
TOMCAT DEPLOYMENT IN DOCKER CONTAINER USING DOCKER FILE

Step1 – Create a VM Instance with Ubuntu as OS

Step2 – Login to VM Instance SSH terminal Install Docker

Docker – Installation:

```
sudo apt update -y
```

```
sudo apt install docker.io -y
```

```
docker -v
```

NOTE: make sure to work as sudo user.

Step3 – Now write Dockerfile for war file deployment in Docker Container.

- **vim Dockerfile** (write the below Dockerfile in this file)

FROM ubuntu AS install-build-stage

Install required packages and clean up

RUN apt-get update && \

apt-get install -y \

openjdk-11-jdk \

git \

curl \

gzip \

tar \

&& apt-get clean \

&& rm -rf /var/lib/apt/lists/*

Install Apache Maven 3.x

ENV MAVEN_VERSION=3.9.5

ENV M2_HOME=/opt/apache-maven-\${MAVEN_VERSION}

ENV PATH="\${M2_HOME}/bin:\${PATH}"

RUN mkdir -p \${M2_HOME} && \

curl -fsSL "https://downloads.apache.org/maven/maven-3/\${MAVEN_VERSION}/binaries/apache-maven-\${MAVEN_VERSION}-bin.tar.gz" | tar -xzc \${M2_HOME} --strip-components=1

RUN git clone https://github.com/SaravanaNani/jenkins-java-project.git /maven

WORKDIR /maven

RUN mvn clean package

Download and extract Apache Tomcat

ADD https://dlcdn.apache.org/tomcat/tomcat-9/v9.0.89/bin/apache-tomcat-9.0.89.tar.gz .

RUN tar -zxvf apache-tomcat-9.0.89.tar.gz && \

rm apache-tomcat-9.0.89.tar.gz

Configure Tomcat users

RUN sed -i '56 a<role rolename="manager-gui"/>' apache-tomcat-9.0.89/conf/tomcat-users.xml && \

sed -i '57 a<role rolename="manager-script"/>' apache-tomcat-9.0.89/conf/tomcat-users.xml && \

sed -i '58 a<user username="tomcat" password="tomcat" roles="manager-gui, manager-script"/>' apache-tomcat-9.0.89/conf/tomcat-users.xml && \

sed -i '59 a</tomcat-users>' apache-tomcat-9.0.89/conf/tomcat-users.xml && \

sed -i '56d' apache-tomcat-9.0.89/conf/tomcat-users.xml && \

sed -i '21d' apache-tomcat-9.0.89/webapps/manager/META-INF/context.xml && \

sed -i '22d' apache-tomcat-9.0.89/webapps/manager/META-INF/context.xml

RUN cp /maven/target/*.war /maven/apache-tomcat-9.0.89/webapps

RUN mv /maven/apache-tomcat-9.0.89 /usr/local/

ENTRYPOINT ["/usr/local/apache-tomcat-9.0.89/bin/catalina.sh", "run"]

Note: Tomcat Version may Change Refer the below link and Update the Dockerfile.

<https://dlcdn.apache.org/tomcat>

Note: In the below given git Repo link also you can find the Dockerfile ([Dockerfile - Tomcat Deployment](#))

<https://github.com/SaravanaNani/Docker-GCP.git>

Step4 – Now Build the image Using the Dockerfile.

- **docker build -t IMAGE:TAG /Path/to/Dockerfile**

Step5 – List the Images:

- **docker images**

Step6 – Now create a Container using above created image.

- **docker run -itd --name CONTAINER_NAME -p 8081:8080 IMAGE:TAG**

Step7 – List the containers:

- **docker ps -a**

Verification: Copy & Paste VM Instance external_IP:8081 in web-browser.