
Installing the Software

This course will discuss the technologies and APIs of Web Services in a vendor-independent fashion. However, the examples in the book will show you how to use both Apache's Axis and Sun's Web Services Developers Pack.

Perform the following steps to download, install and prepare the necessary software for this course:

Step 1: Download Axis

Axis is freely downloadable from Apache's Web site at:

`http://xml.apache.org/axis/`

When you click on the link to download Axis, you are shown an FTP directory with a list of files. If you are using any version of Windows, you want to download the file with the .zip extension, which will look like:

`xml-axis-11.zip`

Step 2: Install Axis

To install Axis, you simply need to unzip the file you downloaded. It will create all the necessary subfolders automatically, so unzip directly in your root directory; for example, c:\.

NOTE

Axis requires a Web server that supports Java Servlets. In the next few steps you will download and install the Java Web Services Developer Pack (WSDP), which comes with Tomcat. (Tomcat is an open-source Servlet container available from Apache at <http://jakarta.apache.org/tomcat/>) If you are going to use Axis by itself and not download and install the WSDP, then you need to download and install Tomcat separately.

Step 3: Download and install the J2SE SDK

You need to have the Standard Developer Kit (SDK) for the Java 2 Platform, Standard Edition (J2SE) installed so you can run Sun's WSDP. You can download the latest version of the J2SE SDK at:

`http://java.sun.com/j2se/downloads.html`

Step 4: Install the J2SE SDK

The file you downloaded in the previous step is an installation wizard. Simply run the wizard to install the J2SE SDK.

Step 5: Download the Java WSDP

Sun provides the Java Web Services Developer Pack (WSDP) for programmers developing Web Services applications using Java. It is free to download and use, and can be downloaded at:

<http://java.sun.com/webservices/download.html>

You will need to agree to the usual license agreement, but download the latest version of the WSDP now.

Step 6: Install the WSDP

The file you download for the Windows version of the WSDP is an executable installation file, so you can simply run the file and follow the steps of the installation wizard to install the WSDP.

Step 7: Define Environment Variables

You need to define the following three environment variables:

- **JAVA_HOME** needs to be assigned to the folder where the J2SE SDK is installed, which will look similar to `c:\j2sdk1.4.0`, depending on the version you downloaded.
- **JWSDP_HOME** needs to be assigned to the folder where the WSDP is installed, which will be something like `c:\jwsdp-1_0_01`, depending on the version you downloaded.
- **AXIS_HOME** needs to be assigned to the folder where you installed Axis, which will look similar to `c:\axis-1_1`, depending on the version you downloaded.

To assign these environment variables on Windows 95/98/ME, add the following lines to your `c:\autoexec.bat` file:

```
set JAVA_HOME=c:\j2sdk1.4.0
set JWSDP_HOME=c:\jwsdp-1_0_01
set AXIS_HOME=c:\axis-1_1
```

You will need to reboot for these changes to take affect.

If you are using Windows NT/2000/XP, then set these environment variables in the System Properties, which is found in the Control Panel by double-clicking on the System icon.

NOTE FOR XP USERS

In Windows XP, the System icon is found by opening the Control Panel, then clicking on the Performance and Maintenance option.

Once you have the System Properties window opened, click on the Advanced tab and then click on the Environment Variables button. The Environment Variables dialog appears, as shown in Figure 7:

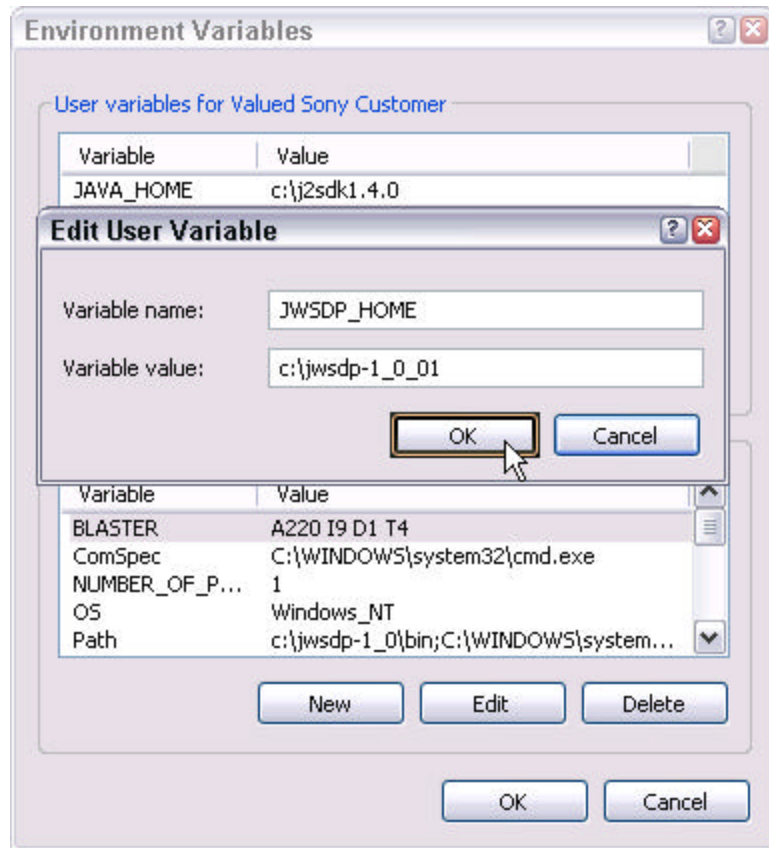


FIGURE 7. *The Environments Variables dialog.*

Click the New button to define a new environment variable. Once you have defined JAVA_HOME, JWSDP_HOME and AXIS_HOME to the correct folders, click OK to close the opened dialog windows.

Step 8: Copy Axis onto your Web Server

Axis requires a Servlet-compliant Web server, and the WSDP comes with one: Tomcat. You need to copy the Axis Web Services server onto your Web server so that your services will be available. To do this look for the folder:

```
%AXIS_HOME%\webapps\axis
```

Copy the entire folder into the following folder:

```
%JWSDP_HOME%\webapps
```

You should now see a folder named `\axis` in the your `%JWSDP_HOME%\webapps` folder, as shown in Figure 8.

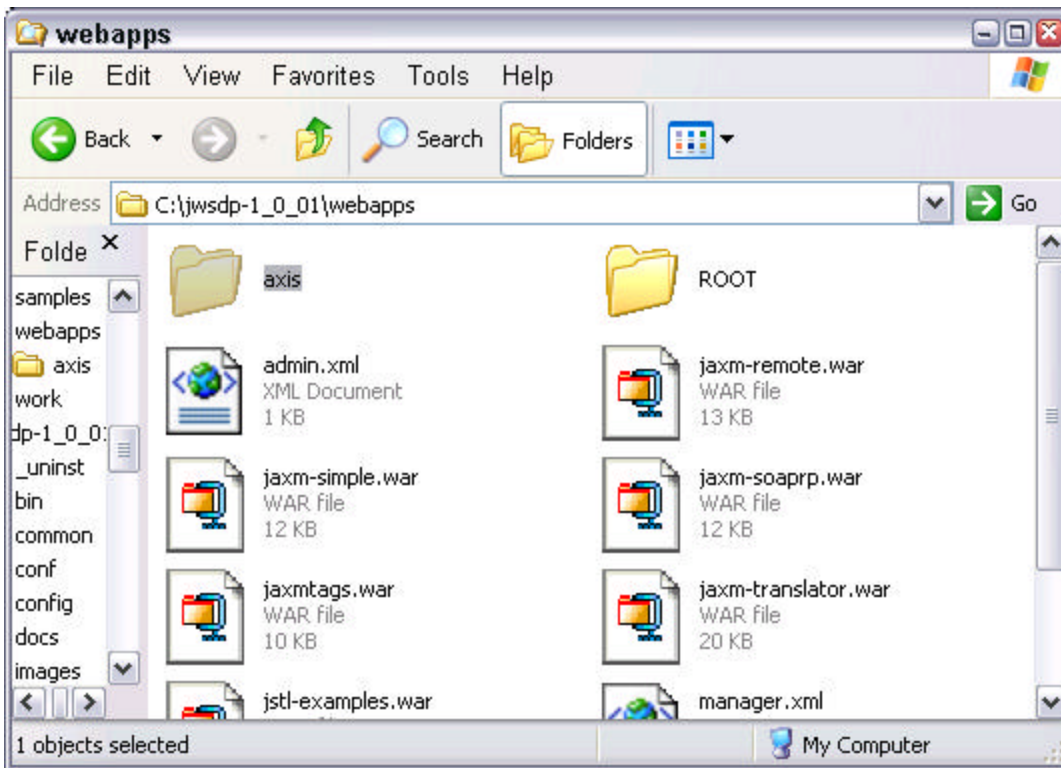


FIGURE 8. Copy the `\axis` folder into your Web server's `\webapps` folder.

Step 9: Testing the installation

You can test your installation of Axis by:

- first, starting the Tomcat Web server. There is a “Start Tomcat” menu item on the Windows Start menu in the “Java Web Services Developer Pack” group.
- second, open a Web browser and enter the URL:

```
http://localhost:8080/axis/
```

You should see the following page:

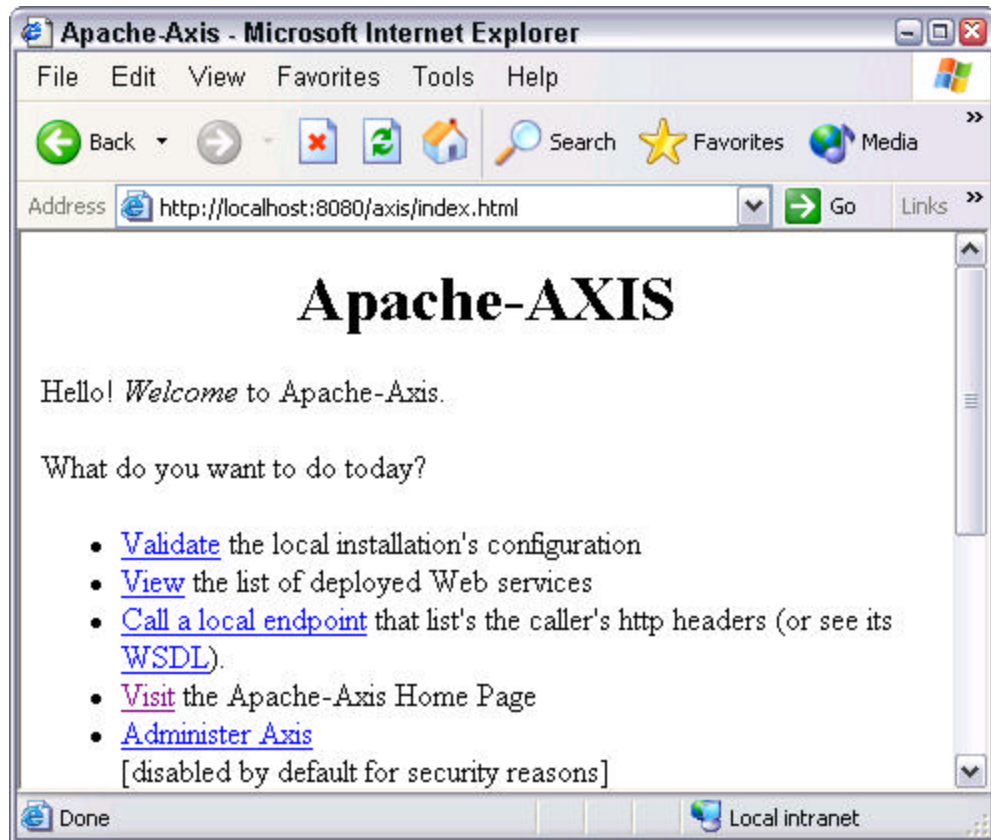


FIGURE 9. Test the Axis installation by opening this page.