

# STRUTS 2 - ENVIRONMENT SETUP

[http://www.tutorialspoint.com/struts\\_2/struts\\_environment\\_setup.htm](http://www.tutorialspoint.com/struts_2/struts_environment_setup.htm)

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Our first task is to get a minimal Struts 2 application running. This chapter will guide you on how to prepare a development environment to start your work with Struts 2. I assume that you already have JDK 5+, Tomcat and Eclipse installed on your machine. If you do not have these components installed then follow the given steps on fast track:

## Step 1 - Setup Java Development Kit *JDK*:

You can download the latest version of SDK from Oracle's Java site: [Java SE Downloads](#). You will find instructions for installing JDK in downloaded files, follow the given instructions to install and configure the setup. Finally set PATH and JAVA\_HOME environment variables to refer to the directory that contains java and javac, typically java\_install\_dir/bin and java\_install\_dir respectively.

If you are running Windows and installed the SDK in C:\jdk1.5.0\_20, you would have to put the following line in your C:\autoexec.bat file.

```
set PATH=C:\jdk1.5.0_20\bin;%PATH%
set JAVA_HOME=C:\jdk1.5.0_20
```

Alternatively, on Windows NT/2000/XP, you could also right-click on My Computer, select Properties, then Advanced, then Environment Variables. Then, you would update the PATH value and press the OK button.

On Unix *Solaris, Linux, etc.*, if the SDK is installed in /usr/local/jdk1.5.0\_20 and you use the C shell, you would put the following into your .cshrc file.

```
setenv PATH /usr/local/jdk1.5.0_20/bin:$PATH
setenv JAVA_HOME /usr/local/jdk1.5.0_20
```

Alternatively, if you use an Integrated Development Environment *IDE* like Borland JBuilder, Eclipse, IntelliJ IDEA, or Sun ONE Studio, compile and run a simple program to confirm that the IDE knows where you installed Java, otherwise do proper setup as given document of the IDE.

## Step 2 - Setup Apache Tomcat:

You can download the latest version of Tomcat from <http://tomcat.apache.org/>. Once you downloaded the installation, unpack the binary distribution into a convenient location. For example in C:\apache-tomcat-6.0.33 on windows, or /usr/local/apache-tomcat-6.0.33 on Linux/Unix and create CATALINA\_HOME environment variable pointing to these locations.

Tomcat can be started by executing the following commands on windows machine, or you can simply double click on startup.bat

```
%CATALINA_HOME%\bin\startup.bat

or

C:\apache-tomcat-6.0.33\bin\startup.bat
```

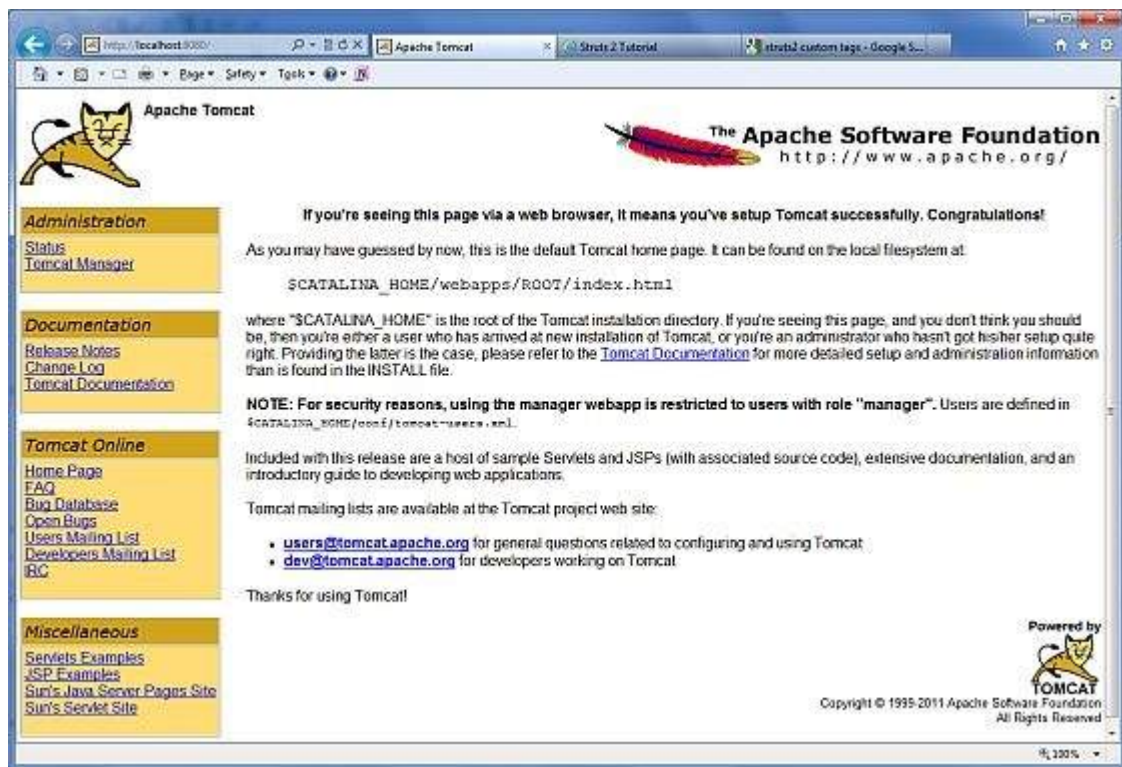
Tomcat can be started by executing the following commands on Unix *Solaris, Linux, etc.* machine:

```
$CATALINA_HOME/bin/startup.sh

or

/usr/local/apache-tomcat-6.0.33/bin/startup.sh
```

After a successful startup, the default web applications included with Tomcat will be available by visiting **<http://localhost:8080/>**. If everything is fine then it should display following result:



Further information about configuring and running Tomcat can be found in the documentation included here, as well as on the Tomcat web site: <http://tomcat.apache.org>

Tomcat can be stopped by executing the following commands on windows machine:

```
%CATALINA_HOME%\bin\shutdown
or
C:\apache-tomcat-5.5.29\bin\shutdown
```

Tomcat can be stopped by executing the following commands on Unix *Solaris, Linux, etc.* machine:

```
$CATALINA_HOME/bin/shutdown.sh
or
/usr/local/apache-tomcat-5.5.29/bin/shutdown.sh
```

### Step 3 - Setup Eclipse IDE

All the examples in this tutorial has been written using Eclipse IDE. So I would suggest you have latest version of Eclipse installed on your machine.

To install Eclipse dDownload the latest Eclipse binaries from <http://www.eclipse.org/downloads/>. Once you downloaded the installation, unpack the binary distribution into a convenient location. For example in C:\eclipse on windows, or /usr/local/eclipse on Linux/Unix and finally set PATH variable appropriately.

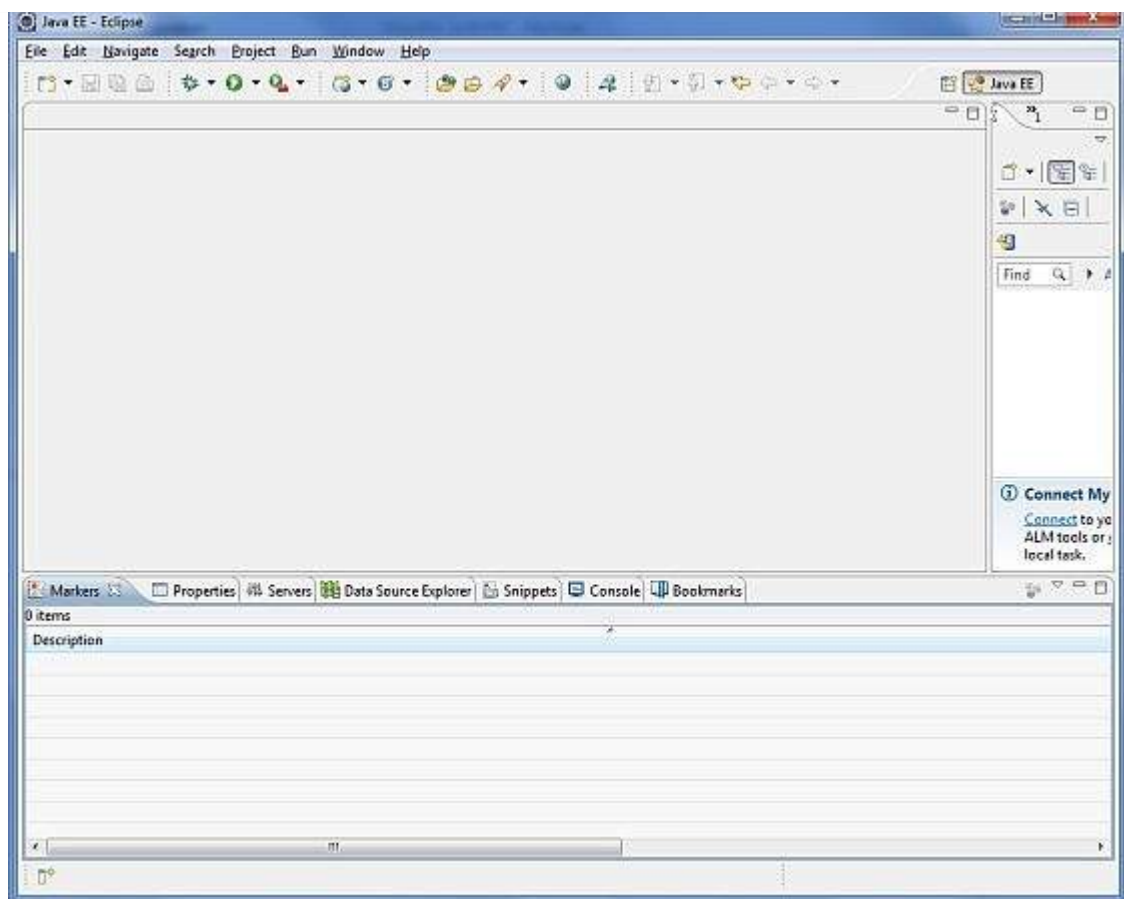
Eclipse can be started by executing the following commands on windows machine, or you can simply double click on eclipse.exe

```
%C:\eclipse\eclipse.exe
```

Eclipse can be started by executing the following commands on Unix *Solaris, Linux, etc.* machine:

```
$/usr/local/eclipse/eclipse
```

After a successful startup, if everything is fine then it should display following result:



## Step 4 - Setup Struts2 Libraries

Now if everything is fine, then you can proceed to setup your Struts 2 framework. Following are the simple steps to download and install Struts2 on your machine.

- Make a choice whether you want to install Struts2 on Windows, or Unix and then proceed to the next step to download .zip file for windows and .tar file for Unix.
- Download the latest version of Struts2 binaries from <http://struts.apache.org/download.cgi>.
- At the time of writing this tutorial, I downloaded **struts-2.0.14-all.zip** and when you unzip the downloaded file it will give you directory structure inside C:\struts-2.2.3 as follows.

Name	Date modified	Type	Size
apps	4/8/2011 9:30 AM	File folder	
docs	4/8/2011 9:27 AM	File folder	
lib	4/8/2011 9:30 AM	File folder	
src	4/8/2011 9:30 AM	File folder	
ANTLR-LICENSE	4/8/2011 8:53 AM	Text Document	2 KB
CLASSWORLDS-LICENSE	4/8/2011 8:53 AM	Text Document	2 KB
FREEMARKER-LICENSE	4/8/2011 8:53 AM	Text Document	3 KB
LICENSE	4/8/2011 8:52 AM	Text Document	10 KB
NOTICE	4/8/2011 8:52 AM	Text Document	1 KB
OGNL-LICENSE	4/8/2011 8:53 AM	Text Document	3 KB
OVAL-LICENSE	4/8/2011 8:53 AM	Text Document	12 KB
SITEMESH-LICENSE	4/8/2011 8:53 AM	Text Document	3 KB
XPP3-LICENSE	4/8/2011 8:53 AM	Text Document	3 KB
XSTREAM-LICENSE	4/8/2011 8:53 AM	Text Document	2 KB

Second step is to extract the zip file in any location, I downloaded & extracted **struts-2.2.3-all.zip** in **c:\** folder on my Windows 7 machine so that I have all the jar files into **C:\struts-2.2.3\lib**. Make sure you set your CLASSPATH variable properly otherwise you will face problem while running your

application

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