

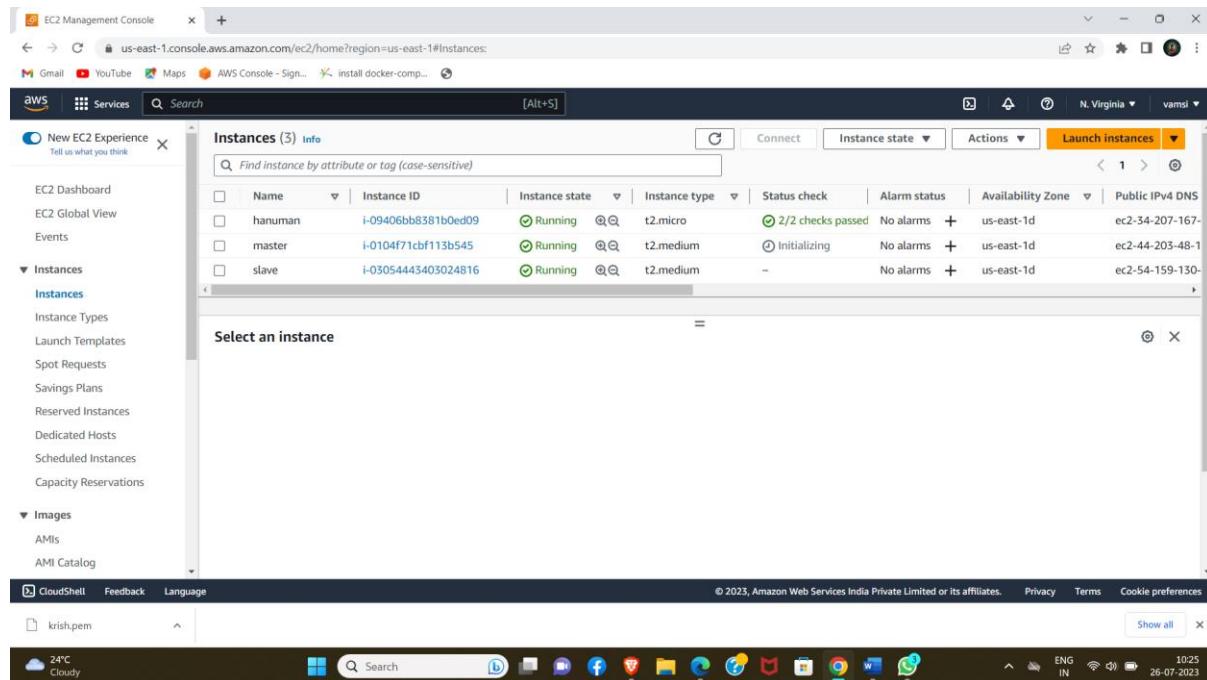
PROJECT - 4

Master slave configuration

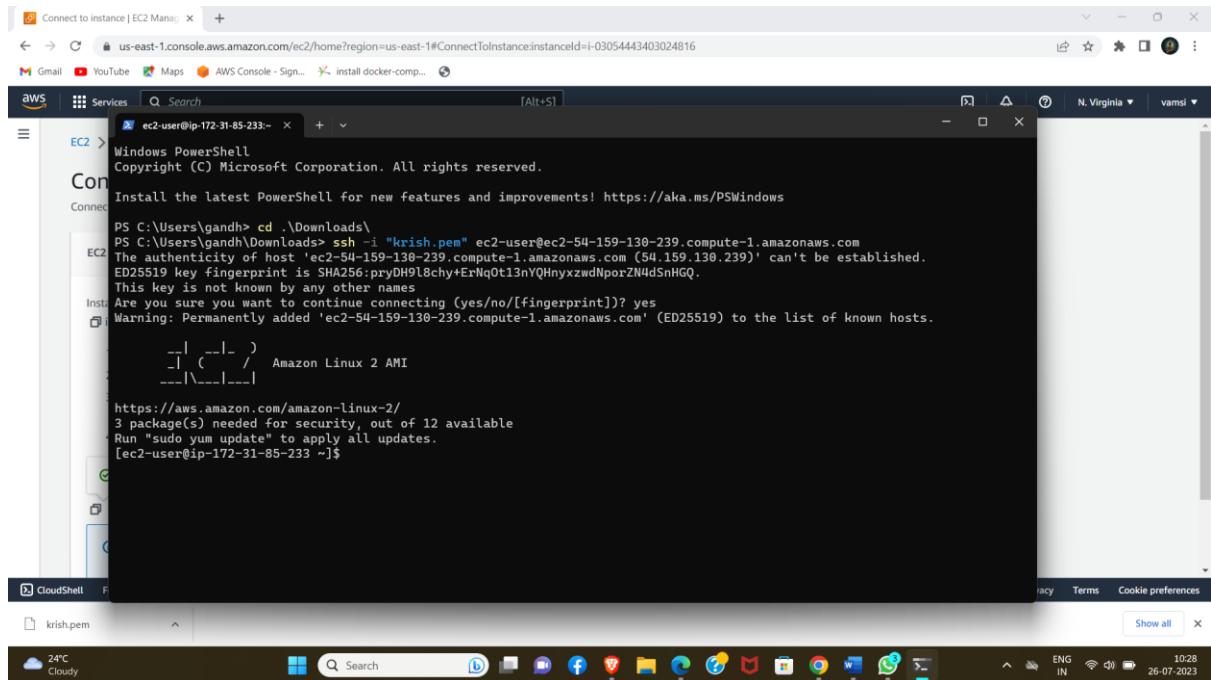
MODULE-1 :

1.create ec2 instance one is master and one is slave

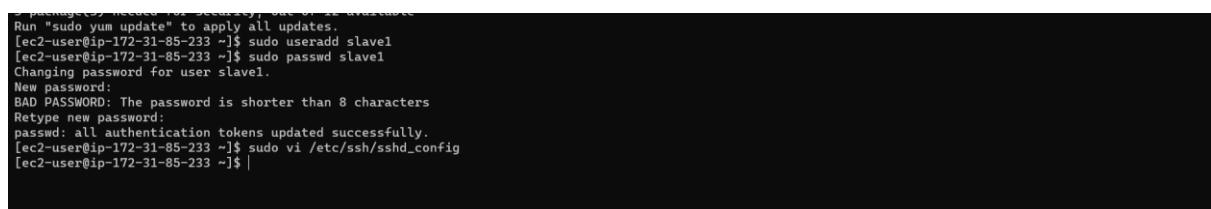
- a. in master attatch 16 gb volume and assain port 8080
- b. in slave attatch 8 gb volume and assain code related port.



2. Connect to terminal for slave and create user and passwd.



```
PS C:\Users\gandh> cd .\Downloads<br/>PS C:\Users\gandh\Downloads> ssh -i "krish.pem" ec2-user@ec2-54-159-130-239.compute-1.amazonaws.com<br/>The authenticity of host 'ec2-54-159-130-239.compute-1.amazonaws.com (54.159.130.239)' can't be established.<br/>ED25519 key fingerprint is SHA256:pryD9l8chY+ExNqti13nYQHnyxzwdNporZN4dSnhQ.0<br/>This key is not known by any other names<br/>Are you sure you want to continue connecting (yes/no/[fingerprint])? yes<br/>Warning: Permanently added 'ec2-54-159-130-239.compute-1.amazonaws.com' (ED25519) to the list of known hosts.<br/>_ _| _ _|_<br/>_ | ( _ / _<br/>_ | \_ _|_<br/>https://aws.amazon.com/amazon-linux-2/<br/>3 package(s) needed for security, out of 12 available<br/>Run "sudo yum update" to apply all updates.<br/>[ec2-user@ip-172-31-85-233 ~]$<br/><br/>krish.pem<br/>CloudShell F Show all x<br/>Cloudy 24°C 10:28 26-07-2023 ENG IN
```



```
[ec2-user@ip-172-31-85-233 ~]$ sudo useradd slave1<br/>[ec2-user@ip-172-31-85-233 ~]$ sudo passwd slave1<br/>Changing password for user slave1.<br/>New password:<br/>BAD PASSWORD: The password is shorter than 8 characters<br/>Retype new password:<br/>passwd: all authentication tokens updated successfully.<br/>[ec2-user@ip-172-31-85-233 ~]$ sudo vi /etc/ssh/sshd_config<br/>[ec2-user@ip-172-31-85-233 ~]$
```

3.connect master server to terminal and install Jenkins

```

Windows PowerShell [ec2-user@ip-172-31-92-68 ~] $ sudo wget -O /etc/yum.repos.d/jenkins.repo \
> https://pkg.jenkins.io/redhat-stable/jenkins.repo
--2023-07-26 05:05:23-- https://pkg.jenkins.io/redhat-stable/jenkins.repo
Resolving pkg.jenkins.io (pkg.jenkins.io) ... 146.75.34.133, 2a04:4e42:78::645
Connecting to pkg.jenkins.io (pkg.jenkins.io)|146.75.34.133|: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

2023-07-26 05:05:23 (6.04 MB/s) - '/etc/yum.repos.d/jenkins.repo' saved [85/85]

[ec2-user@ip-172-31-92-68 ~]$ sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key
[ec2-user@ip-172-31-92-68 ~]$ sudo yum upgrade
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
jenkins
jenkins/primary_db
No packages marked for update
[ec2-user@ip-172-31-92-68 ~]$ sudo yum -y install jenkins
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Resolving Dependencies
--> Running transaction check
--> Package jenkins.noarch 0:2.401.2-1.1 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package           Arch      Version       Repository      Size
=====
Installing:
jenkins          noarch   2.401.2-1.1   jenkins        94 M

Transaction Summary
=====
Install 1 Package

Cloud 24°C Cloudy Search ENG IN 10:38 26-07-2023

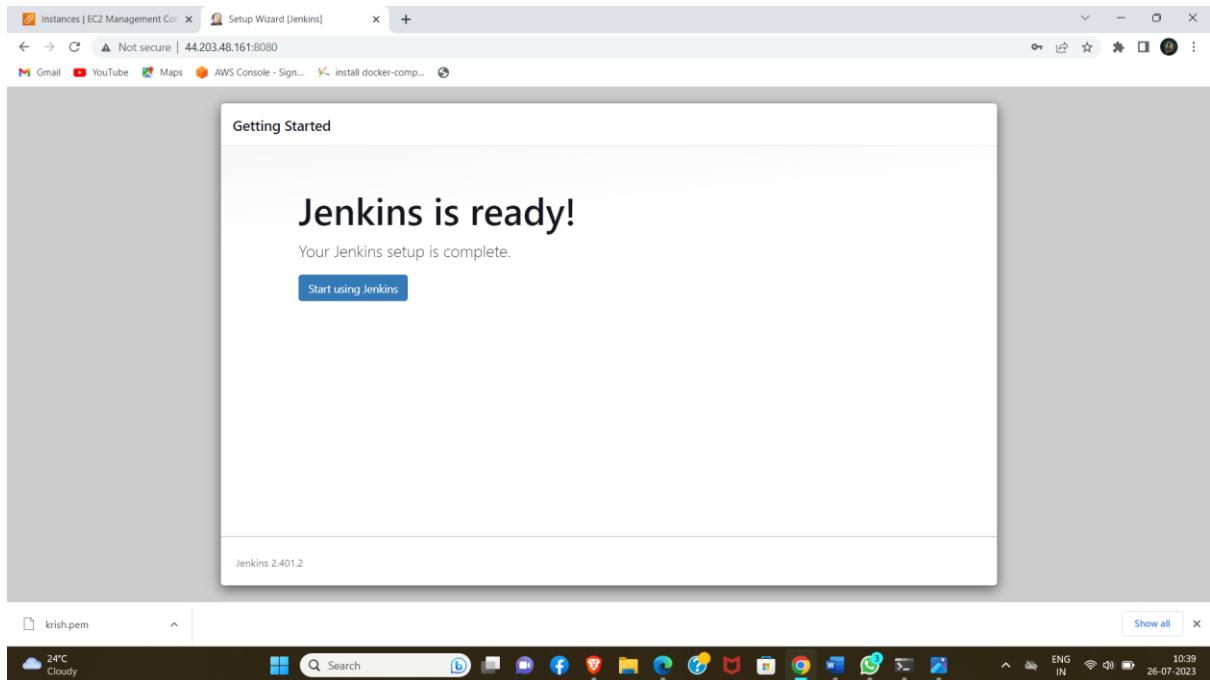
```

```

Windows PowerShell [ec2-user@ip-172-31-92-68 ~] $ sudo yum install jenkins
Installed size: 94 M
Downloading packages:
jenkins-2.401.2-1.1.noarch.rpm
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : jenkins-2.401.2-1.1.noarch
  Verifying   : jenkins-2.401.2-1.1.noarch
Installed:
  jenkins.noarch 0:2.401.2-1.1

Complete!
[ec2-user@ip-172-31-92-68 ~]$ sudo systemctl start jenkins
^C
[ec2-user@ip-172-31-92-68 ~]$ sudo systemctl enable jenkins
Created symlink from /etc/systemd/system/multi-user.target.wants/jenkins.service to /usr/lib/systemd/system/jenkins.service.
[ec2-user@ip-172-31-92-68 ~]$ sudo 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 Wed 2023-07-26 05:06:53 UTC; 6s ago
      Main PID: 4474 (java)
     CGroup: /system.slice/jenkins.service
             └─4474 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=%C/jenkins/war --httpPort=8080

Jul 26 05:06:38 ip-172-31-92-68.ec2.internal jenkins[4474]: 440c234e820149f1a6cccd793ad400e44
Jul 26 05:06:38 ip-172-31-92-68.ec2.internal jenkins[4474]: This may also be found at: /var/lib/jenkins/secrets/initialAdminPassword
Jul 26 05:06:38 ip-172-31-92-68.ec2.internal jenkins[4474]: ****
Jul 26 05:06:38 ip-172-31-92-68.ec2.internal jenkins[4474]: ****
Jul 26 05:06:38 ip-172-31-92-68.ec2.internal jenkins[4474]: ****
Jul 26 05:06:53 ip-172-31-92-68.ec2.internal jenkins[4474]: 2023-07-26 05:06:53.195+0000 [id=33] INFO jenkins.InitReactorRunner$1@on...ization
Jul 26 05:06:53 ip-172-31-92-68.ec2.internal jenkins[4474]: 2023-07-26 05:06:53.223+0000 [id=24] INFO hudson.Lifecycle.Lifecycle#onR...running
Jul 26 05:06:53 ip-172-31-92-68.ec2.internal systemd[1]: Started Jenkins Continuous Integration Server.
Jul 26 05:06:53 ip-172-31-92-68.ec2.internal jenkins[4474]: 2023-07-26 05:06:53.382+0000 [id=49] INFO h.m.DownloadService$Downloadab...staller
Jul 26 05:06:53 ip-172-31-92-68.ec2.internal jenkins[4474]: 2023-07-26 05:06:53.383+0000 [id=49] INFO hudson.util.Retrier#start: Per...empt #1
Hint: Some lines were ellipsized, use -l to show in full.
[ec2-user@ip-172-31-92-68 ~]$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword
440c234e820149f1a6cccd793ad400e44
[ec2-user@ip-172-31-92-68 ~]$ |
```



4. Give ssh permissions in master using below commands

Configure Jenkins Master Node:

Copy the slave node's public key to master node's known_hosts file.

```
sudo mkdir -p /var/lib/jenkins/.ssh
```

```
cd /var/lib/jenkins/.ssh
```

```
cd ..
```

```
sudo chmod 777 .ssh
```

```
cd .ssh
```

```
sudo ssh-keyscan -H SLAVE_NODE_PRIVATE_IP  
>>/var/lib/jenkins/.ssh/known_hosts
```

```
sudo chown jenkins:jenkins known_hosts
```

```
sudo chmod 700 known_hosts
```

```
[ec2-user@master .ssh]$ cd  
[ec2-user@master ~]$ sudo mkdir -p /var/lib/jenkins/.ssh  
[ec2-user@master ~]$ cd /var/lib/jenkins/.ssh  
[ec2-user@master .ssh]$ sudo ssh-keyscan -H 10.0.0.138>>/var/lib/jenkins/.ssh/known_hosts  
-bash: /var/lib/jenkins/.ssh/known_hosts: Permission denied  
[ec2-user@master .ssh]$ cd ..  
[ec2-user@master jenkins]$ sudo chmod 777 .ssh  
[ec2-user@master .ssh]$ sudo ssh-keyscan -H 10.0.0.138 >>/var/lib/jenkins/.ssh/known_hosts  
# 10.0.0.138:22 SSH-2.0-OpenSSH_7.4  
# 10.0.0.138:22 SSH-2.0-OpenSSH_7.4  
# 10.0.0.138:22 SSH-2.0-OpenSSH_7.4  
[ec2-user@master .ssh]$ sudo chown jenkins:jenkins known_hosts  
[ec2-user@master .ssh]$ sudo chmod 700 known_hosts  
[ec2-user@master .ssh]$ pwd  
/var/lib/jenkins/.ssh
```

5.give ssh permissions in slave to use below commands

Configure Jenkins Slave Node:

Create user, ssh keys and copy it to authorized_keys.

```
sudo useradd jenkins-slave1
```

```
sudo passwd jenkins-slave1
```

```
sudo su - jenkins-slave1
```

```
ssh-keygen -t rsa -N "" -f /home/jenkins-  
slave1/.ssh/id_rsa
```

```
cd .ssh
```

```
cat id_rsa.pub > authorized_keys
```

```
chmod 700 authorized_keys
```

```
[slave@slave .ssh]$ cd
[slave@slave ~]$ ssh-keygen -t rsa -N "" -f /home/slave/.ssh/id_rsa
Generating public/private rsa key pair.
/home/slave/.ssh/id_rsa already exists.
Overwrite (y/n)? y
Your identification has been saved in /home/slave/.ssh/id_rsa.
Your public key has been saved in /home/slave/.ssh/id_rsa.pub.
The key fingerprint is:
SHA256:+ZyixLJYeVTr7xuTS2RAZLjtD2ViLf4FvN3hVwk0yN8 slave@slave
The key's randomart image is:
+---[RSA 2048]---+
|   o+...o+.. |
| .o.ooo.o. |
| +o+ .+o.o |
| ..o++ ..oEo |
| ..Soo. . . |
| + .o= o. |
| + + ooO |
| o = . +.+
| . . . = |
+----[SHA256]----+
[slave@slave ~]$ cd .ssh
[slave@slave .ssh]$ ls
id_rsa id_rsa.pub
[slave@slave .ssh]$ cat id_rsa.pub > authorized_keys
[slave@slave .ssh]$ chmod 700 authorized_keys
Cloudy 26°C Search ENG IN 13:37 26-07-2023
```

. and install java in slave mishene

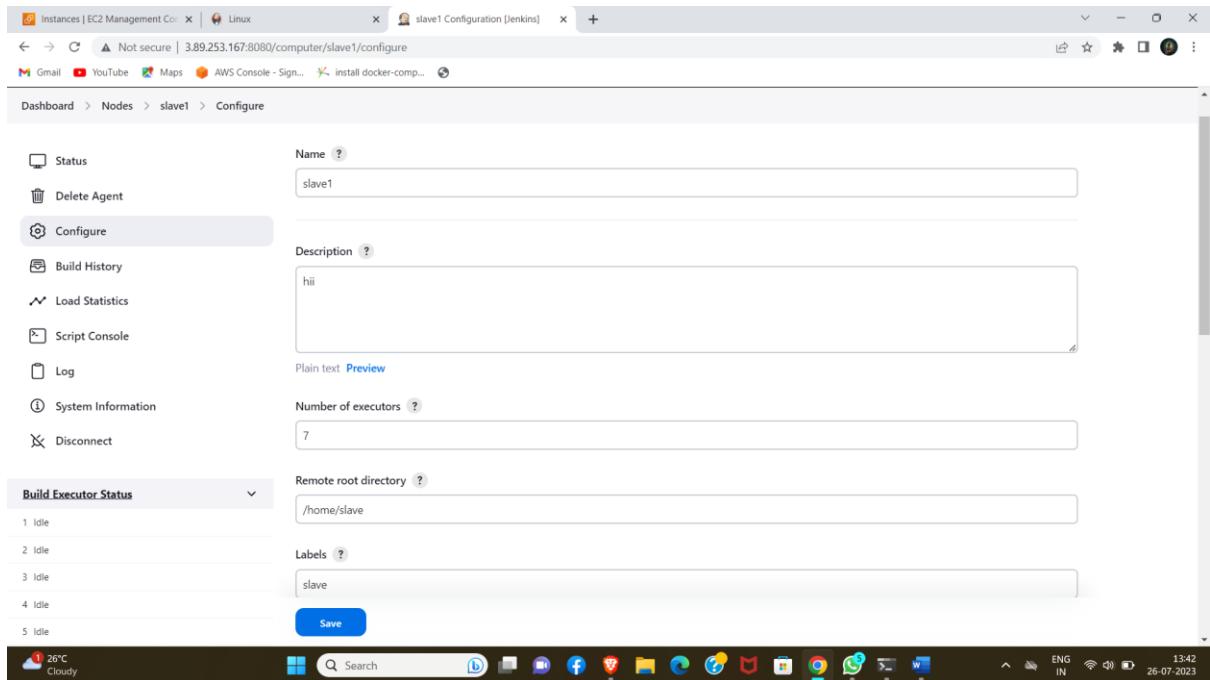
6. Goto Jenkins and click on mansge Jenkins & click nodes and add node connect master and slave in Jenkins.

The screenshot shows the Jenkins Manage Jenkins dashboard. In the top right corner, there is a message: "Building on the built-in node can be a security issue. You should set the number of executors on the built-in node to 0. See [the documentation](#)". Below this, the "System Configuration" section is visible, featuring four main categories: "System" (Configure global settings and paths), "Tools" (Configure tools, their locations and automatic installers), "Clouds" (Add, remove, and configure cloud instances to provision agents on-demand), and "Plugins" (Add, remove, disable or enable plugins that can extend the functionality of Jenkins). On the left side, there are sections for "Build Queue" (No builds in the queue) and "Build Executor Status" (Built-In Node, 1 idle). The bottom of the screen shows a Windows taskbar with various icons and system status information.

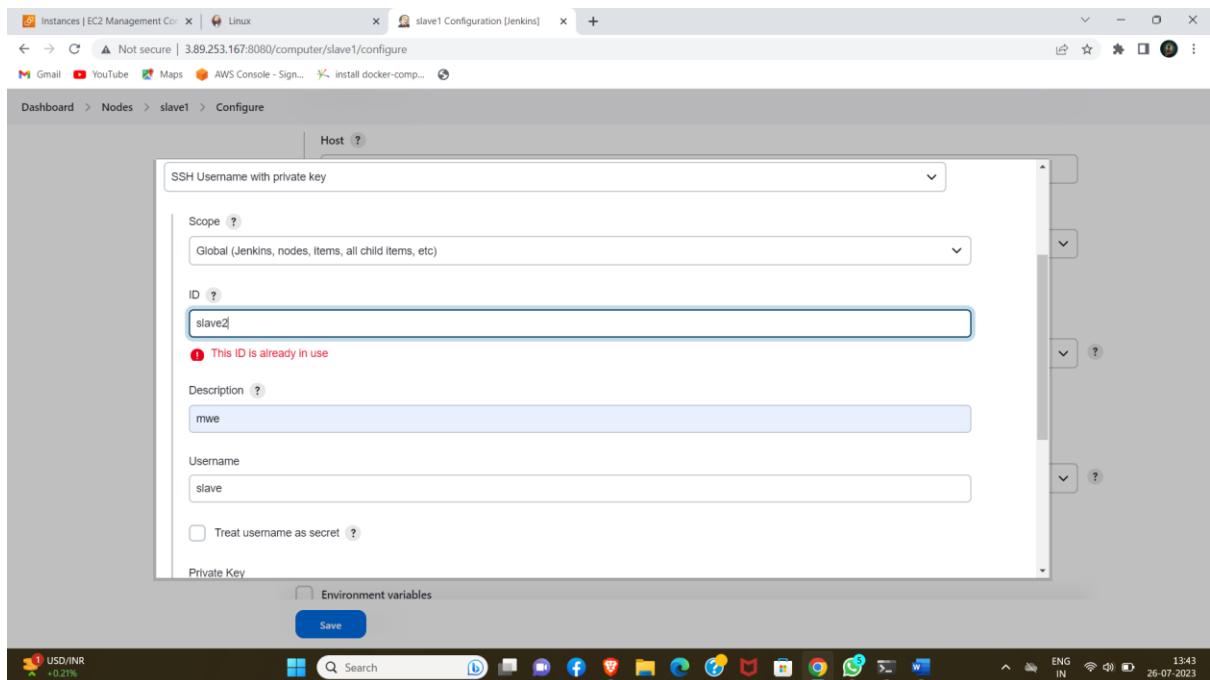
Click on new node

The screenshot shows the "New node" configuration page. The "Node name" field is empty. Under the "Type" section, two options are available: "Permanent Agent" (selected) and "Copy Existing Node". A "Create" button is located at the bottom of the form. The bottom of the screen shows a Windows taskbar with various icons and system status information.

Add the related details



Add credentials



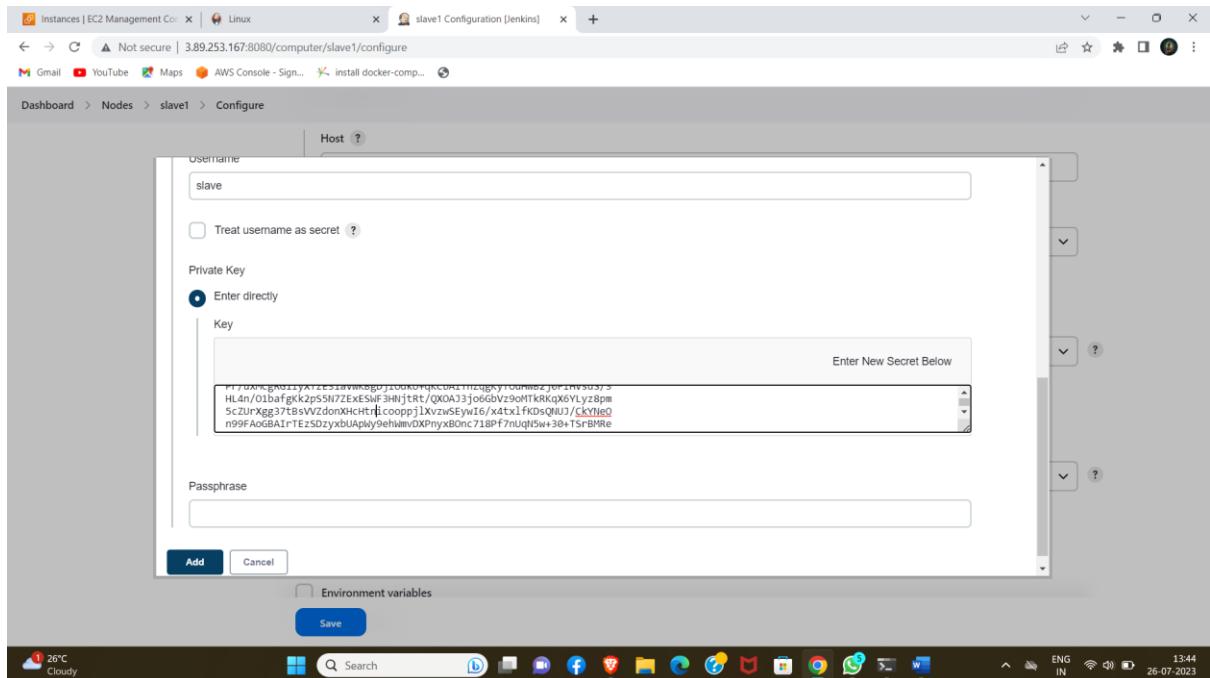
Copy rsa secret key

```

[slave@slave ~]$ pwd
/home/slave
[slave@slave ~]$ cd .ssh
[slave@slave .ssh]$ sudo cat id_rsa
-----BEGIN RSA PRIVATE KEY-----
MIIEowIKAQEAx8XnImJLNske+d76xSaELh8jqKfmDkpVo18Guj5xyh7wN
bxRfGUGrpDRGbIws5XbZVBR6jBDbAInRzzeUl87y2wAkfdwL0DRpcboI4tb
BumpImLvy5iuY902Lblkq1a1Vpvvngnnh9vIMYHsijajl5a3R+JnReqDsk0ClR
z9Utd0kerLXNuZNATLfaBAPlbjZV3SvRjMfFwsxqo2G56rCdT2qxwxiU5UqvG63
h1J32eRnxitLkQ3M9+bec+/464idnx62HO19JXjeHU8snG9K8cFK/HwLNk7
1$xBhA50RjRg1tRMGFChkuAdx+IQBvhWIDQABoIA8CnK0ntEvpMnkAM
X1YaeTSx12h2FKitgxnFB9P8wnzPL9Y/IMAIcspjcmkTNiNvtbkjdSQwK56XY
Y7PqzDoUT9j2uKABATguEtu0x3foitxjoUnWxm7/bkdkd9CAxHBFj
xptekDuuNSEk2weFeapGLrd5eTOea07xKAWFZ000UlhZal973/+DubrExmiiyoH
Tz3UmTwaw7zF4Mez2lkzlnzCnDJKy6jER5/hCbsy0Ulwern/N6djLD67eSE
f5MoJhEqX1DyjMzVERgYuyny59UDMNvdifdxU6mE7Z2k410GDNxYCEdewIY6
ufA177kCgYEAg6czgvbeAd/7uWq5DUw09PK0JtLTZiuL7He60Q+9FTepwdxkw
h1dPVYebhDZOJ61VEugGBLGxnf9N0KpobuxUXRsLpAFy11/9z1q//bd4X6EQQ6RC
1zfri10/ps/jhsZ7aEqq5+1yWm0NweDv01dITB6aY0Y+ow2sTx3dMCGyEwQZs
BrrhcF12dLbA983UuVcaaaazh3J1+CLTxzS01hEmVBH/FhrVS4fArtsReCVQEeu
k1AUld01NmV6a2aj4H/0nCzuxsZSPAEm5xaICvwFdqAfFkwTfLdje9qgiz01k
tLm9oH1P6RsgC02BkZMbsF9ubR0Bfg1LfPw8C30GyBsVPWejCUoxdysR01b++/V
H9tqeMG1cChwD67K5PhNurZyCu8DyhLzzZEFGT1jRwpP-RQ05QnTCApinx84HKCP
c8jINg/TLYs4171vUAVTxNQ0sEsE2KG8hBEjWBL03EFC562z11PMwQfj30t+
Ps/uxMcgrGIyXtzE31aVwKbgDjIOdUqKcbALThZggKyf0uhwB2j0fIRHvsdS/3
HL4n/01bafgKh2p5N72ExESWf3HNjtRt/XOA03jog6bvz9oMTRRqX6LYz8pm
5cZUrXgg37tBsVVZdonXHcHtniccooppj1xzwSEyI6/x4txlFKdsQNUj/CkyNe0
n99FAogBAIrTEz5DzyxbUpwy9eNwDXPnyxB0nc718PF7nUgNsW+30+TsrMRe
28K7jbWw+LpqM7s/oamfjFB01V3Lgbxaw4lUhUhOzsmlIEm0Tr2/TxdCy6qUCb
juUh94LVNUw2pWkMkQqzbs7/z/5rvJTF/HXBrazoFGAqgeNDHGy
-----END RSA PRIVATE KEY-----
[slave@slave .ssh]$ cd
[slave@slave ~]$ sudo yum -y install java
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core
Resolving Dependencies
--> Running transaction check
--> Package java-17-amazon-corretto.x86_64 1:17.0.8+7-1.amzn2.1 will be installed
--> Processing Dependency: java-17-amazon-corretto-headless(x86-64) = 1:17.0.8+7-1.amzn2.1 for package: 1:java-17-amazon-corretto-17.0.8+7-1.amzn2.1.x86_64
--> Processing Dependency: giflib for package: 1:java-17-amazon-corretto-17.0.8+7-1.amzn2.1.x86_64

```

Phaste to credentials



And click on add

7.check the log

```

~/.etc/bashrc
Checking Java version in the PATH
openjdk version "17.0.8" 2023-07-18 LTS
OpenJDK Runtime Environment Corretto-17.0.8.7.1 (build 17.0.8+7-LTS)
OpenJDK 64-Bit Server VM Corretto-17.0.8.7.1 (build 17.0.8+7-LTS, mixed mode, sharing)
[07/26/23 08:03:31] [SSH] Checking java version of /home/slave/jdk/bin/java
Couldn't figure out the Java version of /home/slave/jdk/bin/java
bash: /home/slave/jdk/bin/java: No such file or directory

[07/26/23 08:03:31] [SSH] Checking java version of java
[07/26/23 08:03:31] [SSH] java -version returned 17.0.8.
[07/26/23 08:03:31] [SSH] Starting sftp client.
[07/26/23 08:03:31] [SSH] Copying latest remoting.jar...
[07/26/23 08:03:31] [SSH] Copied 1,371,113 bytes.
Expanded the channel window size to 4MB
[07/26/23 08:03:31] [SSH] Starting agent process: cd "/home/slave" && java -jar remoting.jar -workDir /home/slave -jar-cache /home/slave/remoting/jarCache
Jul 26, 2023 8:03:31 AM org.jenkinsci.remoting.engine.WorkDirManager initializeWorkDir
INFO: Using /home/slave/remoting as a remoting work directory
Jul 26, 2023 8:03:31 AM org.jenkinsci.remoting.engine.WorkDirManager setupLogging
INFO: Both error and output logs will be printed to /home/slave/remoting
<===[JENKINS REMOTING CAPACITY]==>channel started
Remoting version: 3131.vf2b_b_798b_ce99
Launcher: SSHLauncher
Communication Protocol: Standard in/out
This is a Unix agent
Agent successfully connected and online

```



And to see output

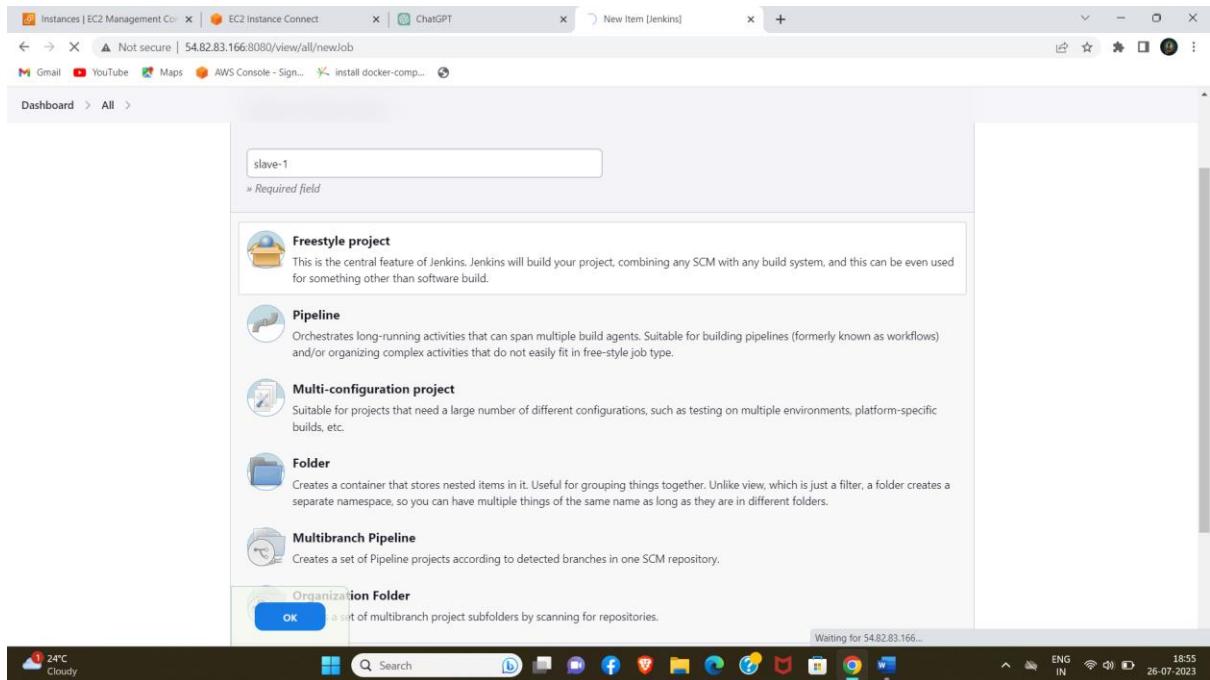
S	Name	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
	Built-In Node	Linux (amd64)	In sync	13.66 GB	0 B	13.66 GB	0ms
	slave1	Linux (amd64)	In sync	6.05 GB	0 B	6.05 GB	25ms
	Data obtained	16 min	16 min	16 min	16 min	16 min	16 min

Build Executor Status

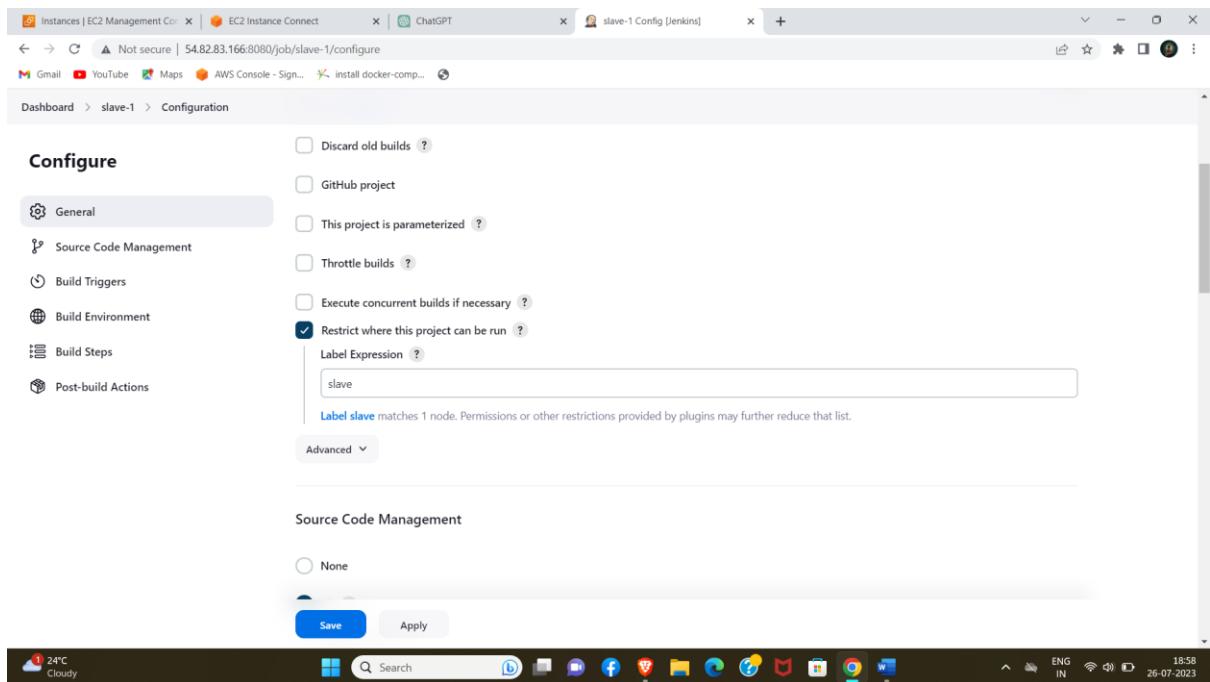
- Built-In Node
 - 1 Idle
 - 2 Idle
- slave1
 - 1 Idle
 - 2 Idle
 - 3 Idle
 - 4 Idle

MODULE – 2 :

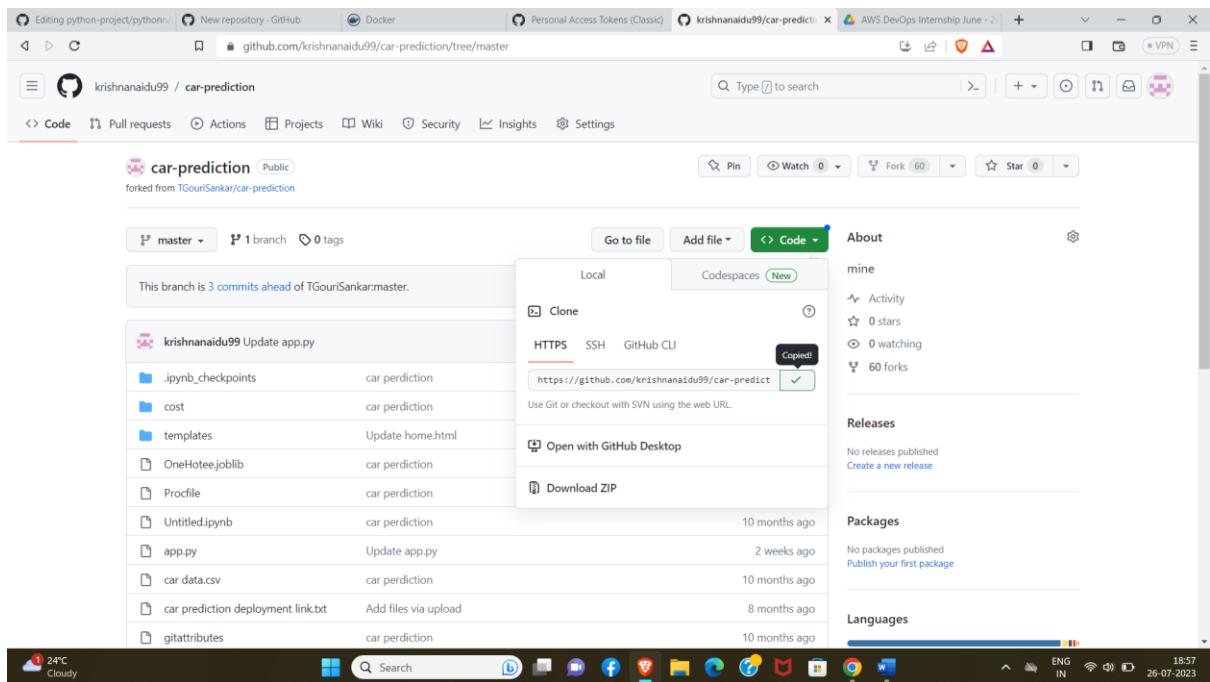
1.create a free style project



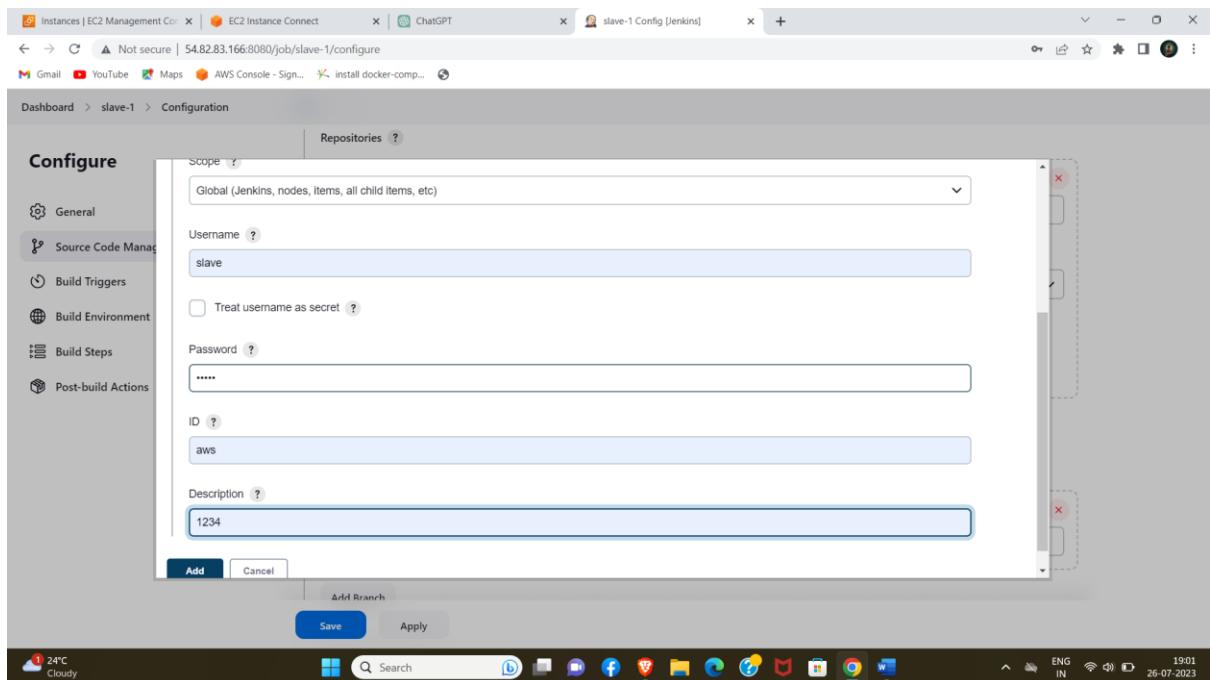
2. add the slave and git repo and credentials

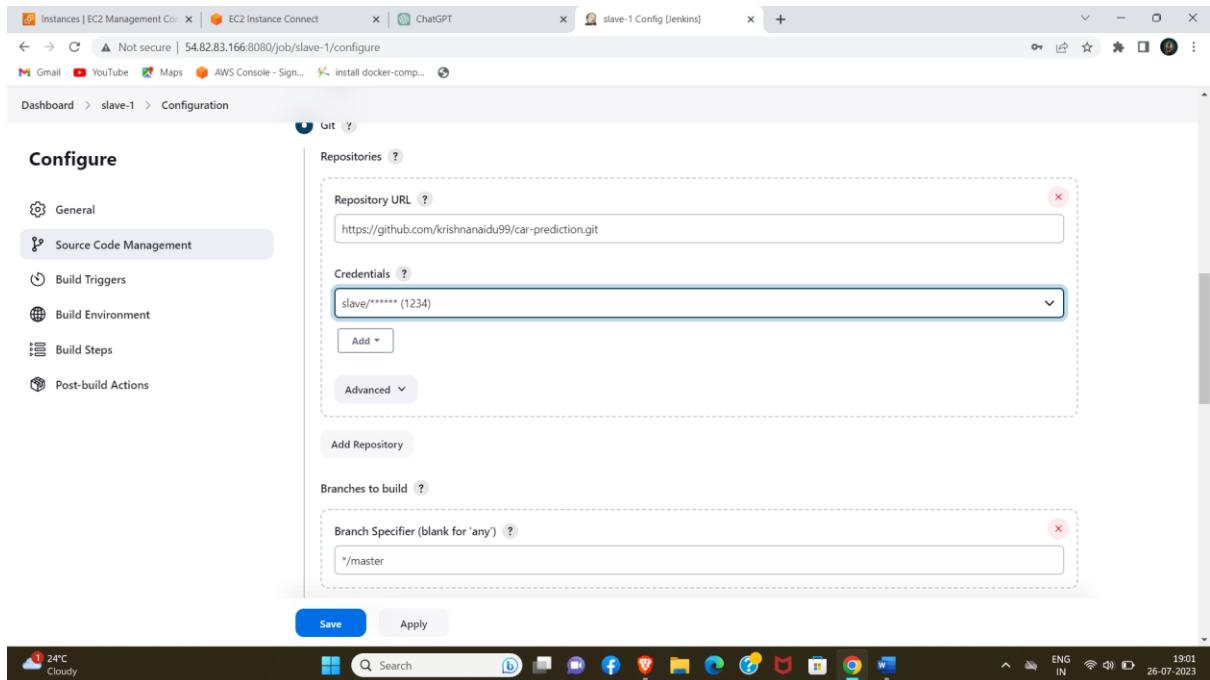


Copy the github ssh client

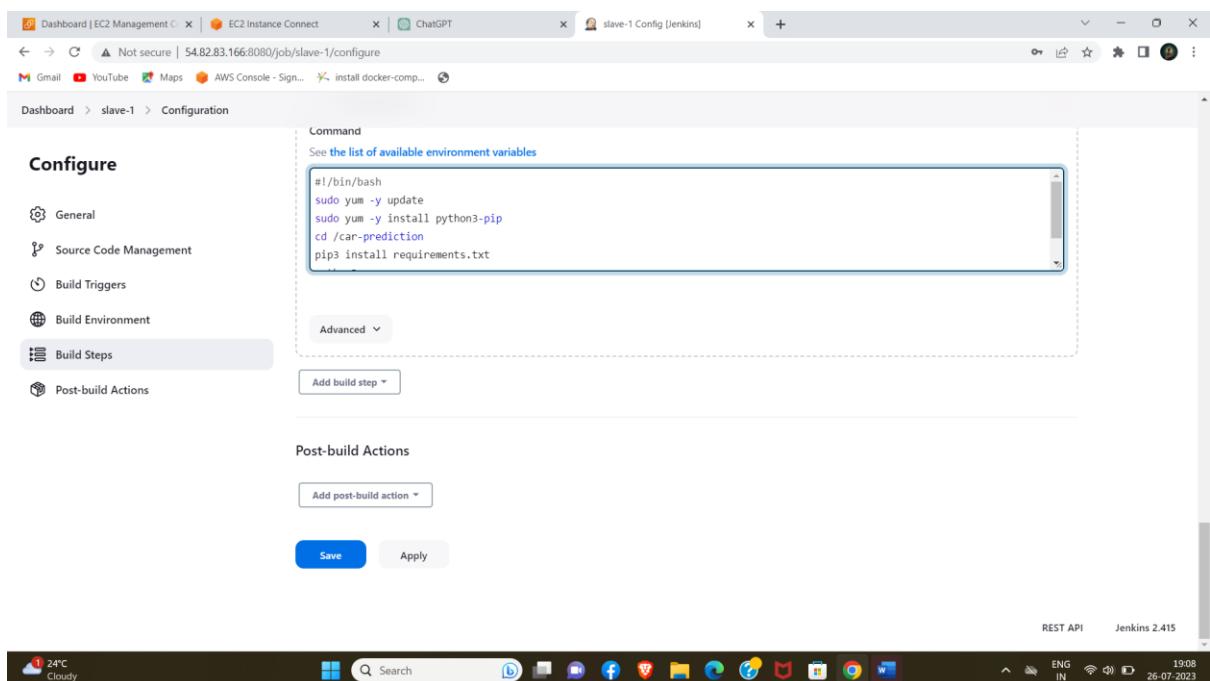


Add the git repo and credentials

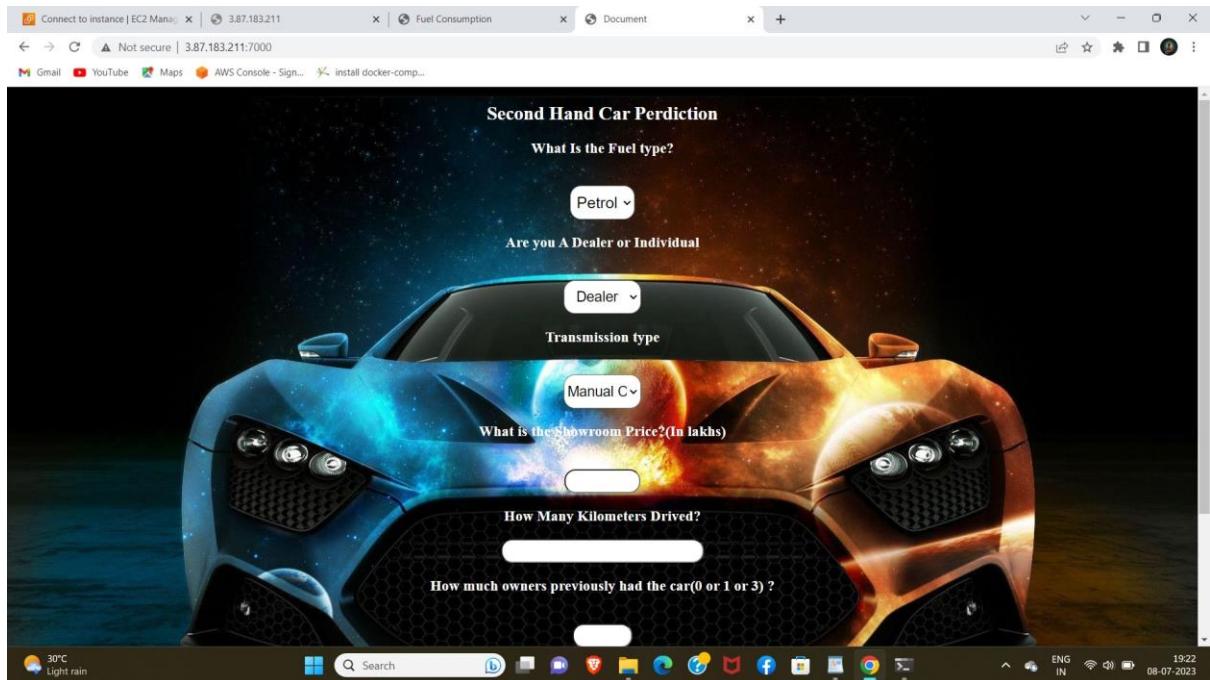




3. Give the commands in execute shell



4. build the job and check output and deploy the application



MODULE – 3 :

PART - 2

DEPLOY A JAVA APPLICATION ON A TOMCAT SERVER USING MAVEN, JENKINS AND AWS

1.create instance for t2 large and assain port 8080 & 8089 or any.

Launch an instance | EC2 Manager

ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#LaunchInstances:

Gmail YouTube Maps AWS Console - Sign... install docker-comp...

Services Search [Alt+S]

Architecture: 64-bit (x86) AMI ID: ami-021f7978361c18b01 Verified provider

Instance type: t2.large

Key pair (login): grand

Summary: Number of instances: 1 Software Image (AMI): Amazon Linux 2 Kernel 5.10 AMI... Virtual server type (instance type): t2.large Firewall (security group): New security group Storage (volumes): 1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which it's available)

Launch instance

Review commands

CloudShell Feedback Language Search ENG IN 10:04 08-08-2023

Launch an instance | EC2 Manager

ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#LaunchInstances:

Gmail YouTube Maps AWS Console - Sign... install docker-comp...

Services Search [Alt+S]

Security group rule 1 (TCP, 22, 0.0.0.0/0): Type: ssh Protocol: TCP Port range: 22

Source type: Anywhere Description: e.g. SSH for admin desktop

Security group rule 2 (TCP, 8080, 0.0.0.0/0): Type: Custom TCP Protocol: TCP Port range: 8080

Source type: Custom Description: e.g. SSH for admin desktop

Security group rule 3 (TCP, 8089, 0.0.0.0/0): Type: Custom TCP Protocol: TCP Port range: 8089

Summary: Number of instances: 1 Software Image (AMI): Amazon Linux 2 Kernel 5.10 AMI... Virtual server type (instance type): t2.large Firewall (security group): New security group Storage (volumes): 1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which it's available)

Launch instance

Review commands

CloudShell Feedback Language Search ENG IN 10:04 08-08-2023

The screenshot shows the AWS EC2 Management Console. The left sidebar is collapsed, and the main area displays the 'Instances (1/1) info' section. A table lists one instance:

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
TOMCAT	i-0765dce2a81af6e94	Pending	t2.large	-	No alarms	ap-south-1a	-

Below the table, a detailed view for the instance i-0765dce2a81af6e94 (TOMCAT) is shown. The 'Details' tab is selected, displaying information such as Instance ID, Public IPv4 address (13.233.162.52), Private IP4 addresses (10.0.0.130), and Instance state (Pending). Other tabs include Security, Networking, Storage, Status checks, Monitoring, and Tags.

2. Then connect to terminal

```
ec2-user@ip-10-0-0-130:~$ cd Downloads/
gandhi@LAPTOP-8K6J6U2E MINGW64 ~ (main)
$ ssh -i "grand.pem" ec2-user@13.233.162.52
The authenticity of host '13.233.162.52 (13.233.162.52)' can't be established.
ED25519 key fingerprint is SHA256:1azfMeUG8nYxdTRuDuxHLVyyGJHT42VX/STt8y80PMg.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
warning: Permanently added '13.233.162.52' (ED25519) to the list of known hosts.

              _\   _ /  Amazon Linux 2 AMI
             _\ \_ | |_ |

https://aws.amazon.com/amazon-linux-2/
7 package(s) needed for security, out of 8 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-10-0-0-130 ~]$
```

3. then you can install tomcat the tar files are in tomcat web page.

Connect to instance | EC2 Manager Apache Tomcat® - Apache Tomcat 11.0.0-M9

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Binary Distributions

- Core:
 - zip (pgp, sha512)
 - tar.gz (pgp, sha512)
 - Windows zip (Open link in new tab)
 - Windows Ser (Open link in new window)
- Full documentation:
 - tar.gz (pgp, sha512)
- Deployer:
 - zip (pgp, sha512)
 - tar.gz (pgp, sha512)
- Embedded:
 - tar.gz (pgp, sha512)
 - zip (pgp, sha512)

Source Code Distributions

- tar.gz (pgp, sha512)
- zip (pgp, sha512)

ec2-user@ip-10-0-0-130:~

```

Verifying : yaajl-2.0.4-4.amzn2.0.3.x86_64          4/15
Verifying : elfutils-libs-0.176-2.amzn2.0.1.x86_64  5/15
Verifying : python-configobj-4.7.2-7.amzn2.0.1.noarch 6/15
Verifying : openldap-2.4.44-25.amzn2.0.7.x86_64     7/15
Verifying : python3-setuptools-49.1.3-1.amzn2.0.3.noarch 8/15
Verifying : elfutils-libs-0.176-2.amzn2.x86_64       9/15
Verifying : python3-setuptools-49.1.3-1.amzn2.0.2.noarch 10/15
Verifying : elfutils-default-yama-scope-0.176-2.amzn2.noarch 11/15
Verifying : elfutils-libelf-0.176-2.amzn2.x86_64     12/15
Verifying : python-configobj-4.7.2-7.amzn2.noarch    13/15
Verifying : yaajl-2.0.4-4.amzn2.0.2.x86_64         14/15
Verifying : openldap-2.4.44-25.amzn2.0.6.x86_64     15/15

Installed:
  kernel.x86_64 0:5.10.186-179.751.amzn2

Updated:
  elfutils-default-yama-scope.noarch 0:0.176-2.amzn2.0.1
  elfutils-libs.x86_64 0:0.176-2.amzn2.0.1
  python-configobj.noarch 0:4.7.2-7.amzn2.0.1
  yaajl.x86_64 0:2.0.4-4.amzn2.0.3

Complete!
[ec2-user@ip-10-0-0-130 ~]$ wget https://dlcdn.apache.org/tomcat/tomcat-11/v11.0.0-M9/bin/apache-tomcat-11.0.0-M9.tar.gz
--2023-08-08 04:40:39-- https://dlcdn.apache.org/tomcat/tomcat-11/v11.0.0-M9/bin/apache-tomcat-11.0.0-M9.tar.gz
Resolving dlcdn.apache.org (dlcdn.apache.org)... 151.101.2.132, 2a04:4e42::644
Connecting to dlcdn.apache.org (dlcdn.apache.org)|151.101.2.132|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 12058949 (12M) [application/x-gzip]
Saving to: 'apache-tomcat-11.0.0-M9.tar.gz'

100%[=====] 12,058,949  ---.k/s  in 0.09s

2023-08-08 04:40:40 (125 MB/s) - 'apache-tomcat-11.0.0-M9.tar.gz' saved [12058949/12058949]

[ec2-user@ip-10-0-0-130 ~]$ ll
total 11780
-rw-rw-r-- 1 ec2-user ec2-user 12058949 Jul  4 10:55 apache-tomcat-11.0.0-M9.tar.gz
[ec2-user@ip-10-0-0-130 ~]$
```

Search ENG IN 10:10 08-08-2023

Then unzip the tar file using [tar xvzf “ file name like apache-tomcat-11.0.0-mg.tar.gz”]

```
ec2-user@ip-10-0-0-130:~$ total 11780
-rw-rw-r-- 1 ec2-user ec2-user 12058949 Jul  4 10:55 apache-tomcat-11.0.0-M9.tar.gz
[ec2-user@ip-10-0-0-130 ~]$ [ec2-user@ip-10-0-0-130 ~]$ tar xvzf apache-tomcat-11.0.0-M9.tar.gz
apache-tomcat-11.0.0-M9/conf/
apache-tomcat-11.0.0-M9/conf/catalina.properties
apache-tomcat-11.0.0-M9/conf/context.xml
apache-tomcat-11.0.0-M9/conf/jaspic-providers.xml
apache-tomcat-11.0.0-M9/conf/jaspic-providers.xsd
apache-tomcat-11.0.0-M9/conf/logging.properties
apache-tomcat-11.0.0-M9/conf/server.xml
apache-tomcat-11.0.0-M9/conf/tomcat-users.xml
apache-tomcat-11.0.0-M9/conf/tomcat-users.xsd
apache-tomcat-11.0.0-M9/conf/web.xml
apache-tomcat-11.0.0-M9/bin/
apache-tomcat-11.0.0-M9/lib/
apache-tomcat-11.0.0-M9/logs/
apache-tomcat-11.0.0-M9/temp/
apache-tomcat-11.0.0-M9/webapps/
apache-tomcat-11.0.0-M9/webapps/ROOT/
apache-tomcat-11.0.0-M9/webapps/ROOT/WEB-INF/
apache-tomcat-11.0.0-M9/webapps/docs/
apache-tomcat-11.0.0-M9/webapps/docs/META-INF/
apache-tomcat-11.0.0-M9/webapps/docs/WEB-INF/
apache-tomcat-11.0.0-M9/webapps/docs/WEB-INF/jsp/
apache-tomcat-11.0.0-M9/webapps/docs/annotationapi/
apache-tomcat-11.0.0-M9/webapps/docs/api/
apache-tomcat-11.0.0-M9/webapps/docs/appdev/
apache-tomcat-11.0.0-M9/webapps/docs/appdev/sample/
apache-tomcat-11.0.0-M9/webapps/docs/appdev/sample/docs/
apache-tomcat-11.0.0-M9/webapps/docs/appdev/sample/src/
apache-tomcat-11.0.0-M9/webapps/docs/appdev/sample/src/mypackage/
apache-tomcat-11.0.0-M9/webapps/docs/appdev/sample/web/
apache-tomcat-11.0.0-M9/webapps/docs/appdev/sample/web/WEB-INF/
apache-tomcat-11.0.0-M9/webapps/docs/appdev/sample/web/images/
apache-tomcat-11.0.0-M9/webapps/docs/architecture/
apache-tomcat-11.0.0-M9/webapps/docs/architecture/requestProcess/
apache-tomcat-11.0.0-M9/webapps/docs/architecture/startup/
apache-tomcat-11.0.0-M9/webapps/docs/config/
```

Go into the file and go into the bin and start engine using ./startup.sh.

```
apache-tomcat-11.0.0-M9/bin/tool-wrapper.sh
apache-tomcat-11.0.0-M9/bin/version.sh
[ec2-user@ip-10-0-0-130 ~]$ ls
apache-tomcat-11.0.0-M9 apache-tomcat-11.0.0-M9.tar.gz
[ec2-user@ip-10-0-0-130 ~]$ cd apache-tomcat-11.0.0-M9/
[ec2-user@ip-10-0-0-130 apache-tomcat-11.0.0-M9]$ ls
bin BUILDING.txt conf CONTRIBUTING.md lib LICENSE logs NOTICE README.md RELEASE-NOTES RUNNING.txt temp webapps work
[ec2-user@ip-10-0-0-130 apache-tomcat-11.0.0-M9]$ |
```

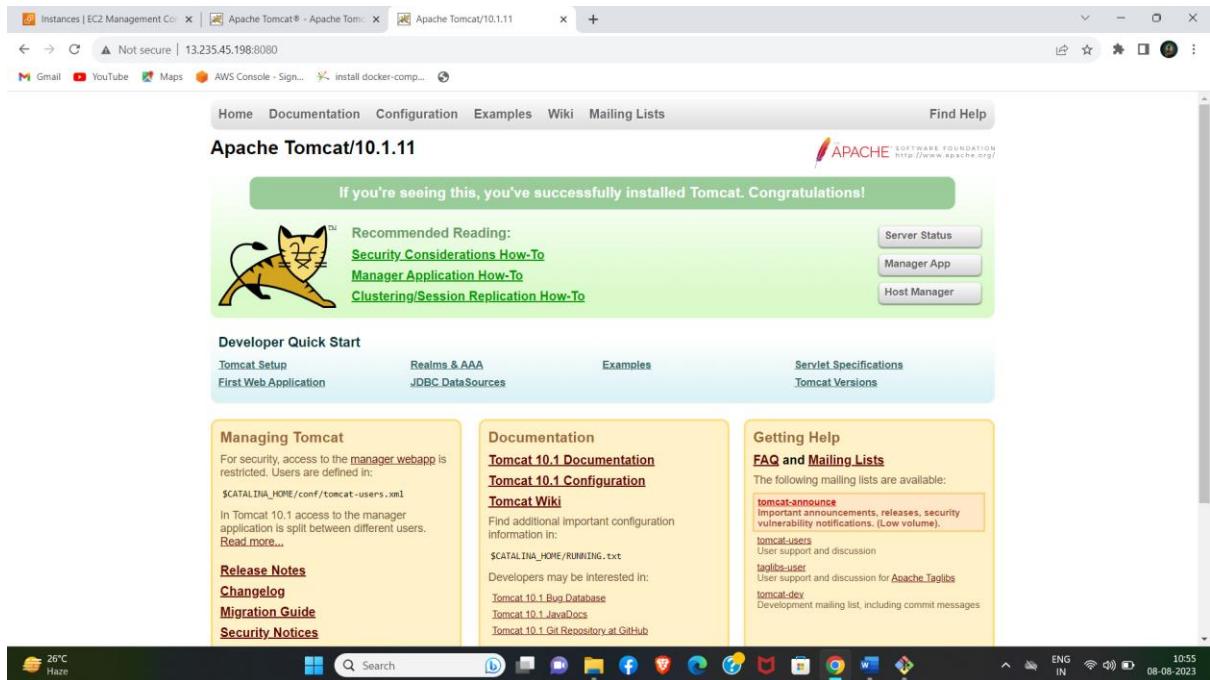
```
[ec2-user@ip-10-0-0-130 apache-tomcat-11.0.0-M9]$ ls
bin BUILDING.txt conf CONTRIBUTING.md lib LICENSE logs NOTICE README.md RELEASE-NOTES RUNNING.txt temp webapps work
[ec2-user@ip-10-0-0-130 apache-tomcat-11.0.0-M9]$ cd bin/
[ec2-user@ip-10-0-0-130 bin]$ ls
bootstrap.jar ciphers.sh daemon.sh migrate.bat shutdown.sh tool-wrapper.bat
catalina.bat commons-daemon.jar digest.bat migrate.sh startup.bat tool-wrapper.sh
catalina.sh commons-daemon-native.tar.gz digest.sh setclasspath.bat startup.sh version.bat
catalina-tasks.xml configtest.bat makebase.bat setclasspath.sh tomcat-juli.jar version.sh
ciphers.bat configtest.sh makebase.sh shutdown.bat tomcat-native.tar.gz
[ec2-user@ip-10-0-0-130 bin]$ ./startup.sh
Neither the JAVA_HOME nor the JRE_HOME environment variable is defined
At least one of these environment variable is needed to run this program
[ec2-user@ip-10-0-0-130 bin]$ |
```

They ask java and then install java and start the engine.

```
ec2-user@ip-10-0-0-130:~/apache-tomcat-11.0.0-M9/bin
At least one of these environment variable is needed to run this program
[ec2-user@ip-10-0-0-130 bin]$ sudo yum -y install java
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core
Resolving Dependencies
--> Running transaction check
--> Package java-17-amazon-corretto.x86_64 1:17.0.8+7-1.amzn2.1 will be installed
--> Processing Dependency: java-17-amazon-corretto-headless(x86-64) = 1:17.0.8+7-1.amzn2.1 for package: 1:java-17-amazon-corretto-17.0.8+7-1.amzn2.1.x86_64
--> Processing Dependency: giflib for package: 1:java-17-amazon-corretto-17.0.8+7-1.amzn2.1.x86_64
--> Processing Dependency: libxtst for package: 1:java-17-amazon-corretto-17.0.8+7-1.amzn2.1.x86_64
--> Processing Dependency: libxrandr for package: 1:java-17-amazon-corretto-17.0.8+7-1.amzn2.1.x86_64
--> Processing Dependency: libxrender for package: 1:java-17-amazon-corretto-17.0.8+7-1.amzn2.1.x86_64
--> Processing Dependency: libxt for package: 1:java-17-amazon-corretto-17.0.8+7-1.amzn2.1.x86_64
--> Processing Dependency: libxiinerama for package: 1:java-17-amazon-corretto-17.0.8+7-1.amzn2.1.x86_64
--> Processing Dependency: libXi for package: 1:java-17-amazon-corretto-17.0.8+7-1.amzn2.1.x86_64
--> Processing Dependency: libX11 for package: 1:java-17-amazon-corretto-17.0.8+7-1.amzn2.1.x86_64
--> Running transaction check
--> Package giflib.x86_64 0:4.1.6-9.amzn2.0.2 will be installed
--> Processing Dependency: libSM.so.6()(64bit) for package: giflib-4.1.6-9.amzn2.0.2.x86_64
--> Processing Dependency: libICE.so.6()(64bit) for package: giflib-4.1.6-9.amzn2.0.2.x86_64
--> Package java-17-amazon-corretto-headless.x86_64 1:17.0.8+7-1.amzn2.1 will be installed
--> Processing Dependency: log4j-cve-2021-44228-cve-mitigations for package: 1:java-17-amazon-corretto-headless-17.0.8+7-1.amzn2.1.x86_64
--> Processing Dependency: alsa-lib for package: 1:java-17-amazon-corretto-headless-17.0.8+7-1.amzn2.1.x86_64
--> Processing Dependency: dejavu-sans-mono-fonts for package: 1:java-17-amazon-corretto-headless-17.0.8+7-1.amzn2.1.x86_64
--> Processing Dependency: dejavu-serif-fonts for package: 1:java-17-amazon-corretto-headless-17.0.8+7-1.amzn2.1.x86_64
--> Processing Dependency: dejavu-sans-fonts for package: 1:java-17-amazon-corretto-headless-17.0.8+7-1.amzn2.1.x86_64
--> Processing Dependency: fontconfig for package: 1:java-17-amazon-corretto-headless-17.0.8+7-1.amzn2.1.x86_64
--> Processing Dependency: jpackage-utils for package: 1:java-17-amazon-corretto-headless-17.0.8+7-1.amzn2.1.x86_64
--> Package libX11.x86_64 0:1.6.7-3.amzn2.0.3 will be installed
--> Processing Dependency: libX11-common >= 1.6.7-3.amzn2.0.3 for package: libX11-1.6.7-3.amzn2.0.3.x86_64
--> Processing Dependency: libxcb.so.1()(64bit) for package: libX11-1.6.7-3.amzn2.0.3.x86_64
--> Package libXi.x86_64 0:1.7.9-1.amzn2.0.2 will be installed
--> Processing Dependency: libXext.so.6()(64bit) for package: libxi-1.7.9-1.amzn2.0.2.x86_64
--> Package libXiinerama.x86_64 0:1.1.3-2.1.amzn2.0.2 will be installed
--> Package libXrender.x86_64 0:0.9.10-1.amzn2.0.2 will be installed
--> Package libxt.x86_64 0:1.1.5-3.amzn2.0.2 will be installed
```

```
Complete!
[ec2-user@ip-10-0-0-130 bin]$ ./startup.sh
Using CATALINA_BASE:   /home/ec2-user/apache-tomcat-11.0.0-M9
Using CATALINA_HOME:   /home/ec2-user/apache-tomcat-11.0.0-M9
Using CATALINA_TMPDIR: /home/ec2-user/apache-tomcat-11.0.0-M9/temp
Using JRE_HOME:        /usr
Using CLASSPATH:       /home/ec2-user/apache-tomcat-11.0.0-M9/bin/bootstrap.jar:/home/ec2-user/apache-tomcat-11.0.0-M9/bin/tomcat-juli.jar
Using CATALINA_OPTS:
Tomcat started.
[ec2-user@ip-10-0-0-130 bin]$ |
```

Then browse the public ip assain port 8080.



4. change the port in server.xml and give the permissions in conf and web apps.

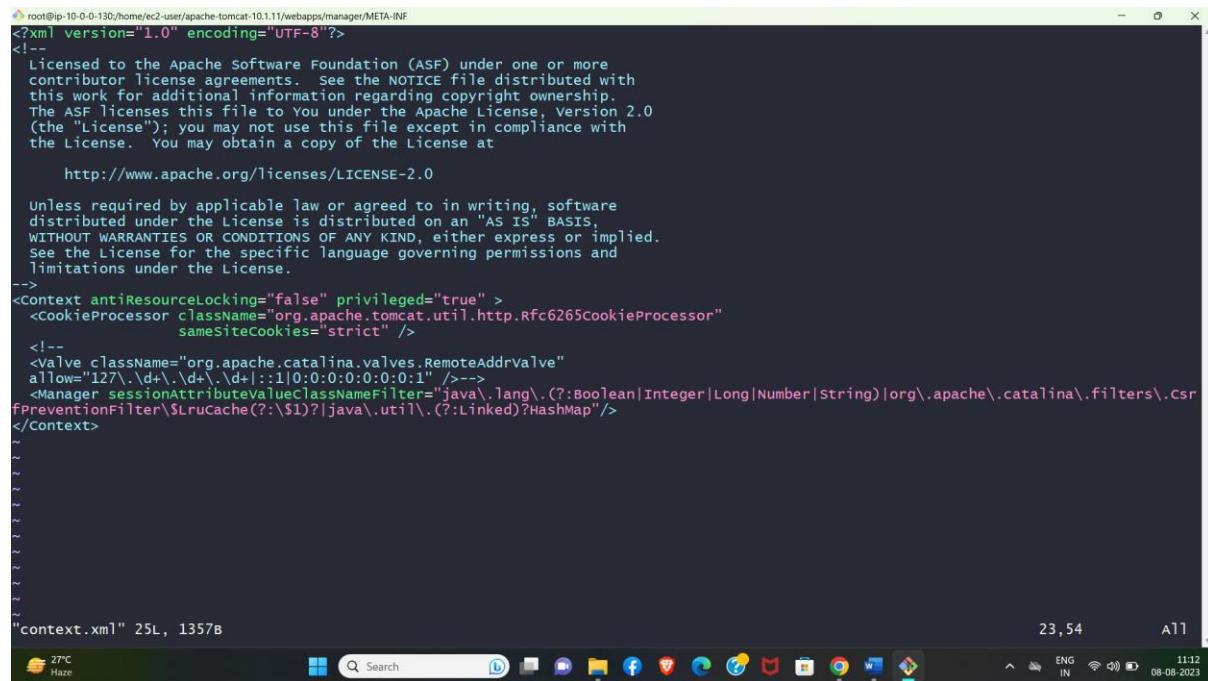
A. web apps and open tomcat-user.xml and modify

```
root@ip-10-0-0-130:/home/ec2-user/apache-tomcat-10.1.11/conf
version="1.0">
<!--
By default, no user is included in the "manager-gui" role required
to operate the "/manager/html" web application. If you wish to use this app,
you must define such a user - the username and password are arbitrary.

Built-in Tomcat manager roles:
- manager-gui - allows access to the HTML GUI and the status pages
- manager-script - allows access to the HTTP API and the status pages
- manager-jmx - allows access to the JMX proxy and the status pages
- manager-status - allows access to the status pages only

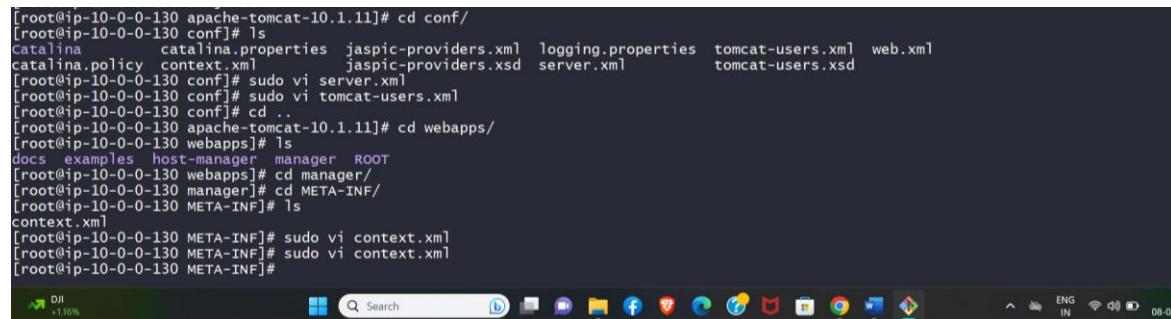
The users below are wrapped in a comment and are therefore ignored. If you
wish to configure one or more of these users for use with the manager web
application, do not forget to remove the <!... > that surrounds them. You
will also need to set the passwords to something appropriate.
-->
<!--
<user username="admin" password="" roles="manager-gui"/>
<user username="robot" password="" roles="manager-script"/>
-->
<!--
The sample user and role entries below are intended for use with the
examples web application. They are wrapped in a comment and thus are ignored
when reading this file. If you wish to configure these users for use with the
examples web application, do not forget to remove the <!... > that surrounds
them. You will also need to set the passwords to something appropriate.
-->
<!--
<role rolename="tomcat"/>
<role rolename="role1"/>
<user username="tomcat" password="" roles="tomcat"/>
<user username="both" password="" roles="tomcat,role1"/>
<user username="role1" password="" roles="role1"/>
-->
<role rolename="manager-gui"/>
<user username="tomcat" password="s3cret" roles="manager-gui,manager-script,manager-jmx,manager-status"/>
</tomcat-users>
-- INSERT --
57,103          Bot
11:06
08-06-2023
```

Go to conf and /manager/Meta-DATA /open context.xml



```
root@ip-10-0-0-130:/home/ec2-user/apache-tomcat-10.1.11/webapps/manager/META-INF
<?xml version="1.0" encoding="UTF-8"?>
<!--
Licensed to the Apache Software Foundation (ASF) under one or more
contributor license agreements. See the NOTICE file distributed with
this work for additional information regarding copyright ownership.
The ASF licenses this file to you under the Apache License, Version 2.0
(the "License"); you may not use this file except in compliance with
the License. You may obtain a copy of the License at
http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
-->
<Context antiResourceLocking="false" privileged="true" >
<CookieProcessor className="org.apache.tomcat.util.http.Rfc6265CookieProcessor"
    sameSiteCookies="strict" />
<!--
<Valve className="org.apache.catalina.valves.RemoteAddrValve"
allow="127\.\d+\.\d+\.\d+|0\.:1|0\.:0\.:0\.:1" /-->
<Manager sessionAttributeValueClassNameFilter="java\.lang\.(?:Boolean|Integer|Long|Number|String)|org\.apache\.catalina\.filters\.CSRfPreventionFilter\$LRuCache(?:\$1)?|java\.util\.(?:Linked)?HashMap"/>
</Context>
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
context.xml" 25L, 1357B
23,54          All
27°C Haze      Search  ENG IN  11:12  08-08-2023
```



```
[root@ip-10-0-0-130 apache-tomcat-10.1.11]# cd conf/
[root@ip-10-0-0-130 conf]# ls
Catalina      catalina.properties  jaspic-providers.xml  logging.properties  tomcat-users.xml  web.xml
catalina.policy  context.xml       jaspic-providers.xsd  server.xml          tomcat-users.xsd
[root@ip-10-0-0-130 conf]# sudo vi server.xml
[root@ip-10-0-0-130 conf]# sudo vi tomcat-users.xml
[root@ip-10-0-0-130 conf]# cd ..
[root@ip-10-0-0-130 apache-tomcat-10.1.11]# cd webapps/
[root@ip-10-0-0-130 webapps]# ls
docs  examples  host-manager  manager  ROOT
[root@ip-10-0-0-130 webapps]# cd manager/
[root@ip-10-0-0-130 manager]# cd META-INF/
[root@ip-10-0-0-130 META-INF]# ls
context.xml
[root@ip-10-0-0-130 META-INF]# sudo vi context.xml
[root@ip-10-0-0-130 META-INF]# sudo vi context.xml
[root@ip-10-0-0-130 META-INF]#
DJI +1.16%      Search  Baidu  ENG IN  11:12  08-08-2023
```

```

<?xml version="1.0" encoding="UTF-8"?>
<!--
Licensed to the Apache Software Foundation (ASF) under one or more
contributor license agreements. See the NOTICE file distributed with
this work for additional information regarding copyright ownership.
The ASF licenses this file to You under the Apache License, Version 2.0
(the "License"); you may not use this file except in compliance with
the License. You may obtain a copy of the License at
http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
-->
<Context antiResourceLocking="false" privileged="true" >
    <CookieProcessor className="org.apache.tomcat.util.http.Rfc6265CookieProcessor"
        sameSiteCookies="strict" />
    <!--
    <Valve className="org.apache.catalina.valves.RemoteAddrValve"
        allow="127.\d+.\d+.\d+:1|0:0:0:0:0:1" /-->
    <Manager sessionAttributeValueClassNameFilter="java\.lang\.(?:Boolean|Integer|Long|Number|String)|org\.apache\.catalina\.filters\.CSRfPreventionFilter\$LruCache(?:\$1)?|java\.util\.(?:Linked)?HashMap"/>
</Context>
~
~
```

"context.xml" 25L, 1355B 23,54 11:18 08-06-2023

Start the engine.

```

[root@ip-10-0-0-130 bin]# ls
bootstrap.jar      ciphers.sh      daemon.sh   migrate.bat  shutdown.sh      tool-wrapper.bat
catalina.bat       commons-daemon.jar digest.bat  migrate.sh   startup.sh      tool-wrapper.sh
catalina.sh        commons-daemon-native.tar.gz digest.sh   setclasspath.bat startup.sh      version.bat
catalina-tasks.xml configtest.bat  makebase.bat setclasspath.sh tomcat-juli.jar  version.sh
ciphers.bat        configtest.sh   makebase.sh  shutdown.bat  tomcat-native.tar.gz
[root@ip-10-0-0-130 bin]# cd ..
[root@ip-10-0-0-130 apache-tomcat-10.1.11]# cd conf/
[root@ip-10-0-0-130 conf]# ls
Catalina      catalina.properties  jaspic-providers.xml  logging.properties  tomcat-users.xml  web.xml
catalina.policy  context.xml       jaspic-providers.xsd  server.xml          tomcat-users.xsd
[root@ip-10-0-0-130 conf]# sudo vi server.xml
[root@ip-10-0-0-130 conf]# ./shutdown.sh
bash: ./shutdown.sh: No such file or directory
[root@ip-10-0-0-130 conf]# cd ..
[root@ip-10-0-0-130 apache-tomcat-10.1.11]# cd bin/
[root@ip-10-0-0-130 bin]# ls
bootstrap.jar      ciphers.sh      daemon.sh   migrate.bat  shutdown.sh      tool-wrapper.bat
catalina.bat       commons-daemon.jar digest.bat  migrate.sh   startup.sh      tool-wrapper.sh
catalina.sh        commons-daemon-native.tar.gz digest.sh   setclasspath.bat startup.sh      version.bat
catalina-tasks.xml configtest.bat  makebase.bat setclasspath.sh tomcat-juli.jar  version.sh
ciphers.bat        configtest.sh   makebase.sh  shutdown.bat  tomcat-native.tar.gz
[root@ip-10-0-0-130 bin]# ./shutdown.sh
Using CATALINA_BASE:  /home/ec2-user/apache-tomcat-10.1.11
Using CATALINA_HOME:  /home/ec2-user/apache-tomcat-10.1.11
Using CATALINA_TMPDIR: /home/ec2-user/apache-tomcat-10.1.11/temp
Using JRE_HOME:      /
Using CLASSPATH:     /home/ec2-user/apache-tomcat-10.1.11/bin/bootstrap.jar:/home/ec2-user/apache-tomcat-10.1.11/bin/tomcat-juli.jar
Using CATALINA_OPTS:
[root@ip-10-0-0-130 bin]# ./startup.sh
Using CATALINA_BASE:  /home/ec2-user/apache-tomcat-10.1.11
Using CATALINA_HOME:  /home/ec2-user/apache-tomcat-10.1.11
Using CATALINA_TMPDIR: /home/ec2-user/apache-tomcat-10.1.11/temp
Using JRE_HOME:      /
Using CLASSPATH:     /home/ec2-user/apache-tomcat-10.1.11/bin/bootstrap.jar:/home/ec2-user/apache-tomcat-10.1.11/bin/tomcat-juli.jar
Using CATALINA_OPTS:
Tomcat started.
[root@ip-10-0-0-130 bin]# cd ..
[root@ip-10-0-0-130 apache-tomcat-10.1.11]# | 11:33 08-06-2023
```

Then browse the ip address using port 8089

The screenshot shows the Tomcat Web Application Manager interface. At the top, there's a header bar with tabs for 'Instance details | EC2 Management' and '/manager'. Below the header is a toolbar with links to Gmail, YouTube, Maps, AWS Console, and Docker-related tools. The main content area has a yellow header 'Tomcat Web Application Manager'. A message box at the top says 'Message: OK'. Below it is a 'Manager' section with tabs for 'List Applications', 'HTML Manager Help', 'Manager Help', and 'Server Status'. The 'Applications' table lists five entries:

Path	Version	Display Name	Running	Sessions	Commands
/	None specified	Welcome to Tomcat	true	0	Start Stop Reload Undeploy Expire sessions with idle > 30 minutes
/docs	None specified	Tomcat Documentation	true	0	Start Stop Reload Undeploy Expire sessions with idle > 30 minutes
/examples	None specified	Servlet and JSP Examples	true	0	Start Stop Reload Undeploy Expire sessions with idle > 30 minutes
/host-manager	None specified	Tomcat Host Manager Application	true	0	Start Stop Reload Undeploy Expire sessions with idle > 30 minutes
/manager	None specified	Tomcat Manager Application	true	1	Start Stop Reload Undeploy Expire sessions with idle > 30 minutes

Below the applications table is a 'Deploy' section with fields for Context Path, Version (for parallel deployment), XML Configuration file path, and WAR or Directory path, followed by a 'Deploy' button. The system tray at the bottom shows the date and time as 08-08-2023, 11:37.

5. install Jenkins on terminal and start and enable Jenkins.

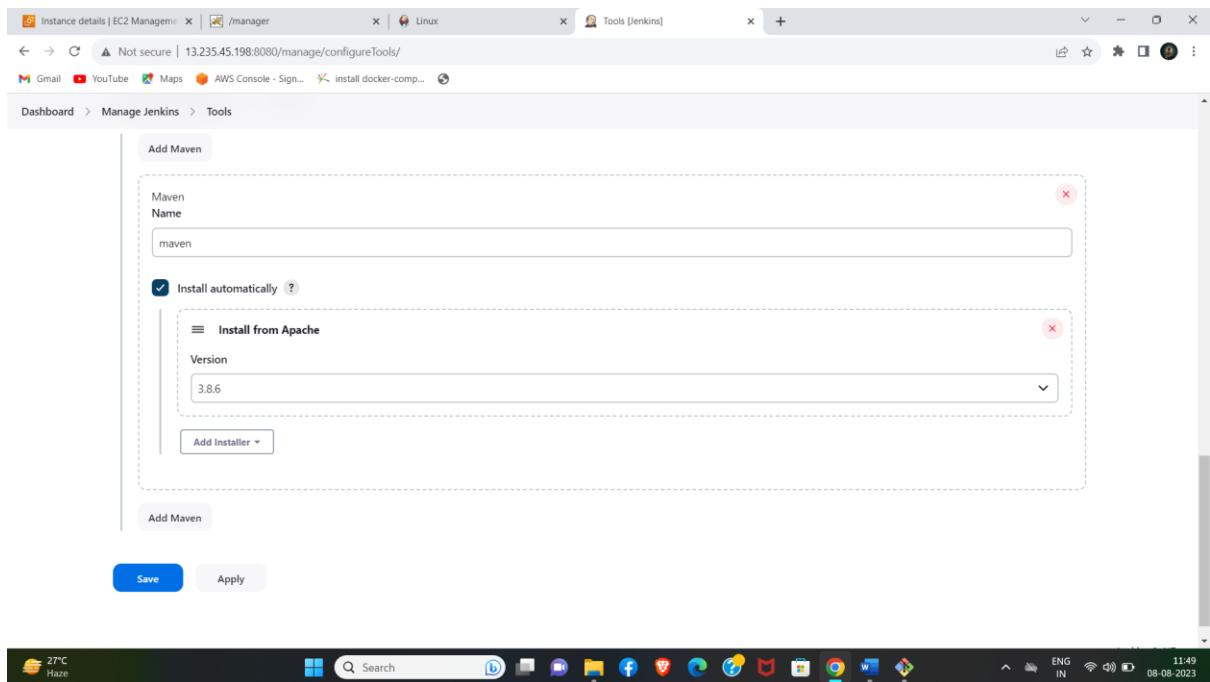
```

MINGW64: /c/Users/gandh/Downloads
Installed size: 85 M
Downloading packages:
jenkins-2.417-1.1.noarch.rpm
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : jenkins-2.417-1.1.noarch
  Verifying   : jenkins-2.417-1.1.noarch
Installed:
  jenkins.noarch 0:2.417-1.1
Complete!
[ec2-user@ip-10-0-0-130 ~]$ sudo systemctl start jenkins
[ec2-user@ip-10-0-0-130 ~]$ sudo systemctl enable jenkins
Created symlink from /etc/systemd/system/multi-user.target.wants/jenkins.service to /usr/lib/systemd/system/jenkins.service.
[ec2-user@ip-10-0-0-130 ~]$ sudo systemctl start jenkins
[ec2-user@ip-10-0-0-130 ~]$ sudo 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 2023-08-08 06:12:22 UTC; 51s ago
    Main PID: 4166 (java)
      CGroup: /system.slice/jenkins.service
              └─4166 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=%C/jenkins/war --httpPort=8080

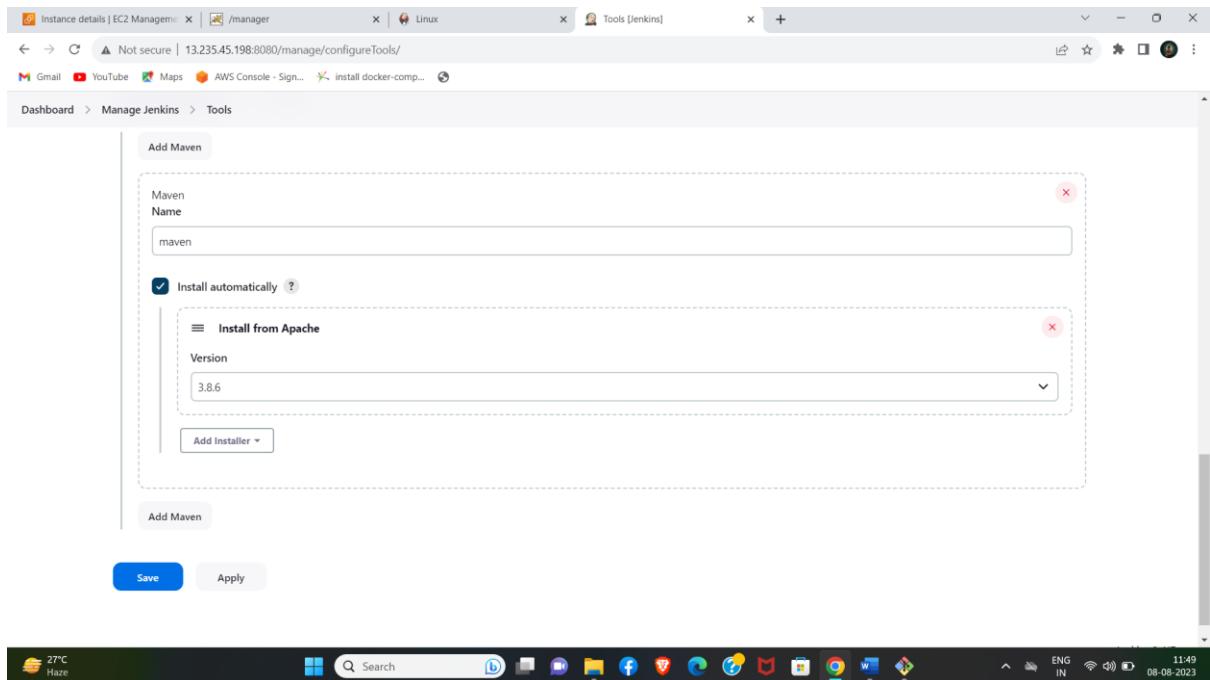
Aug 08 06:12:04 ip-10-0-0-130.ap-south-1.compute.internal jenkins[4166]: 73496ffff10644c19da4ab1af9ea6fba
Aug 08 06:12:04 ip-10-0-0-130.ap-south-1.compute.internal jenkins[4166]: This may also be found at: /var/lib/jenkins/secrets/initialAdminPassword
Aug 08 06:12:04 ip-10-0-0-130.ap-south-1.compute.internal jenkins[4166]: ****
Aug 08 06:12:04 ip-10-0-0-130.ap-south-1.compute.internal jenkins[4166]: ****
Aug 08 06:12:04 ip-10-0-0-130.ap-south-1.compute.internal jenkins[4166]: ****
Aug 08 06:12:22 ip-10-0-0-130.ap-south-1.compute.internal jenkins[4166]: 2023-08-08 06:12:22.312+0000 [id=32]           INFO  ...
Aug 08 06:12:22 ip-10-0-0-130.ap-south-1.compute.internal jenkins[4166]: 2023-08-08 06:12:22.333+0000 [id=24]           INFO  ...
Aug 08 06:12:22 ip-10-0-0-130.ap-south-1.compute.internal systemd[1]: Started Jenkins continuous Integration server.
Aug 08 06:12:23 ip-10-0-0-130.ap-south-1.compute.internal jenkins[4166]: 2023-08-08 06:12:23.148+0000 [id=48]           INFO  ...
Aug 08 06:12:23 ip-10-0-0-130.ap-south-1.compute.internal jenkins[4166]: 2023-08-08 06:12:23.149+0000 [id=48]           INFO  ...
Hint: Some lines were ellipsized, use -l to show in full.
[ec2-user@ip-10-0-0-130 ~]$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword

```

Go to manage Jenkins / tools / add maven



Go to manage Jenkins / plugins / available /deploy to container/maven installer.



The screenshot shows the Jenkins 'Available plugins' page. A search bar at the top contains the text 'maven'. Below the search bar, there is a table listing several Jenkins plugins:

Install	Name	Released
<input checked="" type="checkbox"/>	Deploy to container 1.16 Artifact Uploaders	2 yr 9 mo ago
<input checked="" type="checkbox"/>	Maven Integration 3.23 Build Tools	3 days 2 hr ago
<input type="checkbox"/>	Config File Provider 952.va_544a_6234b_46 Groovy-related External Site/Tool Integrations Maven	16 days ago
<input type="checkbox"/>	Jira 3.10 External Site/Tool Integrations Maven jira	2 mo 8 days ago
<input type="checkbox"/>	Pipeline Maven Integration 1314.v09626b_14362f	

The screenshot shows the Jenkins 'Download progress' page. It lists various Jenkins API components and their download status:

	Success
Ionicons API	Success
Folders	Success
OWASP Markup Formatter	Success
bouncycastle API	Success
Instance Identity	Success
JavaBeans Activation Framework (JAF) API	Success
JavaMail API	Success
Structs	Success
Token Macro	Success
Build Timeout	Success
Pipeline: Step API	Success
Credentials	Success
Plain Credentials	Success
Trilead API	Success
SSH Credentials	Success
Credentials Binding	Success
SCM API	Success
Pipeline: API	Success
commons-lang3 v3.x Jenkins API	Success
Timestamper	Success
Caffeine API	Success
Script Security	Success

Create a free style project . add the repo and add the details

The screenshot shows the Jenkins configuration interface for a job named "tomcat Config [Jenkins]". The left sidebar lists build configurations: General, Source Code Management (selected), Build Triggers, Build Environment, Build Steps, and Post-build Actions. The main panel is titled "Configure" and shows the "Source Code Management" section. It is set to "Git". The "Repository URL" field contains "https://github.com/amar-m-cloud/maven-project.git". The "Credentials" dropdown is set to "- none -". There is an "Add" button and an "Advanced" link. Below these are "Add Repository" and "Branches to build" sections. The "Branch Specifier" field is empty. At the bottom are "Save" and "Apply" buttons.

The screenshot shows the Jenkins configuration interface for a job named "tomcat Config [Jenkins]". The left sidebar lists build configurations: General, Source Code Management (selected), Build Triggers, Build Environment, Build Steps, and Post-build Actions. The main panel is titled "Configure" and shows the "Deploy war/ear to a container" section. It is set to "Tomcat 9.x Remote". The "WAR/EAR files" field contains "**/*.war". A note says "War/ear files to deploy. Relative to the workspace root. You can also specify Ant-style GLOBs, like '**/*.war'" and "(from Deploy to container Plugin)". The "Context path" field is empty. The "Containers" section shows "Tomcat 9.x Remote" with "Credentials" set to "tomcat/******** (tomm)" and "Tomcat URL" set to "http://13.235.45.198:8089/". At the bottom are "Save" and "Apply" buttons.

Then build the job

```

Progress (1): 549/549 kB
Progress (1): 549/549 kB
Progress (1): 549 kB

Downloaded from central: https://repo.maven.apache.org/maven2/com/thoughtworks/xstream/xstream/1.4.9/xstream-1.4.9.jar (549 kB at 2.6 MB/s)
[INFO] Packaging webapp
[INFO] Assembling war [webapp] in [/var/lib/jenkins/workspace/tomcat/webapp/target/webapp]
[INFO] Processing war project
[INFO] Copying webapp resources [/var/lib/jenkins/workspace/tomcat/webapp/src/main/webapp]
[INFO] Webapp assembled in [27 msecs]
[INFO] Building war: /var/lib/jenkins/workspace/tomcat/webapp/target/webapp.war
[INFO] -----
[INFO] Reactor Summary for Maven Project 1.0-SNAPSHOT:
[INFO]
[INFO] Maven Project ..... SUCCESS [ 1.061 s]
[INFO] Server ..... SUCCESS [ 4.111 s]
[INFO] Webapp ..... SUCCESS [ 2.288 s]
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 7.561 s
[INFO] Finished at: 2023-08-08T06:47:40Z
[INFO] -----
[DeployPublisher][INFO] Attempting to deploy 1 war file(s)
[DeployPublisher][INFO] Deploying /var/lib/jenkins/workspace/tomcat/webapp/target/webapp.war to container Tomcat 9.x Remote with context null
[/var/lib/jenkins/workspace/tomcat/webapp/target/webapp.war] is not deployed. Doing a fresh deployment.
Deploying [/var/lib/jenkins/workspace/tomcat/webapp/target/webapp.war]
Finished: SUCCESS

```

#1 (Aug 8, 2023, 6:47:26 AM)

Started 41 sec ago
Took **14 sec**

Git Revision: 4f9348f30b46d5fea07c907c50ccb1a102c2b818
Repository: <https://github.com/amar-m-cloud/maven-project.git>

- refs/remotes/origin/main

Then again browse the application to see output web apps

MODULE - 3

.create two ec2 instances one is master and one is slave .

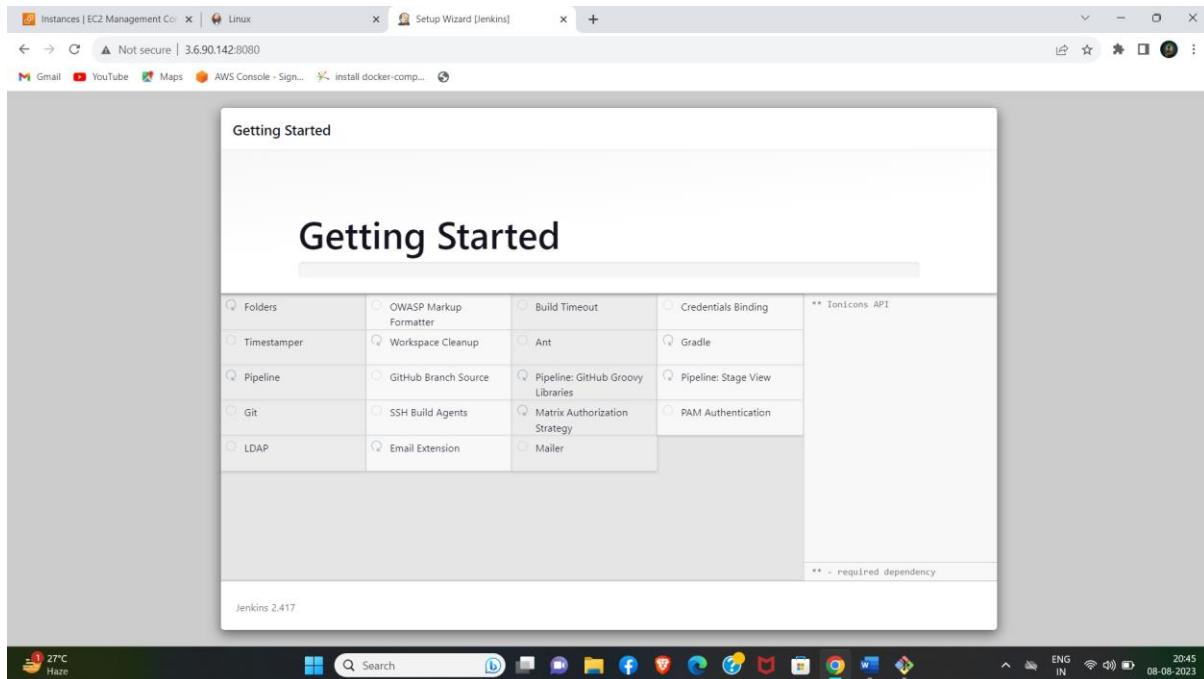
1. Master was connect to terminal and install Jenkins

```
[ec2-user@ip-10-0-0-183:~] jenkins-2.417-1.1.noarch.rpm | 85 MB 00:08
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : jenkins-2.417-1.1.noarch                               1/1
  Verifying  : jenkins-2.417-1.1.noarch                               1/1

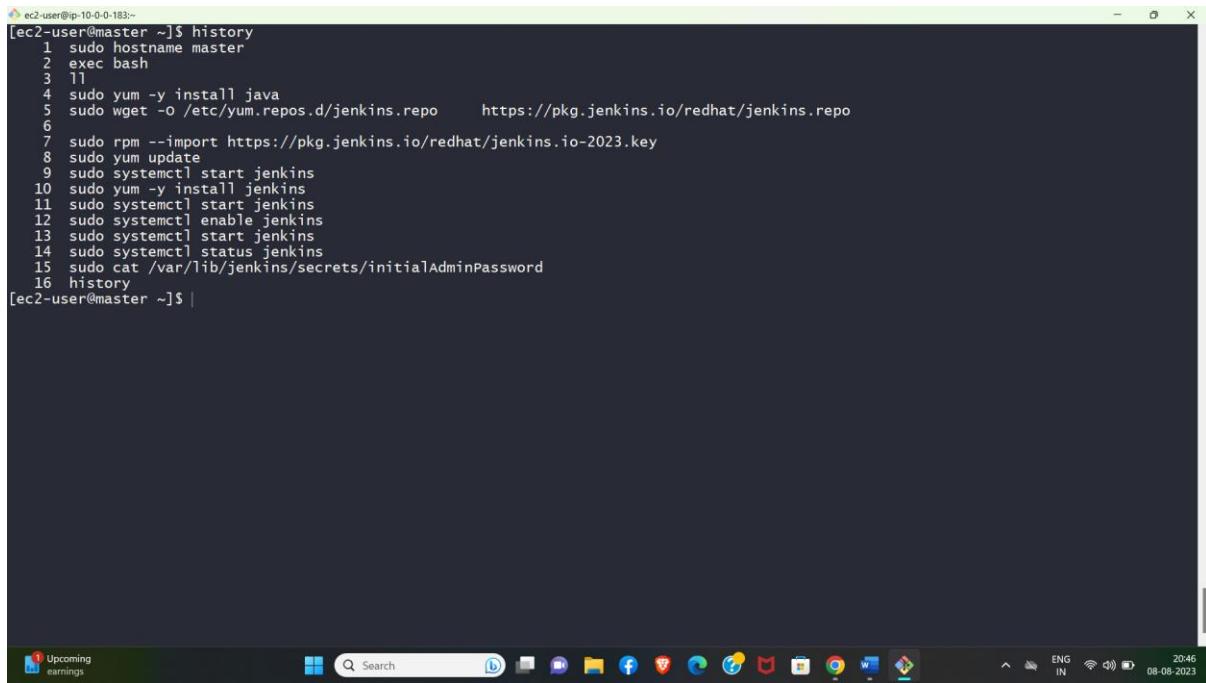
Installed:
  jenkins.noarch 0:2.417-1.1

Complete!
[ec2-user@master ~]$ sudo systemctl start jenkins
[ec2-user@master ~]$ sudo systemctl enable jenkins
Created symlink from /etc/systemd/system/multi-user.target.wants/jenkins.service to /usr/lib/systemd/system/jenkins.service.
[ec2-user@master ~]$ sudo systemctl start jenkins
[ec2-user@master ~]$ sudo 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 2023-08-08 15:13:48 UTC; 14s ago
       Main PID: 7628 (java)
      CGroup: /system.slice/jenkins.service
              └─7628 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=%c/jenkins/war --httpPort=8080

Aug 08 15:13:29 master jenkins[7628]: 281e777f3c65425486fd668715843b2b
Aug 08 15:13:29 master jenkins[7628]: This may also be found at: /var/lib/jenkins/secrets/initialAdminPassword
Aug 08 15:13:29 master jenkins[7628]: ****
Aug 08 15:13:48 master jenkins[7628]: 2023-08-08 15:13:48.577+0000 [id=32]      INFO  jenkins.InitReactorRunner$1@onA...ization
Aug 08 15:13:48 master jenkins[7628]: 2023-08-08 15:13:48.591+0000 [id=24]      INFO  hudson.lifecycle.Lifecycle#onRe...running
Aug 08 15:13:48 master systemd[1]: Started Jenkins Continuous Integration Server.
Aug 08 15:13:49 master jenkins[7628]: 2023-08-08 15:13:49.387+0000 [id=49]      INFO  h.m.DownloadService$Downloadabl...staller
Aug 08 15:13:49 master jenkins[7628]: 2023-08-08 15:13:49.387+0000 [id=49]      INFO  hudson.util.Retrier#start: Perf...empt #1
Hint: some lines were ellipsized, use -l to show in full.
[ec2-user@master ~]$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword
281e777f3c65425486fd668715843b2b
[ec2-user@master ~]$ 
```

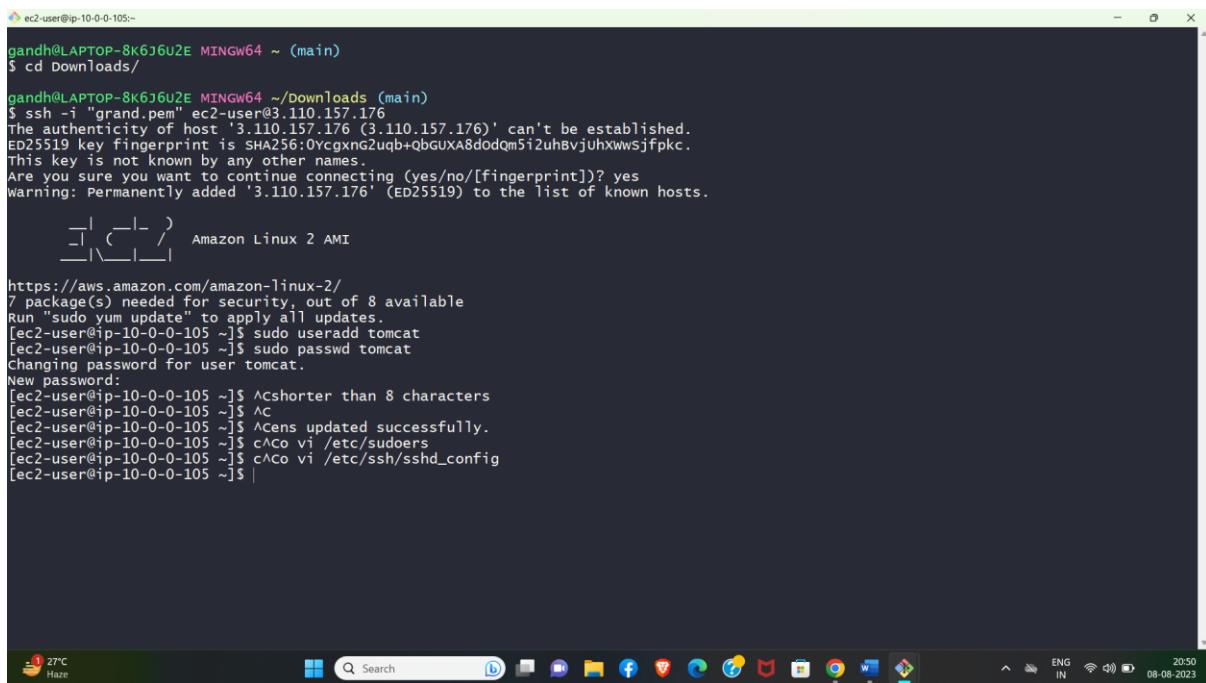


Using below commands to install jenions.



```
ec2-user@ip-10-0-0-183:~$ history
1 sudo hostname master
2 exec bash
3 ll
4 sudo yum -y install java
5 sudo wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat/jenkins.repo
6
7 sudo rpm --import https://pkg.jenkins.io/redhat/jenkins.io-2023.key
8 sudo yum update
9 sudo systemctl start jenkins
10 sudo yum -y install jenkins
11 sudo systemctl start jenkins
12 sudo systemctl enable jenkins
13 sudo systemctl start jenkins
14 sudo systemctl status jenkins
15 sudo cat /var/lib/jenkins/secrets/initialAdminPassword
16 history
[ec2-user@master ~]$
```

2. Slave connect to terminal and create user



```
ec2-user@ip-10-0-0-105:~
gandh@LAPTOP-8K6J6U2E MINGW64 ~ (main)
$ cd Downloads/
gandh@LAPTOP-8K6J6U2E MINGW64 ~/Downloads (main)
$ ssh -i "grand.pem" ec2-user@3.110.157.176
The authenticity of host '3.110.157.176 (3.110.157.176)' can't be established.
ED25519 key fingerprint is SHA256:0YcgxngZuqb+qbGUxA8ddodQm5i2uhAvjuhxwsjfPkc.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '3.110.157.176' (ED25519) to the list of known hosts.

Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
7 package(s) needed for security, out of 8 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-10-0-0-105 ~]$ sudo useradd tomcat
[ec2-user@ip-10-0-0-105 ~]$ sudo passwd tomcat
Changing password for user tomcat.
New password:
[ec2-user@ip-10-0-0-105 ~]$ ^Cshorter than 8 characters
[ec2-user@ip-10-0-0-105 ~]$ ^Cnew updated successfully.
[ec2-user@ip-10-0-0-105 ~]$ c^Co vi /etc/sudoers
[ec2-user@ip-10-0-0-105 ~]$ c^Co vi /etc/ssh/sshd_config
[ec2-user@ip-10-0-0-105 ~]$
```

3. Give permissions on user and password. Using sudo vi /etc/sudoers and sudo vi /etc/ssh/sshd_config.

```
ec2-user@ip-10-0-0-105:~  
# Adding HOME to env_keep may enable a user to run unrestricted  
# commands via sudo.  
#  
# Defaults env_keep += "HOME"  
Defaults secure_path = /sbin:/bin:/usr/sbin:/usr/bin  
  
## Next comes the main part: which users can run what software on  
## which machines (the sudoers file can be shared between multiple  
## systems).  
## Syntax:  
##  
## user MACHINE=COMMANDS  
##  
## The COMMANDS section may have other options added to it.  
##  
## Allow root to run any commands anywhere  
root    ALL=(ALL)        ALL  
tomcat ALL=(ALL) NOPASSWD: ALL  
## Allows members of the 'sys' group to run networking, software,  
## service management apps and more.  
# %sys ALL = NETWORKING, SOFTWARE, SERVICES, STORAGE, DELEGATING, PROCESSES, LOCATE, DRIVERS  
  
## Allows people in group wheel to run all commands  
%wheel  ALL=(ALL)        ALL  
  
## same thing without a password  
# %wheel      ALL=(ALL)      NOPASSWD: ALL  
  
## Allows members of the users group to mount and unmount the  
## cdrom as root  
# %users  ALL=/sbin/mount /mnt/cdrom, /sbin/umount /mnt/cdrom  
  
## Allows members of the users group to shutdown this system  
# %users  localhost=/sbin/shutdown -h now  
  
## Read drop-in files from /etc/sudoers.d (the # here does not mean a comment)  
#includedir /etc/sudoers.d  
"/etc/sudoers" [readonly] 120L, 4359B  
101,31          Bot  
27°C Haze          Search          20:53 08-08-2023
```

```
ec2-user@ip-10-0-0-105:~  
#PermitRootLogin yes  
#StrictModes yes  
#MaxAuthTries 6  
#MaxSessions 10  
  
PubkeyAuthentication yes  
  
# The default is to check both .ssh/authorized_keys and .ssh/authorized_keys2  
# but this is overridden so installations will only check .ssh/authorized_keys  
AuthorizedKeysFile .ssh/authorized_keys  
  
#AuthorizedPrincipalsFile none  
  
# For this to work you will also need host keys in /etc/ssh/ssh_known_hosts  
#HostbasedAuthentication no  
# Change to yes if you don't trust ~/.ssh/known_hosts for  
# HostbasedAuthentication  
#IgnoreUserKnownHosts no  
# Don't read the user's ~/.rhosts and ~/.shosts files  
#IgnoreRhosts yes  
  
# To disable tunneled clear text passwords, change to no here!  
PasswordAuthentication yes  
#PermitEmptyPasswords no  
#PasswordAuthentication no  
  
# Change to no to disable s/key passwords  
#ChallengeResponseAuthentication yes  
ChallengeResponseAuthentication no  
  
# Kerberos options  
#KerberosAuthentication no  
#KerberosOrLocalPasswd yes  
#KerberosTicketCleanup yes  
#KerberosGetAFSToken no  
#KerberosUseKuserok yes  
70,1          36%  
27°C Haze          Search          20:54 08-08-2023
```

4.add ssh and give chmod permissions using

```

sudo useradd jenkins-slave1
sudo su - jenkins-slave1
ssh-keygen -t rsa -N "" -f /home/jenkins-slave1/.ssh/id_rsa
cd .ssh
cat id_rsa.pub > authorized_keys
chmod 700 authorized_keys

```

```

tomcat@ip-10-0-0-105:~$ sudo useradd jenkins-slave1
tomcat@ip-10-0-0-105:~$ sudo su - jenkins-slave1
tomcat@ip-10-0-0-105:~$ ssh-keygen -t rsa -N "" -f /home/jenkins-slave1/.ssh/id_rsa
Generating public/private rsa key pair.
Your identification has been saved in /home/jenkins-slave1/.ssh/id_rsa.
Your public key has been saved in /home/jenkins-slave1/.ssh/id_rsa.pub.
The key fingerprint is:
SHA256:09heksnzz+w79qmXnf19ec34foADksZn+3LMHgEIJOY tomcat@ip-10-0-0-105.ap-south-1.compute.internal
The key's randomart image is:
+---[RSA 2048]----+
|          o
|         .o
|        E .+ + .|
|        =+= . o |
|       .S+oo+.o .|
|      o ..o+..|
|     .+ .o +*|
|     . * .o=0|
|    +.*.*B|
+---[SHA256]----+
[tomcat@ip-10-0-0-105 jenkins-slave1]$ cd .ssh
[tomcat@ip-10-0-0-105 ~]$ sudo cat id_rsa.pub > authorized_keys
[tomcat@ip-10-0-0-105 ~]$ chmod 700 authorized_keys
[tomcat@ip-10-0-0-105 ~]$ 

```

The terminal window also shows system status icons at the bottom, including battery level (27°C Haze), network connectivity, and the date/time (08-08-2023 20:59).

AND install java and git on slave.

5. Goto master and connect slave using

```

sudo mkdir -p /var/lib/jenkins/.ssh
cd /var/lib/jenkins/.ssh
cd ..
sudo chmod 777 .ssh
cd .ssh
sudo ssh-keyscan -H SLAVE_NODE_PRIVATE_IP
>>/var/lib/jenkins/.ssh/known_hosts
sudo chown jenkins:jenkins known_hosts
sudo chmod 700 known_hosts

```

The screenshot shows a terminal window on an Amazon Linux 2 AMI system. The user has run several commands to set up Jenkins:

- Line 3: `https://aws.amazon.com/amazon-linux-2/` (a link)
- Line 4: `sudo yum -y install java`
- Line 5: `sudo wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat/jenkins.repo`
- Line 6: `sudo rpm --import https://pkg.jenkins.io/redhat/jenkins.io-2023.key`
- Line 7: `sudo yum update`
- Line 8: `sudo systemctl start jenkins`
- Line 9: `sudo systemctl start jenkins` (repeated)
- Line 10: `sudo yum -y install jenkins`
- Line 11: `sudo systemctl start jenkins`
- Line 12: `sudo systemctl enable jenkins`
- Line 13: `sudo systemctl start jenkins`
- Line 14: `sudo systemctl status jenkins`
- Line 15: `sudo cat /var/lib/jenkins/secrets/initialAdminPassword` (outputs a long password)
- Line 16: `history` (shows command history)

At the bottom of the terminal, there is a system log entry:

```

[ec2-user@master ~]$ client_loop: send disconnect: Connection reset by peer
gandh@LAPTOP-8K6J6U2E MINGW64 ~/Downloads (main)
$ ssh -i "grand.pem" ec2-user@3.6.90.142
Last login: Tue Aug  8 15:08:05 2023 from 139.5.248.101

```

The desktop environment includes icons for various applications like a file manager, browser, and system tools.

Give the permissions on Jenkins using sudo vi /etc/sudoers

```

ec2-user@master:/var/lib/jenkins/.ssh
# Adding HOME to env_keep may enable a user to run unrestricted
# commands via sudo.
#
# Defaults    env_keep += "HOME"
Defaults    secure_path = /sbin:/bin:/usr/sbin:/usr/bin

## Next comes the main part: which users can run what software on
## which machines (the sudoers file can be shared between multiple
## systems).
## Syntax:
##
##       user      MACHINE=COMMANDS
##
## The COMMANDS section may have other options added to it.
##
## Allow root to run any commands anywhere
root    ALL=(ALL)      ALL
jenkins ALL=(ALL)      NOPASSWD: ALL
## Allows members of the 'sys' group to run networking, software,
## service management apps and more.
# %sys ALL = NETWORKING, SOFTWARE, SERVICES, STORAGE, DELEGATING, PROCESSES, LOCATE, DRIVERS
## Allows people in group wheel to run all commands
%wheel  ALL=(ALL)      ALL

## same thing without a password
# %wheel      ALL=(ALL)      NOPASSWD: ALL
## Allows members of the users group to mount and umount the
## cdrom as root
# %users     ALL=/sbin/mount /mnt/cdrom, /sbin/umount /mnt/cdrom
## Allows members of the users group to shutdown this system
# %users     localhost=/sbin/shutdown -h now
## read drop-in files from /etc/sudoers.d (the # here does not mean a comment)
#include /etc/sudoers.d
"/etc/sudoers" [readonly] 120L, 4360B

```

101,32 Bot 21:07 08-08-2023

6. Goto slave and install tomcat and maven and git

```

root@ip-10-0-0-105:/home/tomcat/apache-tomcat-9.0.78/bin
Verifying : python3-setuptools-49.1.3-1.amzn2.0.2.noarch          10/15
Verifying : elfutils-default-yama-scope-0.176-2.amzn2.noarch        11/15
Verifying : elfutils-libelf-0.176-2.amzn2.x86_64                   12/15
Verifying : python-configobj-4.7.2-7.amzn2.noarch                  13/15
Verifying : yafl-2.0.4-4.amzn2.0.2.x86_64                         14/15
Verifying : openldap-2.4.44-25.amzn2.0.6.x86_64                   15/15

Installed:
  kernel.x86_64 0:5.10.186-179.751.amzn2

Updated:
  elfutils-default-yama-scope.noarch 0:0.176-2.amzn2.0.1           10/15
  elfutils-libs.x86_64 0:0.176-2.amzn2.0.1                      11/15
  python-configobj.noarch 0:4.7.2-7.amzn2.0.1                   12/15
  yafl.x86_64 0:2.0.4-4.amzn2.0.3                            13/15
  openldap.x86_64 0:2.4.44-25.amzn2.0.7                         14/15
  python3-setuptools.noarch 0:49.1.3-1.amzn2.0.3                 15/15

Complete!
[ec2-user@ip-10-0-0-105 ~]$ sudo su tomcat
[tomcat@ip-10-0-0-105 ec2-user]$ cd
[tomcat@ip-10-0-0-105 ~]$ cd apache-tomcat-9.0.78/
[tomcat@ip-10-0-0-105 apache-tomcat-9.0.78]$ cd bin/
bash: cd: bin/: Permission denied
[tomcat@ip-10-0-0-105 apache-tomcat-9.0.78]$ sudo su
[root@ip-10-0-0-105 apache-tomcat-9.0.78]# cd bin/
[root@ip-10-0-0-105 bin]# ls
bootstrap.jar      ciphers.sh            daemon.sh      setclasspath.bat  startup.sh      version.bat
catalina.bat       commons-daemon.jar   digest.bat    setclasspath.sh  tomcat-juli.jar  version.sh
catalina.sh        commons-daemon-native.tar.gz digest.sh    shutdown.bat   tomcat-native.tar.gz
catalina-tasks.xml configtest.bat      makebase.bat shutdown.sh    tool-wrapper.bat
ciphers.bat        configtest.sh       makebase.sh   startup.bat   tool-wrapper.sh
[root@ip-10-0-0-105 bin]# ./startup.sh
Using CATALINA_BASE:  /home/tomcat/apache-tomcat-9.0.78
Using CATALINA_HOME:   /home/tomcat/apache-tomcat-9.0.78
Using CATALINA_TMPDIR: /home/tomcat/apache-tomcat-9.0.78/temp
Using JRE_HOME:       /
Using CLASSPATH:      /home/tomcat/apache-tomcat-9.0.78/bin/bootstrap.jar:/home/tomcat/apache-tomcat-9.0.78/bin/tomcat-juli.jar
Using CATALINA_OPTS:
Tomcat started.
[root@ip-10-0-0-105 bin]#

```

26°C Haze 21:18 08-08-2023

```

root@ip-10-0-0-105:/home/tomcat/apache-tomcat-9.0.78/bin
Using CATALINA_OPTS:
Tomcat started.
[root@ip-10-0-0-105 bin]# sudo yum -y install maven
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Resolving Dependencies
--> Running transaction check
--> Package maven.noarch 0:3.0.5-17.amzn2 will be installed
--> Processing Dependency: sisu-inject-plexus for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: sisu-inject-bean for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: plexus-utils for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: plexus-sec-dispatcher for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: plexus-interpolation for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: plexus-containers-component-annotations for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: plexus-cipher for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: objectweb-asf for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: mvn(org.sonatype.sisu:sisu-inject-plexus) for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: mvn(org.sonatype.plexus:plexus-sec-dispatcher) for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: mvn(org.sonatype.plexus:plexus-cipher) for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: mvn(org.sonatype.aether:aether-util) for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: mvn(org.sonatype.aether:aether-spi) for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: mvn(org.sonatype.aether:aether-impl) for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: mvn(org.sonatype.aether:aether-api) for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: mvn(org.codehaus.plexus:plexus-utils) for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: mvn(org.codehaus.plexus:plexus-interpolation) for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: mvn(org.codehaus.plexus:plexus-container-default) for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: mvn(org.codehaus.plexus:plexus-component-annotations) for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: mvn(org.codehaus.plexus:plexus-classworlds) for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: mvn(org.apache.maven.wagon:wagon-provider-api) for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: maven-wagon for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: java-devel for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: httpcomponents-core for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: httpcomponents-client for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: guava for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: google-guice for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: cglib for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: atinject for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: apache-commons-logging for package: maven-3.0.5-17.amzn2.noarch
--> Processing Dependency: apache-commons-codec for package: maven-3.0.5-17.amzn2.noarch

```

Browse public ip

Connect to instance | EC2 Manager | Linux | Setup Wizard [Jenkins] | Apache Tomcat® - Apache Tomcat | Apache Tomcat/9.0.78

Not secure | 3.690.60:8080

Gmail YouTube Maps AWS Console - Sign... install docker-comp... 🔍

Home Documentation Configuration Examples Wiki Mailing Lists Find Help

Apache Tomcat™ 9.0.78

If you're seeing this, you've successfully installed Tomcat. Congratulations!

Recommended Reading:

- [Security Considerations How-To](#)
- [Manager Application How-To](#)
- [Clustering/Session Replication How-To](#)

Developer Quick Start

- [Tomcat Setup](#)
- [First Web Application](#)
- [Realms & AAA](#)
- [JDBC DataSources](#)
- [Examples](#)
- [Servlet Specifications](#)
- [Tomcat Versions](#)

Documentation

- [Tomcat 9.0 Documentation](#)
- [Tomcat 9.0 Configuration](#)
- [Tomcat Wiki](#)

Getting Help

FAQ and Mailing Lists

The following mailing lists are available:

- [tomcat-announce](#) Important announcements, releases, security vulnerability notifications. (Low volume)
- [tomcat-users](#) User support and discussion
- [taglibs-user](#) User support and discussion for Apache Taglibs
- [tomcat-dev](#) Development mailing list, including commit messages

No search results

And change the port using go to /conf and open server.xml and change

```
root@ip-10-0-0-105:/home/tomcat/apache-tomcat-9.0.78/conf
  so you may not define subcomponents such as "valves" at this level.
  Documentation at /docs/config/service.html
-->
<Service name="catalina">

  <!--The connectors can use a shared executor, you can define one or more named thread pools-->
  <!--
  <Executor name="tomcatThreadPool" namePrefix="catalina-exec-"
    maxThreads="150" minSpareThreads="4"/>
  -->

  <!-- A "Connector" represents an endpoint by which requests are received
       and responses are returned. Documentation at :
       Java HTTP Connector: /docs/config/http.html
       Java AJP Connector: /docs/config/ajp.html
       APR (HTTP/AJP) Connector: /docs/apr.html
       Define a non-SSL/TLS HTTP/1.1 connector on port 8080
  -->
  <Connector port="8089" protocol="HTTP/1.1"
    connectionTimeout="20000"
    redirectPort="8443"
    maxParameterCount="1000"
  />
  <!-- A "Connector" using the shared thread pool-->
  <!--
  <Connector executor="tomcatThreadPool"
    port="8080" protocol="HTTP/1.1"
    connectionTimeout="20000"
    redirectPort="8443"
    maxParameterCount="1000"
  />
  <!-- Define an SSL/TLS HTTP/1.1 Connector on port 8443
      This connector uses the NIO implementation. The default
      SSLImplementation will depend on the presence of the APR/native
      library and the usedOpenSSL attribute of the AprLifecycleListener.
      Either JSSE or OpenSSL style configuration may be used regardless of
    "server.xml" 180L, 7856B
  -->
```

Go to conf/open tomcat-user.xml

```

root@ip-10-0-0-130:/home/ec2-user/apache-tomcat-10.1.11/conf
version="1.0">
<!--
By default, no user is included in the "manager-gui" role required
to operate the "/manager/html" web application. If you wish to use this app,
you must define such a user - the username and password are arbitrary.

Built-in Tomcat manager roles:
- manager-gui - allows access to the HTML GUI and the status pages
- manager-script - allows access to the HTTP API and the status pages
- manager-jmx - allows access to the JMX proxy and the status pages
- manager-status - allows access to the status pages only

The users below are wrapped in a comment and are therefore ignored. If you
wish to configure one or more of these users for use with the manager web
application, do not forget to remove the <!...> that surrounds them. You
will also need to set the passwords to something appropriate.
-->
<!--
<user username="admin" password="" roles="manager-gui"/>
<user username="robot" password="" roles="manager-script"/>
-->
<!--
The sample user and role entries below are intended for use with the
examples web application. They are wrapped in a comment and thus are ignored
when reading this file. If you wish to configure these users for use with the
examples web application, do not forget to remove the <!...> that surrounds
them. You will also need to set the passwords to something appropriate.
-->
<!--
<role rolename="tomcat"/>
<role rolename="role1"/>
<user username="tomcat" password="" roles="tomcat"/>
<user username="both" password="" roles="tomcat,role1"/>
<user username="role1" password="" roles="role1"/>
-->
<role rolename="manager-gui"/>
<user username="tomcat" password="s3cret" roles="manager-gui,manager-script,manager-jmx,manager-status"/>
</tomcat-users>
--> INSERT --

```

57,103 Bot

26°C Haze

Search

ENG IN 11:06 08-08-2023

Go to webapps/manager/META-INF/open context.xml

```

root@ip-10-0-0-130:/home/ec2-user/apache-tomcat-10.1.11/webapps/manager/META-INF
<?xml version="1.0" encoding="UTF-8"?>
<!--
Licensed to the Apache Software Foundation (ASF) under one or more
contributor license agreements. See the NOTICE file distributed with
this work for additional information regarding copyright ownership.
The ASF licenses this file to You under the Apache License, Version 2.0
(the "License"); you may not use this file except in compliance with
the License. You may obtain a copy of the License at

    http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
-->
<Context antiResourceLocking="false" privileged="true">
    <CookieProcessor className="org.apache.tomcat.util.http.Rfc6265CookieProcessor"
        sameSiteCookies="strict" />
    <!--
    <Valve className="org.apache.catalina.valves.RemoteAddrValve"
        allow="127\.\d+\.\d+\.\d+|::1|0:0:0:0:0:1" /-->
    <Manager sessionAttributeValueClassNameFilter="java\.lang\.(?:Boolean|Integer|Long|Number|String)|org\.apache\.catalina\.filters\.CSRfPreventionFilter|${rucache?:\$1?java\.util\.(?:Linked)?HashMap}" />
</Context>
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~>
"context.xml" 25L, 1357B

```

23,54 All

27°C Haze

Search

ENG IN 11:12 08-08-2023

Go to webapps/host-manager/META-INF/open context.xml

```

root@ip-10-0-0-130:/home/ec2-user/apache-tomcat-10.1.11/webapps/manager/META-INF
<?xml version="1.0" encoding="UTF-8"?>
<!--
Licensed to the Apache Software Foundation (ASF) under one or more
contributor license agreements. See the NOTICE file distributed with
this work for additional information regarding copyright ownership.
The ASF licenses this file to You under the Apache License, Version 2.0
(the "License"); you may not use this file except in compliance with
the License. You may obtain a copy of the License at
http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
-->
<Context antiResourceLocking="false" privileged="true" >
    <CookieProcessor className="org.apache.tomcat.util.http.Rfc6265CookieProcessor"
        sameSiteCookies="strict" />
    <!--
    <Valve className="org.apache.catalina.valves.RemoteAddrValve"
        allow="127\.\d+\.\d+\.\d+|:10000:0:0:1" /-->
    <Manager sessionAttributeValueClassNameFilter="java\.lang\.(?:Boolean|Integer|Long|Number|String)|org\.apache\.catalina\.filters\.CSRfPreventionFilter\$LruCache(?:\$1)?|java\.util\.(?:Linked)?HashMap"/>
</Context>
~
~
~
~
~
~
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~
~
~
~
~
~
~
~
~
~
~"context.xml" 25L, 1357B
23,54  All 11:12 ENG IN 08-08-2023
27°C Haze
```

7. browse the public ip

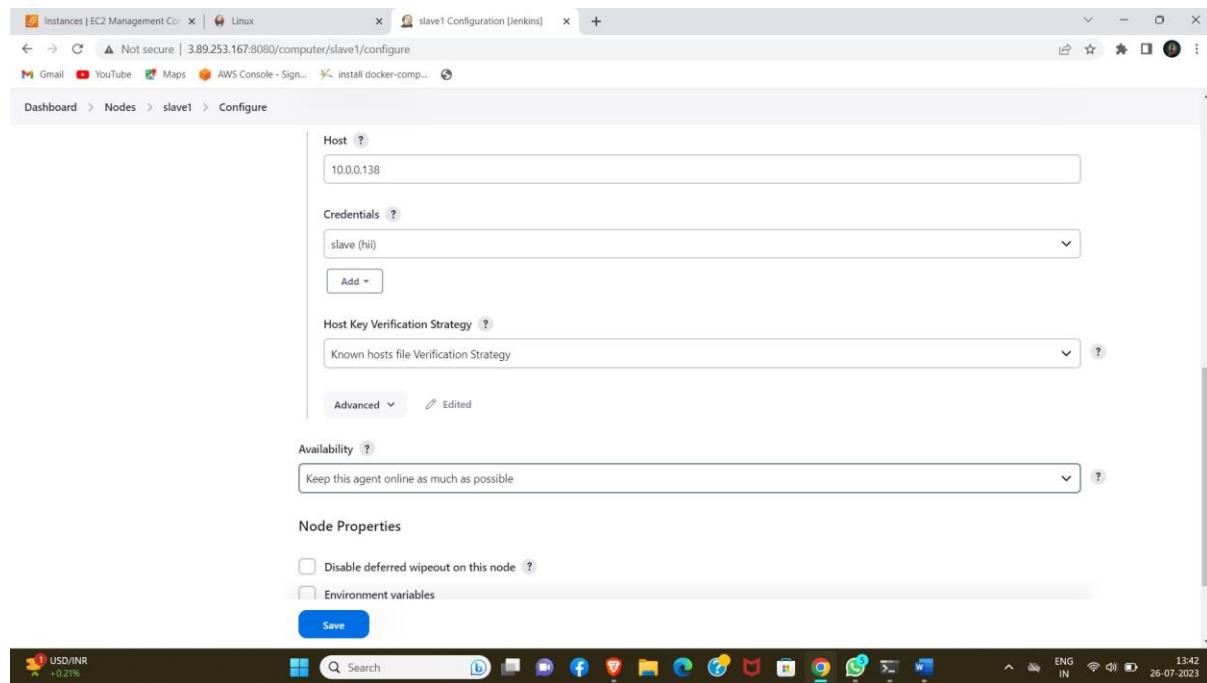
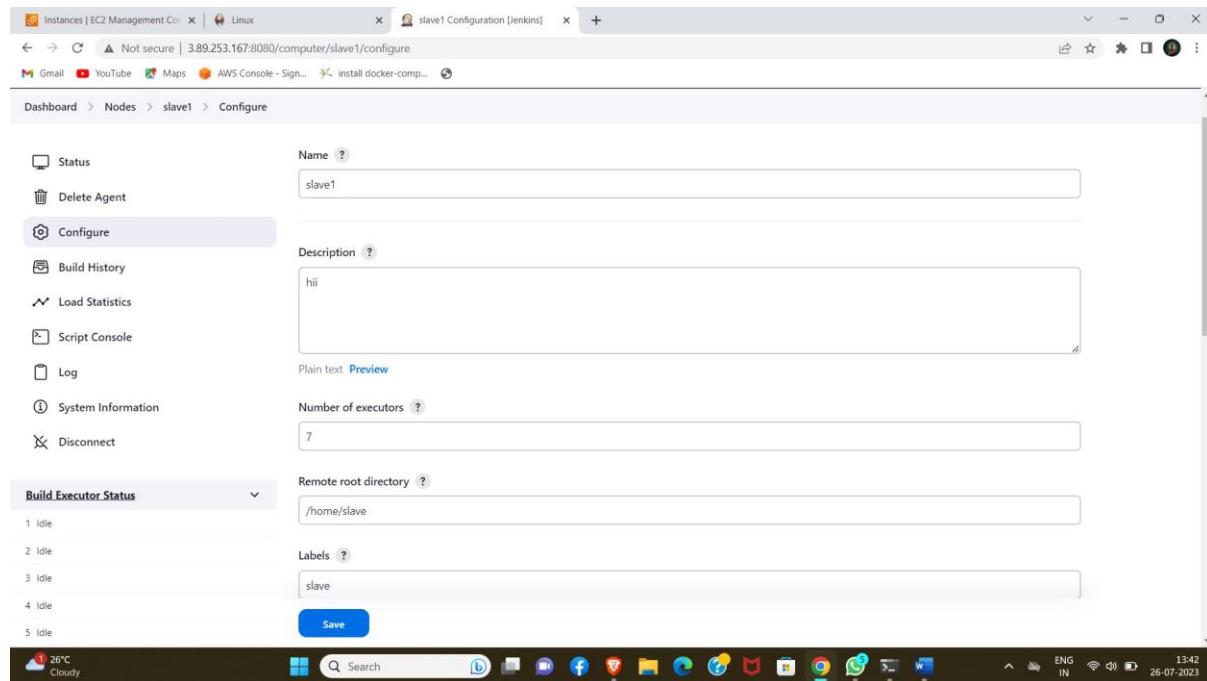
Path	Version	Display Name	Running	Sessions	Commands
/	None specified	Welcome to Tomcat	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/docs	None specified	Tomcat Documentation	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/examples	None specified	Servlet and JSP Examples	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/host-manager	None specified	Tomcat Host Manager Application	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/manager	None specified	Tomcat Manager Application	true	1	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes

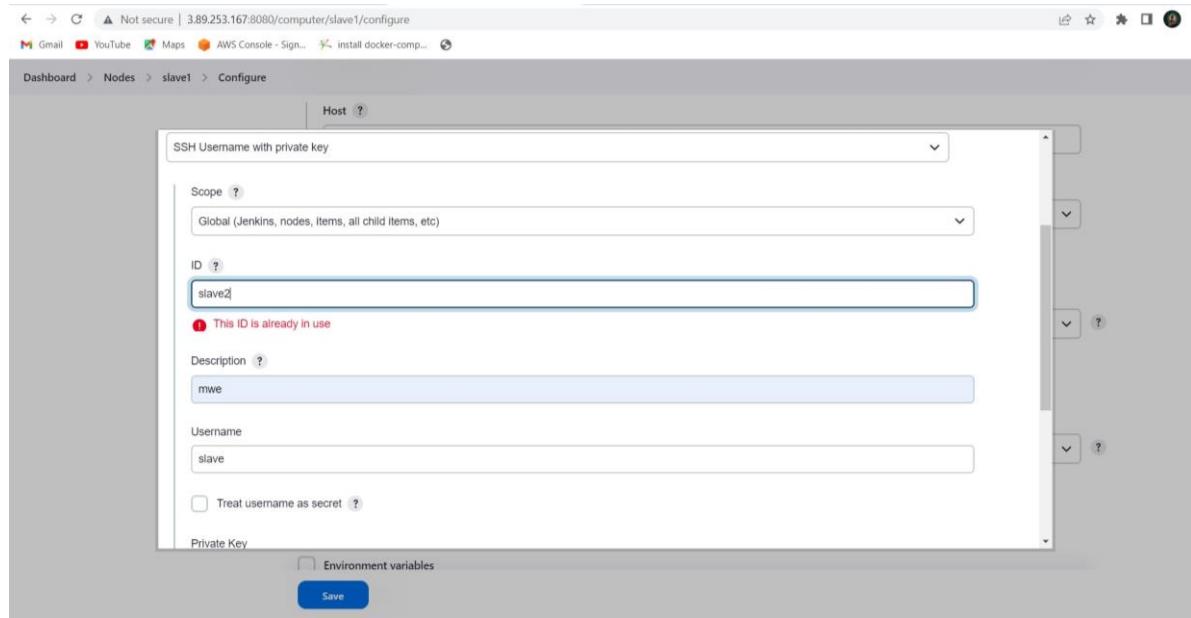
8.Go to Jenkins add master and slaveMansge Jenkins/nodes/new node.

The screenshot shows the Jenkins Manage Jenkins interface. At the top, there is a message: "Building on the built-in node can be a security issue. You should set the number of executors on the built-in node to 0. See [the documentation](#)". Below this, the "System Configuration" section is visible, containing links for System, Tools, Plugins, Nodes, Clouds, and Security. On the left sidebar, there are links for New Item, People, Build History, Project Relationship, Check File Fingerprint, Manage Jenkins (which is selected), and My Views. Below the sidebar, there are sections for Build Queue (No builds in the queue) and Build Executor Status (1 idle). The bottom of the screen shows a Windows taskbar with various icons and a system tray indicating it's 13:41 on 26-07-2023.

The screenshot shows the Jenkins New node configuration page. It has a "Node name" input field containing a single character. Under the "Type" section, the "Permanent Agent" option is selected, with a descriptive note: "Adds a plain, permanent agent to Jenkins. This is called "permanent" because Jenkins doesn't provide higher level of integration with these agents, such as dynamic provisioning. Select this type if no other agent types apply—for example such as when you are adding a physical computer, virtual machines managed outside Jenkins, etc." There is also an unselected option for "Copy Existing Node". A "Create" button is at the bottom. The bottom of the screen shows a Windows taskbar with various icons and a system tray indicating it's 13:41 on 26-07-2023. In the top right corner, it says "REST API Jenkins 2.415".

then connect master and slave in jenkins

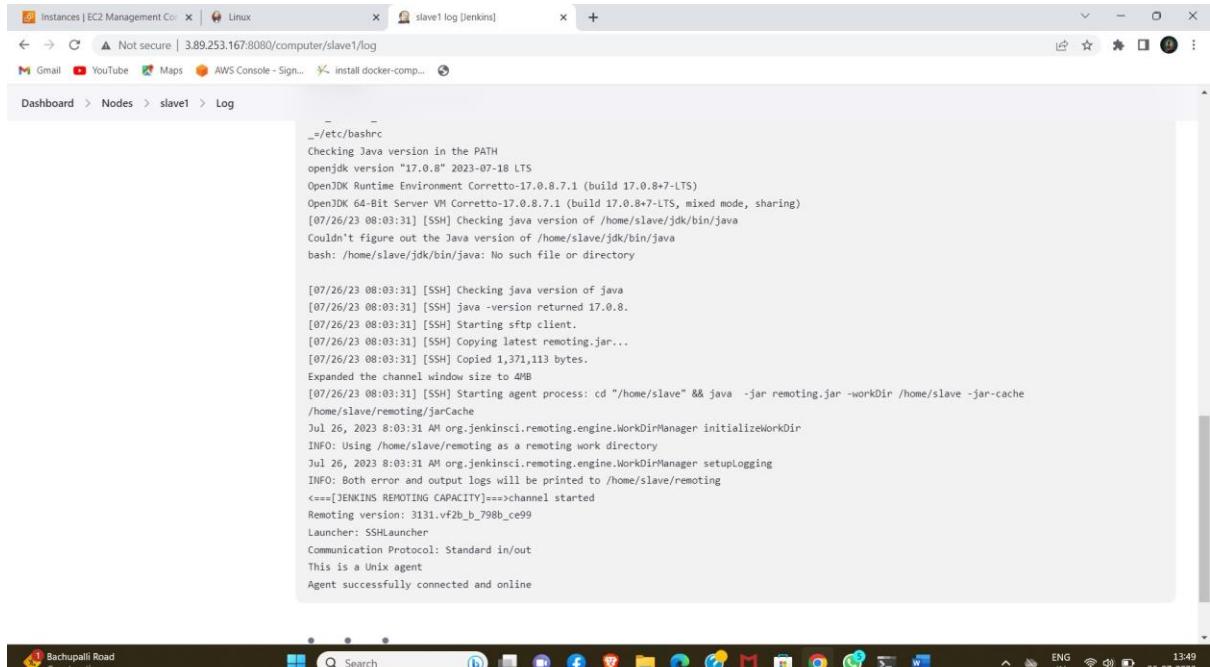
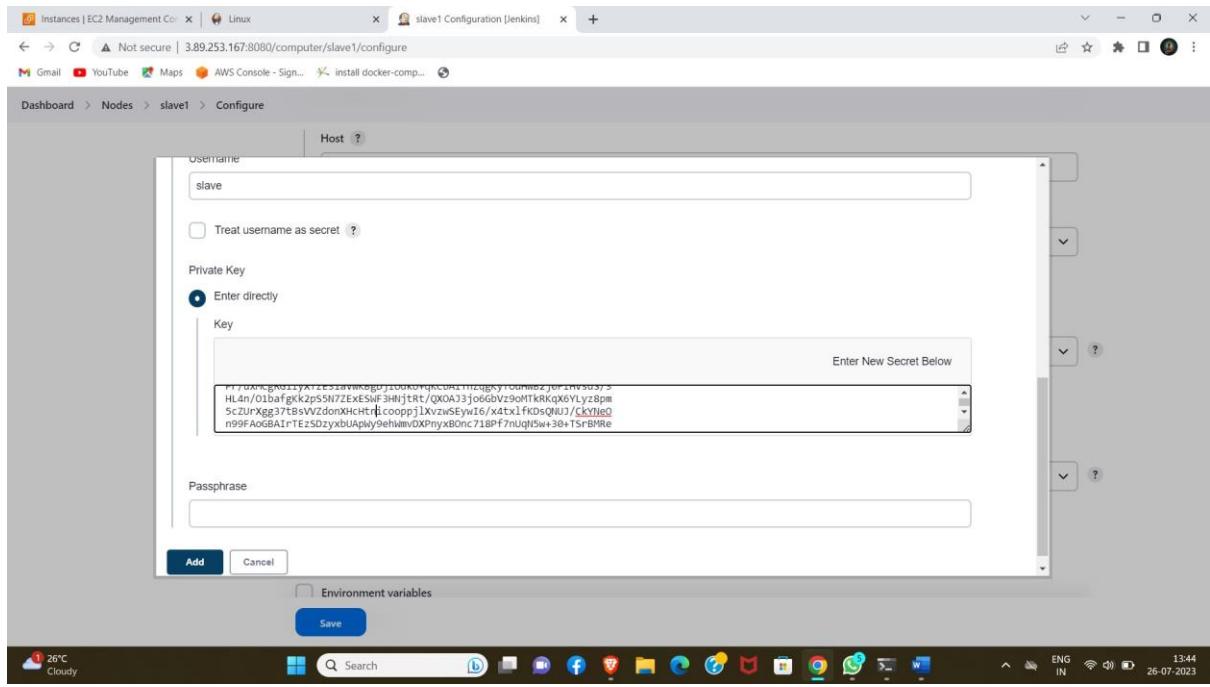




```

[slave@slave ~]$ pwd
/home/slave
[slave@slave ~]$ cd .ssh
[slave@slave .ssh]$ sudo cat id_rsa
-----BEGIN RSA PRIVATE KEY-----
MIIEowIBAAKCAQEAw8xvImJlYNske+dta6xSaELh8jqVFmDkpbVci8Guj5xyh7wN
brrfGUGrpRBgIwL5XBZVB86jBdAmfrzeelBZys2wAhdwLDRqpcbo14tB
BumpimVvsuuy992lbcq1a1Pvvrgnrxh9vIMYHSi1jaJl5a3R+JnReqrDskcCR
z90tdukerlXNuZNATLfaBAPKbjZv3VsRjM4Fwfsoqz0G56xCd72qiuU5yqVG3
h1Jj32eRnx1tLkJQ3M9+bec+/464idnx6b2H0T9JxeMU8s+nG9K8cFK/HWuNk7
lsx0BHA50RjRrg1tRWLGfChkuiaDx+IQBVhbWIdAQABoIAACnK0neEvpmnkAM
X1YaeTSx1h2fFKtigXnfZb9P8nwzPL9Y/IMAIcspjcwktNiNvtbkjdSQwZKS6xY
Y7PqzDoZUT9jz2uBATEquzeTemdx+3f0itxojuhWxmZ/Pbdkd9CAxHBHfj
xptekOuuUNSeK2wfeapGLrd5eT0ea07xKAWFZ0008UThzaL973/+DlUrExnmizyOH
Tz3UmTwaw7qZf4Mez2lKz1nz2cnDjXy6jzER5/hCvbsYv0lwern/N6dj1d67e5E
f5MoJvhwEoX1DyjMzVERgYunyy59UDMMvdifdxU6mE272k410GDNxYCEdewIY6
ufa177kCgYEAG6czgvbAd/7Um2Wg5DMa99PKQJtLTZiu1zHe6Q0+9FTepwdxkw
hTpVYebhD20J61VEugGBLGxNfgN0KpobxUXURsLpAfY1l/9z1q//bd4X6EQQ6RC
lzfwi0/p$ /shSZaEqq05alvYWmN0weDv01daITB6aYoh2sTx3dCgYEaQ2s
BmcnfcF12LbA983UhnVacaazzl3ljl+CLTsxS01hEmVBH/Fn2vSlfAr8RecvQ5u
kIA1kd01Nm6a2aj4H/0nCzuxZSPAEm5x1CwFdqjKwFlfjDE9ggz01k
tl.m9oH1P6RsgC02BzMsF9ubR0BFg9lfPw830CgYBsVPWejCuOxdtsRO1b+7V
H9tqeMG1wC4wW0D7KSpbNuzyCuByhLzaZEFG1TfjRwP+R005QwTCapmx4HkWCP
c8jING/TLyS417ivUAVTxN4QuseEs2KG8kBejuLO3Efbc562z11PMw7Qfj30L+
Px/uxMcgRGIyXtzE31aVwKbgjIOdKUjqKbaLTZhggKyfouhwB2j0fTHVsdS/3
HL4n/01bafgKh2p5NW72ExESWF3HNjtRtjXOA03jo6Gbvbz9oTHRrqX6LYz8pm
5cZUrXg37tBsVnZdonHcHtnicooppljXzwSeYmI6/x4txl1FDsQNUJ/CkNe0
n99FaogBAIrTEz5DzyxbUpwy9ehWmvDXPnyxB0nc718Pf7nUgNsW+30+TsrBMrE
28K7jbWwL.PgM7s/oamfjFB01V3Lgbx2w4lhUhY0zsMIIem0Tr2/TxdCy6qUcb
jUhg94LVNUw2pWkBkQzbs7z/5rvJTF/HXBirazoFGaqeNDHGy
-----END RSA PRIVATE KEY-----
[slave@slave .ssh]$ cd
[slave@slave ~]$ sudo yum -y install java
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core
Resolving Dependencies
--> Running transaction check
--> Package java-17-amazon-corretto.x86_64 1:17.0.8+7-1.amzn2.1 will be installed
--> Processing Dependency: java-17-amazon-corretto-headless(x86-64) = 1:17.0.8+7-1.amzn2.1 for package: 1:java-17-amazon-corretto-17.0.8+7-1.amzn2.1.x86_64
--> Processing Dependency: giflib for package: 1:java-17-amazon-corretto-17.0.8+7-1.amzn2.1.x86_64
| 3.7 kB  00:00:00

```



The screenshot shows the Jenkins 'Nodes' page. On the left, there's a sidebar with 'Nodes', 'Clouds', 'Node Monitoring', 'Build Queue' (empty), and 'Build Executor Status' (listing 'Built-In Node' with 1 idle instance and 'slave1' with 4 idle instances). The main table lists nodes:

S	Name	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
1	Built-In Node	Linux (amd64)	In sync	13.66 GB	0 B	13.66 GB	0ms
2	slave1	Linux (amd64)	In sync	6.05 GB	0 B	6.05 GB	25ms
	Data obtained	15 min	15 min	15 min	15 min	15 min	15 min

9. then go to tools and add maven

The screenshot shows the Jenkins 'Tools' page. Under 'Add Maven', a form is filled with 'Name' set to 'maven'. The 'Install automatically' checkbox is checked. Under 'Install from Apache', 'Version' is set to '3.8.6'. At the bottom are 'Save' and 'Apply' buttons.

10 And go to manage jenkins /pluggins / available pluggins and install deploy to code and maven installer.

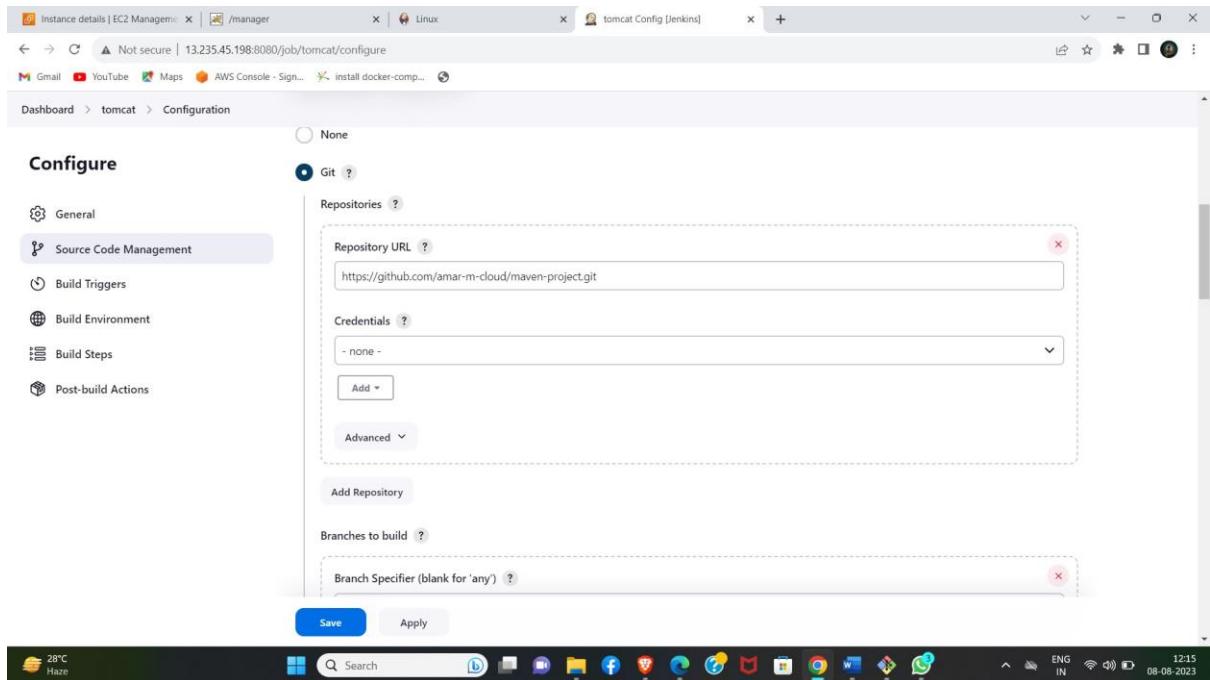
The screenshot shows the Jenkins 'Available plugins' page. A search bar at the top contains the text 'maven'. Below the search bar, there is a table listing several Jenkins plugins:

Install	Name	Released
<input checked="" type="checkbox"/>	Deploy to container 1.16 Artifact Uploaders	2 yr 9 mo ago
<input checked="" type="checkbox"/>	Maven Integration 3.23 Build Tools	3 days 2 hr ago
<input type="checkbox"/>	Config File Provider 952.va_544a_6234b_46 Groovy-related External Site/Tool Integrations Maven	16 days ago
<input type="checkbox"/>	Jira 3.10 External Site/Tool Integrations Maven jira	2 mo 8 days ago
<input type="checkbox"/>	Pipeline Maven Integration 1314.v09626b_14362f	

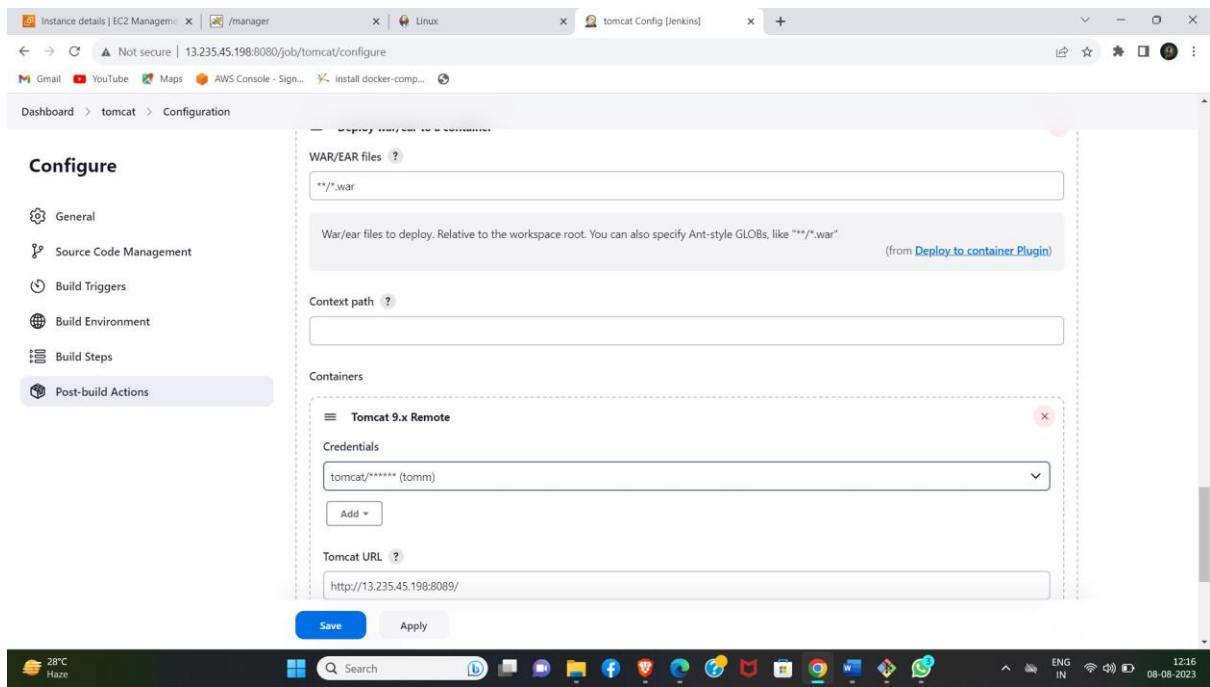
Below the table, there is a section titled 'Success' which lists various Jenkins API components and their status:

- Ionicons API Success
- Folders Success
- OWASP Markup Formatter Success
- bouncycastle API Success
- Instance Identity Success
- JavaBeans Activation Framework (JAF) API Success
- JavaMail API Success
- Structs Success
- Token Macro Success
- Build Timeout Success
- Pipeline: Step API Success
- Credentials Success
- Plain Credentials Success
- Trilead API Success
- SSH Credentials Success
- Credentials Binding Success
- SCM API Success
- Pipeline: API Success
- commons-lang3 v3.x Jenkins API Success
- Timestamper Success
- Caffeine API Success
- Script Security Success

11. create a free style project and add git repo



Add maven in build steps and add war/ear and cradentials and container in post build actions

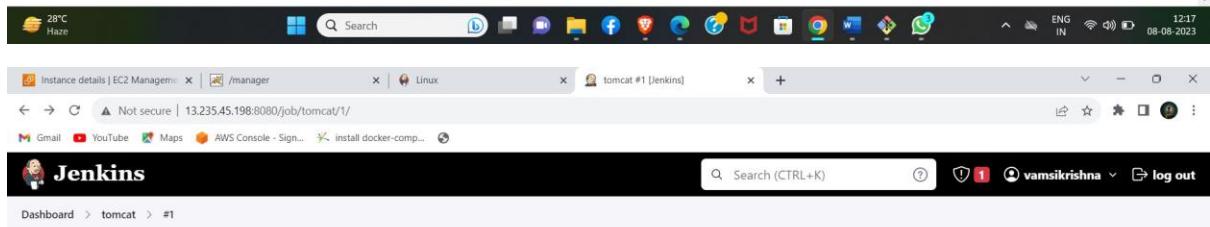


Then deploy the code usind save and build now

```

[INFO] Downloaded from central: https://repo.maven.apache.org/maven2/com/thoughtworks/xstream/xstream/1.4.9/xstream-1.4.9.jar (549 kB at 2.6 MB/s)
[INFO] Packaging webapp
[INFO] Assembling webapp [webapp] in [/var/lib/jenkins/workspace/tomcat/webapp/target/webapp]
[INFO] Processing war project
[INFO] Copying webapp resources [/var/lib/jenkins/workspace/tomcat/webapp/src/main/webapp]
[INFO] Webapp assembled in [27 msecs]
[INFO] Building war: /var/lib/jenkins/workspace/tomcat/webapp/target/webapp.war
[INFO] -----
[INFO] Reactor Summary for Maven Project 1.0-SNAPSHOT:
[INFO]
[INFO] Maven Project ..... SUCCESS [ 1.061 s]
[INFO] Server ..... SUCCESS [ 4.111 s]
[INFO] Webapp ..... SUCCESS [ 2.288 s]
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 7.561 s
[INFO] Finished at: 2023-08-08T06:47:40Z
[INFO] -----
[DeployPublisher][INFO] Attempting to deploy 1 war file(s)
[DeployPublisher][INFO] Deploying /var/lib/jenkins/workspace/tomcat/webapp/target/webapp.war to container Tomcat 9.x Remote with context null
[/var/lib/jenkins/workspace/tomcat/webapp/target/webapp.war] is not deployed. Doing a fresh deployment.
Deploying [/var/lib/jenkins/workspace/tomcat/webapp/target/webapp.war]
Finished: SUCCESS

```



12. then browse the public ip give changed port like 8089

Manager

List Applications | HTML Manager Help | Manager Help | Server Status

Applications

Path	Version	Display Name	Running	Sessions	Commands
/	None specified	Welcome to Tomcat	true	0	Start Stop Reload Undeploy Expire sessions with idle > 30 minutes
/docs	None specified	Tomcat Documentation	true	0	Start Stop Reload Undeploy Expire sessions with idle > 30 minutes
/examples	None specified	Servlet and JSP Examples	true	0	Start Stop Reload Undeploy Expire sessions with idle > 30 minutes
/host-manager	None specified	Tomcat Host Manager Application	true	0	Start Stop Reload Undeploy Expire sessions with idle > 30 minutes
/manager	None specified	Tomcat Manager Application	true	1	Start Stop Reload Undeploy Expire sessions with idle > 30 minutes
/webapp	None specified	Webapp	true	0	Start Stop Reload Undeploy Expire sessions with idle > 30 minutes

Deploy

Deploy directory or WAR file located on server

Context Path:
Version (for parallel deployment):
XML Configuration file path:

28°C Haze 12:18 08-08-2023

Click on webapp

Instance details | EC2 Manager | /manager | Linux | tomcat #1 [Jenkins] | +

Not secure | 13.235.45.198:8089/manager/html

Gmail YouTube Maps AWS Console - Sign... install docker-comp... 12:18 08-08-2023

Apache Tomcat® - Apache Tomcat/9.0.52 (Red Hat Enterprise Linux) | 403 Access Denied | 13.235.9.47:8081/webapp/

Hello, DevOps Engineers You Cracked it Just Relax for sum time

26°C Haze 22:46 08-08-2023

