

Jenkins-Day-4

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► What is Tomcat server?

- Tomcat is web application server.
- What is web application?
 - Sites like www.amazon.com / www.facebook.com / www.netflix.com are considered as web applications.
- The web applications artifacts like .war files we can deploy on tomcat server & can access those deployed programs via browser

► How to install & configure Tomcat?

- To install tomcat we need **pre-requisites** like
 - **Install java-11**
 - 1) List java-11 related packages are available
`yum list | grep -i java-11*`
 - 2) Install the java-11
`yum install java-11* -y`
 - 3) Check the java version
`java -version`
- **Download the tomcat binary from internet & extract it, later copy it to the /opt folder**
`wget https://archive.apache.org/dist/tomcat/tomcat-10/v10.1.13/bin/apache-tomcat-10.1.13.tar.gz`
`tar -xzf apache-tomcat-10.1.13.tar.gz`
`mv apache-tomcat-10.1.13 tomcat`
`mv tomcat /opt/`
- **Start tomcat**
`./opt/tomcat/bin/startup.sh`
- **Check tomcat is running or not**
`ps -ef | grep -i tomcat`
- Now tomcat is accessible on browser with URL
<http://<ip-address>:8080>
- Update content.xml file in-order to have manager-app/server-status check access,
`vi /opt/tomcat/webapps/manager/META-INF`

```
<!--<Valve className="org.apache.catalina.valves.RemoteAddrValve"
allow="127\.\d+\.\d+\.\d+|::1|0:0:0:0:0:0:0:1" /> -->
```
- **To login tomcat setup via GUI credentials**
`vi /opt/tomcat/conf/tomcat-users.xml`

```
<role rolename="manager-gui"/>
<user username="tomcat" password="s3cret" roles="manager-gui"/>
```
- **To deploy applications into tomcat we have to use role "manager-script"**
- **Let's manually deploy sample web application & check manually we are able to access or not.**
`cd /opt/tomcat/webapps`
`wget https://tomcat.apache.org/tomcat-7.0-doc/appdev/sample/sample.war`

Now we are able to sample application through tomcat.
- In this case for your understanding purpose only I download the .war file directly from internet, but in real-time we have to create it out of source code & later we deploy to tomcat server.

► Deploy web applications on tomcat via jenkins pipeline.

- Now we will discuss how to download latest code from GitHub, build that code & deploy tomcat server with help of jenkins we will see.



- **Pre-requisites:**

- EC2-SERVER-1(t2.medium)
 - Git
 - Maven
 - Java
 - Jenkins
 - Repo: online-bookstore
- EC2-server-2(t2.micro)
 - Tomcat
- Deploy to container plugin
- **Free-style job configuration**
 - src: <https://github.com/chaitanyaredd/onlinebookstore.git>
 - Build: mvn clean install
 - Post build steps:
 - Provide location of war file: `**/*.war` {recursively look under the workspace folder for war file}
 - Provide context as you want, since we are configuring deployment for online-bookstore, I am giving as online-bookstore
 - Choose tomcat container as tomcat-9.x
 - ◆ Enter tomcat url
 - ◆ Enter tomcat credentials - (The credentials must have the manager-script role, then we can deploy application to tomcat from jenkins)

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

- ◆ Save --> Apply

- Now execute the job
- Now we can able the access the online-bookstore application
<http://<tomcat-server>:8080/online-bookstore>

- ▶ **Discard old builds**
- ▶ **Choose custom workspace**
- ▶ **Archive the jar/war files**
- ▶ **Publish junit reports**