

# Application Servers

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References:

<http://publib.boulder.ibm.com/infocenter/ws40help/index.jsp?topic=/com.ibm.websphere.v4.doc/welcome.html>

## Enterprise Applications

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- An enterprise application (or J2EE application) is an application that conforms to the J2EE specification. An application can consist of the following:
  - Zero or more EJB modules
  - Zero or more Web modules
  - Zero or more application client modules
  - Optionally, additional JAR files containing dependent classes or other components required by the application
  - Any combination of the above, as long as it contains at least one module

## Application Servers

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- ❑ Application servers extend a Web server's capabilities to handle Web application requests. The application server makes it possible for a server to generate a dynamic, customized response to a client request.
- ❑ For example, suppose:
  - A user at a Web browser on the public Internet visits a company Web site. The user requests to use an application that provides access to data in a database.
  - The user request flows to the Web server.
  - The Web server determines that the request involves an application containing resources not handled directly by the Web server (such as servlets). It forwards the request to the Application Server.

## Application Servers

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- ❑ The Application Server forwards the request to the appropriate process that can serve the requested document.
- ❑ The user request is then processed by the application servlet. For example:
  - An Enterprise Bean that performs database access as per the user request is processed.
  - A dynamic web page containing results of the user query is generated.
- ❑ The application server collaborates with the Web server to return the results to the user at the Web browser.

## Tomcat

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- ❑ Tomcat is an open-source Application Server developed under the Apache license.
- ❑ Tomcat supports Java Servlets and Java Server Pages in its most basic form.
- ❑ Further functionalities can be gained by adding on more modules (EJB, etc.)
- ❑ Each Tomcat server can host multiple Web Applications

## Tomcat: Demo

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- ❑ Starting and stopping the server
- ❑ Accessing the server and applications
- ❑ Server Log
- ❑ Simple Web Application: HelloJSP
- ❑ Deploying & undeploying Web Application
- ❑ Deployment Mechanism