1. **Install Jenkins and run Jenkins on port number 8081.**

**1) Install Jenkins and run Jenkins on port number 8081.**

**Create EC2 and get package of jenkin from website and then install java.**

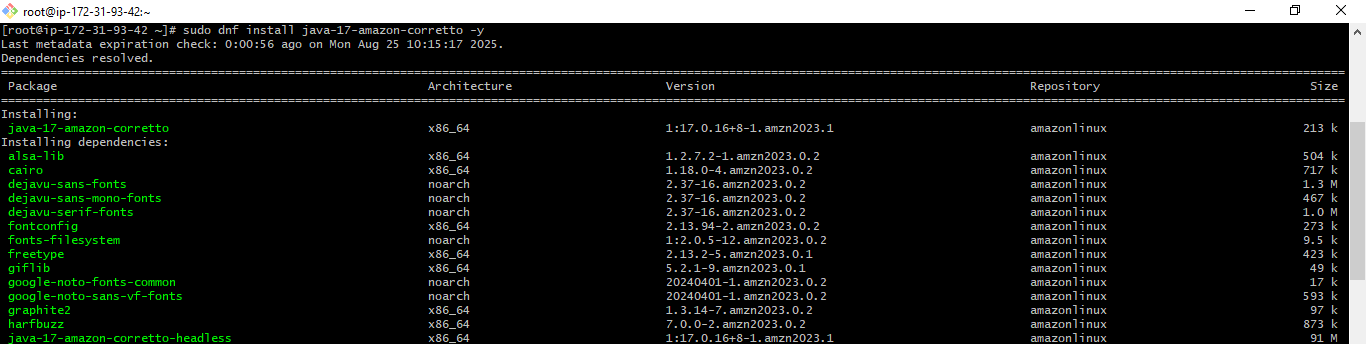
**Install java 17 version → sudo dnf install -y java-17-amazon-corretto**

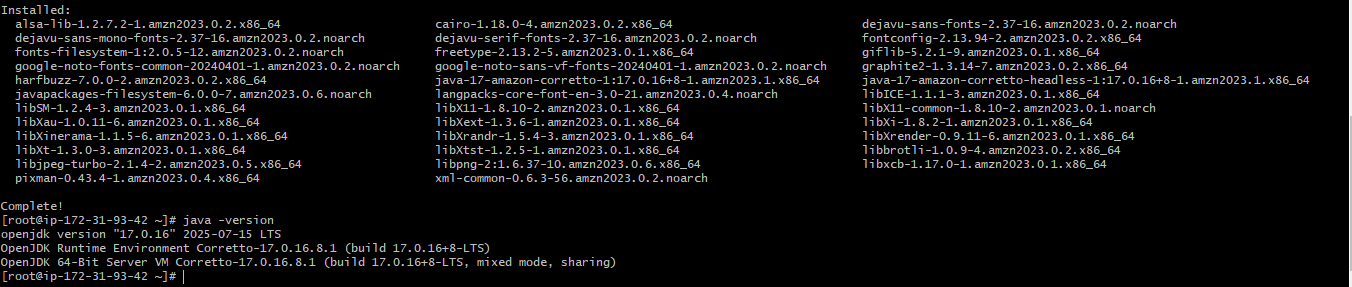
**sudo yum install jenkins**

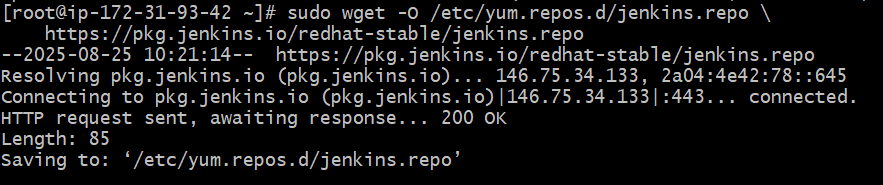
**sudo systemctl enable jenkins**

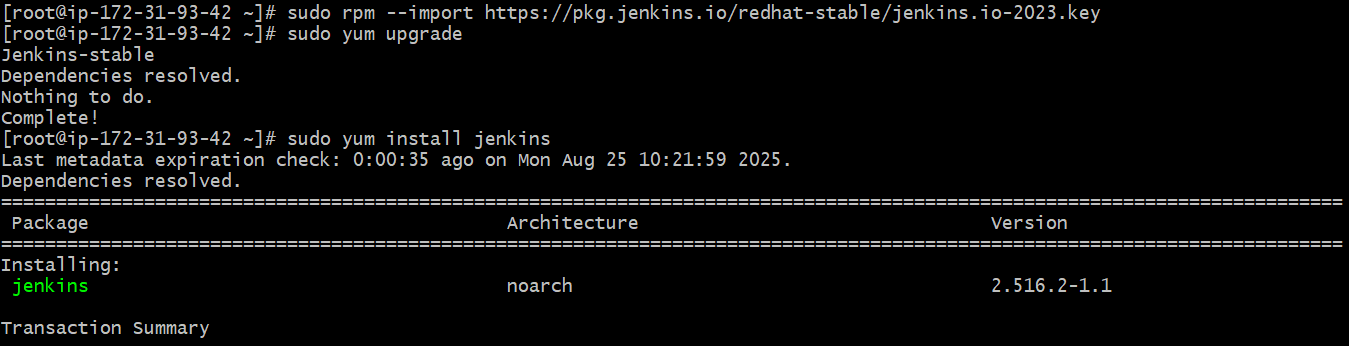
**sudo systemctl start jenkins**

**sudo systemctl status jenkins**

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**Now changing port number to 8081**

**Now go to → sudo vi /usr/lib/systemd/system/jenkins.service**

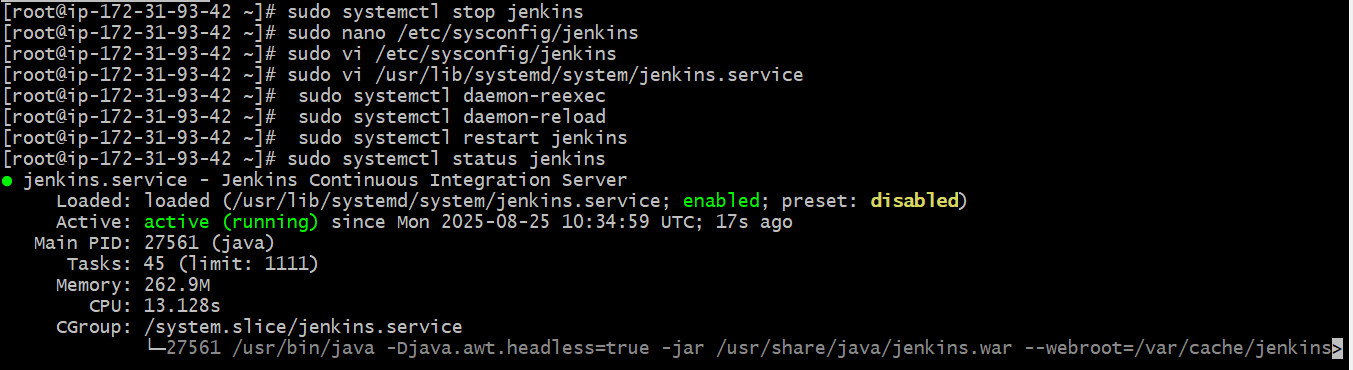
**Update → Environment="JENKINS\_PORT=8081"**

**sudo systemctl daemon-reexec**

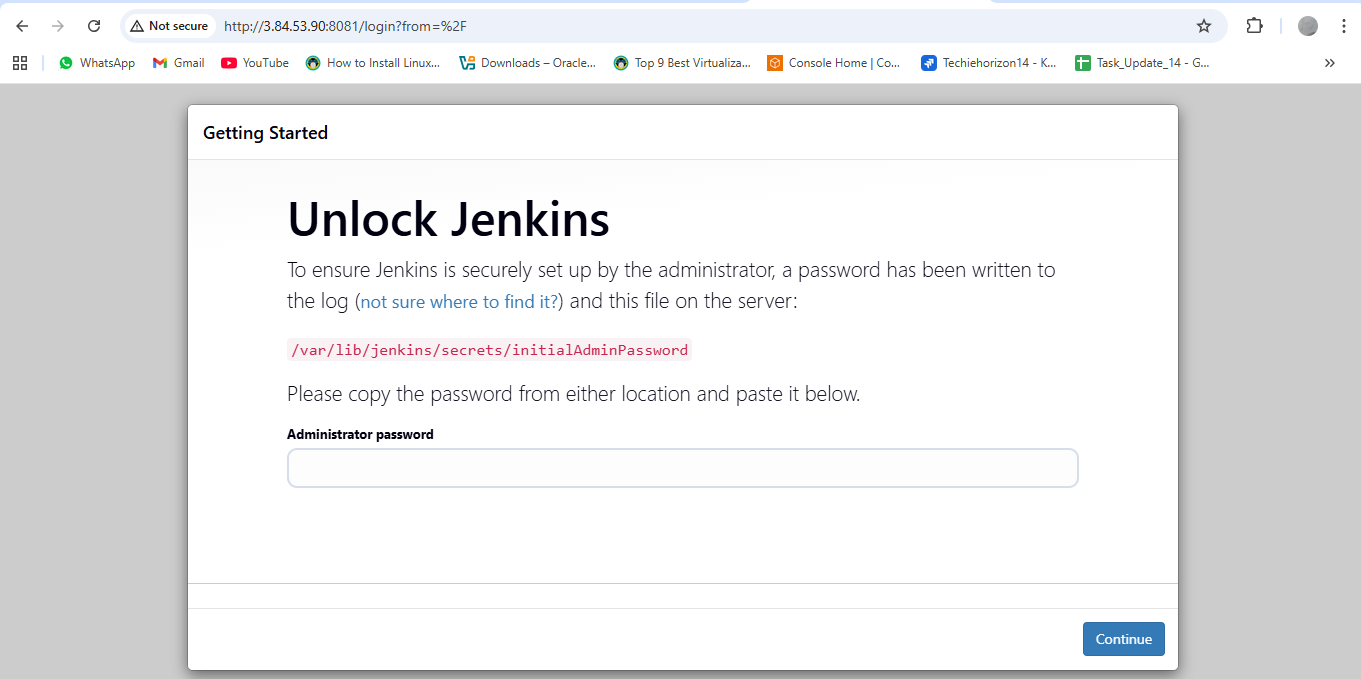
**sudo systemctl daemon-reload**

**sudo systemctl restart jenkins**

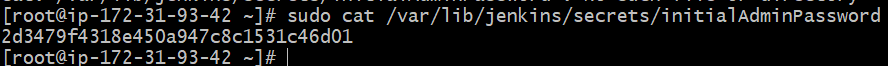
**Now check in browser public-ip-of-EC2:8081**

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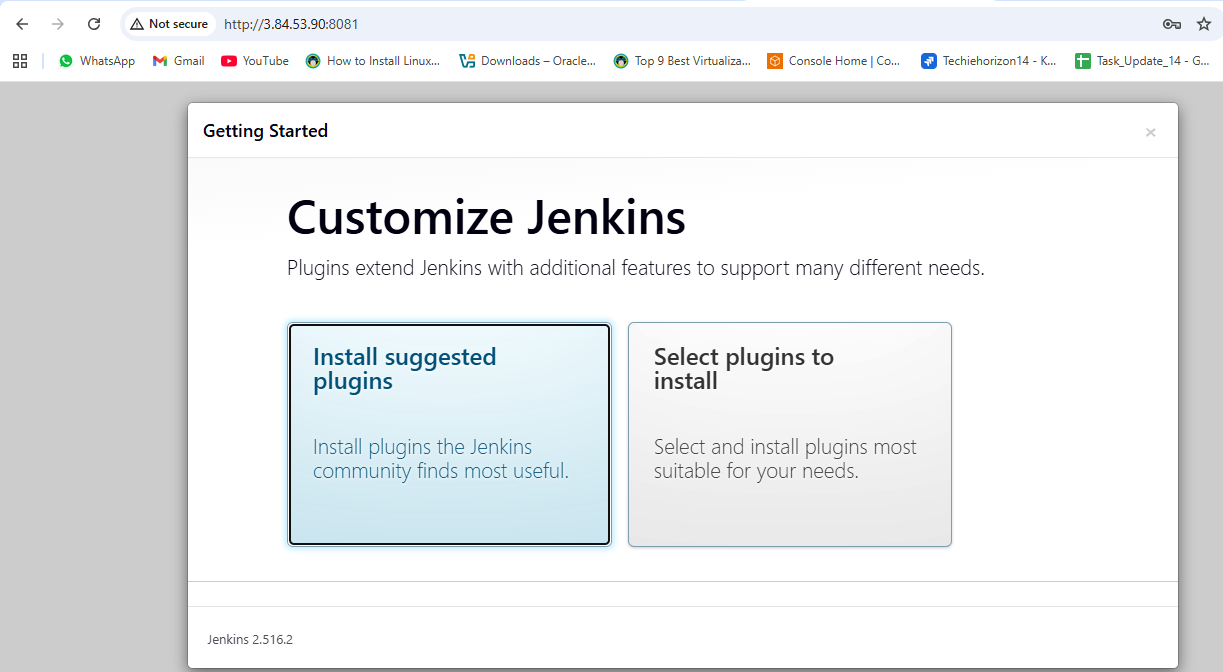
**If security group inbound rule are properly configure then go to browser and paste the public IP with port number 8081 will get this file.**

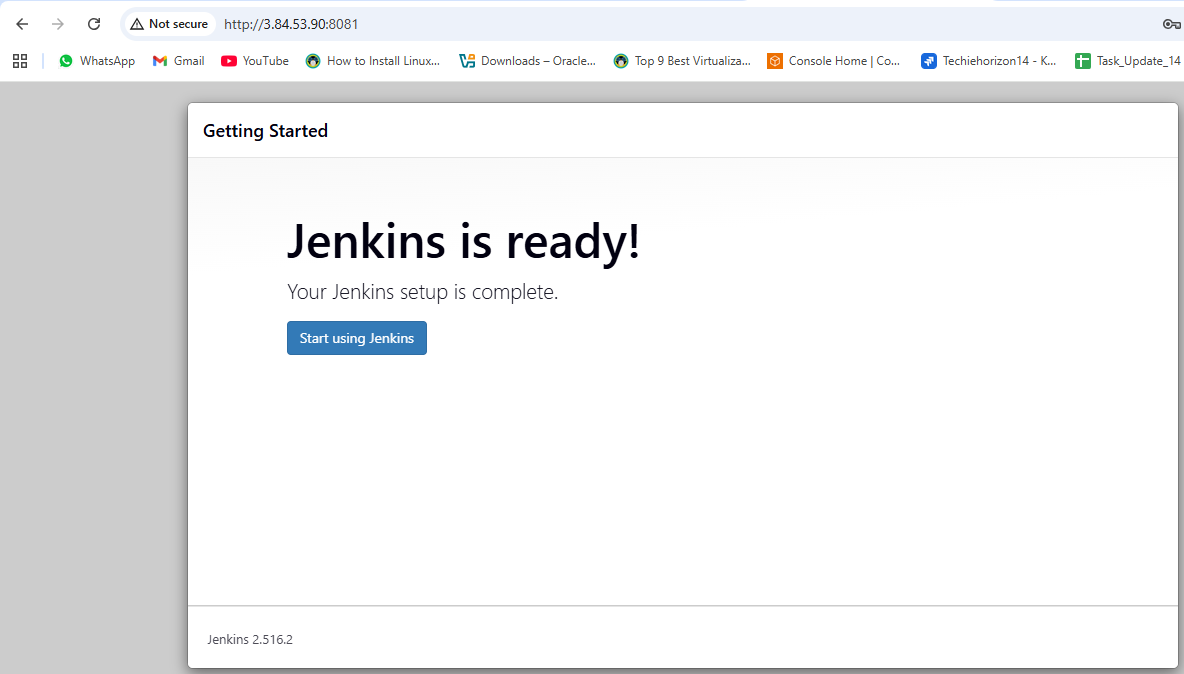
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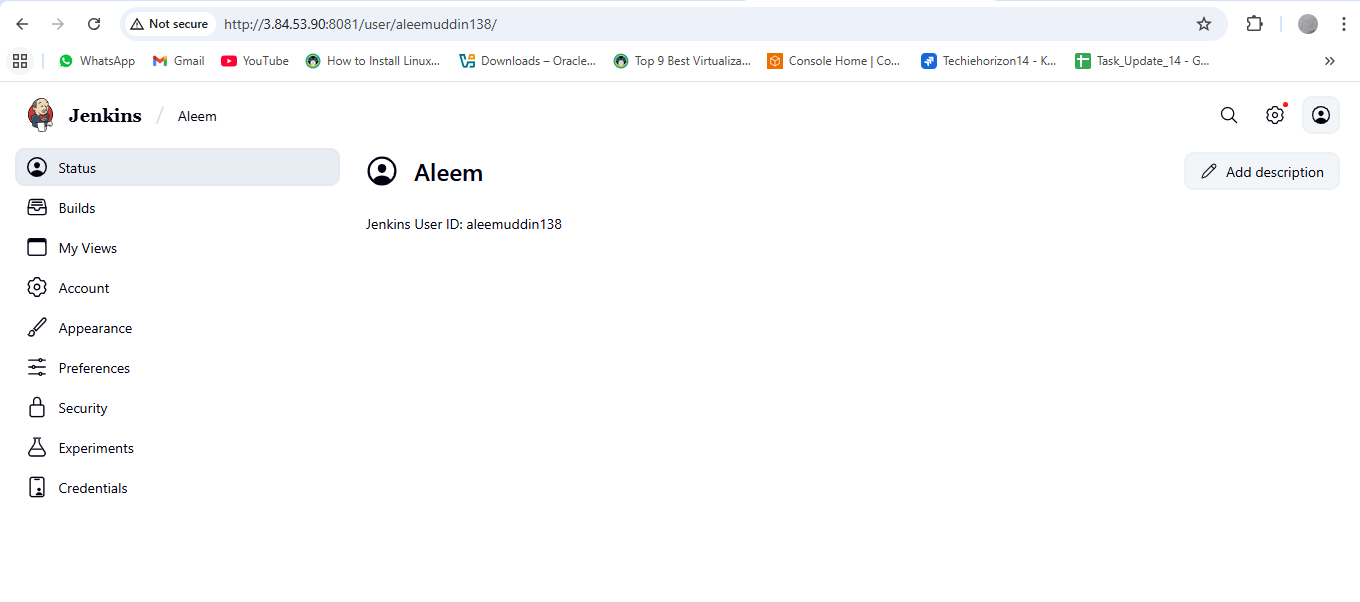
**Then copy the address and use cat command to get the password.**

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**After apply the password select the option no:1**

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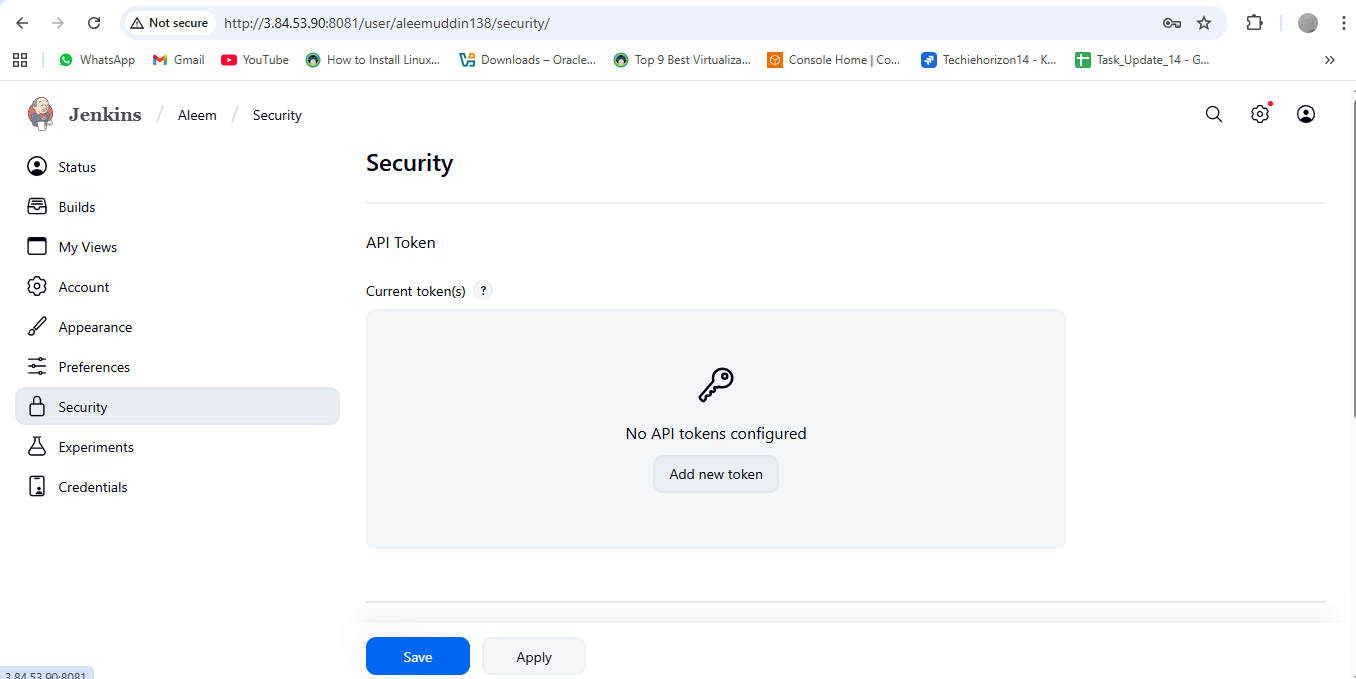
**2) Secure Jenkins server**

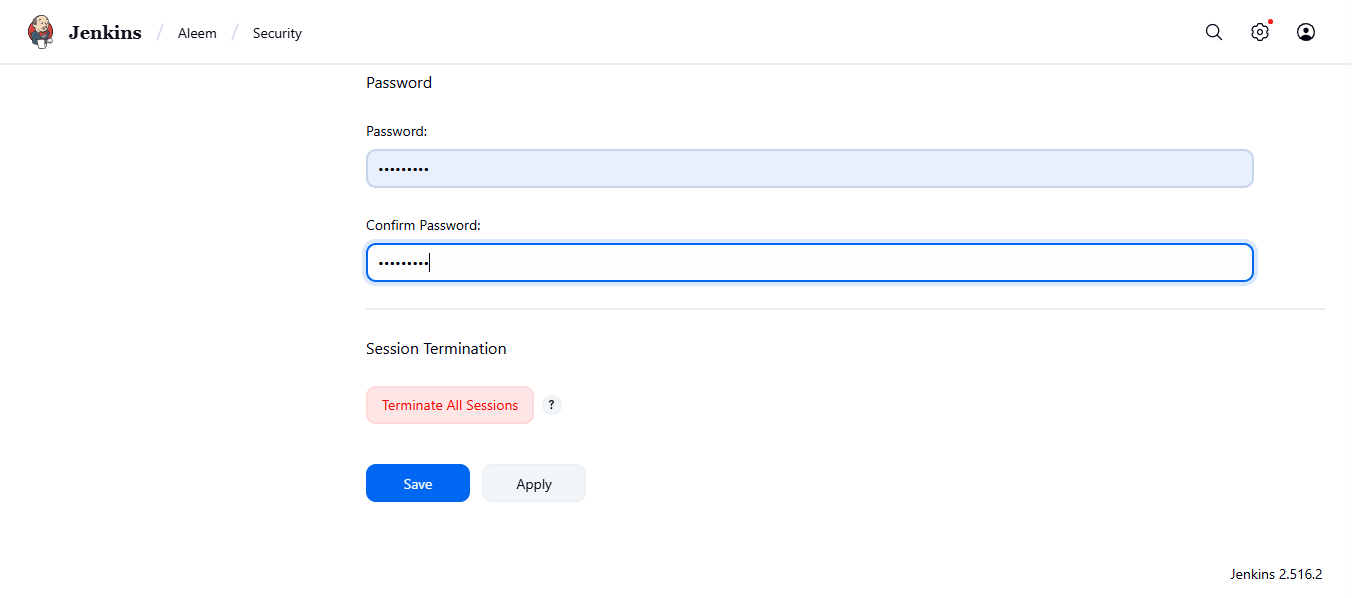
**Check the password and login to jenkins → cd /var/lib/jenkins/secrets**

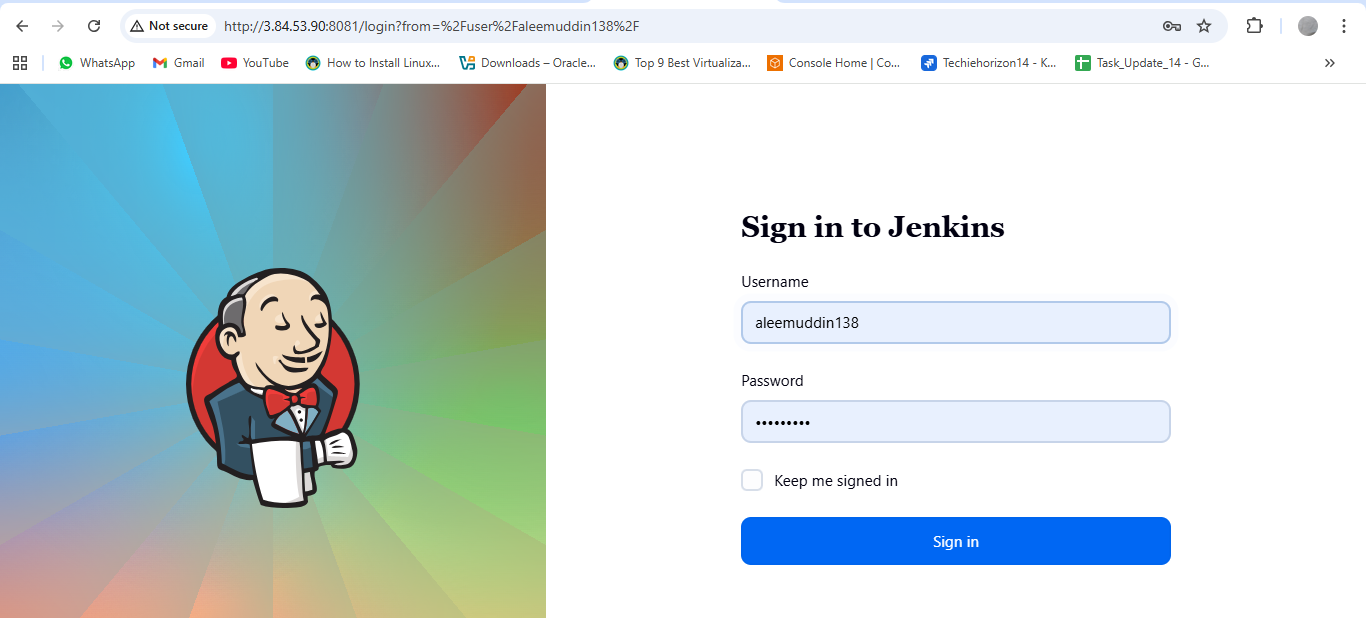
**Cat initialAdminPassword**

**Now login to jenkins**

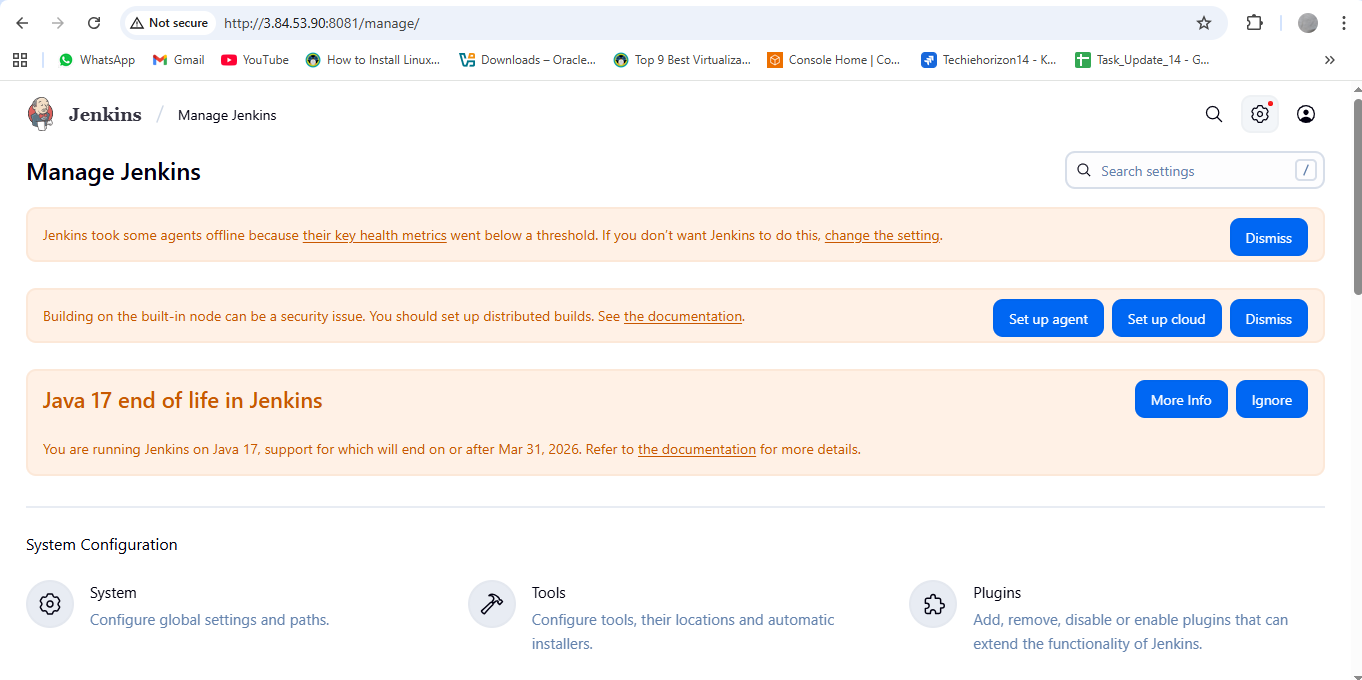
**Change password click on profile pic. jenkins → admin → security**

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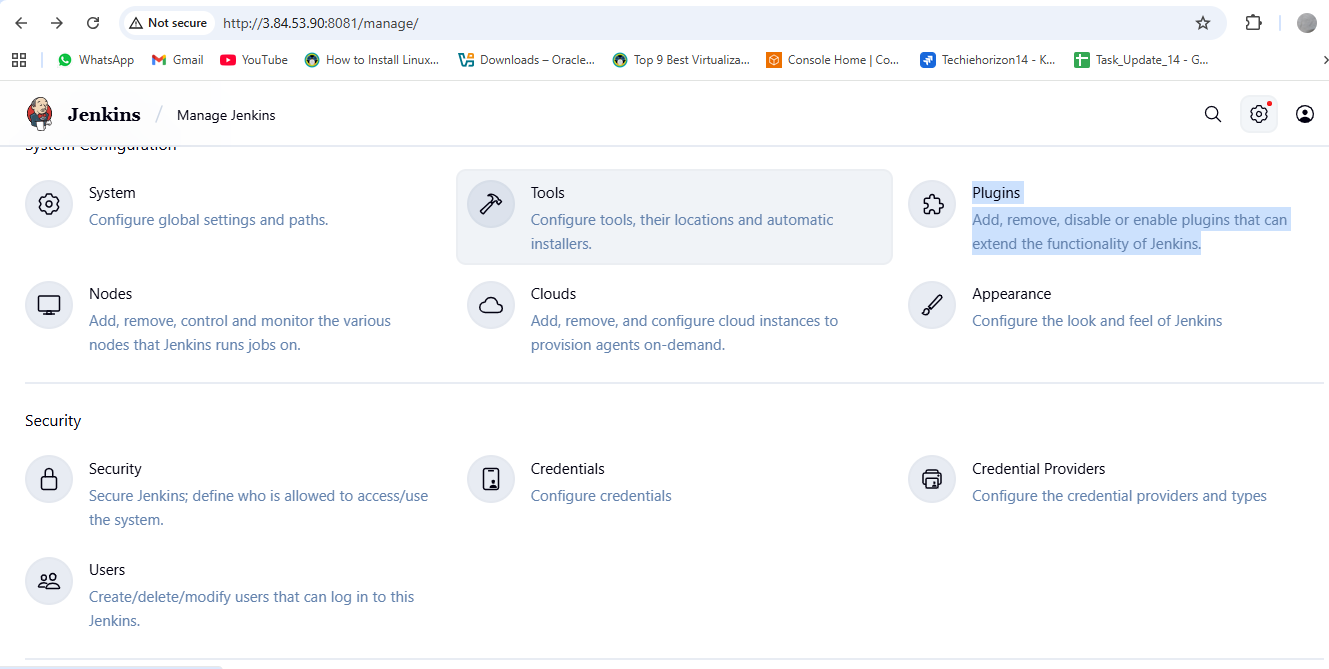
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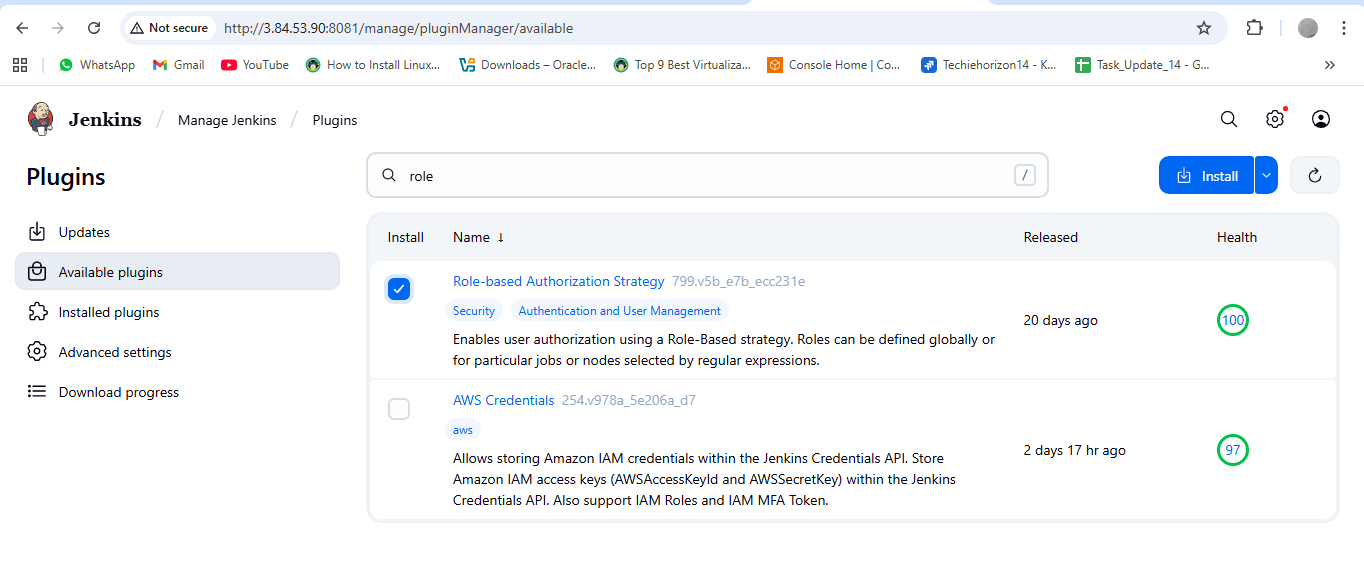
**  
3) Create users called DevOps, Testing in Jenkins with Limited access.**

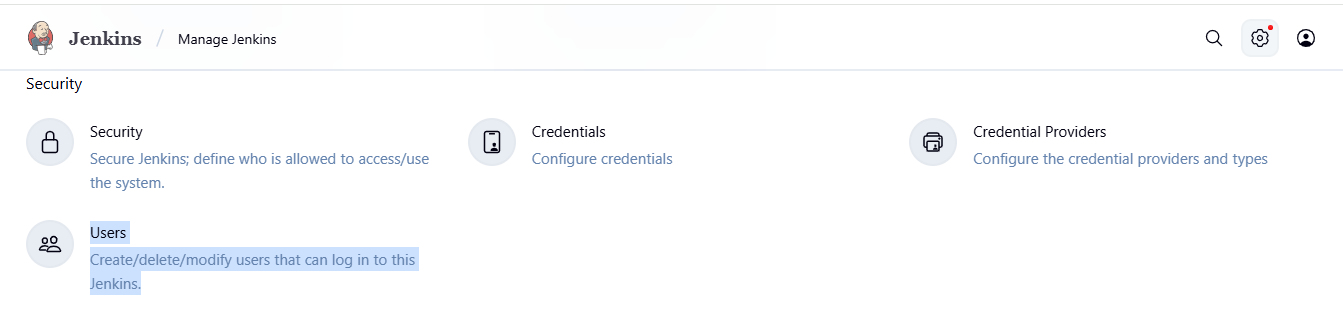
**Goto → manage jenkins → users then create devops and testing users**

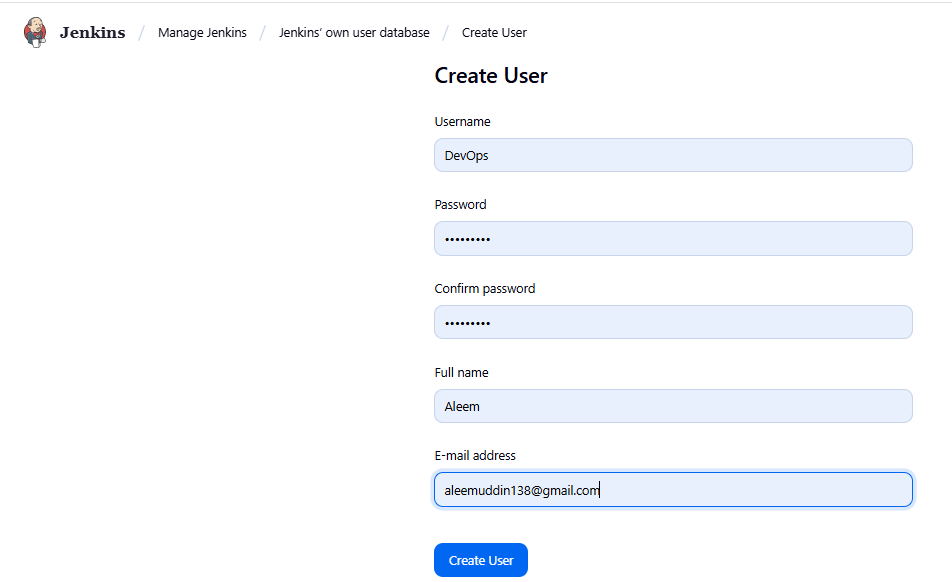
****

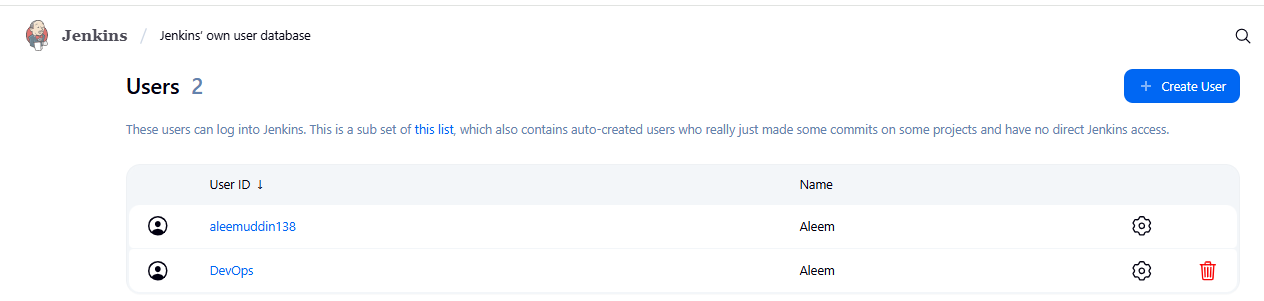
**Install plugin role-based authorization strategy**

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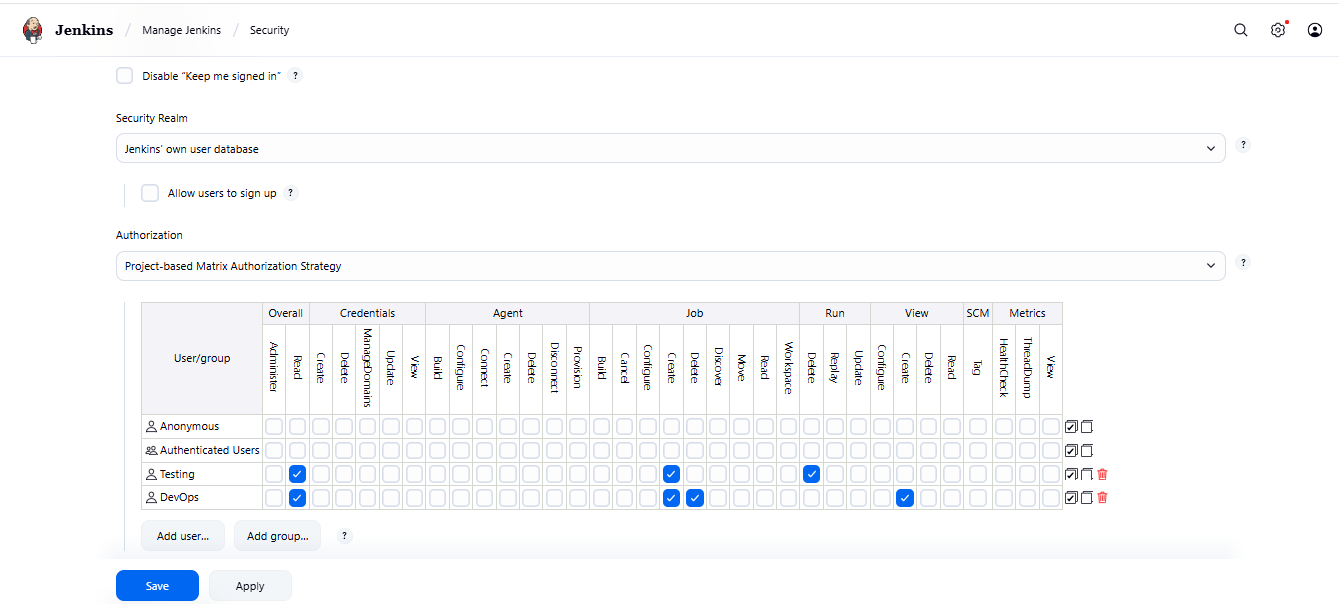
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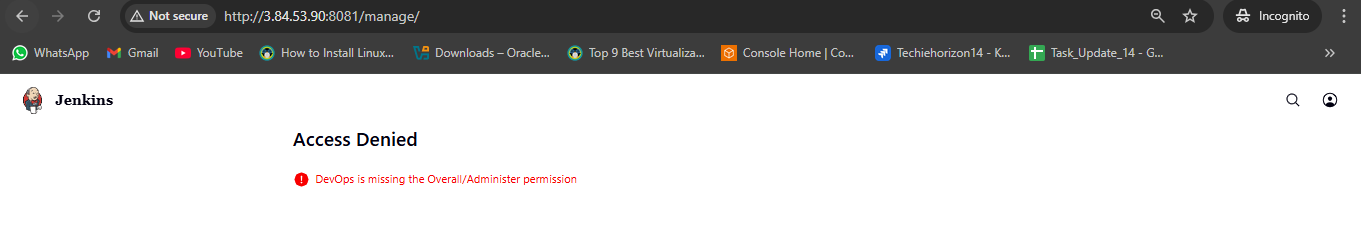
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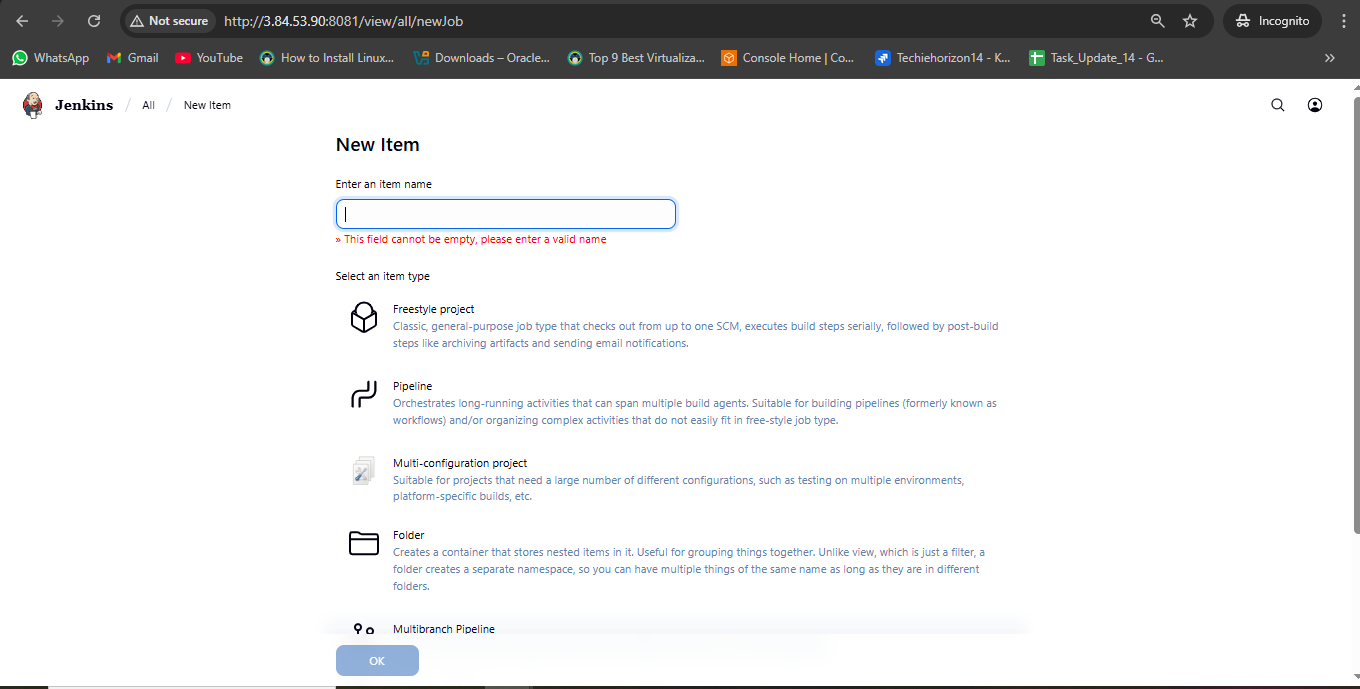
**Manage jenkins → security → authorization(project-based…..)**

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**DevOps Account**

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**Testing Account**

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

**Install GIT**

**Manage jenkins → system → create label Master**

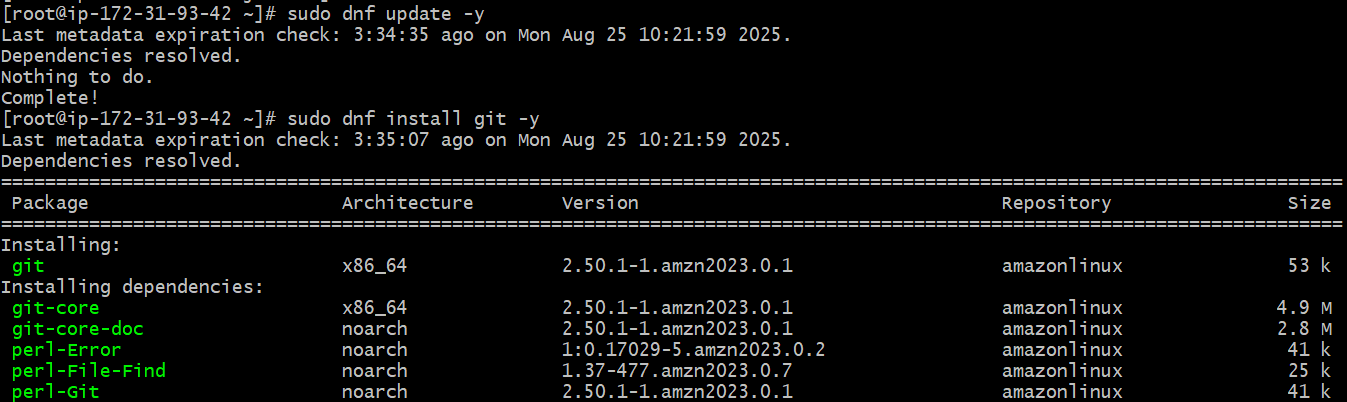
**Create first job having label Master**

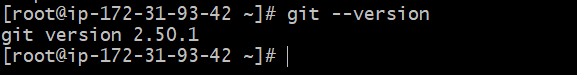
**Create second job without label Master**

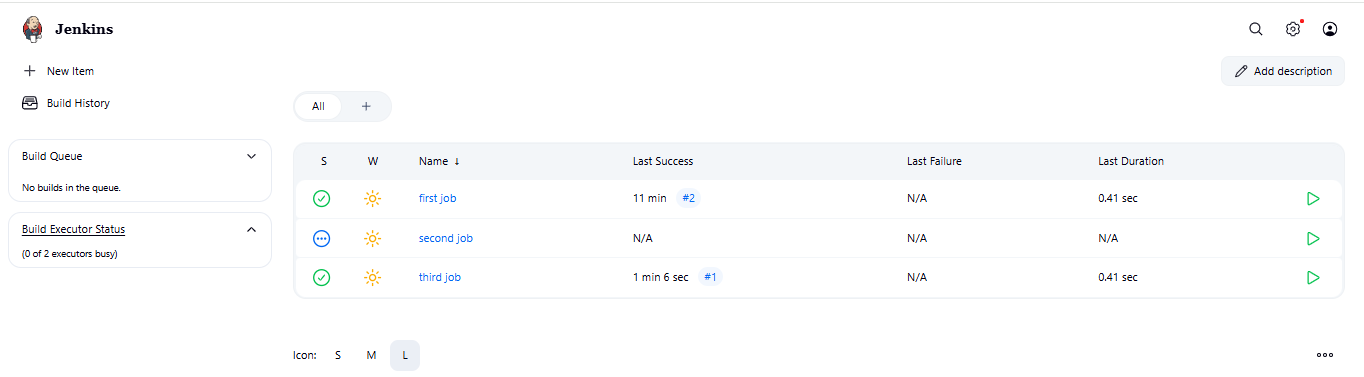
**Create third job with wrong label hotfix**

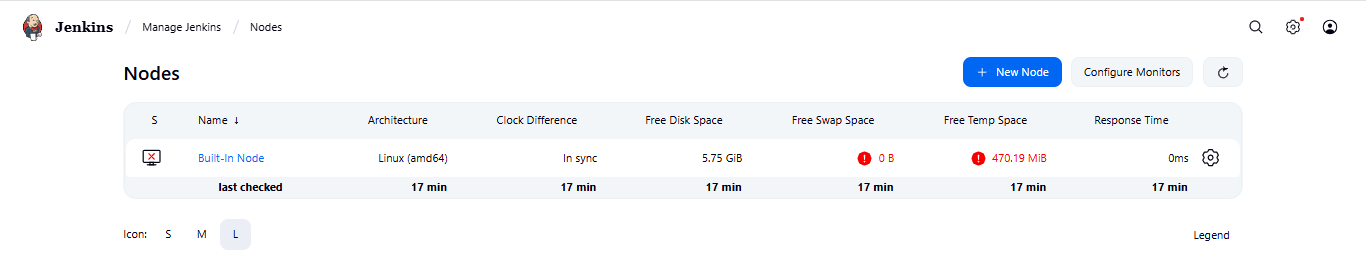
**In each job → configure → build steps → execute shell → give seconds**

**I got an issue with disk space**

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1. **Change Jenkins temporary directory (recommended)** 
   1. **Point Jenkins to use /var/lib/jenkins/tmp (on your main disk, which has ~18 GB free):**
   2. **Create a new tmp directory:  
      sudo mkdir -p /var/lib/jenkins/tmp**

**sudo chown -R jenkins:jenkins /var/lib/jenkins/tmp**

* 1. **Add below temp file → sudo systemctl edit jenkins**
  2. **[Service]**

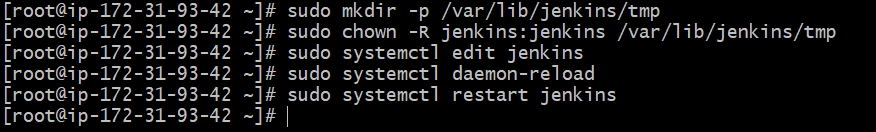
**Environment="JAVA\_OPTS=-Djava.io.tmpdir=/var/lib/jenkins/tmp"**

* 1. **Then reload**

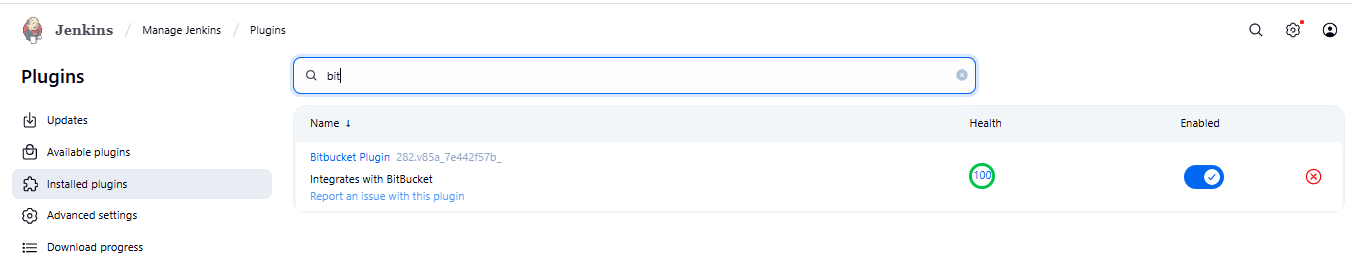
**sudo systemctl daemon-reload**

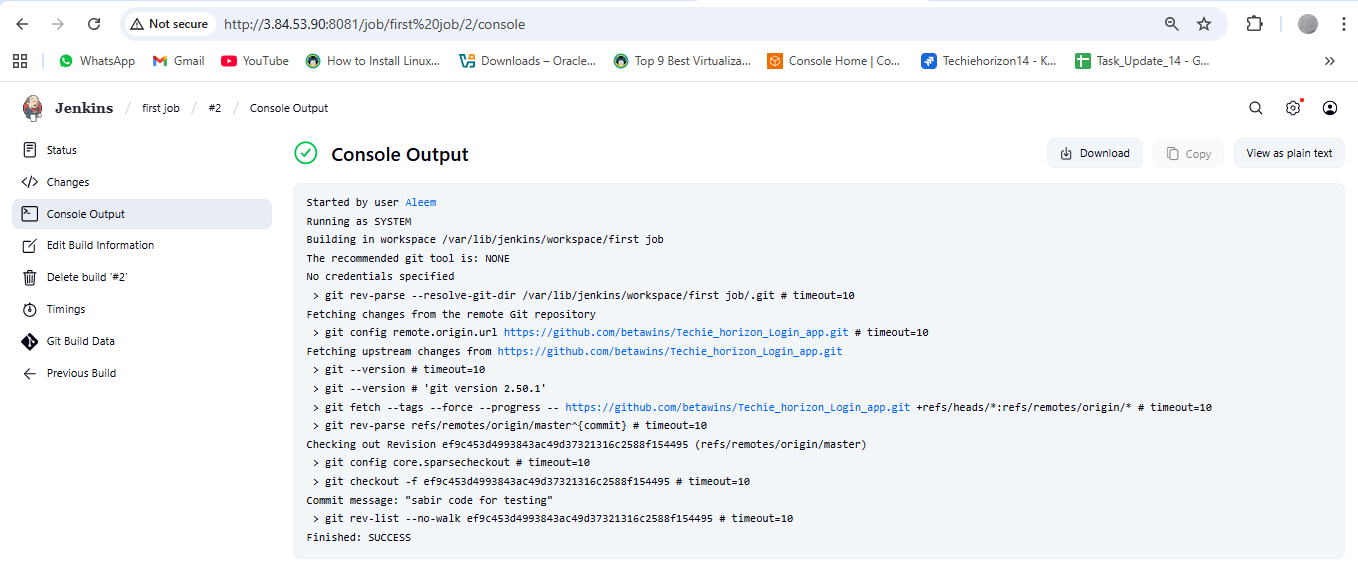
**sudo systemctl restart jenkins**

**Install bitbucket plugin**

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**First job only executed because it’s having label Master other jobs not connected to label Master**

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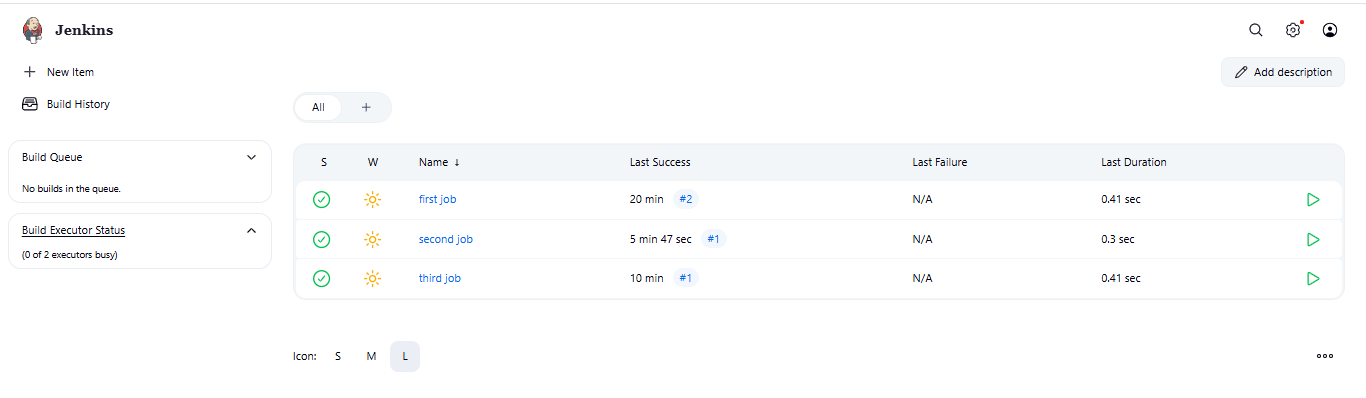
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**5) Create Three sample jobs using the below URL.**[**https://github.com/betawins/Techie\_horizon\_Login\_app.git**](https://github.com/betawins/Techie_horizon_Login_app.git)

**Created three different jobs with different time stamps with label master i already in jenkins configured label as master.**

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**Taken above url and once created then do build**

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**6) Create one Jenkins job using git hub Private repository.**

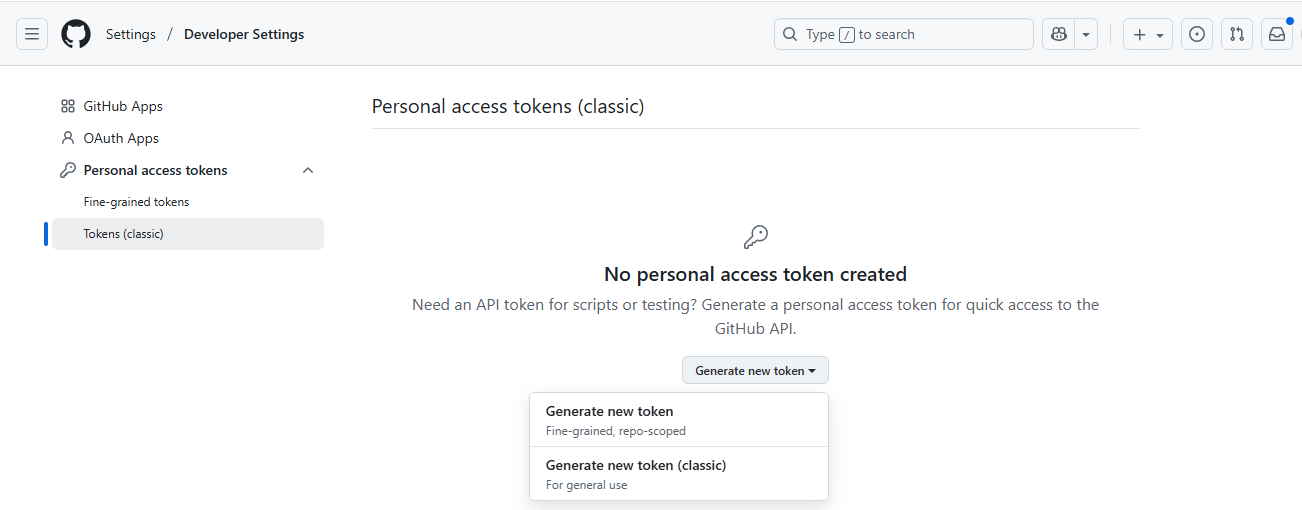
**GitHubGitHub**

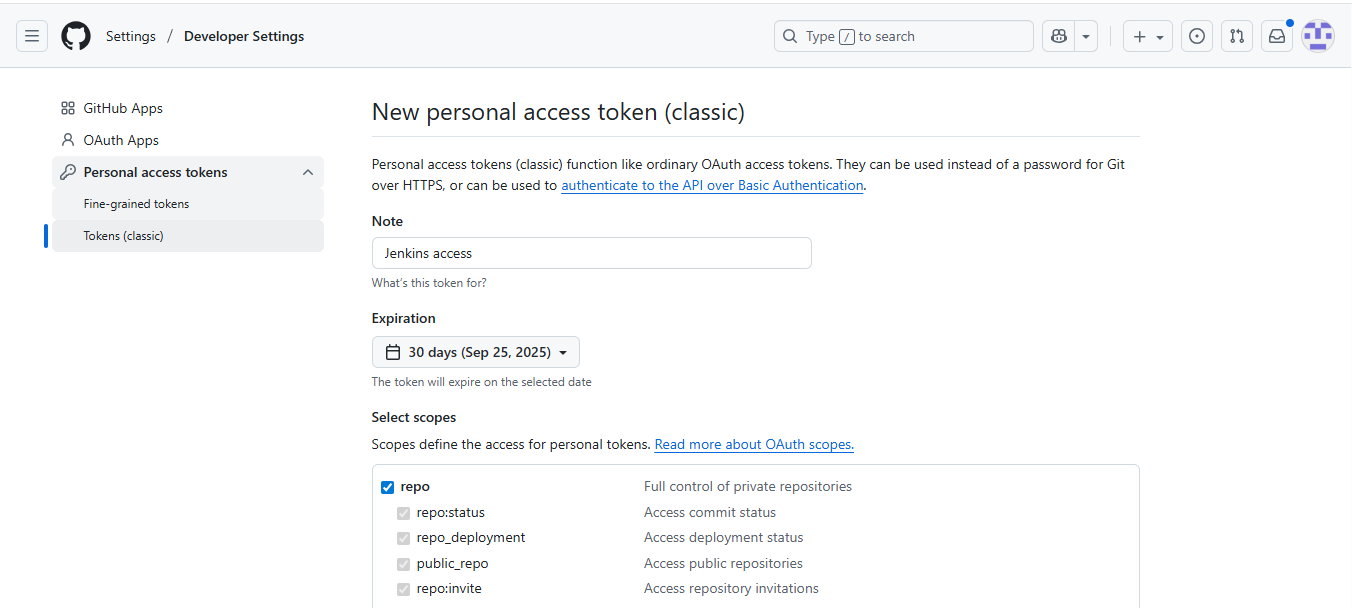
[**GitHub - betawins/Techie\_horizon\_Login\_app**](https://github.com/betawins/Techie_horizon_Login_app.git)

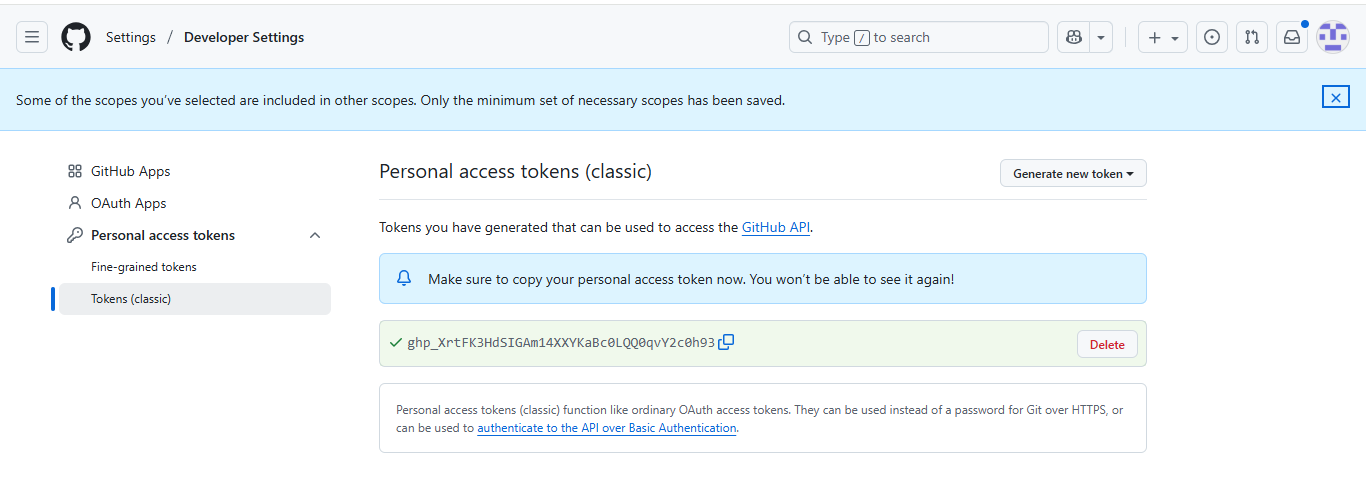
**Contribute to betawins/Techie\_horizon\_Login\_app development by creating an account on GitHub. (33 kB)**

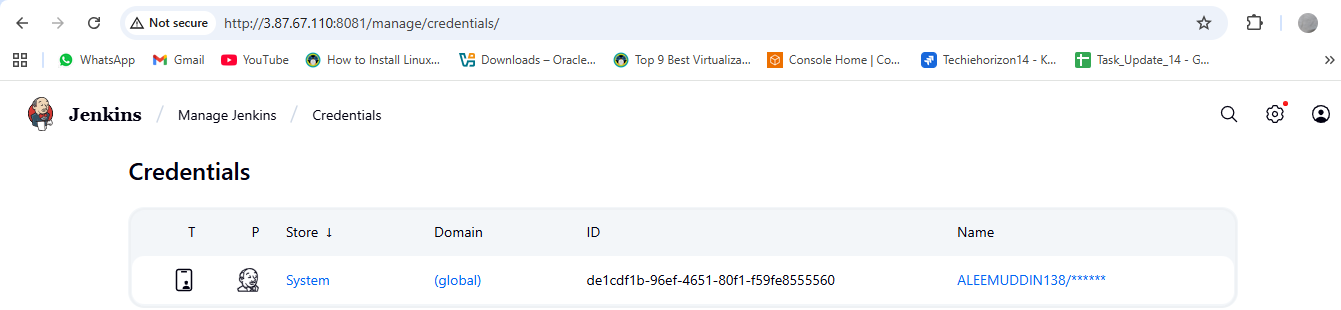
**Go to github and create access token with repo**

**Goto → github → settings → developer settings → personal access token (pat) → Tokens (Classic) → Generate new token → Generate new token (Classic)**

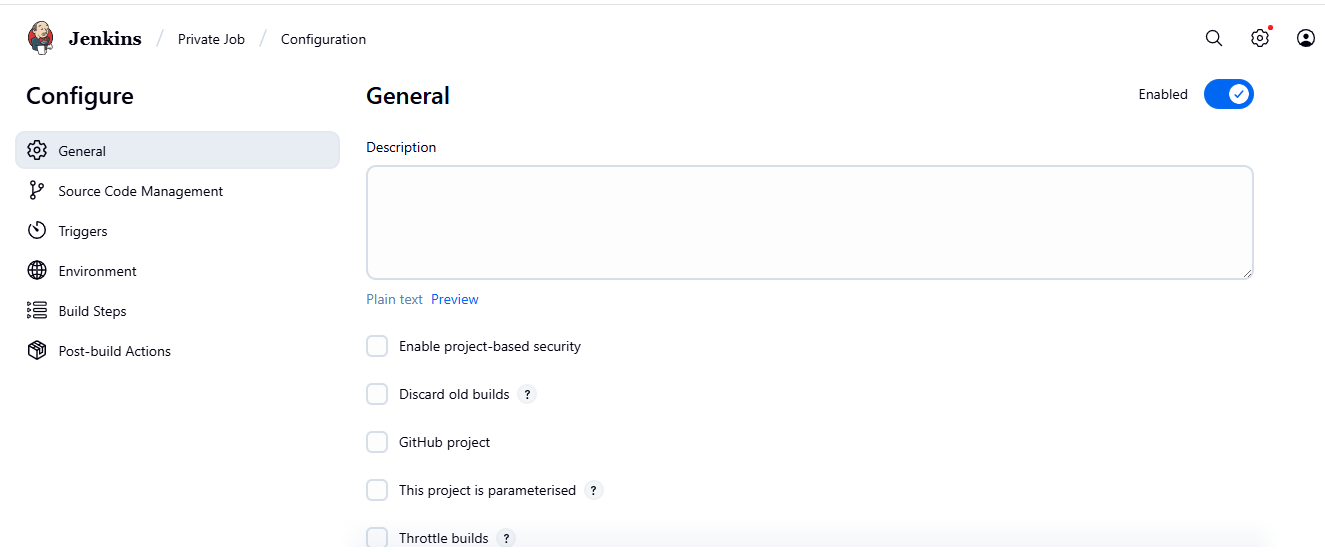
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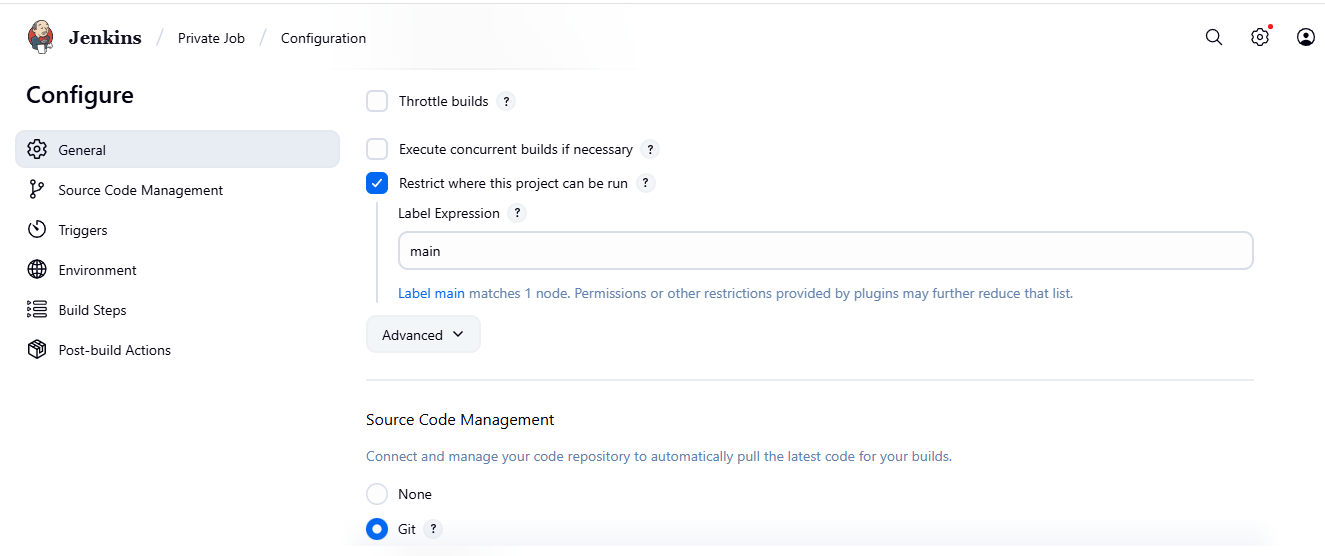
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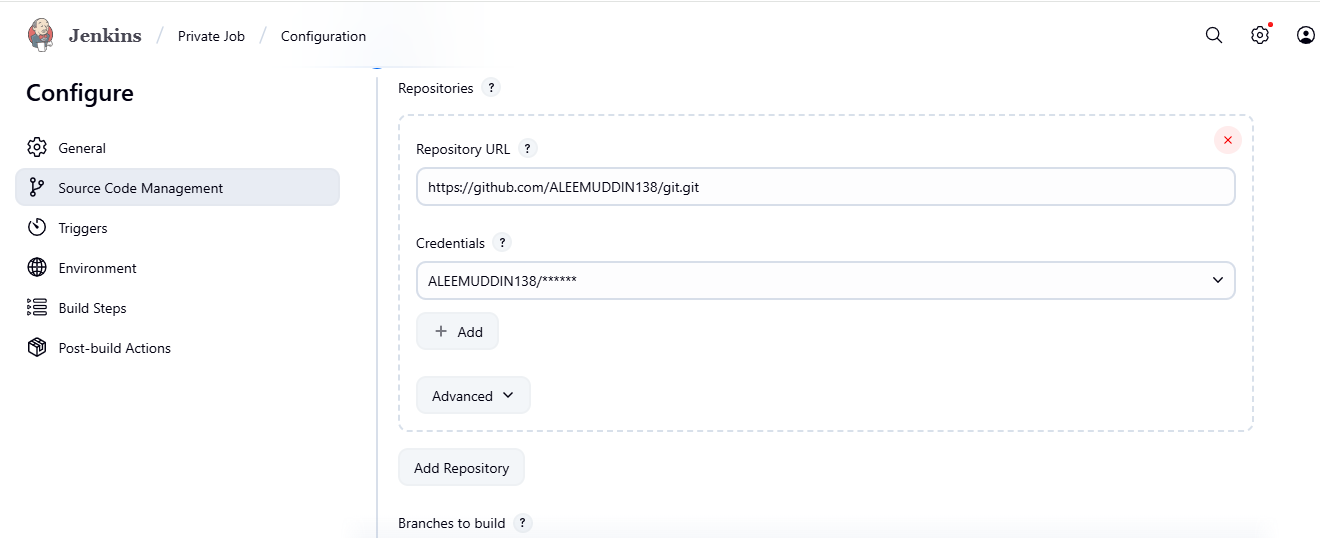
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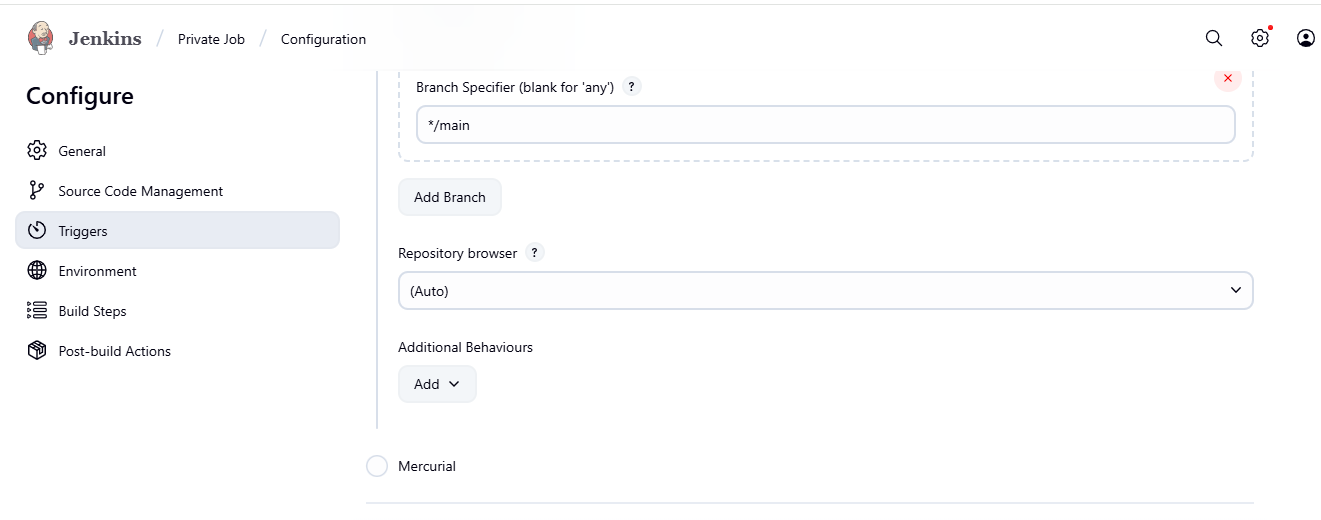
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**Copy the PAT, github URL & add the credentials then configuration**

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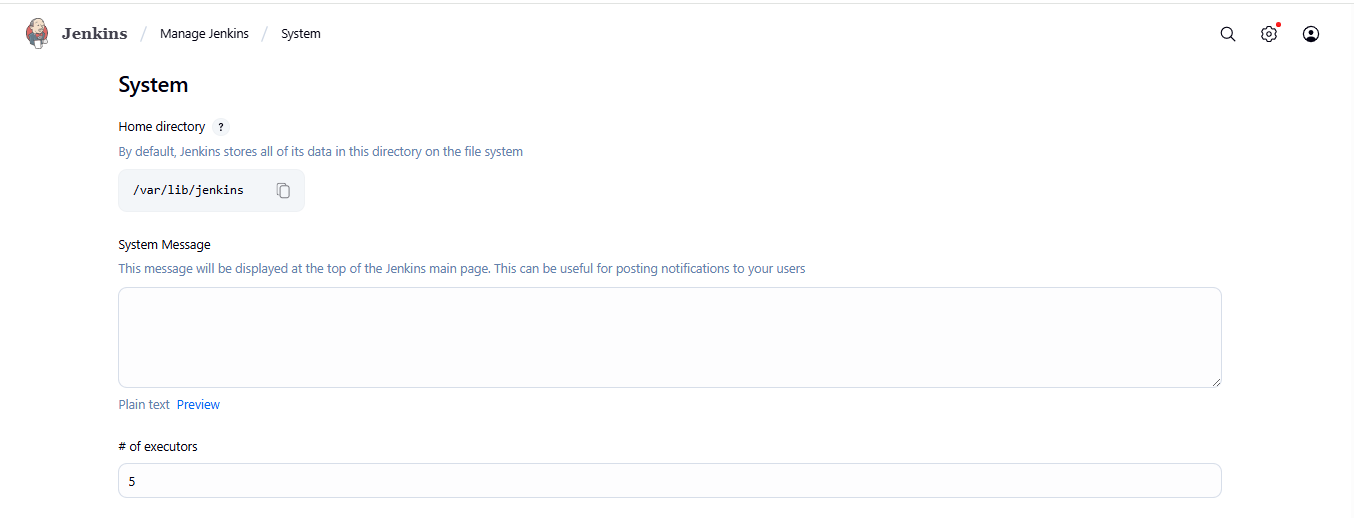
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**Here go to Manage Jenkins > System**

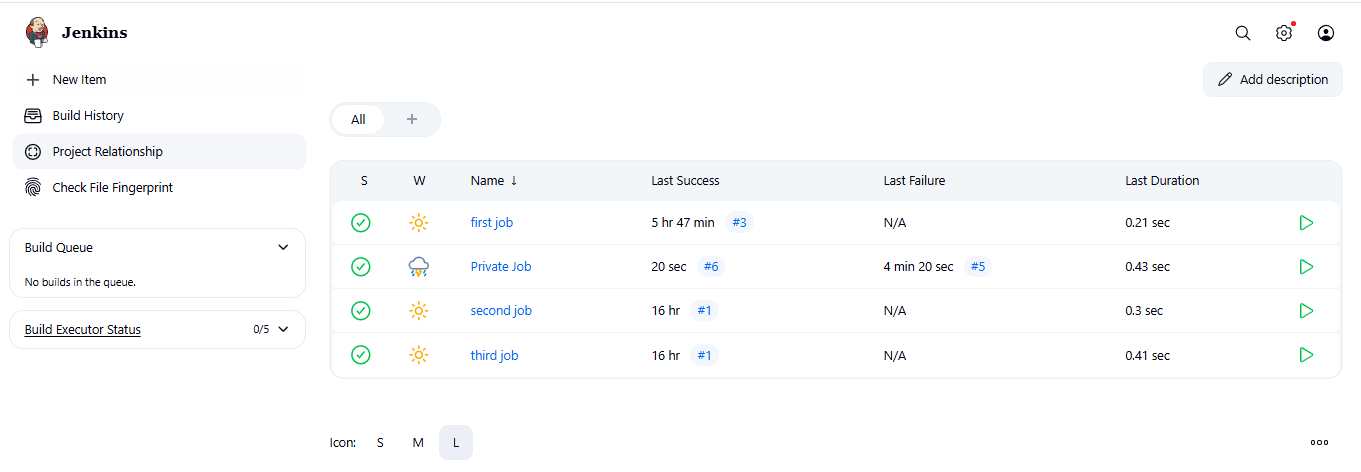
**Follow the path and setup the Lable and required settings**

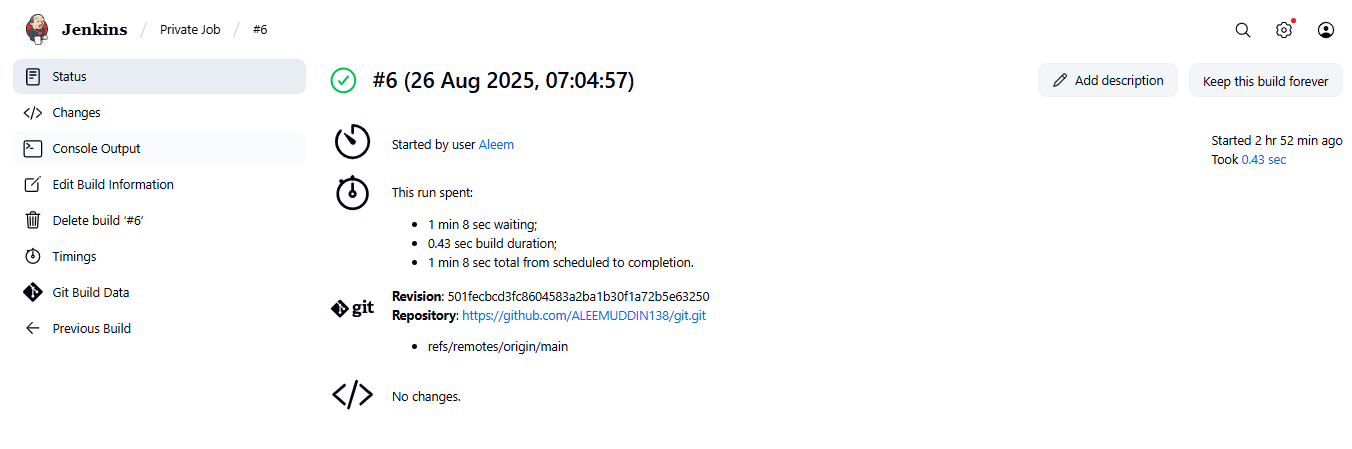
**Example: github branch name like Main, Master or Hotfix etc**

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**Get the private repo outcome after Build the Job**

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