

# Deploying a project through Jenkins of web application server in tomcat

Step : Creating 2 instance

- Creating a Ec2 instance for Jenkins
- Creating a Ec2 instance for Tomcat
- Connect tomcat to Jenkins and deploy

Ec2 of Jenkins

Enable 8080 port for accessing Jenkins inside of network in security group

Install java-17 and install maven(build) then install Jenkins

```
[ sudo wget -O /etc/yum.repos.d/jenkins.repo \ https://pkg.jenkins.io/redhat-stable/jenkins.repo
```

```
sudo yum install java-17 git -y
```

```
sudo yum install maven -y
```

```
sudo systemctl enable Jenkins
```

```
sudo systemctl start Jenkins
```

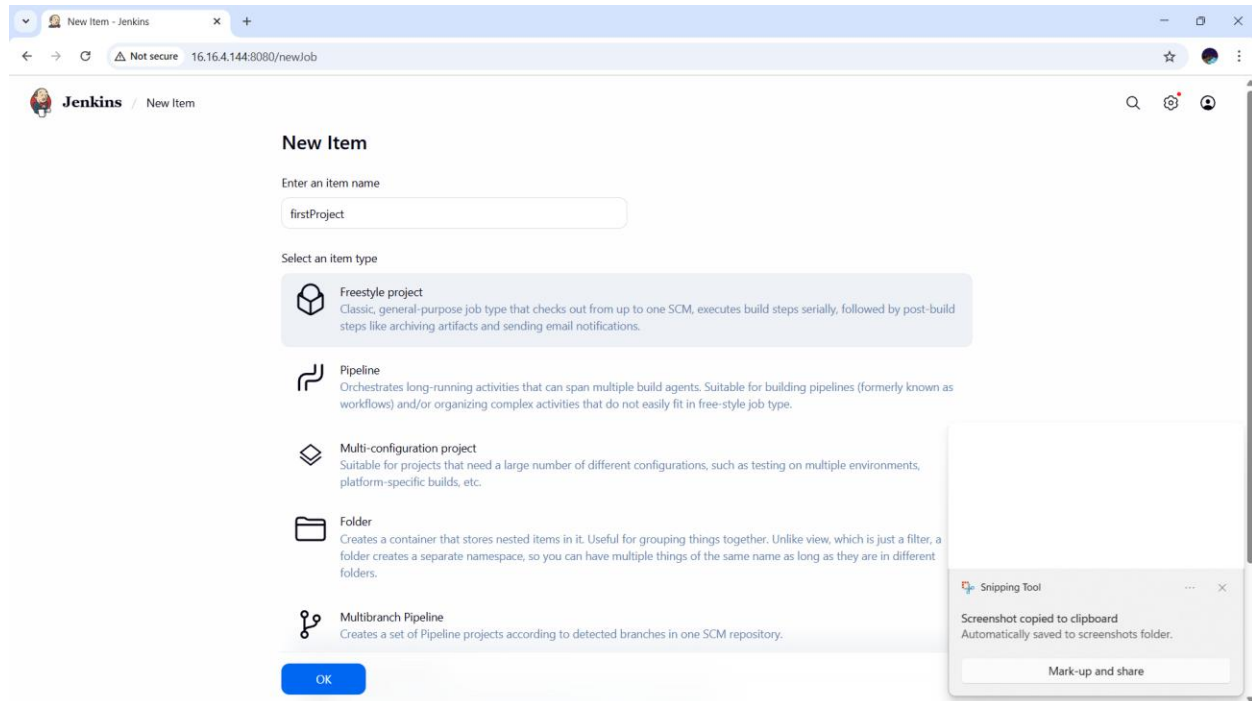
```
sudo systemctl status jenkins
```

```
]
```

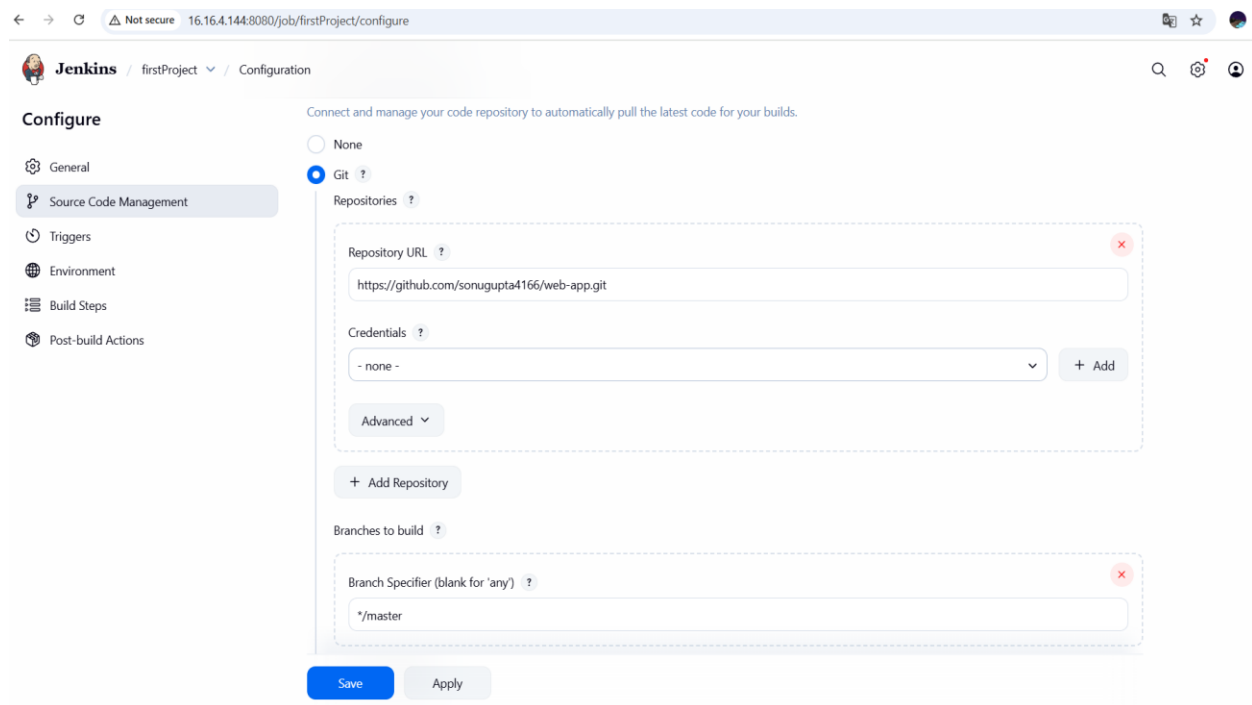
Enable 8080 port from anywhere

- Copy ip paste in browser with 8080 (**<http://16.171.181.213:8080>**)
- Password give for initial ( **`/var/lib/Jenkins/secrets/initialAdminPassword`** )
- After giving initial password create **Username and password also Email**
- **Install plugging**
- Install plugging of build Maven
- Also install plugging Deploy Container

Create a free style project




Add github repository in it



## Install plugging of Deploy to Container

← → ↻ ⚠ Not secure 16.16.4.144:8080/manage/pluginManager/updates/

 **Jenkins** / Manage Jenkins ▾ / Plugins

### Plugins

- 📄 Updates
- 📁 Available plugins
- ⚙ Installed plugins
- ⚙ Advanced settings
- ☰ Download progress**


Trilead API	✓ Success
SSH Build Agents	✓ Success
Matrix Authorization Strategy	✓ Success
LDAP	✓ Success
jsoup API	✓ Success
Email Extension	✓ Success
Mailer	✓ Success
Theme Manager	✓ Success
Dark Theme	✓ Success
Loading plugin extensions	✓ Success
Dev Tools Symbols API	✓ Success
Javadoc	✓ Success
JSch dependency	✓ Success
Maven Integration	✓ Success
Loading plugin extensions	✓ Success
Deploy to container	✓ Success
Loading plugin extensions	✓ Success

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

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

## Install plugging of maven

→ ↻ ⚠ Not secure 16.16.4.144:8080/manage/pluginManager/updates/

 **Jenkins** / Manage Jenkins ▾ / Plugins

### Plugins

- 📄 Updates
- 📁 Available plugins
- ⚙ Installed plugins
- ⚙ Advanced settings
- ☰ Download progress**

### Download progress

Preparation

- Checking internet connectivity
- Checking update center connectivity
- Success

commons-lang3 v3.x Jenkins API	✓ Success
Ionicons API	✓ Success
Folders	✓ Success
OWASP Markup Formatter	✓ Success
ASM API	✓ Success
JSON Path API	✓ Success
Structs	✓ Success
Pipeline: Step API	✓ Success
commons-text API	✓ Success
Token Macro	✓ Success
Build Timeout	✓ Success
bouncycastle API	✓ Success
Credentials	✓ Success
Plain Credentials	✓ Success
Variant	✓ Success
SSH Credentials	✓ Success
Credentials Binding	✓ Success
SCM API	✓ Success
Pipeline: API	✓ Success
Timestamp	✓ Success

Select Build step :Invoke top-level Maven targets

And fill the details

Jenkins / git to jenkins / Configuration

Configure

General

Source Code Management

Triggers

Environment

Build Steps

Post-build Actions

Automate your build process with ordered tasks like code compilation, testing, and deployment.

**Invoke top-level Maven targets**

Goals

clean package

Advanced

+ Add build step

Post-build Actions

Define what happens after a build completes, like sending notifications, archiving artifacts, or triggering other jobs.

+ Add post-build action

Save Apply

## 2 Ec2 for tomcat

Enable 8080 port for accessing Jenkins inside of network in security group

- Connect ec2 instance
- Download tomcat server
- [ wget <https://dlcdn.apache.org/tomcat/tomcat-9/v9.0.112/bin/apache-tomcat-9.0.112.tar.gz>

```
Tar -zxvf apache-tomcat-9.0.112.tar.gz
```

```
mv apache-tomcat-9.0.112.tar.gz tomcat
```

```
sudo yum install locate
```

```
cd tom
```

```
cd bin
```

```
bash startup.sh
```

```
cd ..
```

```
locate context.xml
```

```
cd conf
```

```
vi context.xml (# Edit value remove line 21 and 22 add our IP for instance)
```

```
sudo updatedb
```

```
cd
```

Edit role name

Edit manager-gui and manager script ( for accessing file inside of server )

cd bin

bash startup.sh

username

password

sign in ]

Add plugin deploy in container

Then select post build action

The screenshot shows the Jenkins configuration page for a job named 'git-jenkins-tomcat'. The left sidebar contains a 'Configure' section with a list of tabs: General, Source Code Management, Triggers, Environment, Build Steps, and Post-build Actions. The 'Post-build Actions' tab is selected. The main content area is titled 'POST-BUILD ACTIONS' and includes a description: 'Define what happens after a build completes, like sending notifications, archiving artifacts, or triggering other jobs.' Below this, there are two configuration blocks. The first block is 'Deploy war/ear to a container', which has a 'WAR/EAR files' field containing 'target/\*.war' and a 'Context path' field containing 'git-jenkins-tomcat'. The second block is 'Tomcat 9.x Remote', which has a 'Credentials' dropdown menu showing 'tomcat/\*\*\*\*\*' and an '+ Add' button. At the bottom of the configuration area are 'Save' and 'Apply' buttons.

This screenshot shows the same Jenkins configuration page, but with the 'Containers' section expanded. The 'Tomcat 9.x Remote' block now includes a 'Tomcat URL' field with the value 'http://13.236.134.248:8080/manager/text'. Below this field is an 'Advanced' dropdown menu. At the bottom of the configuration area, there is an '+ Add Container' button. The 'Save' and 'Apply' buttons remain at the bottom.

Then click on Build now

← → ↻ Not secure 16.16.4.144:8080/job/firstProject/1/console

Jenkins / firstProject / #1 / Console Output

Download Copy View as plain text

✓ Console Output

```
Started by user jenkins
Running as SYSTEM
Building in workspace /var/lib/jenkins/workspace/firstProject
The recommended git tool is: NONE
No credentials specified
Cloning the remote Git repository
Cloning repository https://github.com/sonugupta4166/web-app.git
> git init /var/lib/jenkins/workspace/firstProject # timeout=10
Fetching upstream changes from https://github.com/sonugupta4166/web-app.git
> git --version # timeout=10
> git --version # 'git version 2.50.1'
> git fetch --tags --force --progress -- https://github.com/sonugupta4166/web-app.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git config remote.origin.url https://github.com/sonugupta4166/web-app.git # timeout=10
> git config --add remote.origin.fetch +refs/heads/*:refs/remotes/origin/* # timeout=10
Avoid second fetch
> git rev-parse refs/remotes/origin/master^{commit} # timeout=10
Checking out Revision 6980817cd76c714301687ff05896f9a0ede39703 (refs/remotes/origin/master)
> git config core.sparsecheckout # timeout=10
> git checkout -f 6980817cd76c714301687ff05896f9a0ede39703 # timeout=10
Commit message: "update index.jsp"
First time build. Skipping changelog.
```

# After deploy our web in Jenkins using Tomcat server

← → ↻ Not secure 13.236.134.248:8080/manager/html

## Tomcat Web Application Manager

Message: OK

Manager			
<a href="#">List Applications</a>	<a href="#">HTML Manager Help</a>	<a href="#">Manager Help</a>	<a href="#">Server St</a>

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
/git-jenkins-tomcat	None specified	Archetype Created Web Application	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
					Start Stop Reload Undeploy