**TOMCAT server installation and integration:**

**# Tomcat installation on EC2 instance**

**### Pre-requisites**

1. EC2 instance with Java 11

amazon-linux-extras

amazon-linux-extras install java-openjdk11

**### Install Apache Tomcat**

1. Download tomcat packages from  https://tomcat.apache.org/download-80.cgi onto /opt on EC2 instance

   > Note: Make sure you change `<version>` with the tomcat version which you download.

   ```sh

   # Create tomcat directory

   cd /opt

   wget http://mirrors.fibergrid.in/apache/tomcat/tomcat-8/v8.5.35/bin/apache-tomcat-8.5.35.tar.gz

   tar -xvzf /opt/apache-tomcat-<version>.tar.gz

   ```

Start the service

/opt/tomcat/bin and run🡪 ./startup.sh

   ```

   > Note: you may get below error while starting tomcat incase if you dont install Java

   `Neither the JAVA\_HOME nor the JRE\_HOME environment variable is defined At least one of these environment variable is needed to run this program`

**#### Check point :**

access tomcat application from browser on port 8080

 - http://<Public\_IP>:8080

  Using unique ports for each application is a best practice in an environment. But tomcat and Jenkins runs on ports number 8080. Hence lets change tomcat port number to 8090. Change port number in conf/server.xml file under tomcat home

   ```sh

 cd /opt/apache-tomcat-<version>/conf

**# update port number in the "connecter port" field in server.xml**

**# restart tomcat after configuration update**

tomcatdown

tomcatup

```

#### Check point :

Access tomcat application from browser on port 8090

 - http://<Public\_IP>:8090

1. now application is accessible on port 8090. but tomcat application doesnt allow to login from browser. changing a default parameter in context.xml does address this issue

   ```sh

   #search for context.xml

   find / -name context.xml

   ```

1. above command gives 3 context.xml files. comment (<!-- & -->) `Value ClassName` field on files which are under webapp directory.

After that restart tomcat services to effect these changes.

At the time of writing this lecture below 2 files are updated.

   ```sh

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

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

   # Restart tomcat services

   tomcatdown

   tomcatup

   ```

1. Update users information in the tomcat-users.xml file

goto tomcat home directory and Add below users to conf/tomcat-users.xml file

   ```sh

   <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"/>

   ```

1. Restart serivce and try to login to tomcat application from the browser. This time it should be Successful