JENKINS

Installation of jenkins on EC2 (t3.micro) having Amazon Linux2

1. Launch instance EC2 with **t3.micro**, **AMI** amazon linux2, take default VPC, **configure storage 1x20 Gib** and Launch and Login to EC2
2. We can Download repo from below website, or go to step 3 (https://www.jenkins.io/doc/book/installing/linux/#red-hat-centos)
3. `sudo wget -O /etc/yum.repos.d/jenkins.repo \`
   `  https://pkg.jenkins.io/redhat/jenkins.repo`
4. `sudo rpm --import https://pkg.jenkins.io/redhat/jenkins.io-2023.key`
5. `sudo yum upgrade`
6. **sudo dnf install -y java-17-amazon-corretto**
7. `sudo yum install -y jenkins`

```
OpenJDK 64-Bit Server VM Corretto 17.0.10.8.1 (build 17.0.10+8 LTS, mixed mod
[root@ip-172-31-42-25 ~]# sudo yum install jenkins
Last metadata expiration check: 0:04:27 ago on Sat Aug 23 16:39:30 2025.
Dependencies resolved.
================================================================================
 Package          Architecture    Version              Repository         Size
================================================================================
Installing:
 jenkins          noarch          2.524-1.1            jenkins            91 M

Transaction Summary
================================================================================
Install  1 Package

Total download size: 91 M
Installed size: 91 M
Is this ok [y/N]: y
Downloading Packages:
jenkins-2.524-1.1.noarch.rpm                    24 MB/s |  91 MB     00:03
--------------------------------------------------------------------------------
Total                                           24 MB/s |  91 MB     00:03
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing        :                                                      1/1
  Running scriptlet: jenkins-2.524-1.1.noarch                             1/1
  Installing       : jenkins-2.524-1.1.noarch                             1/1
  Running scriptlet: jenkins-2.524-1.1.noarch                             1/1
  Verifying        : jenkins-2.524-1.1.noarch                             1/1

Installed:
  jenkins-2.524-1.1.noarch

Complete!
[root@ip-172-31-42-25 ~]#
```

8.
9. `sudo systemctl enable jenkins`
10. `sudo systemctl start jenkins`

11. sudo systemctl status jenkins

```
[root@ip-172-31-42-25 ~]# sudo systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
     Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled; prese>
     Active: active (running) since Sat 2025-08-23 16:46:44 UTC; 8s ago
   Main PID: 30206 (java)
      Tasks: 46 (limit: 1119)
     Memory: 368.7M
        CPU: 17.212s
     CGroup: /system.slice/jenkins.service
             └─30206 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/>

Aug 23 16:46:38 ip-172-31-42-25.ec2.internal jenkins[30206]: This may also b>
Aug 23 16:46:38 ip-172-31-42-25.ec2.internal jenkins[30206]: ***************>
Aug 23 16:46:38 ip-172-31-42-25.ec2.internal jenkins[30206]: ***************>
Aug 23 16:46:38 ip-172-31-42-25.ec2.internal jenkins[30206]: ***************>
Aug 23 16:46:44 ip-172-31-42-25.ec2.internal jenkins[30206]: 2025-08-23 16:4>
Aug 23 16:46:44 ip-172-31-42-25.ec2.internal jenkins[30206]: 2025-08-23 16:4>
Aug 23 16:46:44 ip-172-31-42-25.ec2.internal systemd[1]: Started jenkins.ser>
Aug 23 16:46:44 ip-172-31-42-25.ec2.internal jenkins[30206]: 2025-08-23 16:4>
Aug 23 16:46:44 ip-172-31-42-25.ec2.internal jenkins[30206]: 2025-08-23 16:4>
Aug 23 16:46:49 ip-172-31-42-25.ec2.internal jenkins[30206]: 2025-08-23 16:4>
lines 1-20/20 (END)
```

12.

13. Cd /var/lib/jenkins   (default locations of jenkins files)

```
[root@ip-172-31-42-25 ~]# cd /var/lib/jenkins
[root@ip-172-31-42-25 jenkins]# ll
total 20
-rw-r--r--. 1 jenkins jenkins 1658 Aug 23 16:46 config.xml
-rw-r--r--. 1 jenkins jenkins  156 Aug 23 16:46 hudson.model.UpdateCenter.xml
-rw-r--r--. 1 jenkins jenkins  171 Aug 23 16:46 jenkins.telemetry.Correlator.
xml
drwxr-xr-x. 2 jenkins jenkins    6 Aug 23 16:46 jobs
-rw-r--r--. 1 jenkins jenkins 1037 Aug 23 16:46 nodeMonitors.xml
drwxr-xr-x. 2 jenkins jenkins    6 Aug 23 16:46 plugins
-rw-r--r--. 1 jenkins jenkins   64 Aug 23 16:46 secret.key
-rw-r--r--. 1 jenkins jenkins    0 Aug 23 16:46 secret.key.not-so-secret
drwx------. 2 jenkins jenkins  125 Aug 23 16:46 secrets
drwxr-xr-x. 2 jenkins jenkins   67 Aug 23 16:46 updates
drwxr-xr-x. 2 jenkins jenkins   24 Aug 23 16:46 userContent
drwxr-xr-x. 3 jenkins jenkins   84 Aug 23 16:46 users
[root@ip-172-31-42-25 jenkins]#
```

14.

15. Now open tab in browser with public ip of ec2
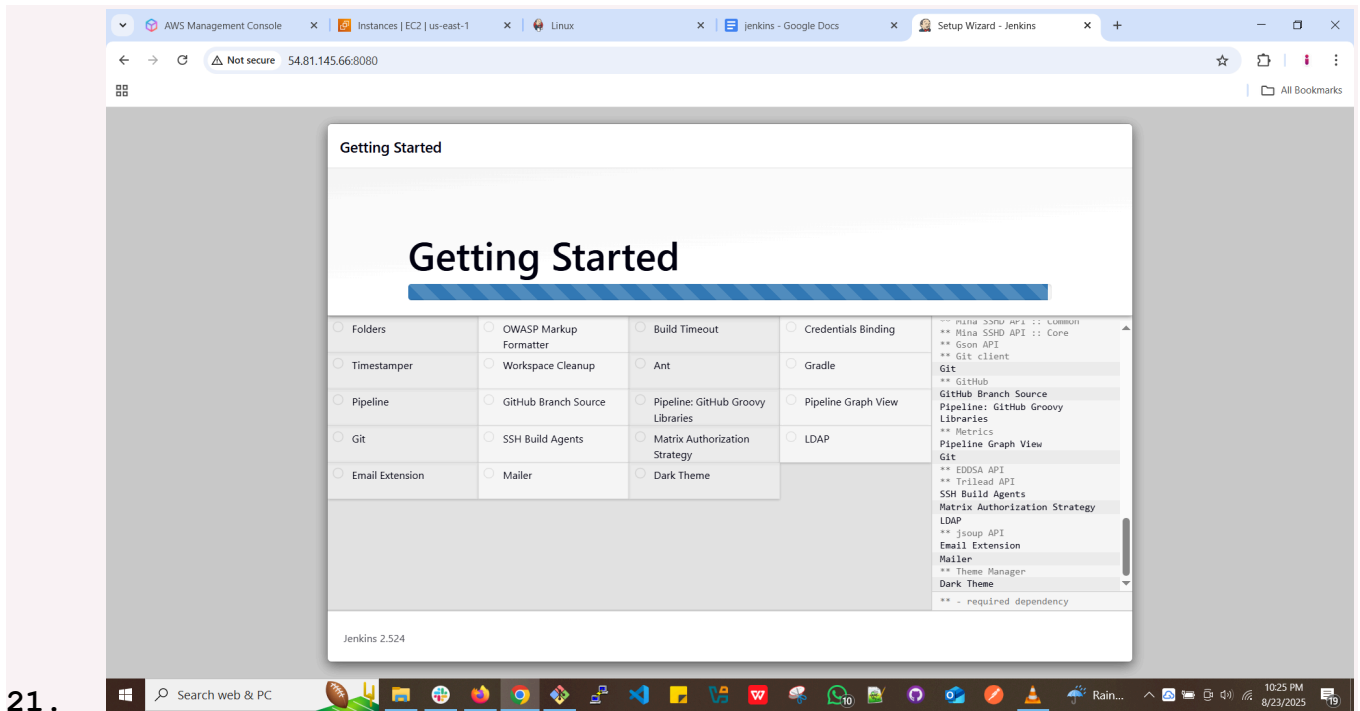
16.   public-ip:8080

17. Bring the password from ec2 from below location

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

19.   Now cat the password and put in webpage of jenkins then
    select install suggested plugins and create user.

20.   Cat initialAdminPassword

21.

22.   Create user or skip and continue as admin.

23.
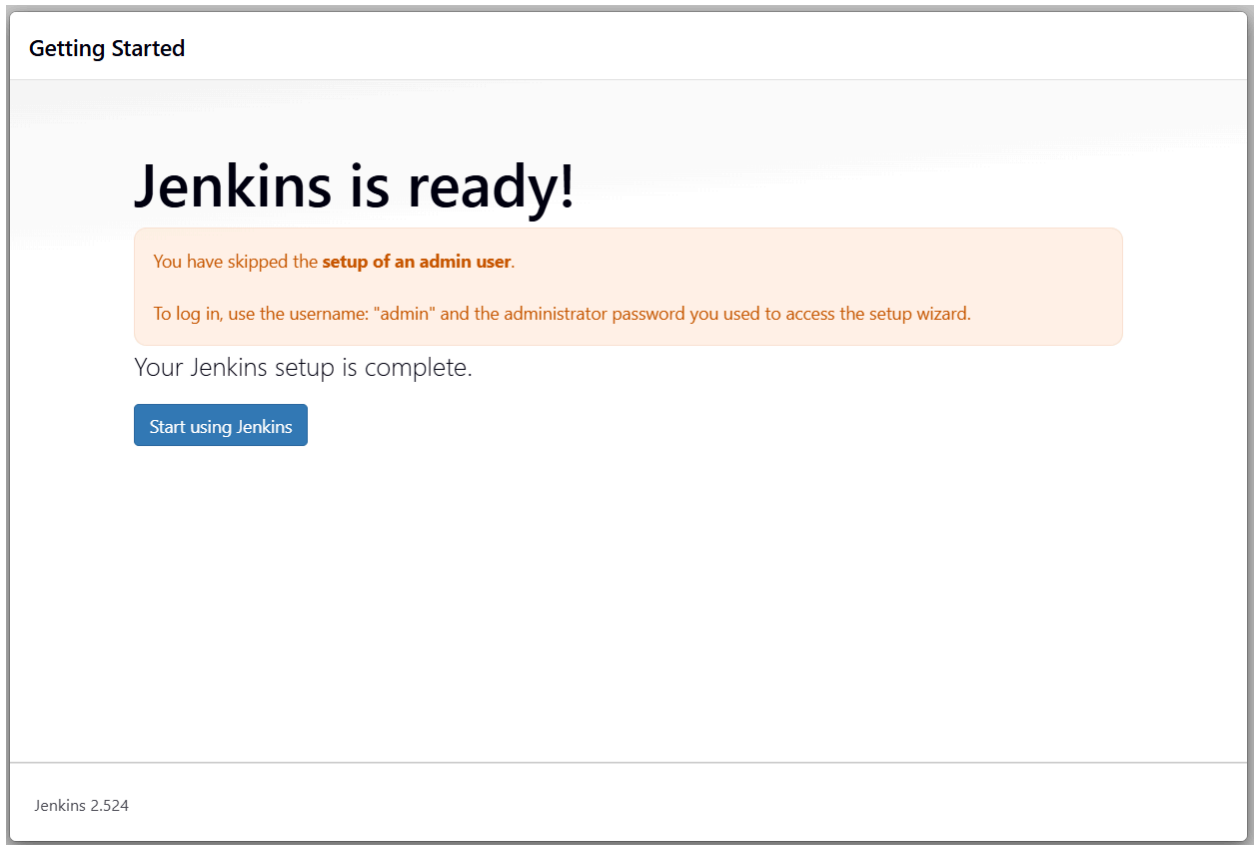
24.
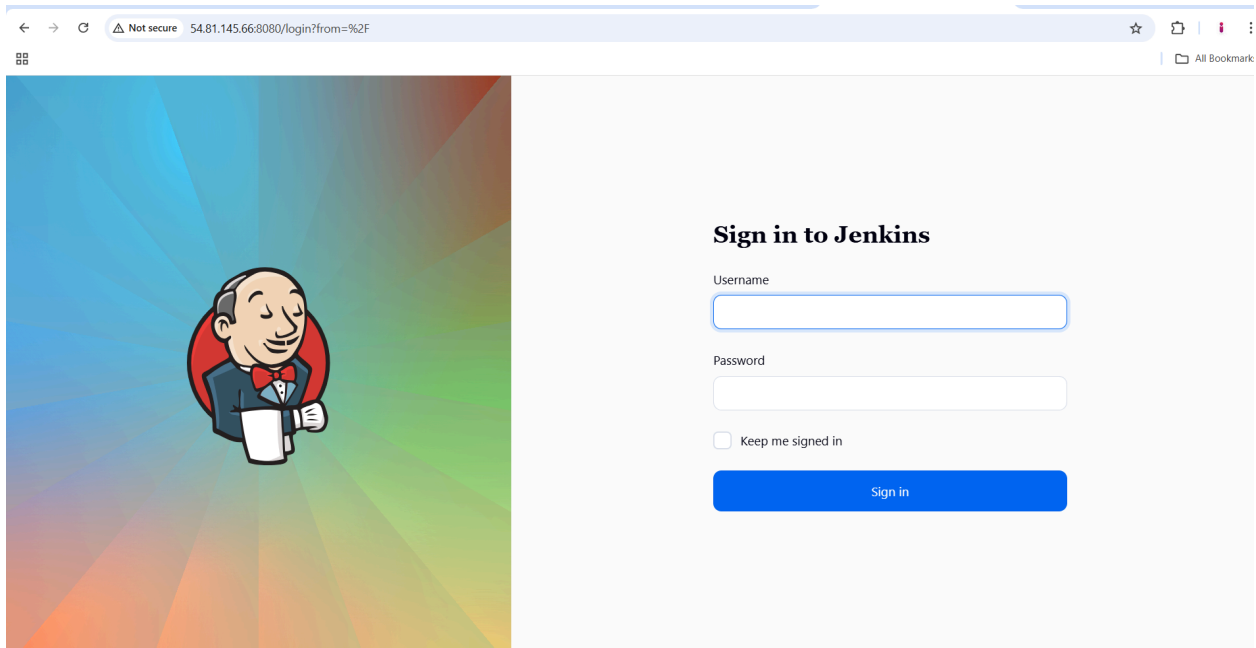
25.

26. You can change password from home page in admin profile logo → security → and enter new password

27.

admin

- Profile
- Builds
- My Views
- Account
- Appearance
- Preferences
- Security
- Experiments
- Credentials

Security

API Token

Current token(s) ?

No API tokens configured

Add new token
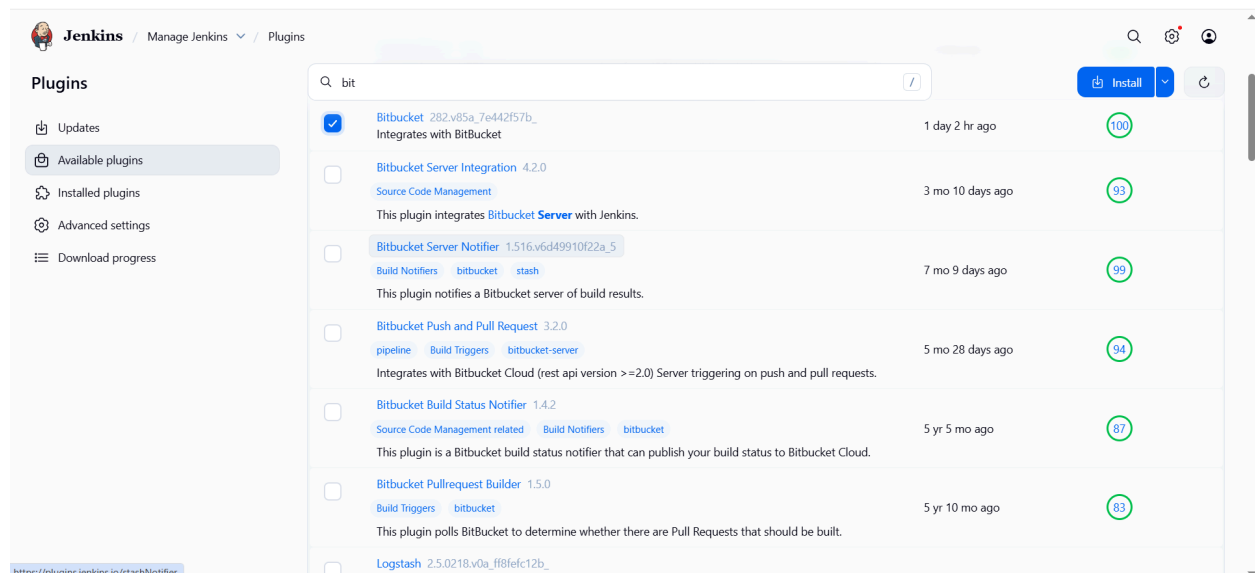
Password

Password:

Save   Apply

CREATING JOB

Installing new plug in "bitbucket" go to manage jenkins(settings icon) → plugins → available plugins → enter bitbucket

1. Now creating first job from jenkins home page → create a job.
2. Enter job name and select git in source code management → enter git repository url and save.
3. Add **your** any github repository
   https://github.com/imrankhanmohammad257/imrankhan.online
4. You can check here failed to connect.(need to install git in your EC2)
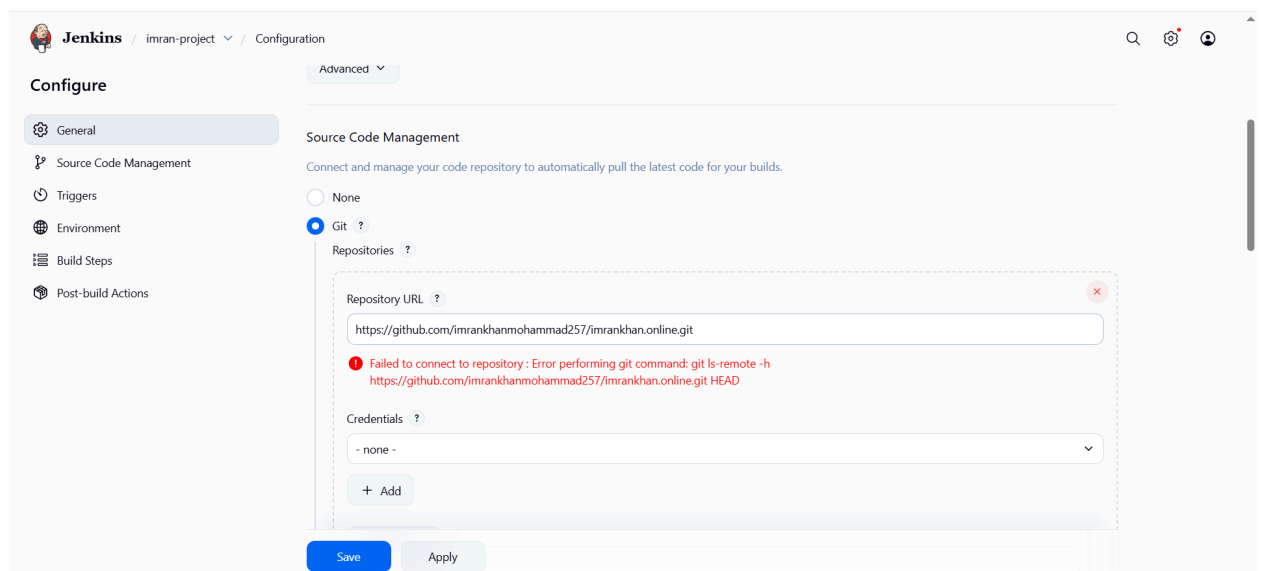
5.
6. In home page you can see your project.
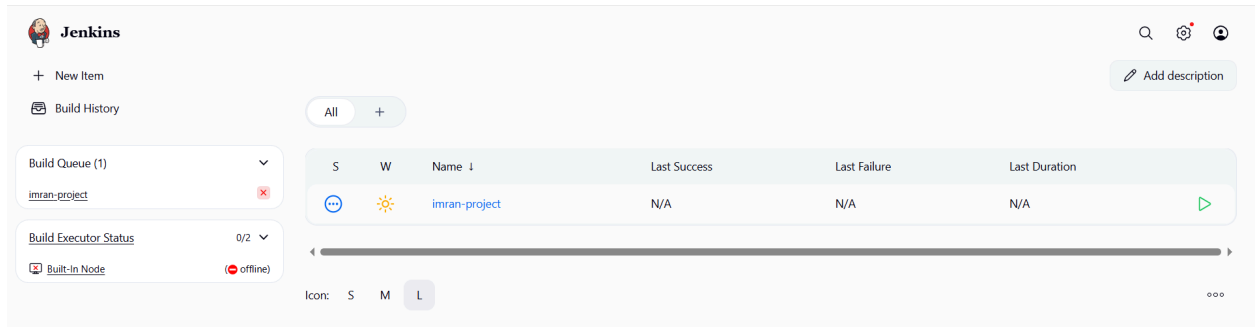
7.

8. You can check in EC2 , you will find your project,
cd /var/lib/jenkins
ll
Cd jobs
ll

```
[ec2-user@ip-172-31-42-25 ~]$ cd /var/lib/jenkins
[ec2-user@ip-172-31-42-25 jenkins]$ ll
total 84
-rw-r--r--.  1 jenkins jenkins  2259 Aug 23 18:08 config.xml
-rw-r--r--.  1 jenkins jenkins   156 Aug 23 18:08 hudson.model.UpdateCenter.x
ml
-rw-r--r--.  1 jenkins jenkins  1267 Aug 23 17:13 hudson.plugins.emailext.Ext
endedEmailPublisher.xml
-rw-r--r--.  1 jenkins jenkins   370 Aug 23 16:55 hudson.plugins.git.GitTool.
xml
-rw-------.  1 jenkins jenkins  1680 Aug 23 16:55 identity.key.enc
-rw-r--r--.  1 jenkins jenkins     5 Aug 23 18:08 jenkins.install.InstallUtil
.lastExecVersion
-rw-r--r--.  1 jenkins jenkins     5 Aug 23 16:59 jenkins.install.UpgradeWiza
rd.state
-rw-r--r--.  1 jenkins jenkins   182 Aug 23 16:58 jenkins.model.JenkinsLocati
onConfiguration.xml
-rw-r--r--.  1 jenkins jenkins   171 Aug 23 16:46 jenkins.telemetry.Correlato
r.xml
drwxr-xr-x.  3 jenkins jenkins    27 Aug 23 18:05 jobs
drwxr-xr-x.  2 jenkins jenkins    32 Aug 23 16:56 logs
-rw-r--r--.  1 jenkins jenkins  1037 Aug 23 18:08 nodeMonitors.xml
drwxr-xr-x. 92 jenkins jenkins 16384 Aug 23 18:07 plugins
-rw-r--r--.  1 jenkins jenkins   258 Aug 23 18:12 queue.xml
-rw-r--r--.  1 jenkins jenkins   258 Aug 23 18:08 queue.xml.bak
-rw-r--r--.  1 jenkins jenkins    64 Aug 23 16:46 secret.key
-rw-r--r--.  1 jenkins jenkins     0 Aug 23 16:46 secret.key.not-so-secret
drwx------.  2 jenkins jenkins 16384 Aug 23 18:12 secrets
drwxr-xr-x.  2 jenkins jenkins   149 Aug 23 16:55 updates
drwxr-xr-x.  2 jenkins jenkins    24 Aug 23 16:46 userContent
drwxr-xr-x.  3 jenkins jenkins    84 Aug 23 16:46 users
[ec2-user@ip-172-31-42-25 jenkins]$ cd jobs
[ec2-user@ip-172-31-42-25 jobs]$ ll
total 0
drwxr-xr-x. 3 jenkins jenkins 38 Aug 23 18:14 imran-project
[ec2-user@ip-172-31-42-25 jobs]$
```

9.

10. Try to build the project click on **build now**, you can see its in waiting state so need to install git in your ec2
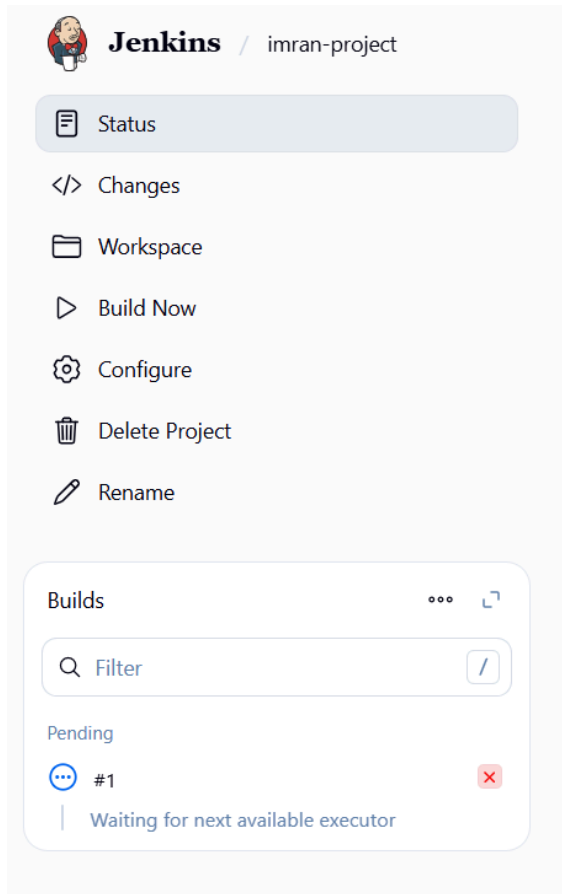
11.

12. Need to install git in your EC2

13.   **sudo dnf install -y git**

14.

15.   Then restart jenkins

16.   **sudo systemctl restart jenkins**

17. Then come to your project and again build and check. If again showing waiting then check your git repo is main or master.

18.

19. Go to **Jenkins → your-project → Configure → Source Code Management → Branches to build**

20. Change `master` → `main` (or the correct branch name from GitHub).

21.

22. Now build is successful.

23. Now in ec2 cli you can check the workspace created for imran-project and have some files.

24. Cd /var/lib/jenkins/jobs

25. Run ll you find your project and you get your project files index.html..etc.

26. Cd imran-projects

27. ll

```
r.xml
drwxr-xr-x.  3 jenkins jenkins    27 Aug 23 18:05 jobs
drwxr-xr-x.  2 jenkins jenkins    32 Aug 23 16:56 logs
-rw-r--r--.  1 jenkins jenkins  1037 Aug 23 19:02 nodeMonitors.xml
drwxr-xr-x. 92 jenkins jenkins 16384 Aug 23 18:07 plugins
-rw-r--r--.  1 jenkins jenkins   258 Aug 23 19:10 queue.xml
-rw-r--r--.  1 jenkins jenkins   973 Aug 23 19:02 queue.xml.bak
-rw-r--r--.  1 jenkins jenkins    64 Aug 23 16:46 secret.key
-rw-r--r--.  1 jenkins jenkins     0 Aug 23 16:46 secret.key.not-so-secret
drwx------.  2 jenkins jenkins 16384 Aug 23 19:03 secrets
drwxr-xr-x.  3 jenkins jenkins   102 Aug 23 19:02 tmp
drwxr-xr-x.  2 jenkins jenkins   149 Aug 23 16:55 updates
drwxr-xr-x.  2 jenkins jenkins    24 Aug 23 16:46 userContent
drwxr-xr-x.  3 jenkins jenkins    84 Aug 23 16:46 users
drwxr-xr-x.  3 jenkins jenkins    27 Aug 23 19:02 workspace
[root@ip-172-31-42-25 jenkins]# cd workspace
[root@ip-172-31-42-25 workspace]# ll
total 0
drwxr-xr-x. 3 jenkins jenkins 126 Aug 23 19:09 imran-project
[root@ip-172-31-42-25 workspace]# cd imran-project
[root@ip-172-31-42-25 imran-project]# ll
total 24
-rw-r--r--. 1 jenkins jenkins   16 Aug 23 19:09 CNAME
-rw-r--r--. 1 jenkins jenkins   39 Aug 23 19:09 error.html
-rw-r--r--. 1 jenkins jenkins 1678 Aug 23 19:09 first_server1.pem
-rw-r--r--. 1 jenkins jenkins 3737 Aug 23 19:09 index.html
-rw-r--r--. 1 jenkins jenkins  609 Aug 23 19:09 script.js
-rw-r--r--. 1 jenkins jenkins 3202 Aug 23 19:09 style.css
[root@ip-172-31-42-25 imran-project]#
```

28.