

TOMCAT(From Apache)

Apache Tomcat:

Is a web server used for deploying java based web applications

Why do we use web servers?

Web servers come with built in features, like

- http implementations
- Multi threading capabilities, using thread we can handle multiple requests concurrently
- security implementation(https) Etc..

Installing Tomcat on linux machine:

In Amazon Linux:

- Java is the dependency for tomcat to work
- Installing java
- `sudo yum install java-1.8.0-openjdk-devel -y`
- `cd /opt`
- Download tomcat

`sudo wget`

<http://www-eu.apache.org/dist/tomcat/tomcat-8/v8.5.32/bin/apache-tomcat-8.5.32.tar.gz>

- Untar the file

`sudo tar -xf apache-tomcat-8.5.32.tar.gz`

- Rename the file

`sudo mv apache-tomcat-8.5.32 tomcat8`

- Change the ownership of tomcat to ec2-user
- **`sudo chown -R ec2-user:ec2-user tomcat8`**

- Starting tomcat server

`${TOMCAT_HOME}/bin/startup.sh`

Note: default port of tomcat is 8080

- Stopping tomcat server

`${TOMCAT_HOME}/bin/shutdown.sh`

Deploying web application on the tomcat server:

Deployment can be done in many ways:

1. Place the war file under **`${TOMCAT_HOME}/webapps`**, webapps folder is called as tomcat's deployment directory

Command To copy war file from Maven to Tomcat Server:

`scp -i ec2key.pem /home/ec2-user/sample-app/target/myapp-0.0.3.war ec2-user@192.32.56.12:/home/ec2-user/`

Next Copy war file to `{TOMCAT_HOME}/webapps`

2. Upload war file via tomcat manager application

Troubleshooting tomcat specific issues:

Troubleshooting is done with help of tomcat log files

`${TOMCAT_HOME}/logs`

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Tomcat manager application:

Tomcat manager is the web application, using this we manage applications running on tomcat.

We can also deploying using this application.

By default access is restricted to this application.

- Remove the restriction to manager application

- **vi /opt/tomcat8/webapps/manager/META-INF/context.xml**

- Remove the <Value></Value> from this file.

- Add user to access tomcat manager application

- **vi /opt/tomcat8/conf/tomcat-users.xml**

```
<role rolename="manager-gui"/>
```

```
<role rolename="manager-script"/>
```

```
<user username="tomcat" password="tomcat" roles="manager-gui,manager-script"/>
```

Note:

1. Deployment related issues we can troubleshoot by using logs.
2. **cd /opt/tomcat8/logs** → logs folder location → **vi Catalina.out**
3. If we want to change port number of tomcat u can change in **server.xml**
4. In Ubuntu/Amazon linux if u want to change port number of tomcat u can cd into **/var/lib/tomcat8/conf**, from there **vi server.xml** in that u change port number 8080 to desired port→ make sure that it is pointing to **HTTP**.

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Enabling Tomcat on reboot:

STEP-1

```
cd /etc/init.d
```

STEP-2

```
vi tomcat8
```

STEP-3

```
#####PASTE THE BELOW CONTENT#####
```

```
#!/bin/bash
```

```
# description: Tomcat Start Stop Restart
```

```
# processname: tomcat
```

```
# chkconfig: 234 20 80
```

```
CATALINA_HOME=/opt/tomcat8
```

```
case $1 in
```

```
start)
```

```
sh $CATALINA_HOME/bin/startup.sh
```

```
..
```

```
;;
```

```
stop)
```

```
sh $CATALINA_HOME/bin/shutdown.sh
```

```
..
```

```
;;
```

```
restart)
```

```
sh $CATALINA_HOME/bin/shutdown.sh
```

```
sh $CATALINA_HOME/bin/startup.sh
```

```
..
```

```
;;
```

```
esac
```

```
exit 0
```

```
#####Up to TOP#####
```

STEP-4

```
chmod 755 tomcat8
```

STEP-5

```
chkconfig --add tomcat8
```

STEP-6

```
chkconfig --level 234 tomcat8 on
```

STEP-7

```
service tomcat8 start
```

```
chkconfig tomcat8 on
```

```
service tomcat8 stop
```

```
service tomcat8 restart
```