

Tomcat App Server

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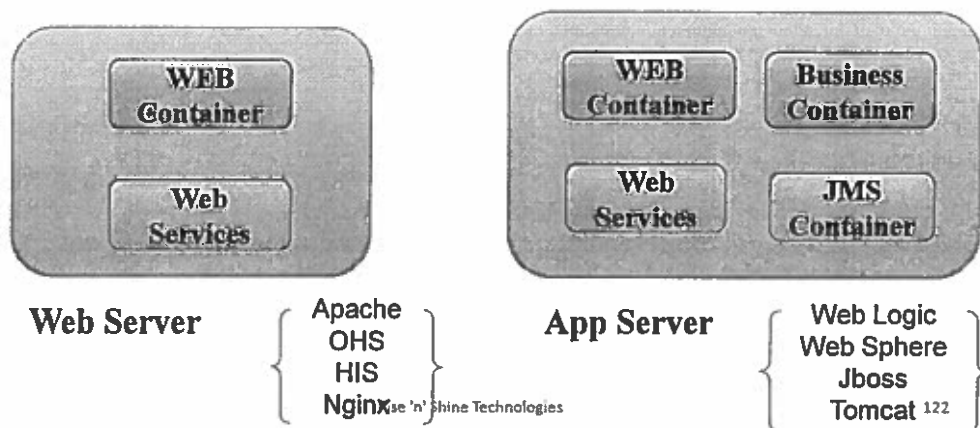
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Types of Servers

1) Web Servers

2) Application Servers



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Web Server	Application Server
A Web server handles the HTTP protocol. Protocol Dependent (Http)	Application Server handles any number of protocols (HTTP, TCP-IP, RMI (t3) ...etc). Protocol Independent.
Web Server is mostly designed to serve static content.	The application server is used to run business logic or dynamically generating presentation code.
It Serves Web Based Applications.	It serves Web Based Applications and Enterprise Based applications.
It provides only Web container (Servlet container + JSP container)	It provides Web Container + EJB Container + JMS Container
Apache, OHS, HIS, IIS, Sun one iplanet	Weblogic, Websphere, Oracle Application Server, JBOSS, GF

About Tomcat Server:

- --> Open Source
- --> Platform Independent
- --> Apache vendor
- --> Pre-requisite: Any OS is recommended
- --> 1 GB RAM

JDK Installation:

- To Install tomcat, first we need to install jdk. So To install java (jdk-7) follow the below steps :
- Step 1: Download the tar file of java
- Step 2: Now unpack the zip file in /u01/java using tar command


```
– > tar xzpfv jdk-7u9-linux-x64.tar.gz -C /u01/java/
```
- This will create the directory /u01/java/jdk1.7.0_09 . This will be our JAVA_HOME

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JDK Installation:

- Step 3: Now we set the Java Home and will put Java into the path of our users using below command


```
– > JAVA_HOME=/usr/java/jdk1.7.0_09/
```

```
– > export JAVA_HOME
```

```
– > PATH=$JAVA_HOME/bin:$PATH
```

```
– > export PATH
```
- To set the JAVA_HOME permanently, we need to add above commands to the ~/.bash profile of the user

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Tomcat Installation:

- Install Tomcat 8/9.
- Step 1: First download the zipped file using the below url
“<http://tomcat.apache.org/>”
- Step 2: We will install tomcat under /u01/tomcat directory , Now unzip the tomcat file using below command:
- `> unzip /u01/batch/apache-tomcat-8.0.29.zip`
- This will create a directory “/u01/batch/apache-tomcat-8.0.29”
- Then rename the this directory to tomcat using ‘mv’ command.

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Tomcat Directory Structure

- CATALINA_HOME = /u01/batch/tomcat
 - webapps (This Application deployment directory)
 - bin (Start and Shutdown scripts of Tomcat)
 - Startup.sh
 - Shutdown.sh
 - logs
 - catalina.out (Server core log file)
 - localhost.dt.log (Access information of the server)
 - Conf
 - server.xml
 - tomcat-users.xml
 - lib (Library / Module files of Tomcat)
 - temp
 - work

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Tomcat Start/Shutdown Server

- Startup the Server
 - > go to bin and run the startup.sh
 - > sh ./startup.sh
 - > ps -aef | grep tom
 - > Access the url --> <http://ip:8080>
- Shutdown Tomcat Server:
 - go to bin and run the
 - ./shutdown.sh

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Configuration Files:

- **conf directory:**
 - - tomcat-users.xml
 - - server.xml (This is the complete configuration file)
 - - port customization (connector Element)
 - - open ports in the linux (netstat -nl | grep 8080)
 - - appBase attribute
 - (which can be used to customize the webapps directory)
 - -SSL configuration port should be enabled
 - Default https port – 8443
- **logs:**
 - -- tail -f catalina.out
 - -- localhost_access_log

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Types of Deployments

- Deployment Operation: Web Application:(.war file)
- Two types of Deployments:
 - 1. Console / Tomcat manager Deployment
 - -> On the home page of tomcat click on Tomcat manager line
 - -> Go to war deployment section
 - -> Browse your war file
 - 2. Direct / Hot Deployment
 - -> This is recommended when the large size of applications.
 - -> May be restart required.

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tmp Dir / Cache Dir

- tmp dir: this is extracted directory of the Tomcat web Apps Apps
- work dir: cache dir
- Clean and Start the Tomcat incase if the server throws any exception like 'lock exception' while starting server
 - -- delete the content of the tmp and work directory and restart the server.
 -
 - -- rm -rf tmp/*
 - -- rm -rf work/*

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