Integrating tomcat server in CICD pipeline

1. setup a tomcat server

2. integrate tomcat with jenkins

3. deploy artifacts on tomcat server

4. automate build and deploy using POLL

1. setup tomcat server

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login to amazon linux server

install java

#amazon-linux-extras install java-openjdk11

#java -version

Go to website tomcat download

cd /opt

# wget https://dlcdn.apache.org/tomcat/tomcat-9/v9.0.85/bin/apache-tomcat-9.0.85.tar.gz

# tar -xvzf apache-tomcat-9.0.85.tar.gz

# mv apache-tomcat-9.0.85 tomcat

# cd bin

# ./startup.sh

open browser : https:<ip address>:8080

click on manager app to login webapp UI - It wont work

we need to update context.xml to login to webUI

# cd /opt/tomcat

# find . -name context.xml

/opt/tomcat/webapps/host-manager/META-INF/context.xml

/opt/tomcat/webapps/manager/META-INF/context.xml

# vi /opt/tomcat/webapps/host-manager/META-INF/context.xml

comment the local host ip line

<!-- 127.0.0.1 -->

# vi /opt/tomcat/webapps/manager/META-INF/context.xml

comment the local host ip line

<!-- 127.0.0.1 -->

# cd bin

#./shutdown.sh

#./startup.sh

open browser : https://<ipaddress>:8080

click on manager app , now it will ask for creds

# cd /opt/tomcat/conf

# vi tomcat-users.xml

<role rolename="manager-gui"/>

<role rolename="manager-script"/>

<role rolename="manager-jmx"/>

<role rolename="manager-status"/>

<user username="admin" password="admin" roles="manager-gui, manager-script, manager-jmx, manager-status"/>

<user username="deployer" password="deployer" roles="manager-script"/>

<user username="tomcat" password="s3cret" roles="manager-gui"/>

update above contents at the end of file and save it

restart tomcat services

# cd /opt/tomcat/bin

#./shutdown.sh

#./startup.sh

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create softlink to restart tomcat services using the commands tomcatup and tomcatdown (optional)

ln -s /opt/apache-tomcat-<version>/bin/startup.sh /usr/local/bin/tomcatup

ln -s /opt/apache-tomcat-<version>/bin/shutdown.sh /usr/local/bin/tomcatdown

tomcatdown

tomcatup

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access url : http://<ip address>:8080

go to manager app

login using credentials which are added in tomcat-user.xml file

user: tomcat

pass: secrets

2. Integrate tomcat with jenkins

a) Install "Deploy to container " plugin

b) configure tomcat server with credentials

-> manage jenkins -> available -> deploy to container plugin -> install

-> manage jenkins -> manage credentials -> jenkins -> global credentials -> add credentials -> username with password ->

username: deployer

password: deployer

ID: tomcat deployer

description: tomcat deployer

create new jenkins job:

new item -> buildanddeployjob -> maven project -> build code with help of maven and deploy it on tomcat server

git: https://github.com/srinuedupoly/hello-world.git

branch : /main

Build: clean install

post build actions:

select - deploy ear/war to container

WAR/EAR file path:

/var/lib/jenkins/workspace/firstmavenproject/webapp/target/webapp.war

webapp/target/webapp.war --- need to update this in field

or

\*\*/\*.war

containers:

select tomcat 8.x

credentials: select deployer (which we created earlier)

tomcat url: https://<IP address>:8080

apply and save

buildnow

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make sure update the index.jsp file in the github repo

index.jsp

<h1> Hi </h1>

<h2> Welcome to edupoly </h2>

<h2> Bye </h2>

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3. Deploy artifacts on tomcat server

clone the repo to local to update the code

git clone https://github.com/srinuedupoly/hello-world.git

update the index.jsp with above code

with the code present in repo

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update code in index.jsp in github to test if changes are reflecting in url :

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<form action="action\_page.php">

<div class="container">

<h1>New user Register for DevOps Learning</h1>

<p>Please fill in this form to create an account.</p>

<hr>

<label for="Name"><b>Enter Name</b></label>

<input type="text" placeholder="Enter Full Name" name="Name" id="Name" required>

<br>

<label for="mobile"><b>Enter mobile</b></label>

<input type="text" placeholder="Enter moible number" name="mobile" id="mobile" required>

<br>

<label for="email"><b>Enter Email</b></label>

<input type="text" placeholder="Enter Email" name="email" id="email" required>

<br>

<label for="psw"><b>Password</b></label>

<input type="password" placeholder="Enter Password" name="psw" id="psw" required>

<br>

<label for="psw-repeat"><b>Repeat Password</b></label>

<input type="password" placeholder="Repeat Password" name="psw-repeat" id="psw-repeat" required>

<hr>

<br>

<p>By creating an account you agree to our <a href="#">Terms & Privacy</a>.</p>

<button type="submit" class="registerbtn">Register</button>

</div>

<div class="container signin">

<p>Already have an account? <a href="#">Sign in</a>.</p>

</div>

<h1> Thankyou, Happy Learning </h1>

</form>

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git add .

git status

git commit -m "updated index.jsp file"

git push origin master

if any earlier creds -> windows creds and delete and retry

create personal account if any

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usecase:

=> Login to jenkins server and go to same project and build again - now you should see updated page

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use case:

=>Go to jenkins

build and deploy job

configure

select poll SCM

clone the code to the local and update the index file , which should trigger the job automatically

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