

Scenario 2:- CI/CD (Jenkins + Git hub + Maven + Docker container)

Server 1: - jenkins (Make sure to install Jenkins, Git, Maven)

Server 2: - tomcat (Make sure to install docker container)

Step 1: - Install Docker and create docker user on tomcat server.

```
#yum install -y yum-utils device-mapper-persistent-data lvm2
#yum-config-manager --add-repo https://download.docker.com/linux/centos/docker-ce.repo
#yum install docker-ce docker-ce-cli containerd.io -y
#systemctl start docker && systemctl enable docker && systemctl status docker
```

```
#useradd dockeradmin
#passwd dockeradmin
#usermod -G docker dockeradmin
#id dockeradmin
```

Step1.1:- if you are using cloud machine, then make sure to have sshd password authentication enabled.

```
#vim /etc/ssh/sshd_config
#cat /etc/ssh/sshd_config
```

Before: -

PasswordAuthentication no

After:-

PasswordAuthentication yes

```
# systemctl restart sshd
```

Step1.2:-Create a DockerFile under/home/dockeradmin.

```
[dockeradmin@tomcat ~]$ cat Dockerfile
FROM tomcat:8-jre8
LABEL maintainer=Deepan
COPY ./webapp.war /usr/local/tomcat/webapps
[dockeradmin@tomcat ~]$
```

Step 2:- install ssh plugins on Jenkins and add the docker server details on configure system.

@Go to manage Jenkins → manage plugins → click on Available → search and select publish over ssh → click on install without restart.

@Go to manage Jenkins → configure system → drag down → select publish over ssh → add the docker server details → credentials → do click on Test Configuration.

SSH Servers

SSH Server

Name

Hostname

Username

Remote Directory

☒ Use password authentication, or use a different key

Passphrase / Password

Proxy password


Success


Test Configuration


Step 3:- Now go to Jenkins console dashboard and create a new project.


Enter an item name

» Required field

 **Freestyle project**
This is the central feature of Jenkins. Jenkins will build your project, combining any SCM with any build system, and this can be even used for something other than software build.

 **Maven project**
Build a maven project. Jenkins takes advantage of your POM files and drastically reduces the configuration.

 **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

@@add GIT repo on Source code Management@@

you can fork from this repo <https://github.com/vsknalli/devops> to your GIT hub ID.

Jenkins > my_first_maven_project2 >

General Maven Info Plugin Configuration **Source Code Management** Build Triggers Build Environment Pre Steps Build

Post Steps Build Settings Post-build Actions

Source Code Management

☐ None
☒ Git

Repositories

Repository URL

Credentials

Branches to build

Branch Specifier (blank for 'any')

(Auto)

@enter below on build.

Build

Root POM

Goals and options

@click on Post-build Actions → select Send build artifacts over ssh →

:- enter below details.

cd /home/dockeradmin; docker build -t devops-tomcat .; docker run -d --name devops-container -p 8080:8080 devops-tomcat;

Send build artifacts over SSH

SSH Publishers

SSH Server

Name

Transfers

Transfer Set

Source files

Remove prefix

Remote directory

Exec command

All of the transfer fields (except for Exec timeout) support substitution of [Jenkins environment variables](#)

@Now click on build now → then select console output

```
Step 1/3 : FROM tomcat:8-jre8
---> 3639174793ba
Step 2/3 : LABEL maintainer=Deepan
---> Using cache
---> 52c867c8b90d
Step 3/3 : COPY ./webapp.war /usr/local/tomcat/webapps
---> 9b8637e38bcb
Successfully built 9b8637e38bcb
Successfully tagged devops-tomcat:latest
98478e6012fbccc59287fa538e6e17697cf87034a6b2b42c4572edb6486159c9
SSH: EXEC: completed after 1,601 ms
SSH: Disconnecting configuration [docker] ...
SSH: Transferred 1 file(s)
Finished: SUCCESS
```

@Now go to docker server and check the container status

```
[dockeradmin@tomcat ~]$ docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
devops-tomcat        latest              9b8637e38bcb        3 minutes ago      463MB
<none>               <none>              bd43bb6f96b3        6 minutes ago      463MB
tomcat               8-jre8             3639174793ba        10 months ago      463MB
[dockeradmin@tomcat ~]$ docker ps -a
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS
98478e6012fb        devops-tomcat      "catalina.sh run"   3 minutes ago       Up 3 minutes        0.0.0.0:8080->8080/
tcp devops-container
[dockeradmin@tomcat ~]$
```

@Now try to open tomcat url <http://104.197.8.84:8080/webapp/>

← → ↺

Not secure | 104.197.8.84:8080/webapp/

Apps

AWS Free Tier

Imported From IE

Apps

GoToMeet.Me

Hello, Welcome to robo world !!!

Deploying Devops robo Pipeline

This is just pipeline testing

GIT + Jenkins + Tomcat web