

Application server (tomcat)

- **What is the difference between an Application Server and a Web Server?**

A Web server exclusively handles HTTP requests, whereas an application server serves business logic to application programs through any number of protocols. In most cases, the server exposes this business logic through a component API, such as the EJB (Enterprise JavaBean) component model found on J2EE (Java 2 Platform, Enterprise Edition) application servers. Moreover, the application server manages its own resources. Such gate-keeping duties include security, transaction processing, resource pooling, and messaging.

- **What is Catalina?**

Catalina is Tomcat's servlet container. Catalina implements Sun Microsystems' specifications for servlet and JavaServer Pages (JSP). In Tomcat, a Realm element represents a "database" of usernames, passwords, and roles (similar to Unix groups) assigned to those users. Different implementations of Realm allow Catalina to be integrated into environments where such authentication information is already being created and maintained, and then use that information to implement Container Managed Security as described in the Servlet Specification.

- **Describe tomcat directory structure.**

/bin : Contains Start/Stop scripts for tomcat for both windows and linux operating system. Also consists of JAR files with classes required to control tomcat server.

/conf : Contains main configuration files (web.xml and server.xml).

/lib : Contains the Tomcat Java Archive (jar) files, shared across all Tomcat components.

/logs : Contains tomcat log files.

/temp: Temporary file storage.

/webapps : Deployment staging directory, where you place your WAR file.

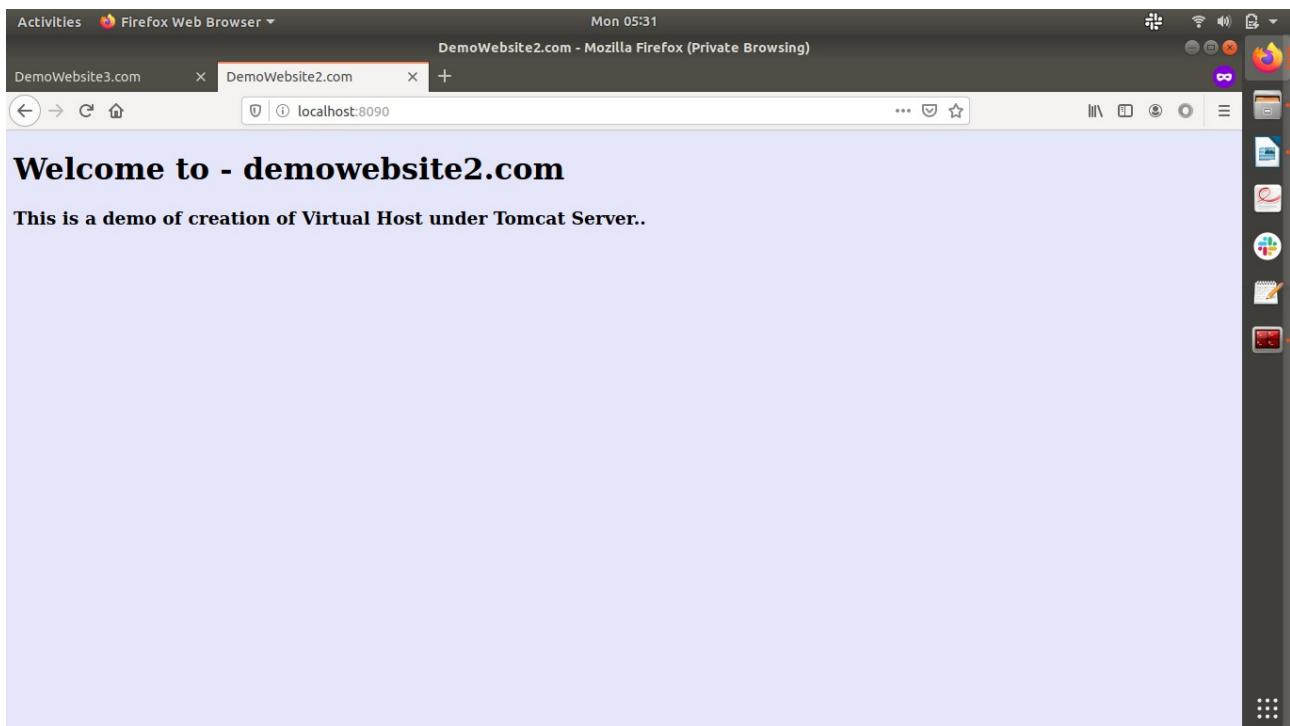
/work : Tomcat's working directory where Tomcat places all servlets that are generated from JSPs.

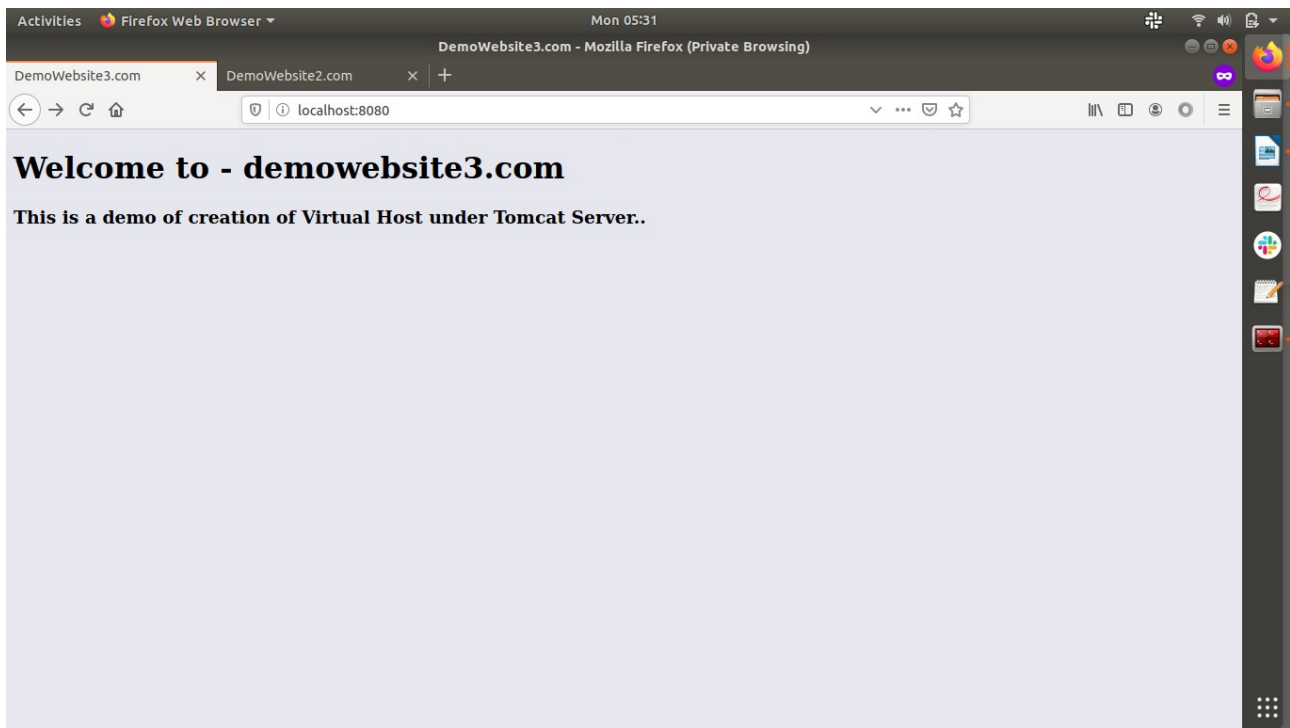
- **Connect any sample.war to MySQL running on localhost.**
- **Run multiple services on different ports with different connectors (AJP/HTTP) on same tomcat installation.**

```
Activities Terminator Mon 05:30 /bin/bash /bin/bash 144x38

<!-- A "Service" is a collection of one or more "Connectors" that share
a single "Container" Note: A "Service" is not itself a "Container",
so you may not define subcomponents such as "Valves" at this level.
Documentation at /docs/config/service.html
-->
<Service name="Catalina_2">
  <Connector port="8090" protocol="HTTP/1.1" connectionTimeout="20000" redirectPort="8444" />
  <Connector port="8010" protocol="AJP/1.3" redirectPort="8444" />
  <Engine name="Catalina_2" defaultHost="localhost">
    <Realm className="org.apache.catalina.realm.LockOutRealm">
      <Realm className="org.apache.catalina.realm.UserDatabaseRealm" resourceName="UserDatabase"/>
    </Realm>
    <Host name="localhost" appBase="website2-webapps" unpackWARs="true" autoDeploy="true">
      <Valve className="org.apache.catalina.valves.AccessLogValve" directory="logs"
        prefix="localhost_access_log." suffix=".txt"
        pattern="%h %l %u %t &quot;%r&quot; %s %b" />
    </Host>
  </Engine>
</Service>

<Service name="Catalina">
  <Connector port="8080" protocol="HTTP/1.1" connectionTimeout="20000" redirectPort="8443" />
  <Connector port="8009" protocol="AJP/1.3" redirectPort="8443" />
  <Engine name="Catalina" defaultHost="localhost">
    <Realm className="org.apache.catalina.realm.LockOutRealm">
      <Realm className="org.apache.catalina.realm.UserDatabaseRealm" resourceName="UserDatabase"/>
    </Realm>
    <Host name="localhost" appBase="website3-webapps" unpackWARs="true" autoDeploy="true">
      <Valve className="org.apache.catalina.valves.AccessLogValve" directory="logs"
        prefix="localhost_access_log." suffix=".txt"
        pattern="%h %l %u %t &quot;%r&quot; %s %b" />
    </Host>
  </Engine>
</Service>
</Server>
-- INSERT --
```



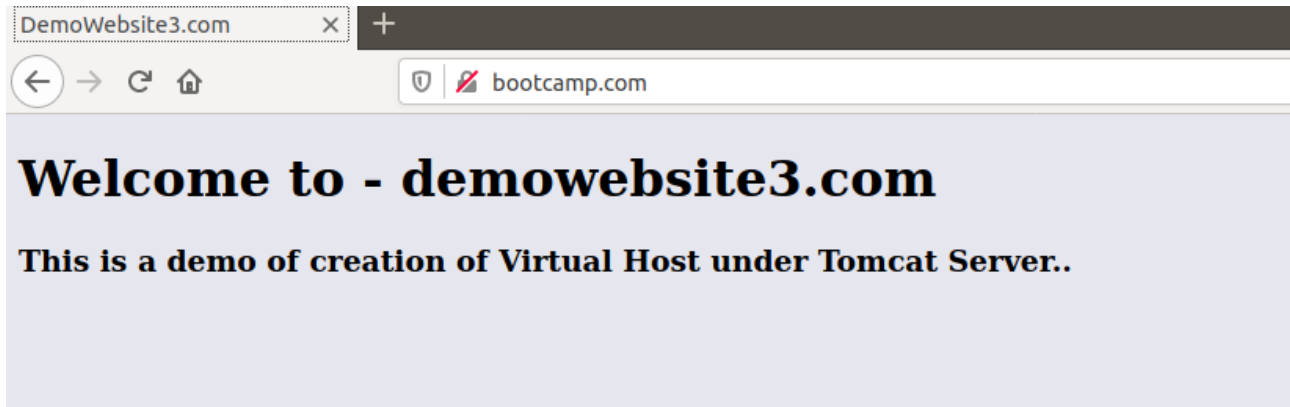
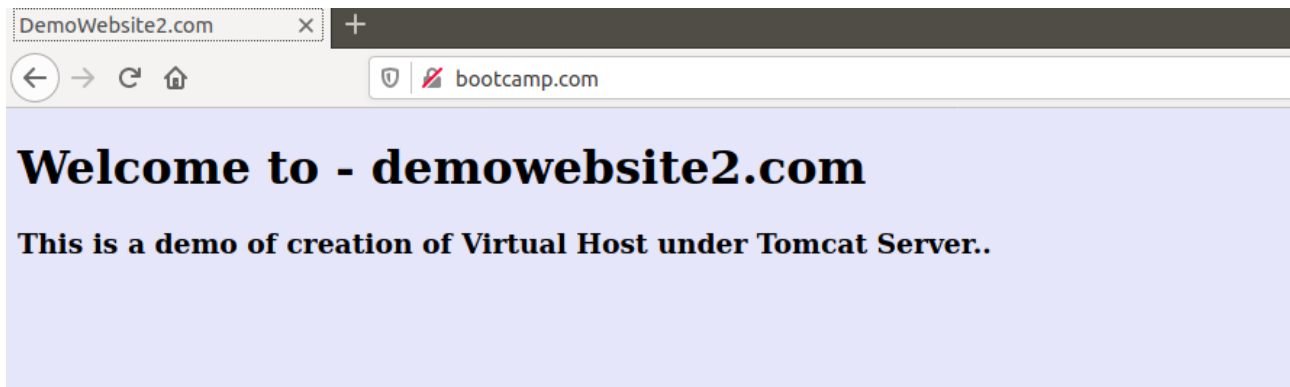


- Use nginx as reverse proxy for tomcat application.

```
upstream jay {
    # hash $request_uri;
    server 127.0.0.1:8080;
    server 127.0.0.1:8090;
}

server {
    listen 127.1.1.4:80;
    server_name bootcamp.co;

    location / {
        proxy_pass http://jay;
    }
}
```



- Setup self signed certificate on that nginx for bootcamp.com.
- What is the difference between proxy_pass & proxy_pass reverse?