

Name :- Komal Mhetre

Role :- DevOps Engineer

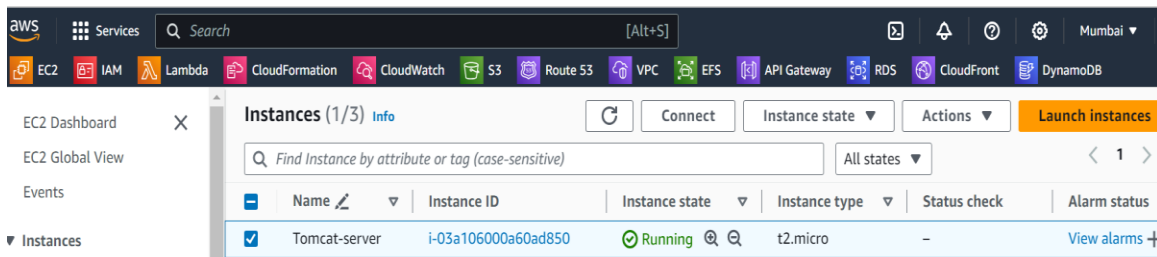
Task :- CI/CD pipeline to deploy the maven web application in tomcat server.

-
- 1 **Create CI/CD Pipeline to Clone and Build Java Maven Web Application**
 - 2 **Create CI/CD Pipeline to Deploy the Maven Web Application in Tomcat Server**
 - 3 **Automate the CI/CD Pipeline using GitHub webhook and Poll-SCM**
-

Prerequisites:

1. Jenkins Installed: Ensure Jenkins is installed and running.
2. GitHub Repository: Have a Java Maven project in a GitHub repository.
3. Maven Installed: Jenkins should have Maven installed or configured.
4. Tomcat Server: Tomcat server set up on a machine with SSH access.
5. Jenkins Plugins: Ensure the following plugins are installed:
 - o GitHub Integration
 - o Maven Integration
 - o SSH Pipeline Steps or Publish Over SSH (for deploying to Tomcat)
 - o Pipeline (for scripted pipelines)

1. First Launch instance and give name tomcat server.



- **Switch to root user**
Sudo su
- **Update the package repository.**
Sudo apt-get update -y

- **Install java**
sudo apt install default-jdk -y
java -version

Navigate to the /opt directory
cd /opt

2. **Install Apache Tomcat** get <https://dlcdn.apache.org/tomcat/tomcat-10/v10.1.28/bin/apache-tomcat-10.1.28.zip>

Unzip the tomcat binary
Sudo apt install unzip
sudo unzip apache-tomcat-10.1.28.zip

3. Edit the tomcat-users.xml file

Sudo vi /conf/tomcat-users.xml

```
root@ip-172-31-0-13:/opt# ls
apache-tomcat-10.1.28  apache-tomcat-10.1.28.zip
root@ip-172-31-0-13:/opt# cd apache-tomcat-10.1.28/
root@ip-172-31-0-13:/opt/apache-tomcat-10.1.28# ls
BUILDING.txt CONTRIBUTING.md LICENSE NOTICE README.md RELEASE-NOTES RUNNING.txt bin conf lib logs temp webapps work
root@ip-172-31-0-13:/opt/apache-tomcat-10.1.28# sudo vi /conf/tomcat-users.xml
```

4. In the editor scroll down and add username , password and roles.

</tomcat-users>

<user username="admin" password="123456" roles="admin-gui,manager-gui,manager-script"/></tomcat-users>

```
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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.
-->
<tomcat-users xmlns="http://tomcat.apache.org/xml"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://tomcat.apache.org/xml tomcat-users.xsd"
  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="<must-be-changed>" roles="manager-gui"/>
  <user username="robot" password="<must-be-changed>" 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="<must-be-changed>" roles="tomcat"/>
  <user username="both" password="<must-be-changed>" roles="tomcat,role1"/>
  <user username="role1" password="<must-be-changed>" roles="role1"/>
  -->
  <user username="admin" password="123456" roles="admin-gui,manager-gui,manager-script"/>
</tomcat-users>
INSERT --
```

5. Edit the context.xml file. As you need to comment out the value tag.

sudo vi webapps/manager/META-INF/context.xml

```
root@ip-172-31-11-238:/opt/apache-tomcat-10.1.28# sudo vi webapps/manager/META-INF/context.xml
root@ip-172-31-11-238:/opt/apache-tomcat-10.1.28# |
```

6. In the vi editor scroll down and comment the value line.

<!-- <value classname= to 0:1" /> -->

```
<?xml version="1.0" encoding="UTF-8"?>
<!--
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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

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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|0:0:0:0:0:0:0:1" />
  -->
  <Manager sessionAttributeValueClassNameFilter="java\.lang\.(?!\Boolean|Integer|Long|Number|String)|org\.apache\.catalina\.f
ava\.util\.(?!Linked)?HashMap"/>
</Context>
```

7. Change the current directory to the tomcat **bin** folder.

```
cd apache-tomcat-10.1.28/bin
ls -l
```

```
root@ip-172-31-11-238:/opt/apache-tomcat-10.1.28# ls
BUILDING.txt  CONTRIBUTING.md  LICENSE  NOTICE  README.md  RELEASE-NOTES  RUNNING.txt  bin  conf  lib  logs  temp  webapps  work
root@ip-172-31-11-238:/opt/apache-tomcat-10.1.28# cd bin/
root@ip-172-31-11-238:/opt/apache-tomcat-10.1.28/bin# ls -l
total 928
-rw-r--r-- 1 root root 36142 Aug 2 15:14 bootstrap.jar
-rw-r--r-- 1 root root 1703 Aug 2 15:14 catalina-tasks.xml
-rw-r--r-- 1 root root 15127 Aug 2 15:14 catalina.bat
-rw-r--r-- 1 root root 23445 Aug 2 15:14 catalina.sh
-rw-r--r-- 1 root root 2123 Aug 2 15:14 ciphers.bat
-rw-r--r-- 1 root root 1997 Aug 2 15:14 ciphers.sh
-rw-r--r-- 1 root root 214459 Aug 2 15:14 commons-daemon-native.tar.gz
-rw-r--r-- 1 root root 25834 Aug 2 15:14 commons-daemon.jar
-rw-r--r-- 1 root root 2040 Aug 2 15:14 configtest.bat
-rw-r--r-- 1 root root 1922 Aug 2 15:14 configtest.sh
-rw-r--r-- 1 root root 8319 Aug 2 15:14 daemon.sh
-rw-r--r-- 1 root root 2091 Aug 2 15:14 digest.bat
-rw-r--r-- 1 root root 1965 Aug 2 15:14 digest.sh
-rw-r--r-- 1 root root 3606 Aug 2 15:14 makebase.bat
-rw-r--r-- 1 root root 3382 Aug 2 15:14 makebase.sh
-rw-r--r-- 1 root root 2096 Aug 2 15:14 migrate.bat
-rw-r--r-- 1 root root 1970 Aug 2 15:14 migrate.sh
-rw-r--r-- 1 root root 3382 Aug 2 15:14 setclasspath.bat
-rw-r--r-- 1 root root 2020 Aug 2 15:14 shutdown.bat
-rw-r--r-- 1 root root 1902 Aug 2 15:14 shutdown.sh
-rw-r--r-- 1 root root 2022 Aug 2 15:14 startup.bat
-rw-r--r-- 1 root root 1904 Aug 2 15:14 startup.sh
-rw-r--r-- 1 root root 48827 Aug 2 15:14 tomcat-juli.jar
-rw-r--r-- 1 root root 471386 Aug 2 15:14 tomcat-native.tar.gz
-rw-r--r-- 1 root root 3623 Aug 2 15:14 tool-wrapper.bat
-rw-r--r-- 1 root root 4600 Aug 2 15:14 tool-wrapper.sh
-rw-r--r-- 1 root root 2026 Aug 2 15:14 version.bat
-rw-r--r-- 1 root root 1908 Aug 2 15:14 version.sh
root@ip-172-31-11-238:/opt/apache-tomcat-10.1.28/bin#
```

8. Add execute permission to all the ***.sh** scripts

```
Chmod u+x *.sh
```

```
root@ip-172-31-11-238:/opt/apache-tomcat-10.1.28/bin# chmod u+x *.sh
root@ip-172-31-11-238:/opt/apache-tomcat-10.1.28/bin# ls -l
total 928
-rwxr--r-- 1 root root 36142 Aug 2 15:14 bootstrap.jar
-rwxr--r-- 1 root root 1703 Aug 2 15:14 catalina-tasks.xml
-rwxr--r-- 1 root root 15127 Aug 2 15:14 catalina.bat
-rwxr--r-- 1 root root 23445 Aug 2 15:14 catalina.sh*
-rwxr--r-- 1 root root 2123 Aug 2 15:14 ciphers.bat
-rwxr--r-- 1 root root 1997 Aug 2 15:14 ciphers.sh*
-rwxr--r-- 1 root root 214459 Aug 2 15:14 commons-daemon-native.tar.gz
-rwxr--r-- 1 root root 25834 Aug 2 15:14 commons-daemon.jar
-rwxr--r-- 1 root root 2040 Aug 2 15:14 configtest.bat
-rwxr--r-- 1 root root 1922 Aug 2 15:14 configtest.sh*
-rwxr--r-- 1 root root 8319 Aug 2 15:14 daemon.sh*
-rwxr--r-- 1 root root 2091 Aug 2 15:14 digest.bat
-rwxr--r-- 1 root root 1965 Aug 2 15:14 digest.sh*
-rwxr--r-- 1 root root 3606 Aug 2 15:14 makebase.bat
-rwxr--r-- 1 root root 3382 Aug 2 15:14 makebase.sh*
-rwxr--r-- 1 root root 2096 Aug 2 15:14 migrate.bat
-rwxr--r-- 1 root root 1970 Aug 2 15:14 migrate.sh*
-rwxr--r-- 1 root root 3382 Aug 2 15:14 setclasspath.bat
-rwxr--r-- 1 root root 2020 Aug 2 15:14 shutdown.bat
-rwxr--r-- 1 root root 1902 Aug 2 15:14 shutdown.sh*
-rwxr--r-- 1 root root 2022 Aug 2 15:14 startup.bat
-rwxr--r-- 1 root root 1904 Aug 2 15:14 startup.sh*
-rwxr--r-- 1 root root 48827 Aug 2 15:14 tomcat-juli.jar
-rwxr--r-- 1 root root 471386 Aug 2 15:14 tomcat-native.tar.gz
-rwxr--r-- 1 root root 3623 Aug 2 15:14 tool-wrapper.bat
-rwxr--r-- 1 root root 4600 Aug 2 15:14 tool-wrapper.sh*
-rwxr--r-- 1 root root 2026 Aug 2 15:14 version.bat
-rwxr--r-- 1 root root 1908 Aug 2 15:14 version.sh*
root@ip-172-31-11-238:/opt/apache-tomcat-10.1.28/bin#
```

```
root@ip-172-31-11-238:/opt/apache-tomcat-10.1.28/bin# ls
bootstrap.jar  ciphers.bat  configtest.bat  digest.sh  migrate.sh  shutdown.sh  tomcat-native.tar.gz  version.sh
catalina-tasks.xml  ciphers.sh  configtest.sh  makebase.bat  setclasspath.bat  startup.bat  tool-wrapper.bat
catalina.bat  commons-daemon-native.tar.gz  daemon.sh  makebase.sh  setclasspath.sh  startup.sh  tool-wrapper.sh
catalina.sh  commons-daemon.jar  digest.bat  migrate.bat  shutdown.bat  tomcat-juli.jar  version.bat
root@ip-172-31-11-238:/opt/apache-tomcat-10.1.28/bin# cd ..
root@ip-172-31-11-238:/opt/apache-tomcat-10.1.28# vi conf/server.xml
root@ip-172-31-11-238:/opt/apache-tomcat-10.1.28#
```

• Configure Tomcat to Use port 9090

1. Open the **server.xml** file located in the **conf** directory.

```
Vi conf/server.xml
```

```
root@ip-172-31-11-238:/opt/apache-tomcat-10.1.28# vi conf/server.xml
root@ip-172-31-11-238:/opt/apache-tomcat-10.1.28# cd bin/
root@ip-172-31-11-238:/opt/apache-tomcat-10.1.28/bin# sudo sh catalina.sh start
Using CATALINA_BASE: /opt/apache-tomcat-10.1.28
Using CATALINA_HOME: /opt/apache-tomcat-10.1.28
Using CATALINA_TMPDIR: /opt/apache-tomcat-10.1.28/temp
Using JRE_HOME: /usr
Using CLASSPATH: /opt/apache-tomcat-10.1.28/bin/bootstrap.jar:/opt/apache-tomcat-10.1.28/bin/tomcat-juli.jar
Using CATALINA_OPTS:
Tomcat started.
root@ip-172-31-11-238:/opt/apache-tomcat-10.1.28/bin#
```

2. Find the following line: XML

`<connector port="8080" protocol="HTTP/1.1"`

3. Change the port value from 8080 to 9090.

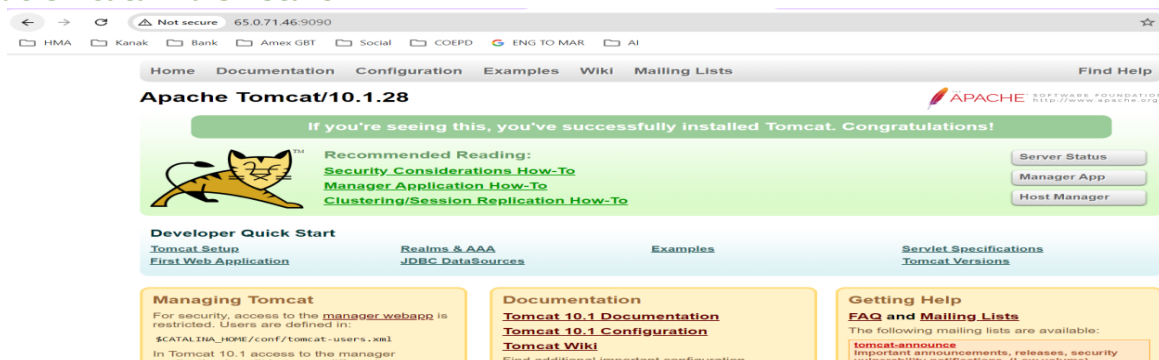
```
-->
<Service name="Catalina">
  <!--The connectors can use a shared executor, you can define one or more named thread pools-->
  <!--
  <Executor name="tomcatThreadPool" namePrefix="catalina-exec-"
    maxThreads="150" minSpareThreads="4"/>
  -->

  <!-- A "Connector" represents an endpoint by which requests are received
  and responses are returned. Documentation at :
  HTTP Connector: /docs/config/http.html
  AJP Connector: /docs/config/ajp.html
  Define a non-SSL/TLS HTTP/1.1 Connector on port 8080
  -->
  <Connector port="9090" protocol="HTTP/1.1"
    connectionTimeout="20000"
    redirectPort="8443"
    maxParameterCount="1000"
  />

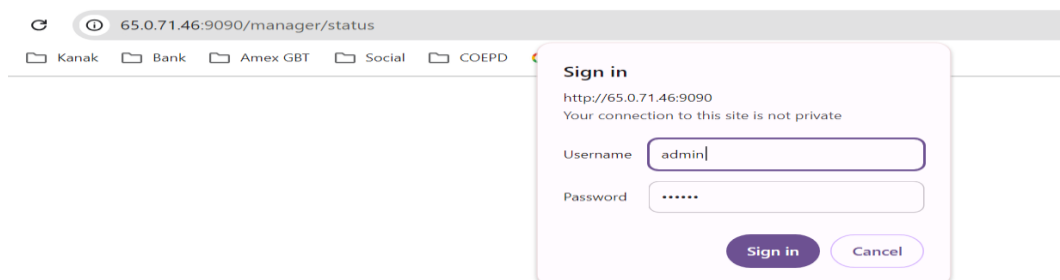
  <!-- A "Connector" using the shared thread pool-->
  <!--
  <Connector executor="tomcatThreadPool"
    port="8080" protocol="HTTP/1.1"
    connectionTimeout="20000"
    redirectPort="8443"
    maxParameterCount="1000"
  />
-->
```

• Start tomcat server

Sudo sh catalina.sh start



1. Click on server status: Enter username and password.



2. You can check the servers status.



Server Status

Manager

List Applications

HTML Manager Help

Manager Help

Complete Server Status

Server Information

Tomcat Version	JVM Version	JVM Vendor	OS Name	OS Version	OS Architecture	Hostname	IP Address
Apache Tomcat/10.1.28	21.0.4+7-Ubuntu-1ubuntu224.04	Ubuntu	Linux	6.8.0-1009-aws	amd64	ip-172-31-11-238	172.31.11.238

JVM

Free Memory: 9.20 MiB Total Memory: 25.81 MiB Max Memory: 232.00 MiB

Memory Pool	Type	Initial	Total	Maximum	Used
Eden Space	Heap memory	4.31 MiB	7.18 MiB	64.00 MiB	0.97 MiB (1%)
Survivor Space	Heap memory	0.50 MiB	0.87 MiB	8.00 MiB	0.87 MiB (10%)
Tenured Gen	Heap memory	10.68 MiB	17.75 MiB	160.00 MiB	14.76 MiB (9%)
CodeHeap 'non-nmethods'	Non-heap memory	2.43 MiB	2.43 MiB	5.55 MiB	1.26 MiB (22%)
CodeHeap 'non-profiled nmethods'	Non-heap memory	2.43 MiB	2.43 MiB	117.22 MiB	1.83 MiB (1%)

3. Now go to the manage app: here you can see we don't have our application.

← → ↺

Not secure 65.0.71.46:9090/manager/html

☆

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Tomcat Web Application Manager

Message: OK

Manager

List Applications HTML Manager Help Manager Help Se

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

← → ↺ Not secure 65.0.71.46:9090/manager/html ☆

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/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

Deploy

Deploy directory or WAR file located on server

Context Path:

Version (for parallel deployment):

XML Configuration file path:

WAR or Directory path:

Deploy

WAR file to deploy

Select WAR file to upload Choose File No file chosen

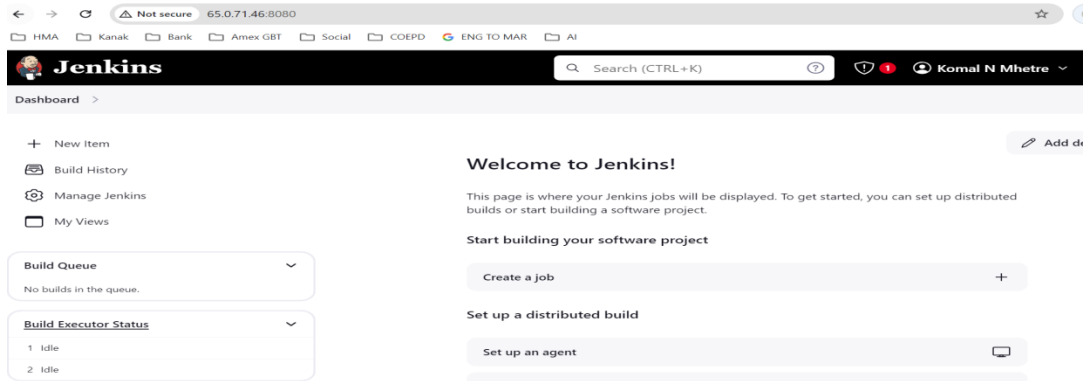
Deploy

- Integrate tomcat with Jenkins.
- Install Jenkins on same EC2 instance.

```

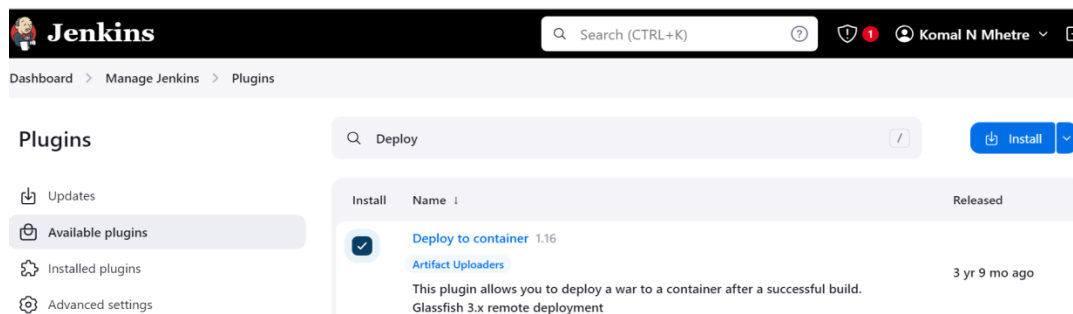
ubuntu@ip-172-31-11-238:~$ sudo systemctl start jenkins
ubuntu@ip-172-31-11-238:~$ sudo systemctl enable jenkins
Synchronizing state of jenkins.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable jenkins
ubuntu@ip-172-31-11-238:~$ sudo systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
   Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled; preset: enabled)
   Active: active (running) since Tue 2024-08-13 12:19:46 UTC; 1min 11s ago
     Main PID: 4701 (java)
       Tasks: 38 (limit: 1130)
      Memory: 259.5M (peak: 294.6M)
         CPU: 16.786s
        CGroup: /system.slice/jenkins.service
                └─4701 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache
Aug 13 12:19:37 ip-172-31-11-238 jenkins[4701]: 405daa971b0c4d3e88fcf6020ad2cafo
Aug 13 12:19:37 ip-172-31-11-238 jenkins[4701]: This may also be found at: /var/lib/jenkins/secrets/initialAdm
Aug 13 12:19:37 ip-172-31-11-238 jenkins[4701]: *****
Aug 13 12:19:37 ip-172-31-11-238 jenkins[4701]: *****
Aug 13 12:19:46 ip-172-31-11-238 jenkins[4701]: 2024-08-13 12:19:46.846+0000 [id=32] INFO jenkins
Aug 13 12:19:46 ip-172-31-11-238 jenkins[4701]: 2024-08-13 12:19:46.877+0000 [id=25] INFO hudson
Aug 13 12:19:46 ip-172-31-11-238 systemd[1]: Started jenkins.service - Jenkins Continuous Integration Server.
Aug 13 12:19:48 ip-172-31-11-238 jenkins[4701]: 2024-08-13 12:19:48.022+0000 [id=48] INFO h.m.Dc
Aug 13 12:19:48 ip-172-31-11-238 jenkins[4701]: 2024-08-13 12:19:48.024+0000 [id=48] INFO hudson

```



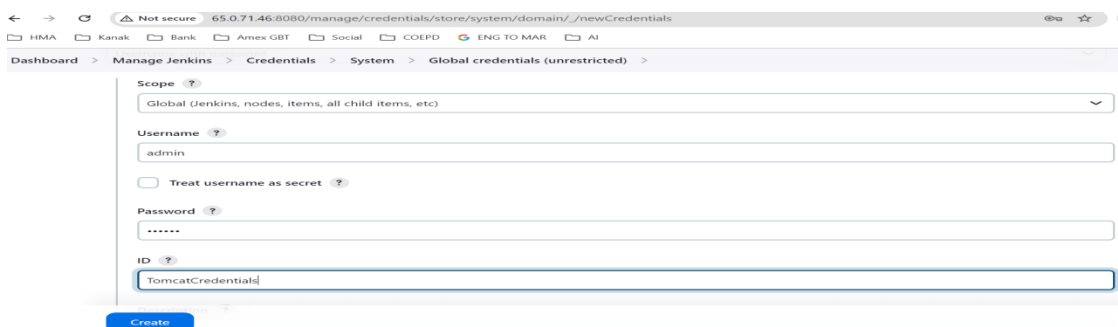
2. Install the 'deploy to container' plugin in Jenkins.

- Go to the 'Manage Jenkins' > 'Manage Plugins' > 'Available'
- Search for 'Deploy to Container' and install it.



3. Provide tomcat credentials:

- Go to 'Manage Jenkins' > 'Credentials' > 'System' > 'Global Credentials (unrestricted)'



Jenkins Search (CTRL+K) Komal N Mhetre

Dashboard > Manage Jenkins > Credentials > System > Global credentials (unrestricted) >

Global credentials (unrestricted)

+ Add Credentials

Credentials that should be available irrespective of domain specification to requirements matching.

ID	Name	Kind	Description
TomcatCredentials	admin/*****	Username with password	

4. Maven installation:

- Go to the 'Manage Jenkins' > 'Tools' > save

Dashboard > Manage Jenkins > Tools

Add Maven

Maven

Name

☒ Install automatically ?

Install from Apache

Version

Add Installer

Save Apply

5. Create new item as 'tomcat' > 'pipeline':

← → ↻ Not secure 65.0.71.46:8080/view/all/newJob

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Dashboard > All > New Item

Enter an item name

Select an item type

Freestyle project
Classic, general-purpose job type that checks out from up to one SCM, executes build steps serially, followed by post-build steps like archiving artifacts and sending email notifications.

Pipeline
Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.

Multi-configuration project
Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc.

Folder

OK

6. Go to the pipeline syntax:

← → ↻ Not secure 65.0.71.46:8080/job/tomcat/pipeline-syntax/

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Dashboard > tomcat > Pipeline Syntax

Global Variables Reference
Online Documentation
Examples Reference
IntelliJ IDEA GDSDL

Steps

Sample Step

deploy

WAR/EAR files ?

Context path ?

Containers

Tomcat 9.x Remote

Credentials

7. Generate pipeline script and also for git repository.

Dashboard > tomcat > Pipeline Syntax

Tomcat 9.x Remote

Credentials
admin/*****
+ Add

Tomcat URL ?
http://65.0.71.46:9090/

Advanced

Add Container

☒ Deploy on failure

- **Deploy Java Application To Tomcat.**

- 1. Clone the repository.**

Dashboard > tomcat > Configuration

Configure

General
Advanced Project Options
Pipeline

Script ?

```
1= pipeline {
2=   agent any
3=   tools {
4=     maven 'maven3'
5=     jdk 'jdk11'
6=   }
7=   stages {
8=     stage('Git Checkout') {
9=       steps {
10=         git branch: 'master', url: 'https://github.com/komal10m/maven-web-application.git'
11=       }
12=     }
13=     stage('Build') {
14=       steps {
15=         sh 'mvn clean install'
16=       }
17=     }
18=   }
19= }
20=
```

☒ Use Groovy Sandbox ?

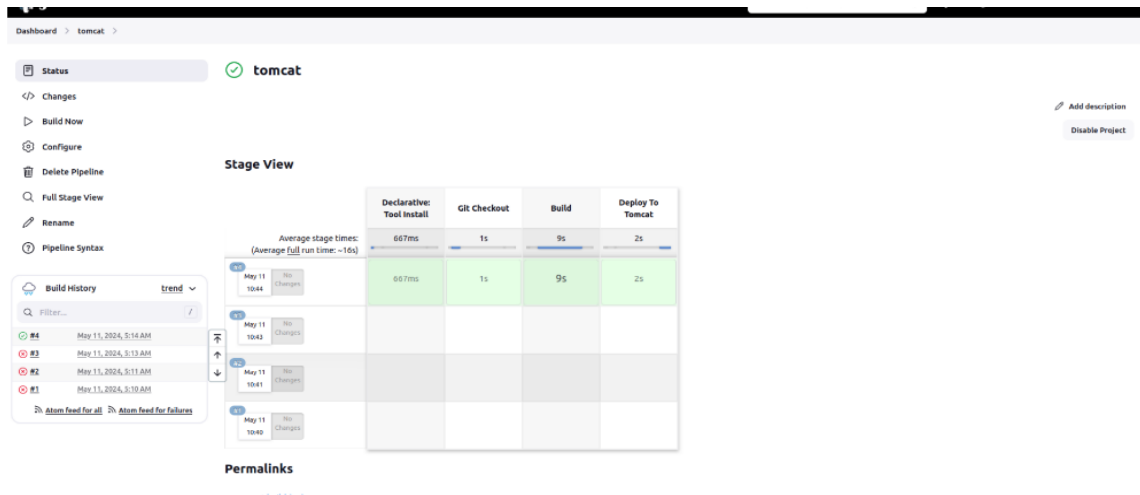
Pipeline Syntax

Save Apply

- 2. Write the pipeline script.**

```
pipeline {
    agent any
    tools {
        maven 'maven3'
        jdk 'jdk11'
    }
    stages {
        stage('Git Checkout') {
            steps {
                git branch: 'master', 'https://github.com/komal10m/maven-web-application.git',
            }
        }
        stage('Build') {
            steps {
                sh 'mvn clean install'
            }
        }
        stage('Deploy To Tomcat') {
            steps {
                deploy adapters: [tomcat9(credentialsId: 'TomcatCredentials', path: '', url: 'http://65.0.71.46:9090/)], contextPath: null, war: '**/*.war'
            }
        }
    }
}
```

- 3. Build your script and run it.**



4. Go to the tomcat web interface. Inside Manager App. Our Maven web-Application is Available.

Tomcat Web Application Manager

Message: OR

Manager

List Applications HTML Manager Help Manager Help Server Status

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]
/maven-web-application	None specified	maven-web-application	true	0	Start Stop Reload Undeploy [Expire sessions with idle > 30 minutes]

Deploy

Deploy directory or WAR file located on server

4.L4 Automate the CICD Pipeline using GitHub webhook and Poll-SCM

1. Configure Github Webhook:

- In your github repository, go to the 'Settings' > 'Webhooks' > 'Add webhook'.

github.com/komal10m/maven-web-application/settings/hooks

komal10m / maven-web-application

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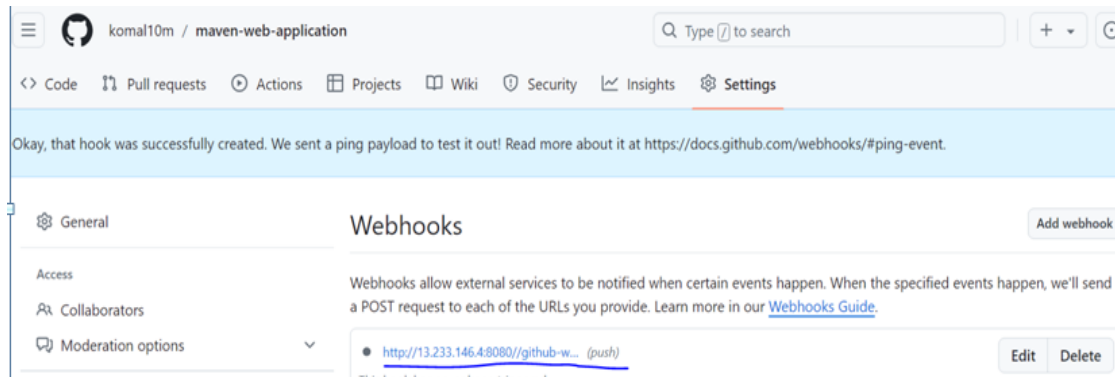
Codespaces

Webhooks

Webhooks allow external services to be notified when certain events happen. When the specified events happen, we'll send a POST request to each of the URLs you provide. Learn more in our [Webhooks Guide](#).

Add webhook

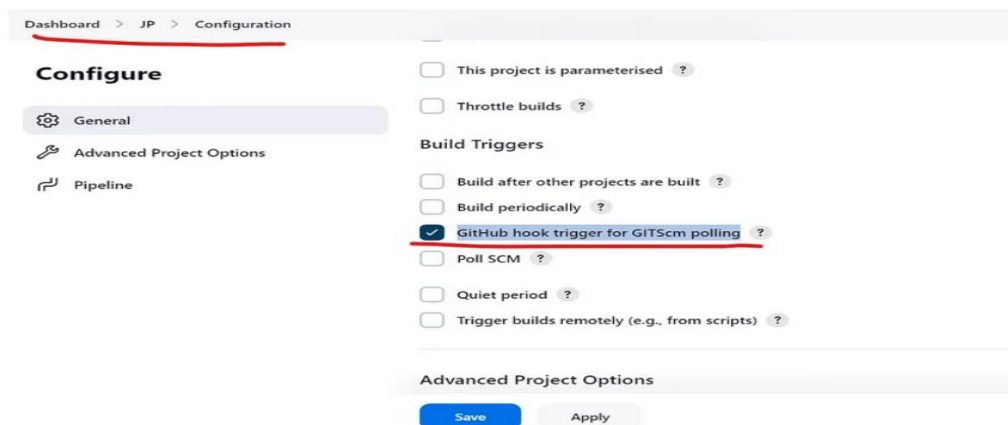
2. Set the payload URL to <http://your-jenkins-server/github-webhook/> (ensure your Jenkins server publicly accessible).



- Set the content type to application/json.
- Choose "just the push event" under which event would you like to trigger this webhook".
- Click add webhook.

3. Configure Jenkins job for webhooks:

- In the pipeline job configuration, go to the "Build Triggers"
- Select "Github hook trigger for GITScm polling".



4. Configure poll SCM (Optional):

- If you prefer to use poll SCM, also select "poll SCM" and set the schedule.(to check every 5min)

5. Save and test.

- Save the configuration and test the pushing changes to your Github Repository. The pipeline should trigger automatically.