Installing and configuring Tomcat

Installing Tomcat isn’t rocket science, but it’s not as easy as making toast.

Here are the steps you can follow to set up Tomcat 5.5 on a Windows XP

system:

1. **Download the Tomcat Zip file.**

2. **Extract the contents of the Zip file by right-clicking the file and choosing**

3. **Create an environment variable named JAVA\_HOME that points to the location of your JDK.**

To create an environment variable, open the Control Panel, double-click

the System icon, click the Advanced Tab, and then click Environment

Variables. Then, click New and create a variable named JAVA\_HOME.

The value of this variable needs to be the complete path to your JDK

installation folder. For example: c:\Program Files\Java\jdk1.5.0.

A common mistake is to set this variable to the bin directory or to the

directory for the JRE, not the JDK. If Tomcat doesn’t start up later,

double-check the JAVA\_HOME directory.

4. **Copy the servlet-api.jar file to the jre\lib\ext folder in your**

**JDK root.**

For example, if your JDF is installed in c:\Program Files\Java\

jdk1.5.0, copy this file to **c:\Program Files\Java\jdk1.5.0\**

**jre\lib\ext.**You find the servlet-api.jar file in **c:\tomcat\**

**common\lib**, assuming you extracted the Tomcat files to c:\tomcat.

If you skip this step or copy the servlet-api.jar file to the wrong

place, you can’t compile your servlet programs. If you get compiler messages

complaining that the javax.servlet package doesn’t exist,

double-check that you performed this step right.

5. **Edit the context.xml configuration file and add reloadable=**

**”true” to the <context> tag.**

The context.xml file is located in c:\tomcat\conf. The second

line is initially this:

Step:1

<Context>

Change it to:

<Context reloadable="true">

**6. Modify the web.xml file to enable the invoker servlet.**

Like context.xml, the web.xml file is located in c:\tomcat\conf.

It contains two groups of lines that configure a Tomcat feature called the

***invoker servlet***that you need to modify. These lines are initially commented

out to disable the invoker servlet; all you have to do is remove

the comment lines that appear before and after each group of lines.

The first group you want to de-comment looks like this:

<!--

<servlet>

**<servlet-name>invoker</servlet-name>**

<servlet-class>

org.apache.catalina.servlets.InvokerServlet

</servlet-class>

<init-param>

<param-name>debug</param-name>

<param-value>0</param-value>

</init-param>

<load-on-startup>2</load-on-startup>

</servlet>

-->

Simply remove the first (<!--) and last (-->) of these lines.

The second group looks like this:

<!--

<servlet-mapping>

<servlet-name>invoker</servlet-name>

<url-pattern>/servlet/\*</url-pattern>

</servlet-mapping>

-->

Once again, you must remove the first and last line so these lines aren’t

treated as comments.

You can quickly find these lines by searching for the word invoker.

7. **Create the classes directory.**

By default, Tomcat looks for the class files for your servlets in the directory

c:\tomcat\webapps\ROOT\WEB-INF\classes. Unfortunately,

the classes directory is missing. So you must navigate to c:\tomcat\

webapps\ROOT\WEB-INF and create the classes directory. (Of course,

the c:tomcat part of these paths varies if you installed Tomcat in some

other location.)

Using Tomcat 617

Starting and stopping Tomcat

After you install and configure Tomcat, you can start it by opening a command

window, changing to the c:\tomcat\bin directory, and typing startup. A

batch file runs that starts Tomcat. When Tomcat starts, it opens up a second

command window that displays various status messages. Figure 2-1 shows

both of these windows in action.

You know that Tomcat has successfully started up when you see a line such

as the following indicating how long the startup took:

INFO: Server startup in 2817 ms

If the Tomcat window appears for a few seconds, and then an exception message

flies by quickly and the window closes, the most likely problem is that

you already have a Web server running on your system and that server has

already laid claim to the port Tomcat wants to use for HTTP communication.

The solution to that problem is to edit the server.xml file in c:\tomcat\

conf and look for this tag:

<Connector port=”8080” ... />

Change the port number from 8080 to some other number, such as 18080.

Later, when you display servlets in a browser window, you have to specify

this number as the HTTP port number instead of 8080.

**Figure 2-1:**

Starting up

Tomcat.

618 Using Tomcat

You don’t need to shut down Tomcat once you start it up unless you make a

change to one of its configuration files. If you do, you can shut down Tomcat

by running the shutdown batch file from the c:\tomcat\bin directory.

Then, you can run the startup batch file to get Tomcat going again.

Testing Tomcat

To find out if you have installed Tomcat correctly, you can try running the

test servlets that are automatically installed when you install Tomcat. Open

a browser window and type this address:

http://localhost:8080/servlets-examples/index.html

(If you changed the port number by editing the server.xml file, use the

port number you specified instead of 8080.) The page shown in Figure 2-2

appears. If it doesn’t, go to the earlier section “Installing and configuring

Tomcat” and double-check that you did each step correctly.

***Note:*** If you scroll down this page, you find links to a variety of sample

servlets you can run along with links to each servlet’s source code. By all

means play around with these samples to get an idea of how servlets work

and what you can do with them.

**Figure 2-2:**

Testing

Tomcat.

**Book VII**

**Chapter 2**

**Creating Servlets**

Creating a Simple Servlet 619