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Installation steps for TOMCAT

Step 1: Update the System
First, ensure your system is up-to-date:

sudo apt update
sudo apt upgrade -y
Step 2: Install Java

Step 1 - Install Java OpenJDK
Verify the installation:
apt install openjdk-11-jdk


java -version


Step 2 - Download Apache Tomcat
sudo useradd -r -m -U -d /opt/tomcat -s /bin/false tomcat

Next, download the Apache Tomcat from their official website.

wget
https://archive.apache.org/dist/tomcat/tomcat-10/v10.1.14/bin/apache-tomcat-10.1.14.ta
r.gz


Then, extract the downloaded file.


Next, move the extracted directory to /opt.

mv apache-tomcat-10.1.14/* /opt/tomcat/


Next, set proper permissions and ownership on the Tomcat directory.

chown -R tomcat: /opt/tomcat
sh -c 'chmod +x /opt/tomcat/bin/*.sh'


Step 3 - Create a Tomcat User Account

nano /opt/tomcat/conf/tomcat-users.xml (add and save the files end of the before line)
<role rolename="manager-gui" />
<user username="manager" password="secure-password" roles="manager-gui" />
<role rolename="admin-gui" />
<user username="admin" password="secure-password" roles="manager-gui,admin-gui" />


Step 4 - Allow Remote Hosts to Access Tomcat
To allow access to the Manager app, edit the context.xml file.

nano /opt/tomcat/webapps/manager/META-INF/context.xml
Remove the following line.

  <Valve className="org.apache.catalina.valves.RemoteAddrValve"
         allow="127\.\d+\.\d+\.\d+|::1|0:0:0:0:0:0:0:1" />


Step 5 - Create a Systemd Service File for Tomcat
nano /etc/systemd/system/tomcat.service
 Add the following lines.

[Unit]
Description=Apache Tomcat 10 Web Application Server
After=network.target

[Service]
Type=forking

User=tomcat
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Group=tomcat

Environment="JAVA_HOME=/usr/lib/jvm/java-11-openjdk-amd64"
Environment="CATALINA_HOME=/opt/tomcat"
Environment="CATALINA_BASE=/opt/tomcat"
Environment="CATALINA_PID=/opt/tomcat/temp/tomcat.pid"
Environment="CATALINA_OPTS=-Xms512M -Xmx1024M -server -XX:+UseParallelGC"

ExecStart=/opt/tomcat/bin/startup.sh
ExecStop=/opt/tomcat/bin/shutdown.sh

[Install]
WantedBy=multi-user.target
```

Save and close the file, then reload the systemd daemon to apply the changes.

```
systemctl daemon-reload
```

Next, start the Tomcat service with the following command.

```
systemctl start tomcat
```

You can check the status of Tomcat with the following command.

```
systemctl status tomcat
```

Step 6 – Access Tomcat Web UI
Now, open your web browser and access the Tomcat UI using the URL
http://your-server-ip:8080.