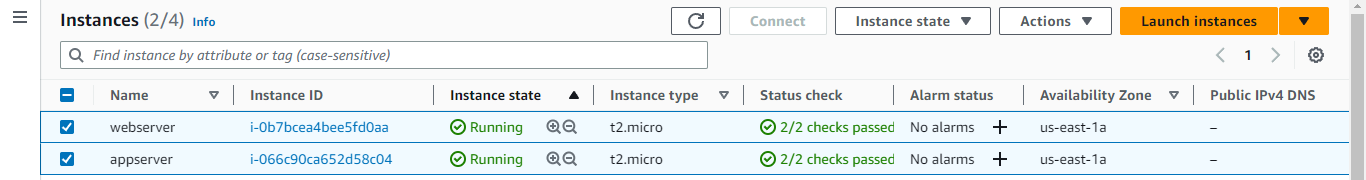
**Project C: 5**

# Run a Java project on Tomcat and integrate it with Apache HTTPD

## **To create an EC2 two instance- Apache web server and Tomcat server:**

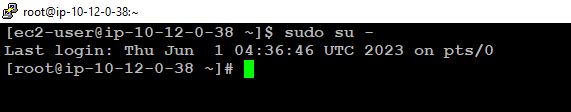
### - Create EC2 instances (Redhat server):



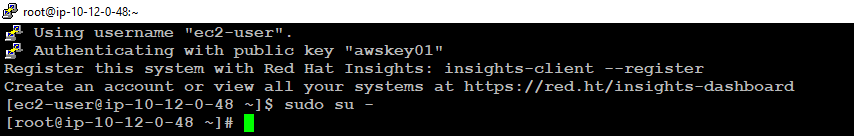
## **Connect to EC2 instance using putty software:**

### -Connect EC2: Using the IP address, username and keypair:

Appserver:



Webserver:

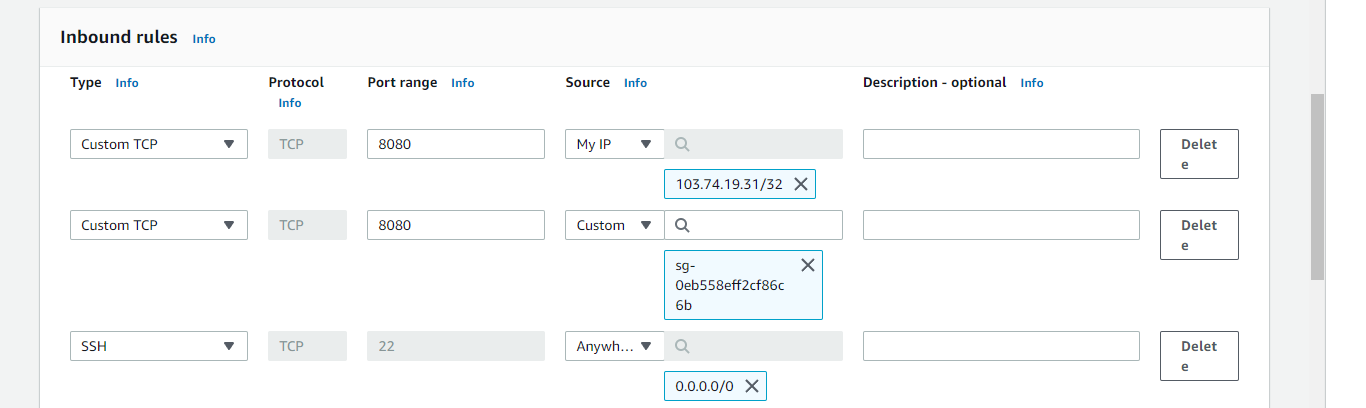


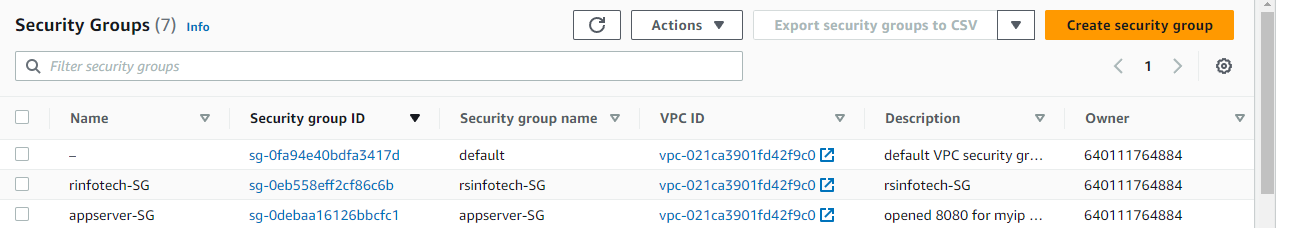
## **To install and configure the Tomcat appserver using the EC2 instance:**

Appserver:

### -Create security group for appserver and attach to appserver:

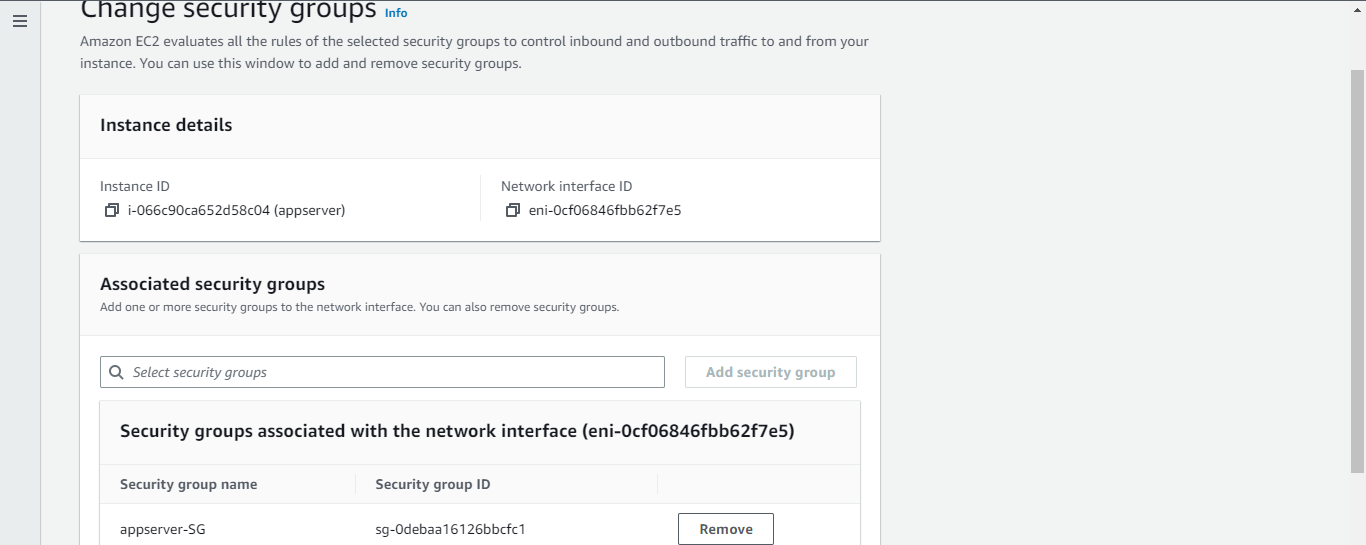
EC2->Network and security->Security group: Create SG: Name: appserver-SG: Select vpc:rsinfotech-vpc: inbound rules





### -Attach security group to appserver:

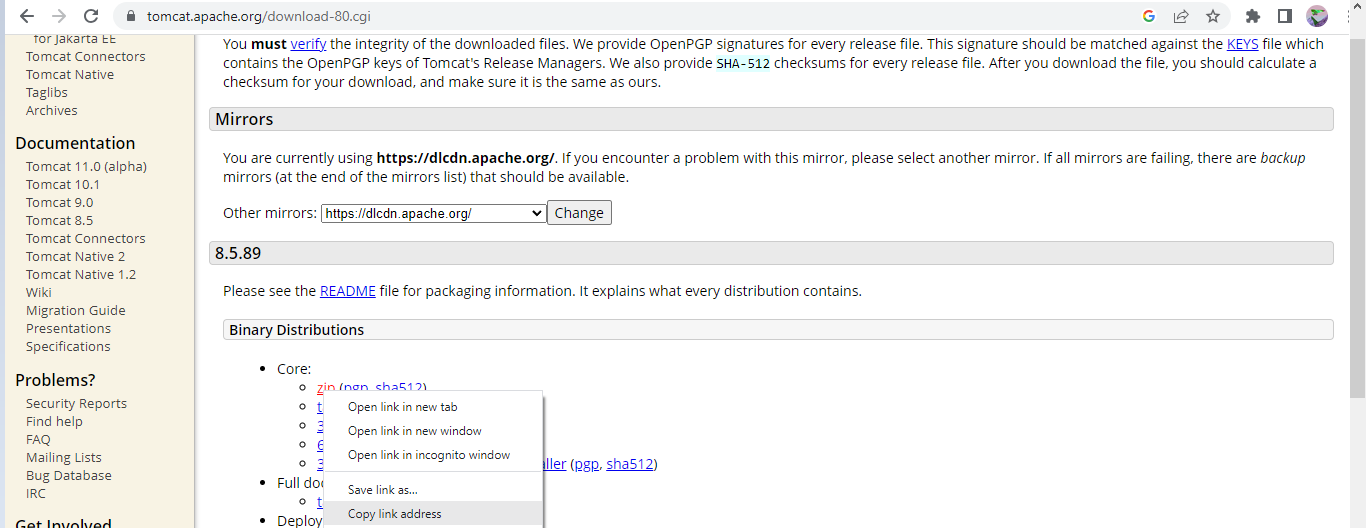
[ ] appserver->Action->Security->Change SG->Select: appserver-SG->ADD and remove default and save



### -Download Install the Tomcat package using the following commands:

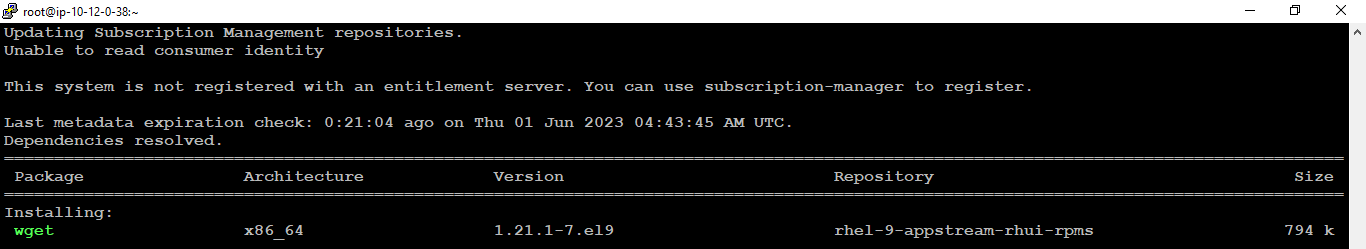
Go to the URL - <https://tomcat.apache.org/download-80.cgi>

Click on Zip: Copy link address



### -Install the wget package using the following command:

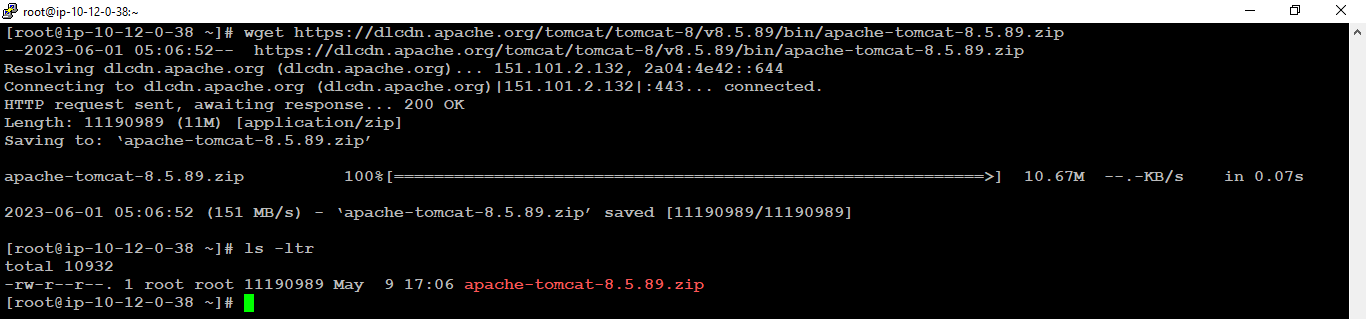
#yum install wget –y



### -Download it in Server using wget using the following command:

#wget <https://dlcdn.apache.org/tomcat/tomcat-8/v8.5.89/bin/apache-tomcat-8.5.89.zip>

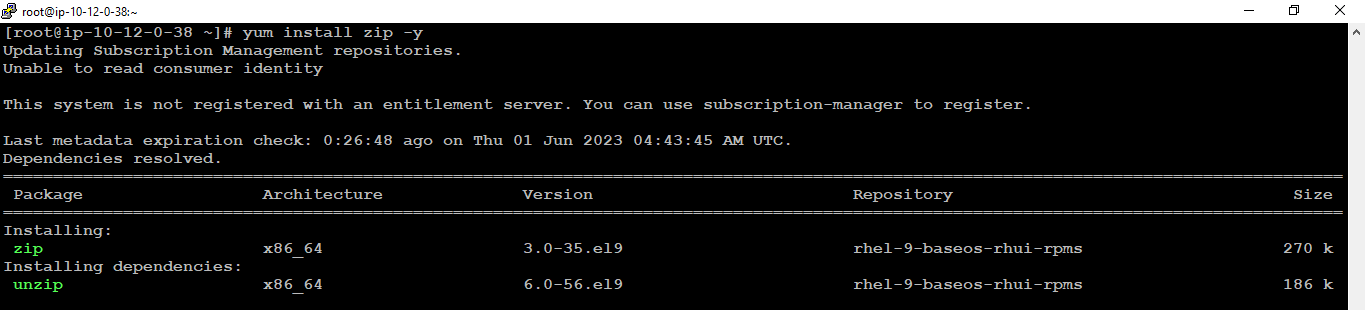
#ls -ltr



### -Install the zip and unzip package using the following command:

#yum install zip –y

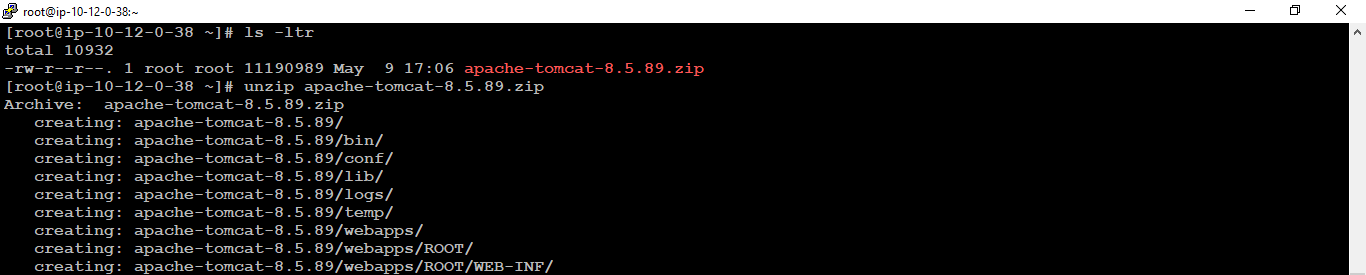
#ls –ltr



### -Unzip the downloaded zip file using the following command:

#unzip apache-tomcat-8.5.89.zip

#ls –ltr



### -Move this file apache-tomcat-8.5.89 to /etc using the following commands:

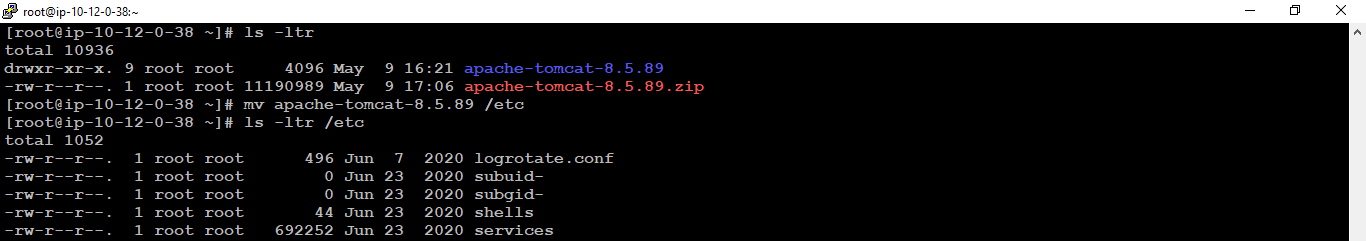
#ls –ltr

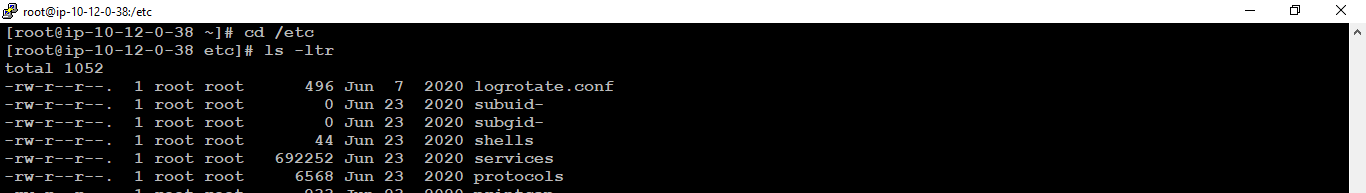
#mv apache-tomcat-8.5.89 /etc

#ls –ltr /etc

#cd /etc

#ls –ltr



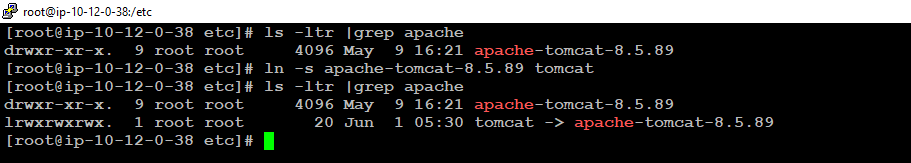


### -Create Soft link for apache-tomcat apache-tomcat-8.5.89 file by using the following command:

#ls –ltr | grep apache

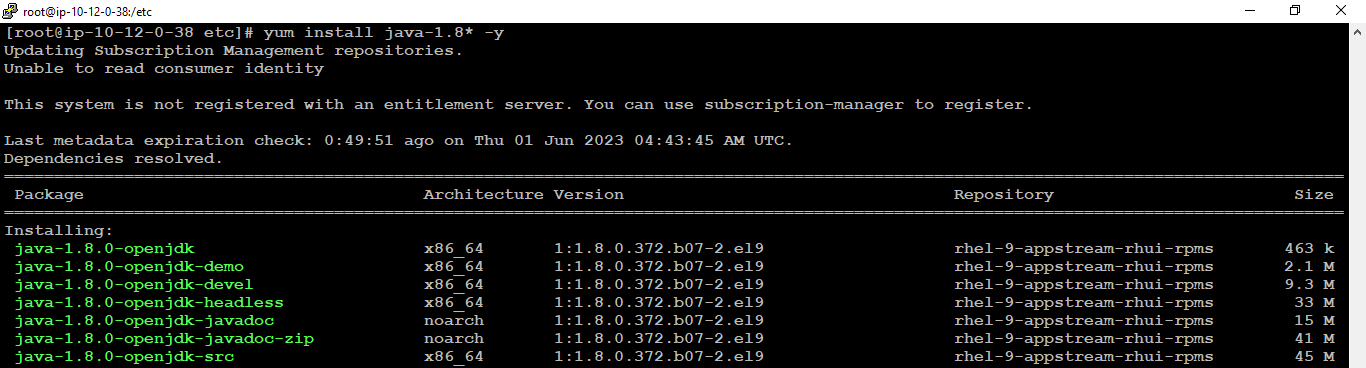
#ln –s apache-tomcat-8.5.89 tomcat

#ls –ltr | grep apache



### -Install java using the following command:

#yum install java-1.8\* -y

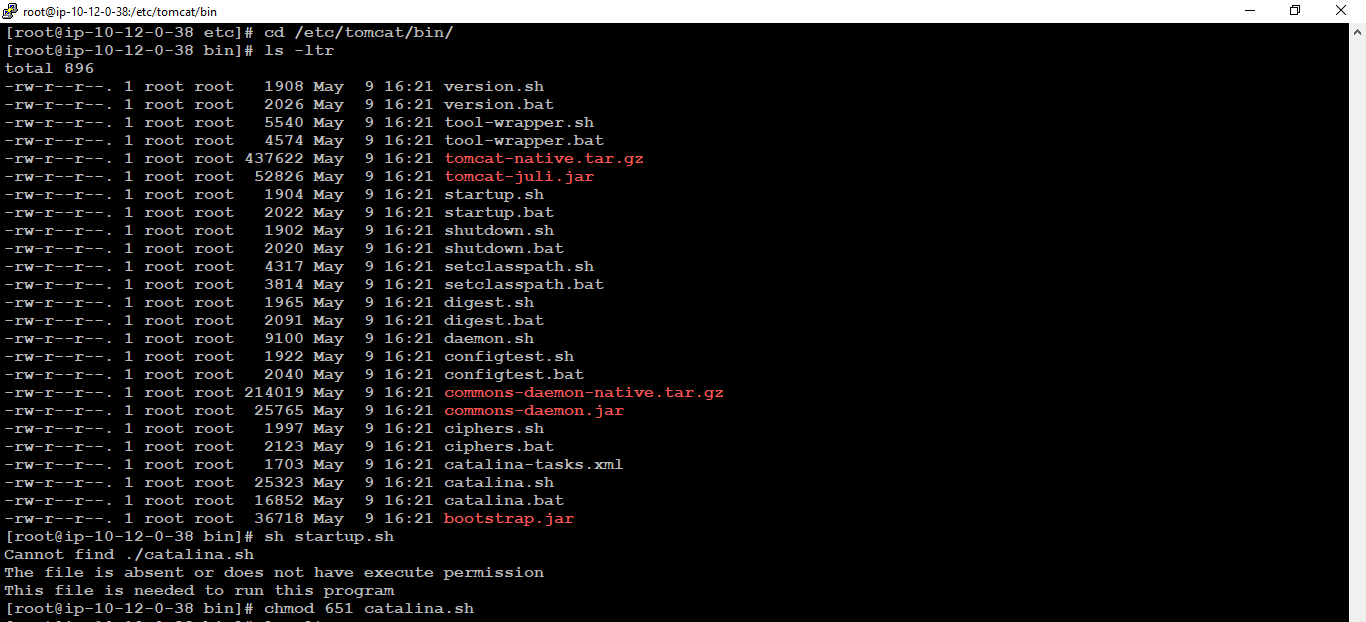


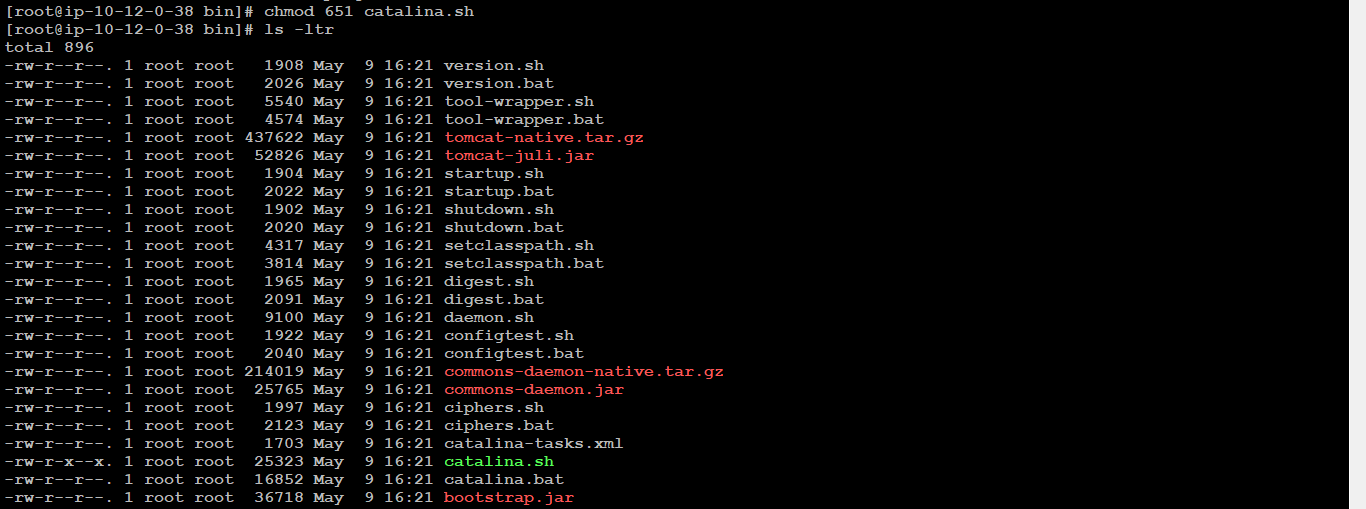
### -Assign the execute permission to Catalina.sh using the following command:

#cd /etc/tomcat/bin/

#ls –ltr

#chmod 651 catalina.sh

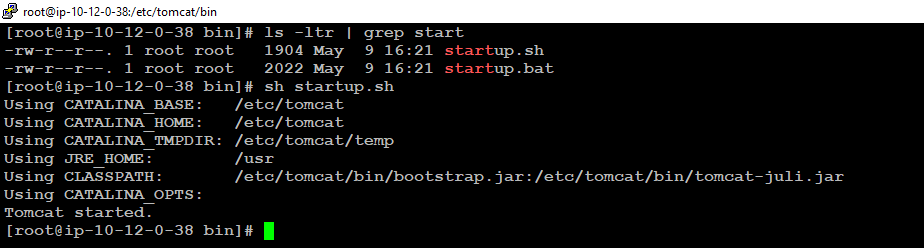




### -Start the Tomcat by using the following command:

#ls –ltr | grep startup.sh

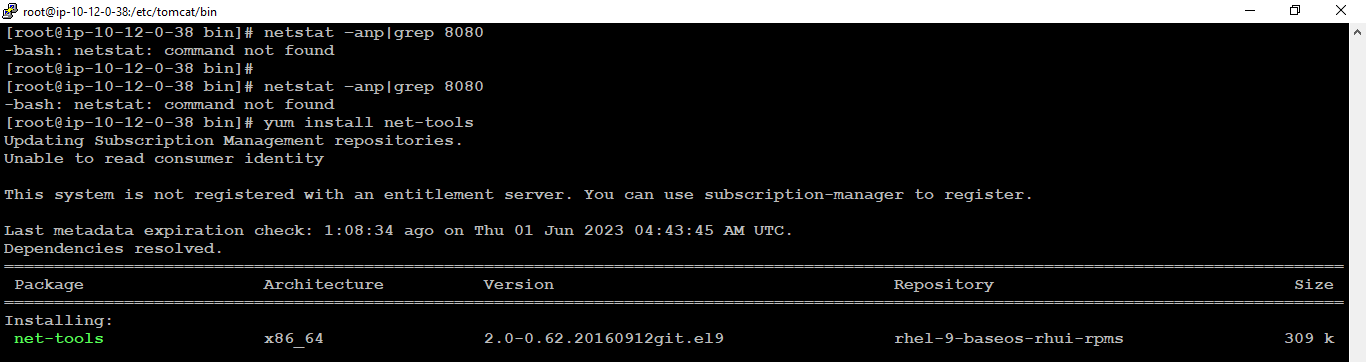
#sh startup.sh



Tomcat starts at 8080 port by default-

#yum install net-tools -y

# netstat -anp|grep 8080

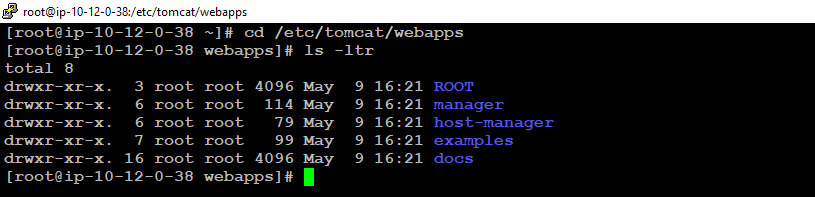




### -Check the ROOT and Manager is present or not:

#cd /etc/tomcat/webapps/

#ls –ltr



### -Update context.xml of manager:

#cd /etc/tomcat/webapps/manager

#ls -ltr

#find . -name context.xml

./META-INF/context.xml

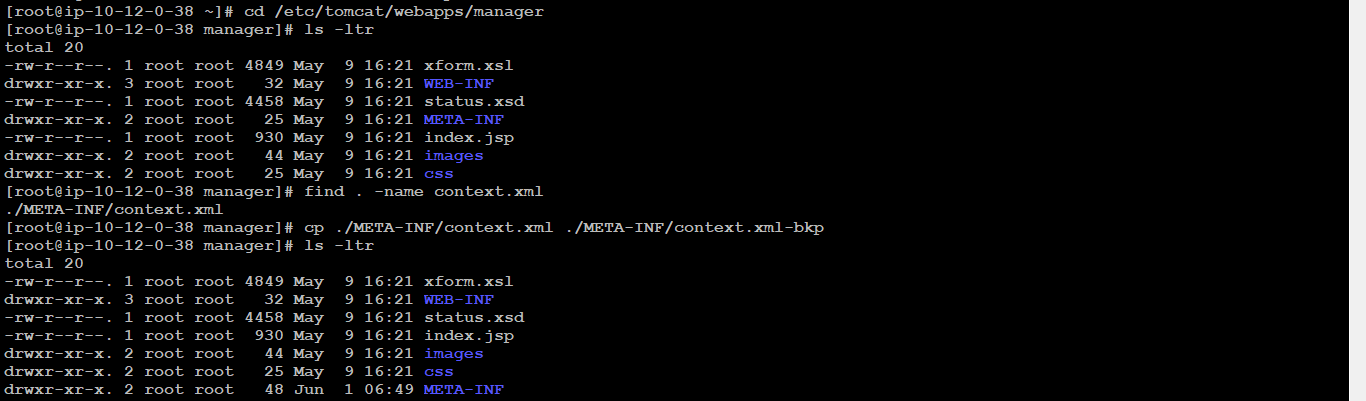
#cp ./META-INF/context.xml ./META-INF/context.xml-bkp

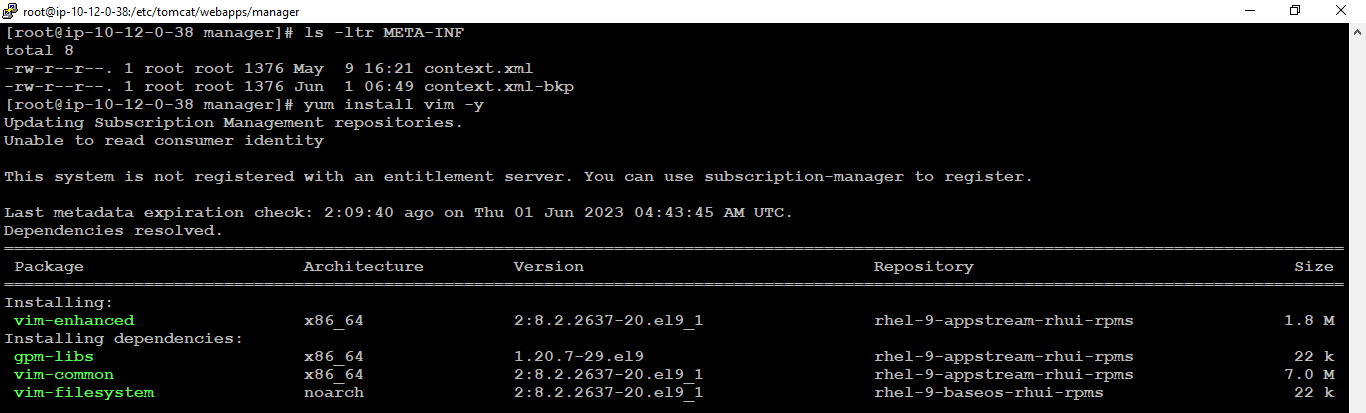
#ls –ltr

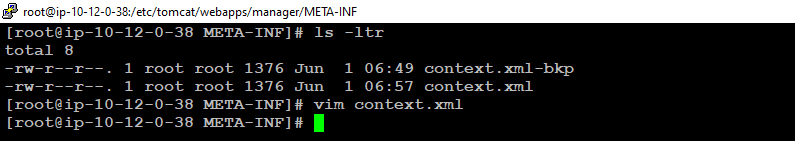
#yum install vim -y

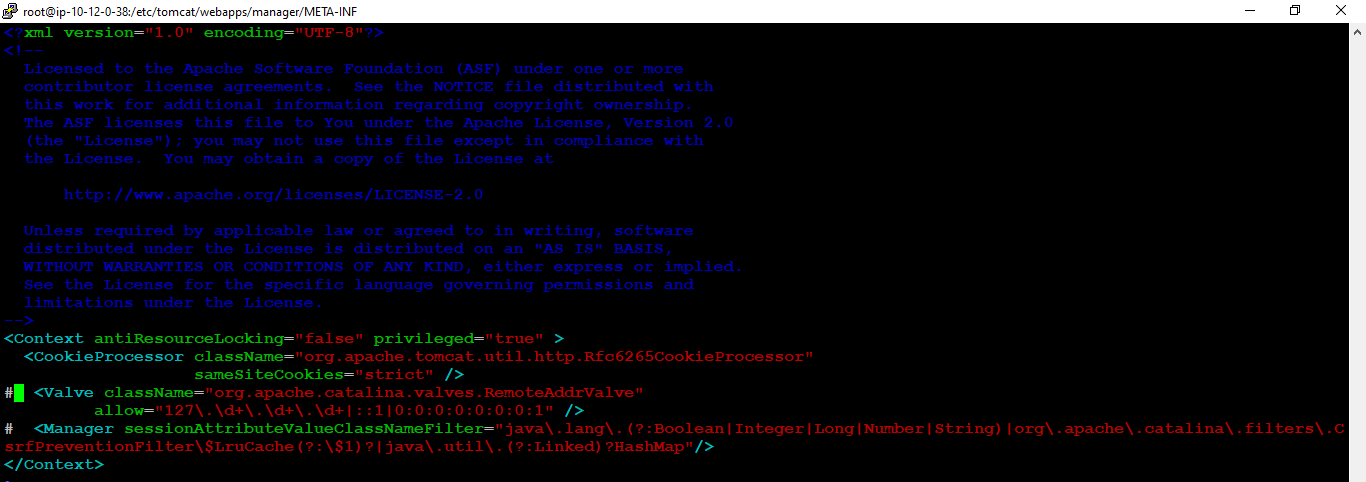
#vim ./META-INF/context.xml

delete the Value and manager









### -Update the tomcat-user.xml file:

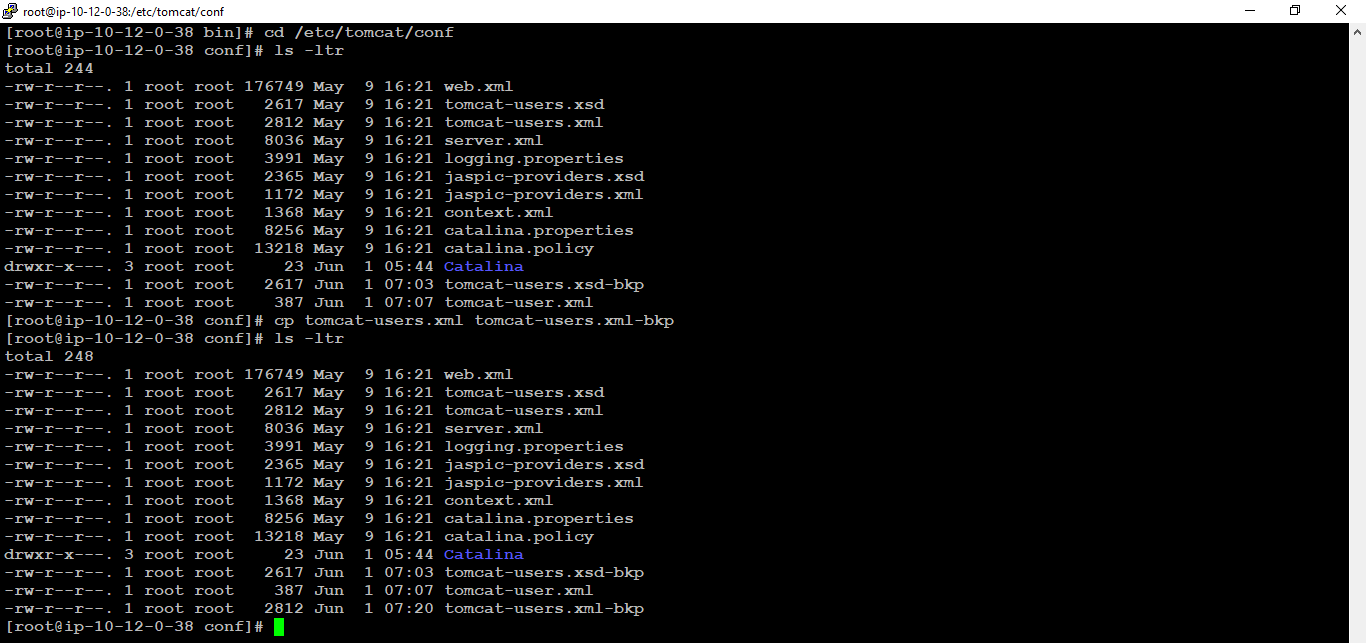
#cd /etc/tomcat/conf

#ls –ltr

Tomcat-user.xml

#cp tomcat-users.xml tomcat-users.xml-bkp

#ls –ltr



#vim tomcat-users.xml

Shift+G #Go to last line

insert below data above the </tomcat\_user>

**Update as below with entries here-**

<role rolename="admin"/>

<role rolename="admin-gui"/>

<role rolename="admin-script"/>

<role rolename="manager"/>

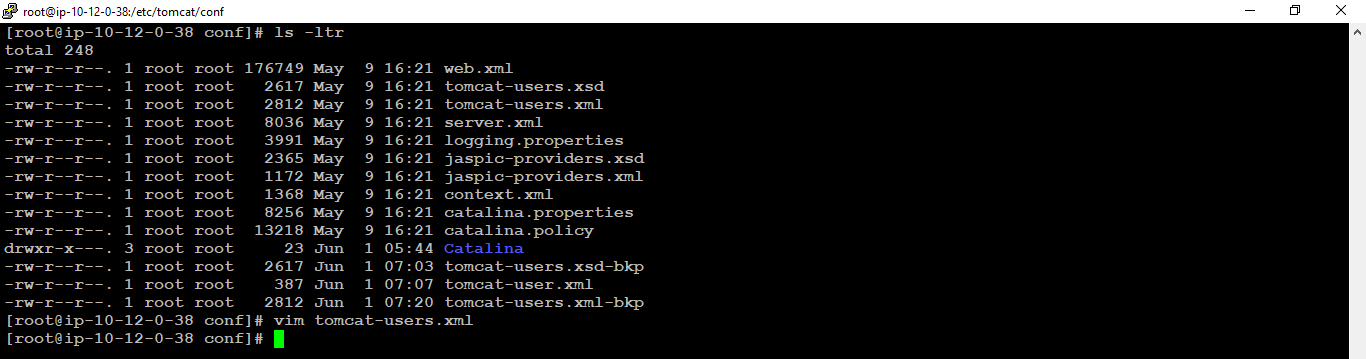
<role rolename="manager-gui"/>

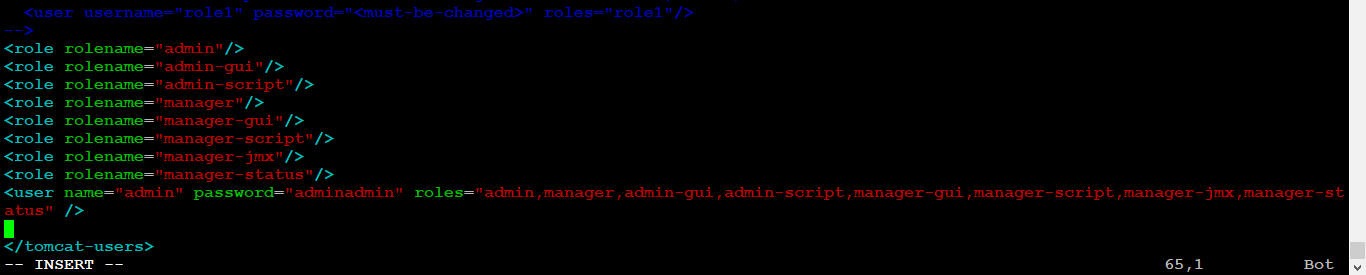
<role rolename="manager-script"/>

<role rolename="manager-jmx"/>

<role rolename="manager-status"/>

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

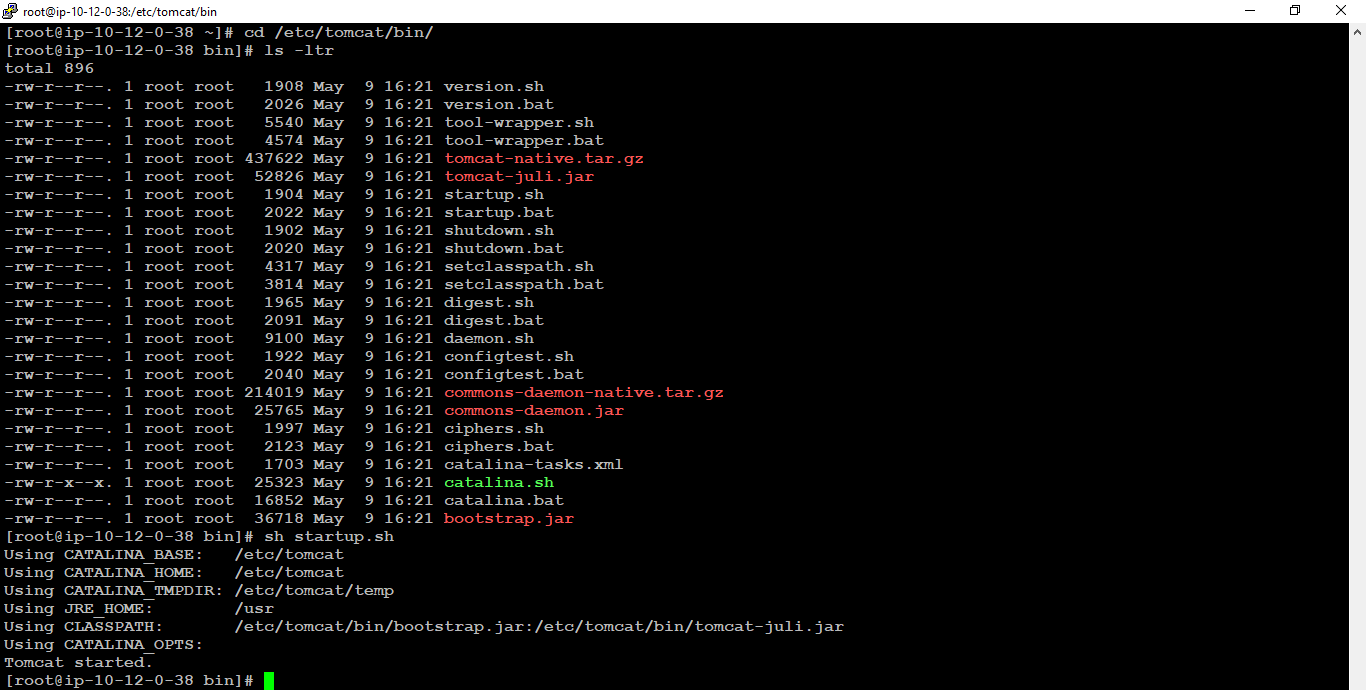




-Startup the tomcat server using the following command:

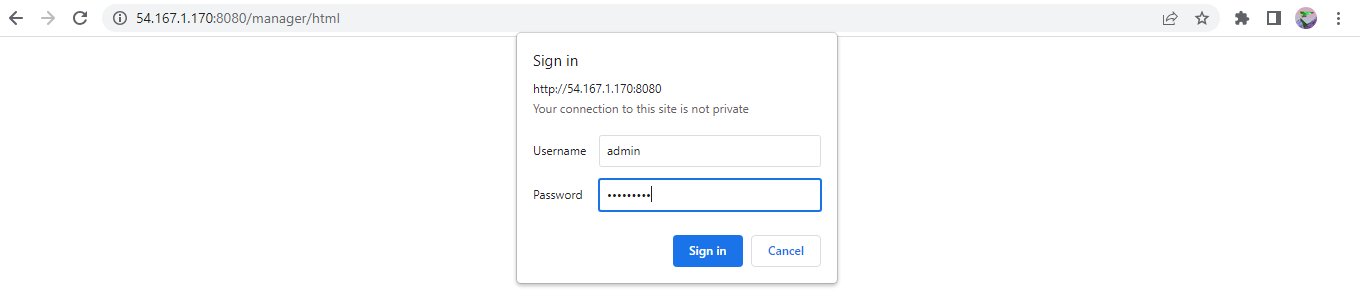
#cd /etc/tomcat/bin/

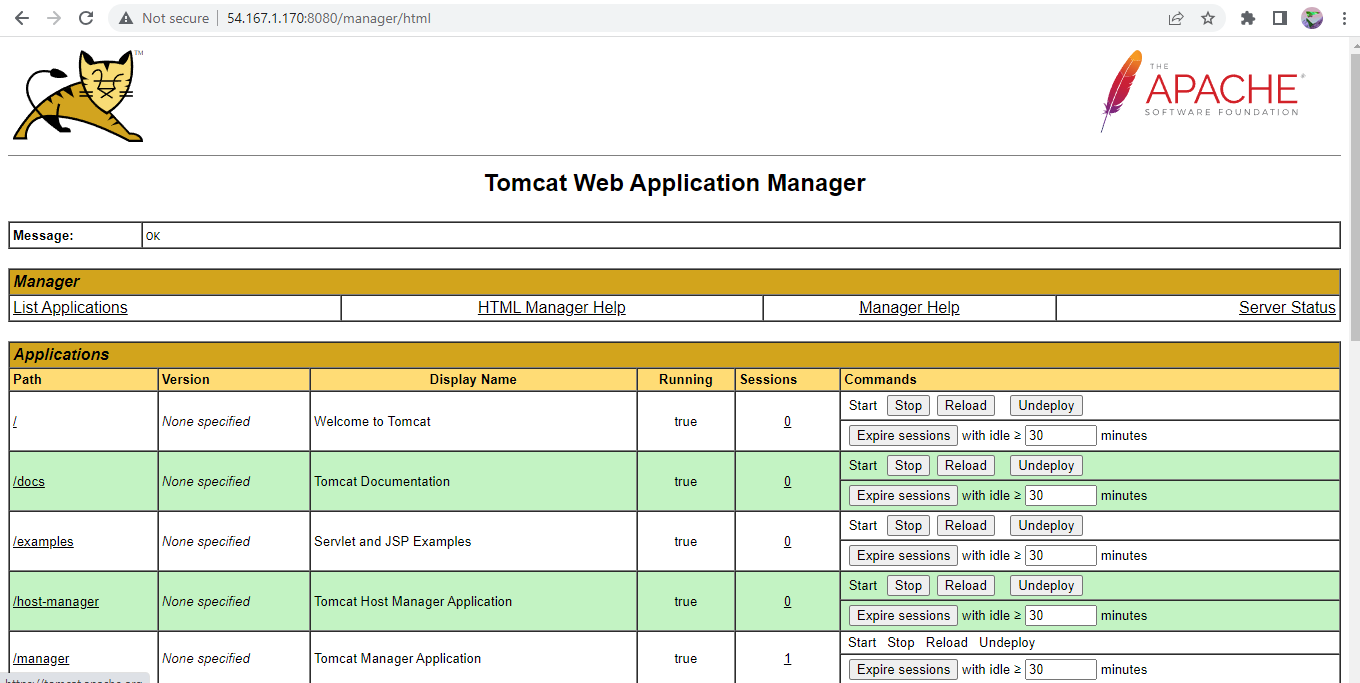
#sh startup.sh



## **To verify the tomcat server accessible using the following path:**

### -Check:- <http://hostname:8080:/manager/>

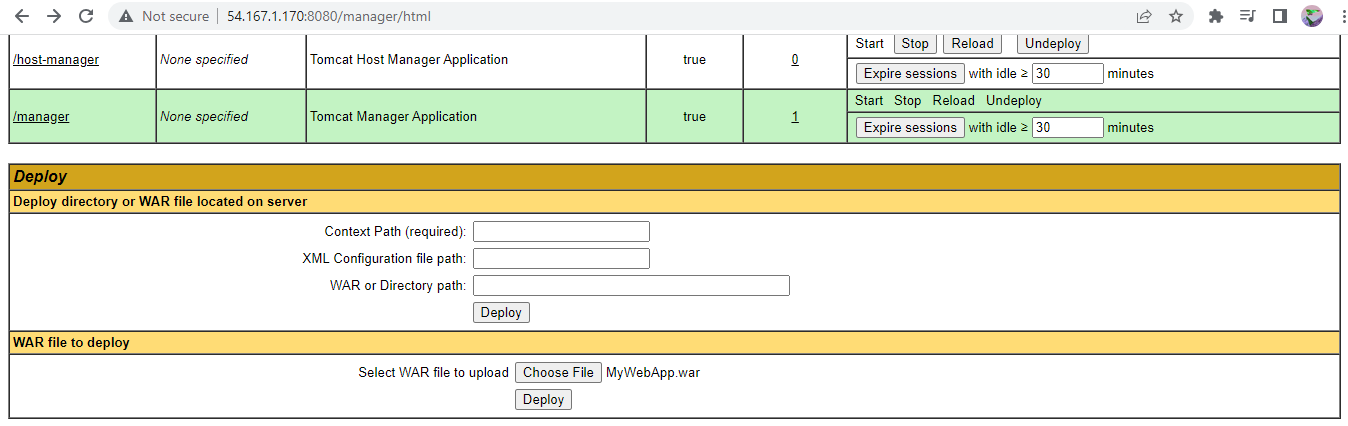


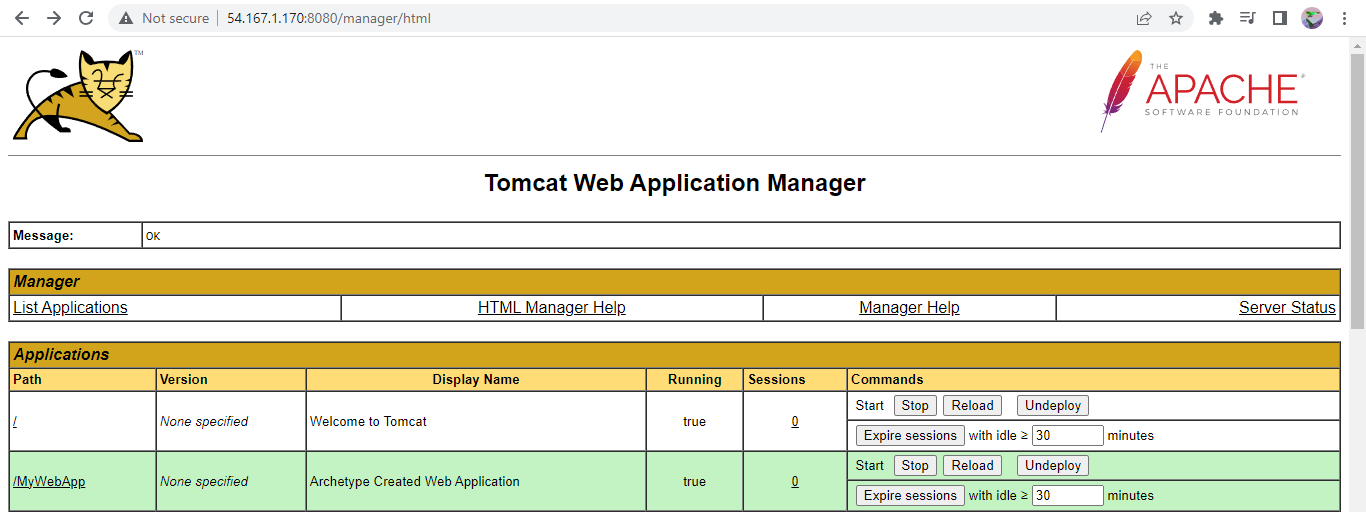


## **Automate build and Deploy Java project using Jenkins on Tomcat:**

### -Deploy the java application .war file using tomcat dashboard:

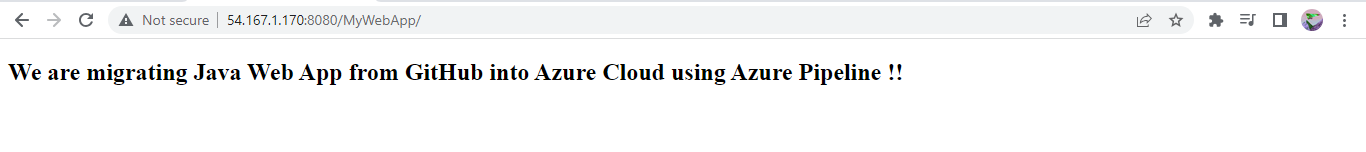
WAR file to deploy->Select WAR file to upload: choose file:Deploy





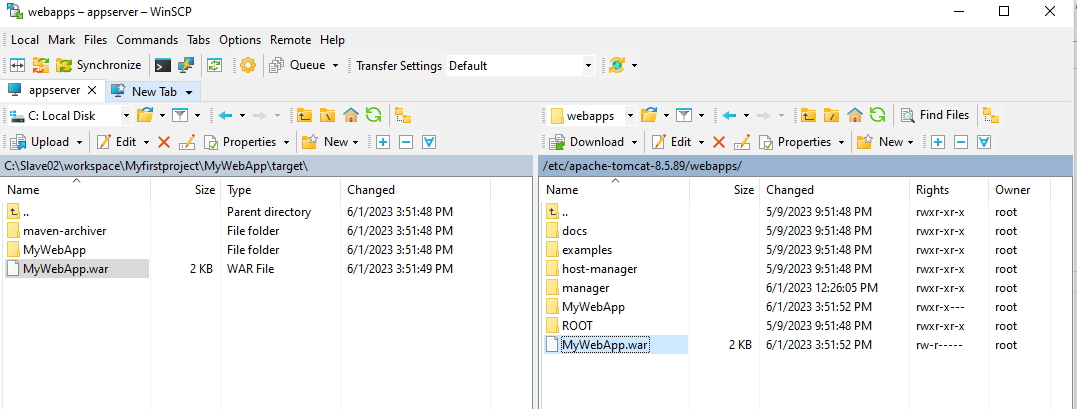
## **To verify the java application accessible using the following path:**

### -Check:- http:// 54.167.1.170:8080:/ MyWebApp/ #appserver public\_ip



### -Deploy the java application .war file using winscp software:

/etc/tomcat/webapps/



## **Proxy pass through Webserver to tomcat server:**

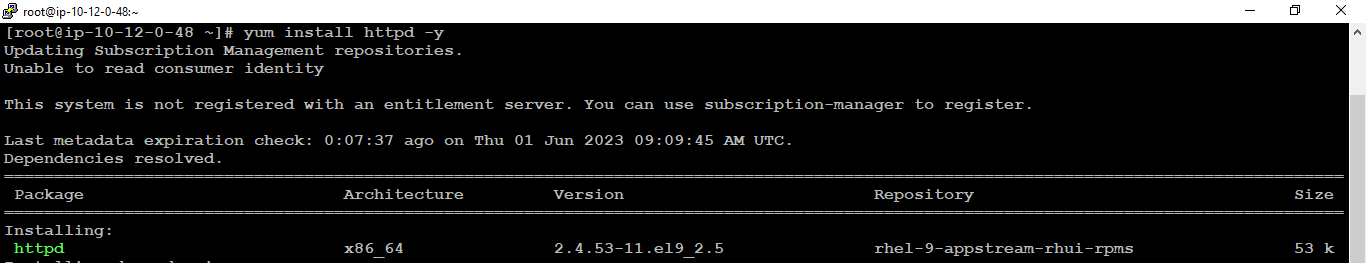
Webserver:

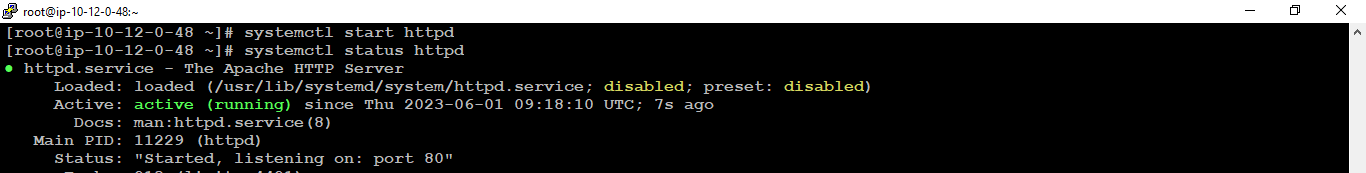
### -Install apache server httpd and start the apache service:

#yum install httpd –y

#systemctl start httpd

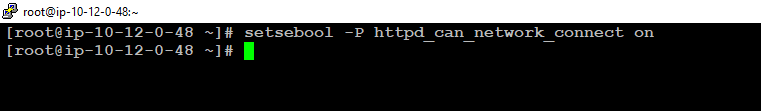
#systemctl status httpd





### -Enable the selinux security:

# setsebool -P httpd\_can\_network\_connect on



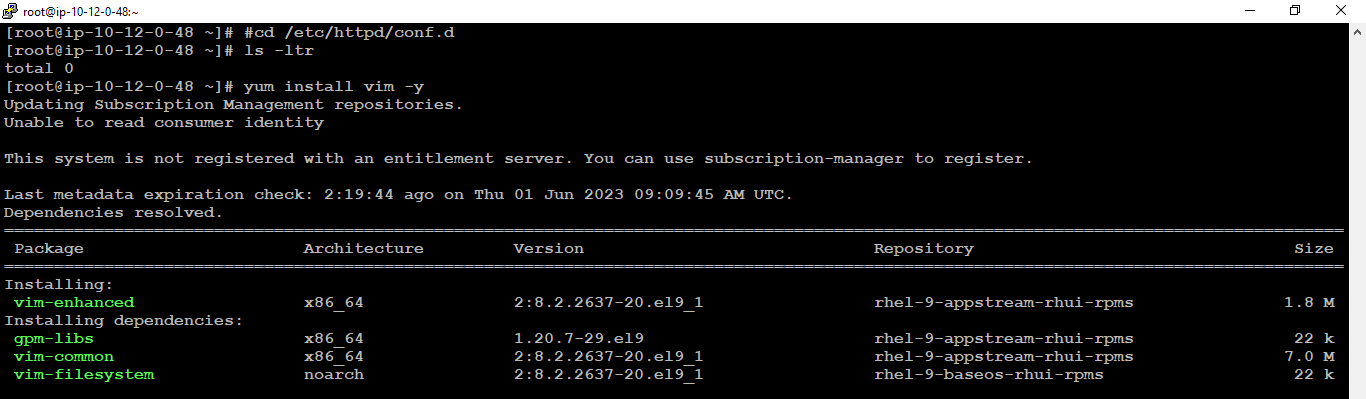
### -Create proxy pass using the following path:

/etc/httpd/conf.d

#cd /etc/httpd/conf.d

#ls –ltr

#yum install vim –y

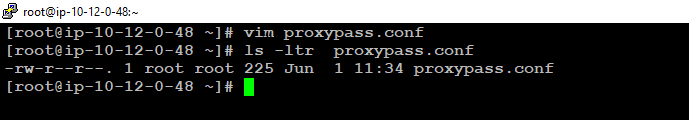


#vim proxypass.conf

ProxyPass /MyWebApp/ <http://54.167.1.170:8080/MyWebApp/> #appserver\_public\_ip

ProxyPassReverse /MyWebApp/ //http://54.167.1.170:8080/MyWebApp/ # appserver\_public\_ip

#ls –ltr



### -Restart the apache service:

#systemctl restart httpd



### -Go to web browser and enter the website:

<http://54.221.147.243/MyWebApp/> #webserver public\_ip

