How To Deploy Application Using Jenkins

Step-1: Launch an Ec2 instance using AWS

- Add a name & choose Ami
- Choose an instance type T2-micro
- Add a key pair
- Configure a security group
- Configure storage
- launch instance.

Step-2: Connect to AWS Console and install dependencies to configure jenkins.

- Install java 21:
- sudo rpm --import https://yum.corretto.aws/corretto.key
- sudo curl -Lo /etc/yum.repos.d/corretto.repo https://yum.corretto.aws/corretto.repo
- sudo yum install -y java-21-amazon-corretto-devel
- java -version

Note: sudo alternatives --config java.

Step-3: Go to /opt and download Maven. It is dependency to Compile,Test & Install the Code.

- cd /opt
- sudo curl -O https://downloads.apache.org/maven/maven-3/3.9.6/binaries/apache-maven-3.9.6-bin.tar.gz
- Extract and rename for simplicity
- sudo tar -xvzf apache-maven-3.9.6-bin.tar.gz
- sudo mv apache-maven-3.9.6 /opt/maven
- Set up environment variables
- sudo tee /etc/profile.d/maven.sh > /dev/null <<EOF
- export M2_HOME=/opt/maven
- export PATH=\$M2_HOME/bin:\$PATH
- EOF
- Make it executable and reload profile
- sudo chmod +x /etc/profile.d/maven.sh
- source /etc/profile.d/maven.sh

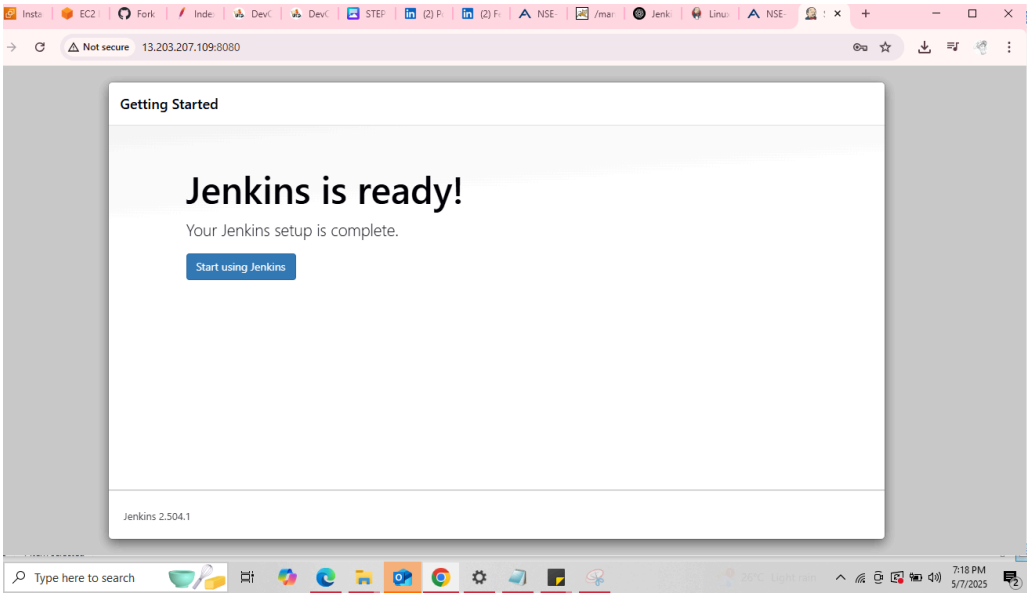
Step-4: Setup jenkins in the same instance using jenkins.io repo.

- sudo wget -O /etc/yum.repos.d/jenkins.repo \
- https://pkg.jenkins.io/redhat-stable/jenkins.repo
- sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key
- sudo yum upgrade

- Add required dependencies for the jenkins package
- sudo yum install fontconfig java-21-openjdk
- sudo yum install jenkins
- sudo systemctl daemon-reload
- sudo systemctl start jenkins
- sudo systemctl status jenkins

Step-5:Access Jenkins

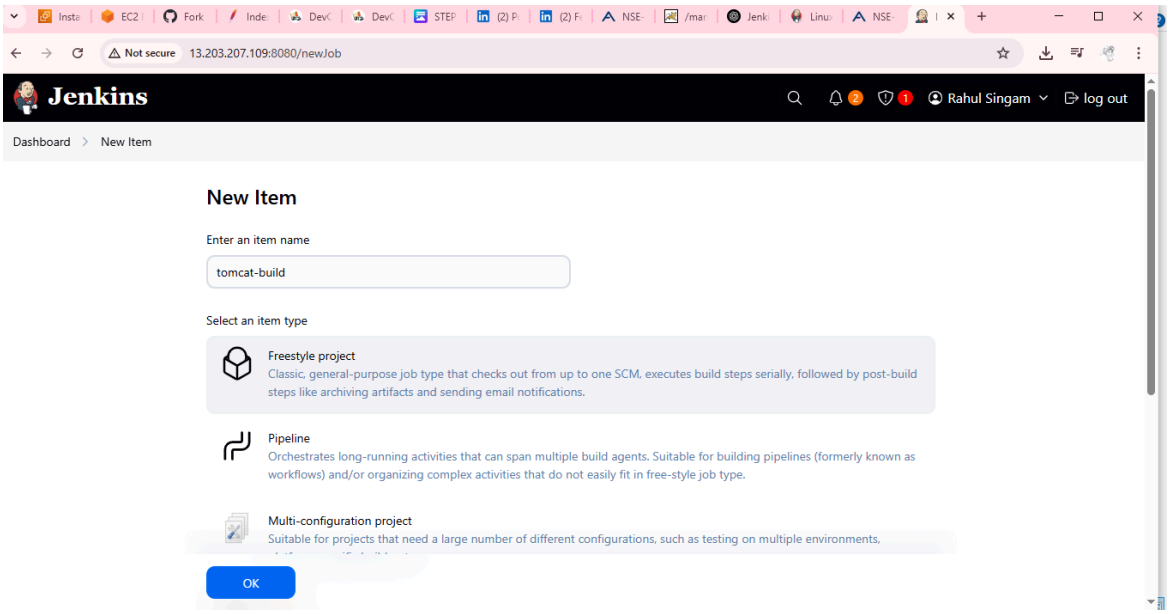
- Open a web browser and navigate to http://your_server_ip_or_domain:8080. Follow the on screen instructions to complete the setup.



Step-6: Navigate to: Manage Jenkins → Global Tool Configuration

- Under Maven: Click Add Maven
- Set name: Maven 3.9.6
- Uncheck Install Automatically
- Set MAVEN_HOME: /opt/maven
- Save configuration

Create a Job

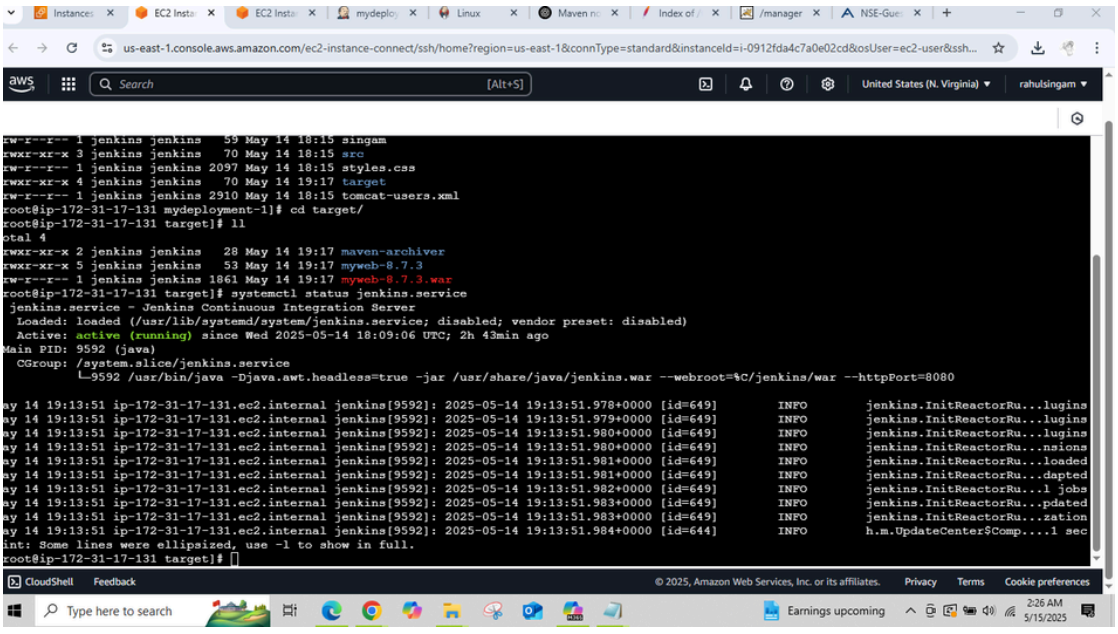


Step-7: Create a Job in Jenkins

- Create a new Freestyle or Pipeline job.
- General → GitHub Project →(add git repo url).
- Source code managment →(add same git repo url).
- In Build Steps →Invoke top level managment targets
- check Use Maven Version → select Maven 3.9.6.
- Use Maven goals like:

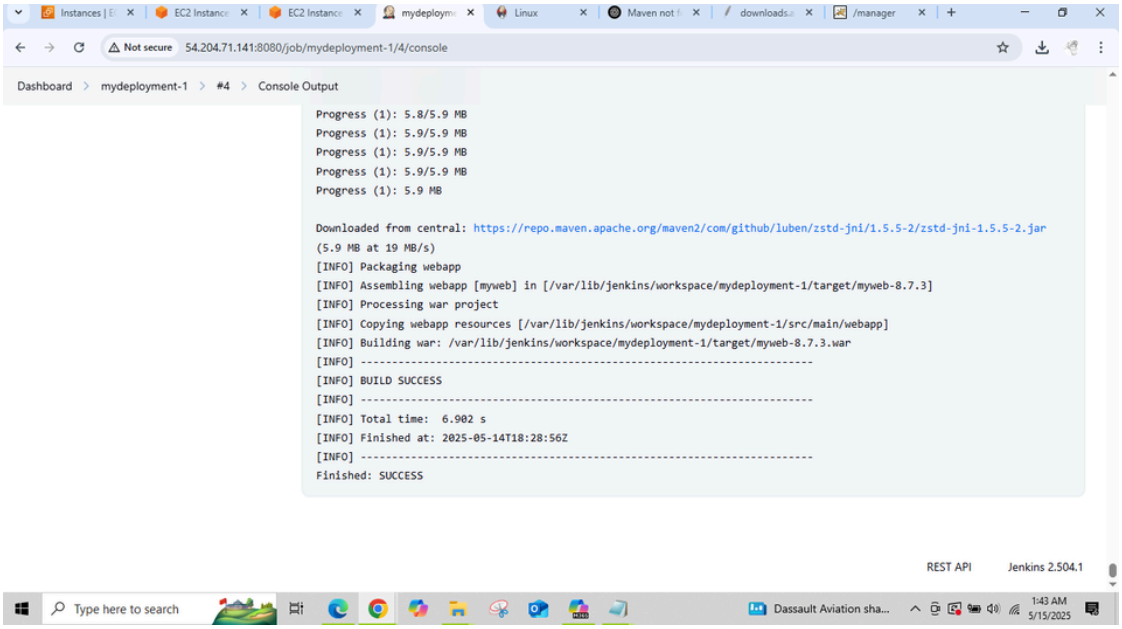
1. clean install
2. clean package

Note: We get WAR File in target folder.



Build the Job →you get job Success. (If not check the pom.xml plugins)

Eg:Output of the job



Step-8: Launch an another Ec2 instance using AWS for setup Tomcat

- **Add a name & choose Ami**
- **Choose an instance type T2-micro**
- **Add a key pair**
- **Configure a security group**
- **Configure storage**
- **launch instance.**

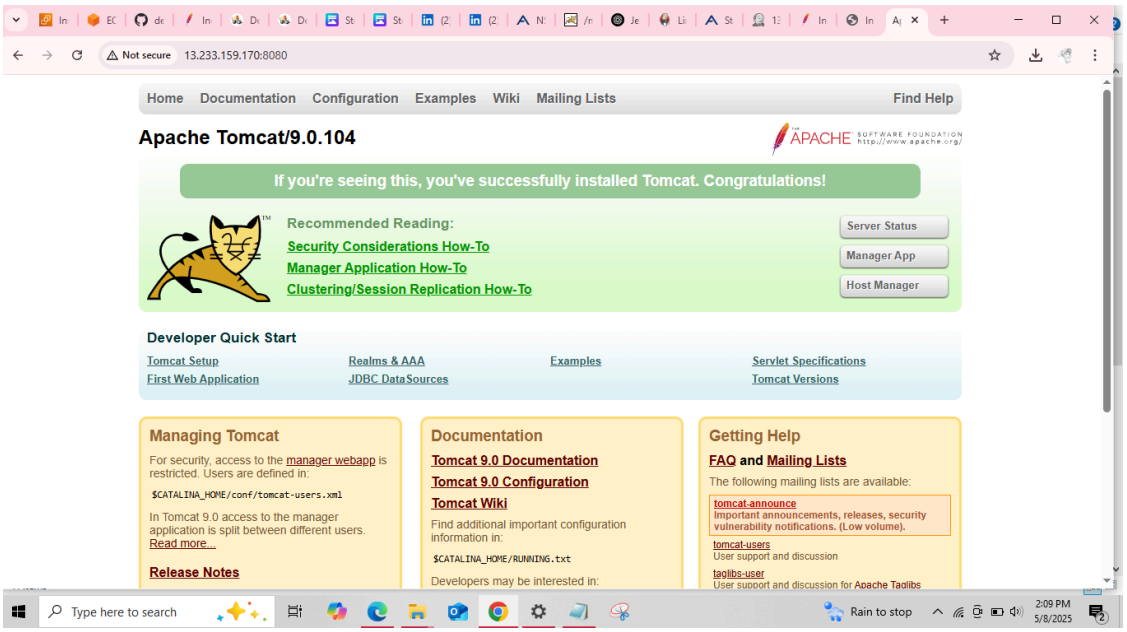
Step-9: Install java

- **sudo yum install java -y**

Step 10: Download and Install Apache Tomcat Download Tomcat:

- **Navigate to the https://downloads.apache.org/tomcat/tomcat-9/v9.0.104/bin/ to find the latest version.**
- **Download the binary distribution for your system.**
- **wget https://downloads.apache.org/tomcat/tomcat-9/v9.0.104/bin/apache-tomcat 9.0.104.tar.gz**
- **Note: Copy the link of tar.gz file only.**
- **Extract the Archive: tar -xvf apache-tomcat-9.0.104.tar.gz**

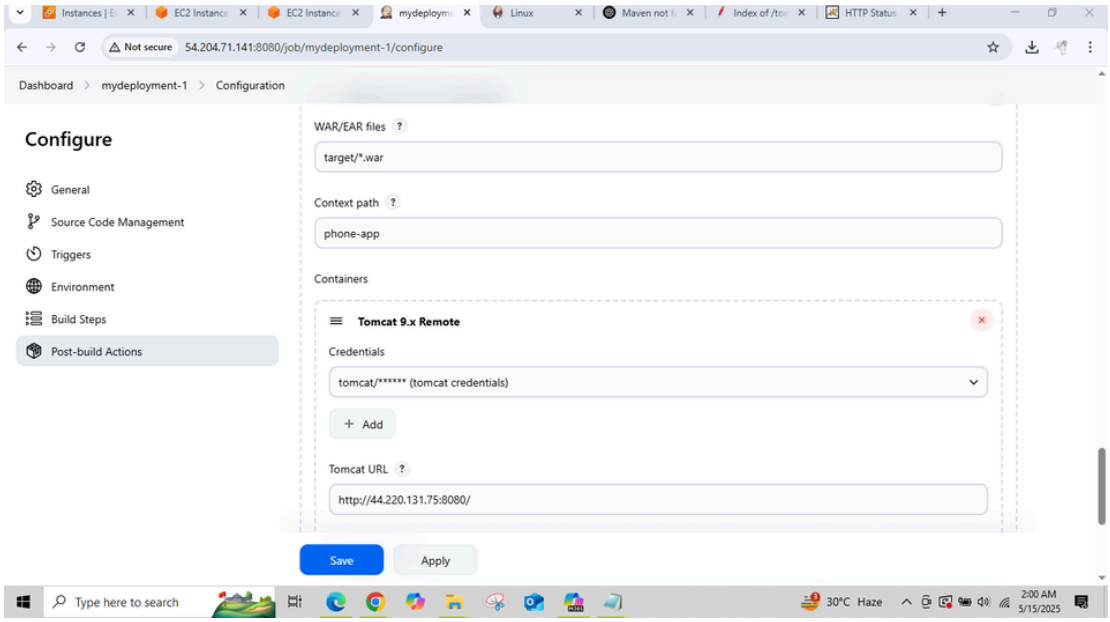
STEP-11: Access Tomcat Open a web browser and navigate to http://your_server_ip_or_domain:8080. Follow the on screen instructions to complete the setup



After Setting up the Tomcat :

- **Navigate to jenkins**
- **Go to Manage Jenkins → Install plugin called Deploy Container**
- **Configure the Post build Actions Select Deploy war/ear to a container**
    1. WAR/EAR Files: target/*.war
    2. Context path: (name of application)
- **Add Tomcat Credentials and give Tomact url.**

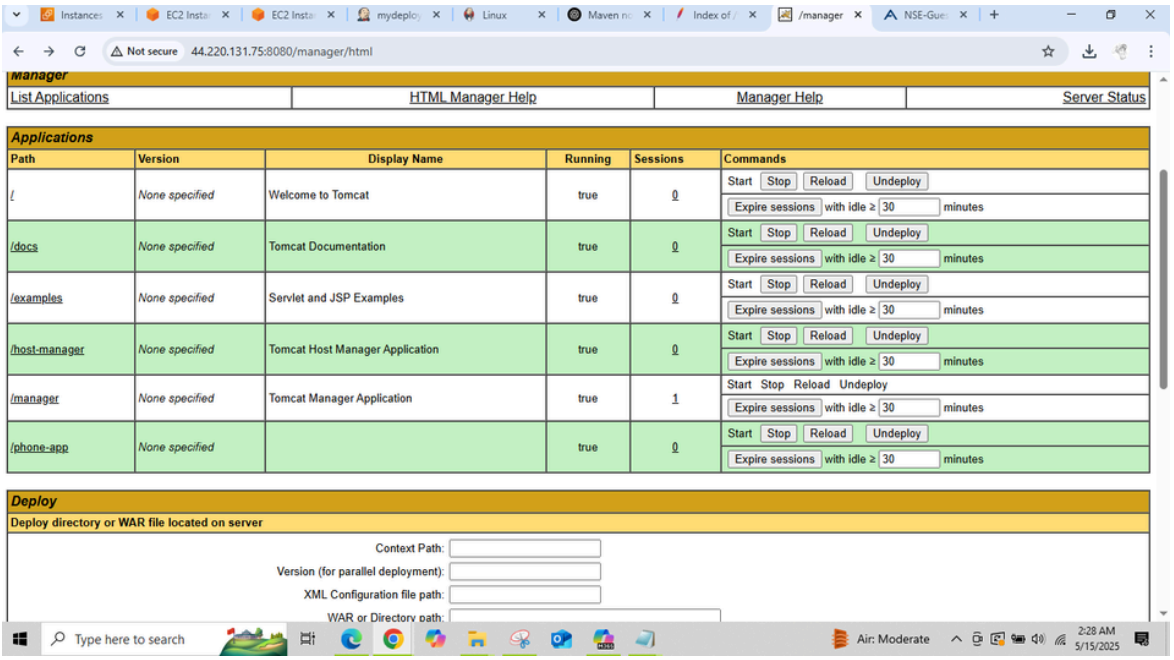
Eg:



- **Save it.**
- **And trigger the job.**

WAR file is deployed in Tomcat Application using jenkins .

Eg: (Given with name called phone-app)


Not secure
44.220.131.75:8080/manager/html
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
/phone-app
None specified
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:
WAR or Directory path:
Type here to search
Air: Moderate
2:28 AM
5/15/2025