouTube | 📍 Maps

**Jenkins** / Manage Jenkins ▾ / Credentials ▾ / System 🔍 ⚙

## System

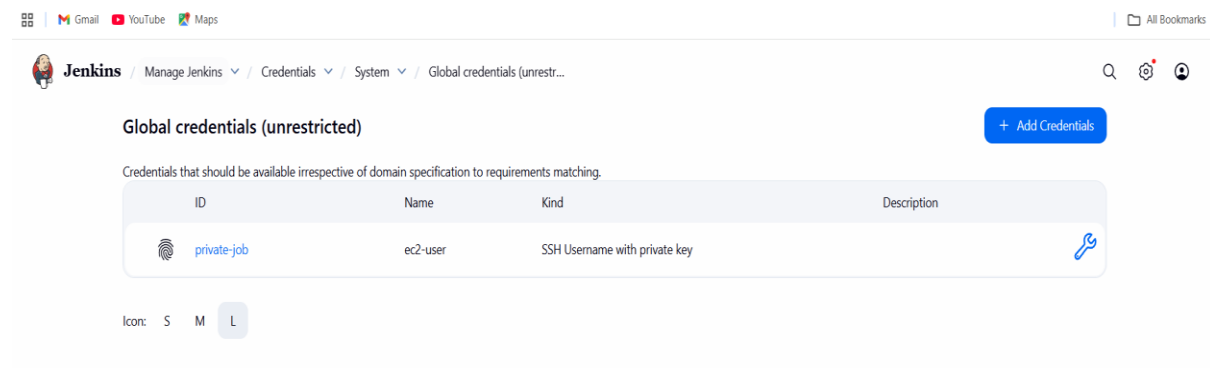
[+ Add domain](#)

Domain ▾	Description
 Global credentials (unrestricted)	Credentials that should be available irrespective of domain specification to requirements matching.

Icon: S M L

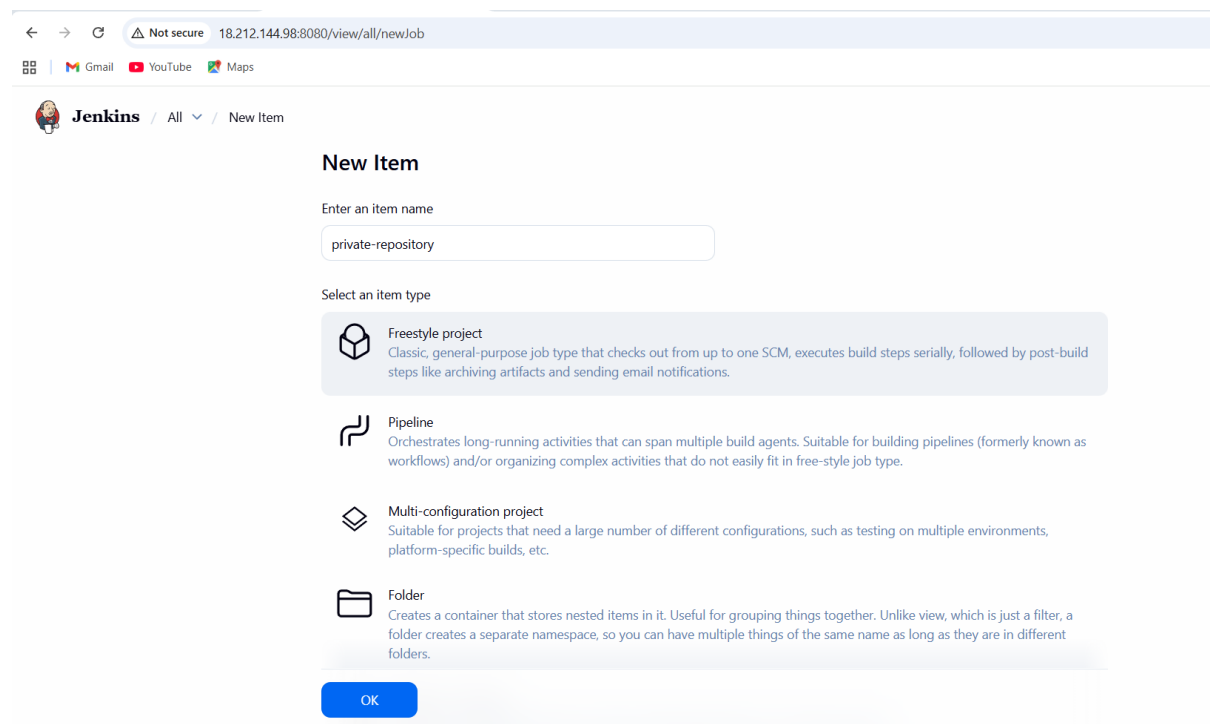
Select create with ssh.

Give the id as private which is name. and user name as ec2-user and copy the sshkey and paste create it.



The screenshot shows the Jenkins 'Global credentials (unrestricted)' page. The breadcrumb trail is 'Jenkins / Manage Jenkins / Credentials / System / Global credentials (unrestricted)'. A blue button '+ Add Credentials' is in the top right. Below the title, a text line reads 'Credentials that should be available irrespective of domain specification to requirements matching.' A table with columns 'ID', 'Name', 'Kind', and 'Description' contains one entry: ID 'private-job' (with a fingerprint icon), Name 'ec2-user', and Kind 'SSH Username with private key'. A blue wrench icon is on the right of the table row. At the bottom left, there are icons for 'Icon: S M L'.

Go to Jenkins and create a new job.



The screenshot shows the Jenkins 'New Item' page. The breadcrumb trail is 'Jenkins / All / New Item'. The page title is 'New Item'. There is a text input field 'Enter an item name' with the value 'private-repository'. Below it, a section 'Select an item type' lists four options: 'Freestyle project' (with a cube icon), 'Pipeline' (with a pipe icon), 'Multi-configuration project' (with a diamond icon), and 'Folder' (with a folder icon). Each option has a brief description. At the bottom, there is a blue 'OK' button.

← → ↻ Not secure 18.212.144.98:8080/job/private-repository/configure ☆

📁 Gmail 📺 YouTube 📍 Maps

**Jenkins** / private-repository ▾ / Configuration 🔍

### Configure

- ⚙️ General
- 🔑 Source Code Management
- 🕒 Triggers
- 🌐 Environment
- 📋 Build Steps
- 🔧 Post-build Actions

### General

Enabled ☒

Description

private-job

Plain text [Preview](#)

☐ Discard old builds ?

☐ GitHub project

☐ This project is parameterized ?

☐ Throttle builds ?

☐ Execute concurrent builds if necessary ?

Advanced ▾

Save Apply

Give your private repository link and password.

← → ↻ Not secure 18.212.144.98:8080/job/private-repository/configure ☆ 📁 All B

📁 Gmail 📺 YouTube 📍 Maps

**Jenkins** / private-repository ▾ / Configuration 🔍 ⚙️ (

### Configure

- ⚙️ General
- 🔑 Source Code Management
- 🕒 Triggers
- 🌐 Environment
- 📋 Build Steps
- 🔧 Post-build Actions

### Source Code Management

Connect and manage your code repository to automatically pull the latest code for your builds.

☐ None

☒ Git ?

Repositories ?

Repository URL ?

https://github.com/mujaheed00/Techie-horizon-01.git

Credentials ?

- none - ▾ + Add

Advanced ▾

+ Add Repository



Jenkins / private-repository

📄 Status

🔗 Changes

📁 Workspace

▶ Build Now

⚙ Configure

🗑 Delete Project

✎ Rename

🔑 Credentials

private-repository

Permalinks

Builds

⋮ 🔗

Today

🟢 #1 10:39 AM

▼



Jenkins

+ New Item

📄 Build History

Build Queue

^

Build Executor Status

0/2 ▼

🔍 ⚙ 👤

✎ Add description

All +

S	W	Name ↕	Last Success	Last Failure	Last Duration	
🟢	☀	first-item	1 hr 19 min #1	N/A	3.5 sec	▶
🟢	☀	private-repository	1 min 49 sec #1	N/A	9 ms	▶



Icons: S M L

⋮