

# Axis C++ Windows Installation Guide

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## 1. Axis C++ Windows Installation Guide

This document contains how to use the binary distribution of Axis C++. These binaries have been tested on following Microsoft platforms,  
Windows 2000 Professional  
Windows XP 2002 Professional

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## 3. What binary distribution contains

1. The binary distribution contains the following folders

- > bin
- > deploy
- > docs
- > include
- > lib
- > samples

2.The folder "bin" contains sample clients and other dlls which are needed to run the Axis c++ server

3.Inside the "deploy" folder following sub folders exist

- > conf (This includes the server.wsdd, which is the deployment descriptor used for deploying services.)
- > handlers (This includes sample handler dlls)
- > libs (Contains dlls which are needed by axis.)
- > logs (Directory for logs)

- > webservises (Contains sample web services that can be deployed with Axis C++)
- > wsdl (Contains sample wsdl)
- 4. The "include" folder contains all the include files which are necessary for building Axis c++ clients.
- 5. "lib" folder contains jars needed to use the wsdl2ws tool.
- 6. "samples" folder contains sources of all the server and client samples including interop tests.

#### **4. Installation with Apache 1.3.X/2.X web server**

Steps:

1. Install apache web server and locate the installation folder(For the default installation (apache 1.3.X) the path is "C:\Program Files\Apache Group\Apache" and for apache 2.X the path is "C:\Program Files\Apache Group\Apache2" ). Lets say this folder is APACHE\_FOLDER.
2. Unzip the binary distribution to a folder of your choice. Say this folder is AXIS\_EXTRACT.
3. Inside the extracted folder AXIS\_EXTRACT there is a sub folder called deploy. Copy the whole deploy folder to APACHE\_FOLDER.
4. Rename copied "deploy" folder to "Axis". Lets say this folder is AXIS\_FOLDER.
5. Set environment variable AXISCPP\_DEPLOY to point to above folder.
6. Add AXIS\_FOLDER/lib to the PATH environment variable.
7. Edit Apache configuration file httpd.conf located in APACHE\_FOLDER/conf and add following lines at the end.  
LoadModule axis\_module modules/AXISMODULE  
<Location/axis>  
SetHandler axis  
</Location>  
AXISMODULE is either mod\_axis.dll for apache 1.3.X or mod\_axis2.dll for apache 2.X.
8. Copy AXISMODULE from AXIS\_EXTRACT/bin folder to APACHE\_FOLDER/modules folder.
9. Copy AxisServer.dll and AxisTransport.dll from AXIS\_EXTRACT/bin folder to AXIS\_FOLDER/lib
- 10.If you want to use the Expat parser with Axis C++, rename AxisXMLParser\_Expat.dll from AXIS\_EXTRACT/bin folder to AxisXMLParser.dll and copy it to AXIS\_FOLDER/lib
- 11.If you want to use the Xerces parser with Axis C++, rename AxisXMLParser\_Xerces.dll from AXIS\_EXTRACT/bin folder to AxisXMLParser.dll and copy it to AXIS\_FOLDER/lib

#### **Installing the Expat XML parser**

If you decide to use the Expat parser you need to install the Expat parser. Download the

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Expat-1.95.7 binary version from <http://sourceforge.net/projects/expat/>

Extract the Expat binaries to a folder Called Expat ,we will refer to this folder as [EXPAT\_EXTRACT].

Copy libexpat.dll file from [EXPAT\_EXTRACT]\Libs to [AXISCPP\_DEPLOY]\lib/

### Installing the Xerces XML parser

If you decide to use the Xerces parser you need to install the Xerces parser. Download the Xerces-C 2.2.0( 32 bit binary release)from: <http://xml.apache.org/xerces-c/download.cgi>

Extract the Xerces-C 2.2.0 binary version. We will refer to this folder as [XERCES\_EXTRACT]. Copy xerces-c\_2\_2\_0.dll from [XERCES\_EXTRACT]\bin/ to [AXISCPP\_DEPLOY]\lib/

12. Open the AXIS\_FOLDER/axiscpp.conf\_win for editing. The contents of the file will look as follows.

LogPath:XXXX

WSDDFilePath:YYYY

XXXX is the path to a file named AxisLog (The log file)and YYYY is the path to the server.wsdd file. Give the appropriate values for XXXX and YYYY as follows.

i.e.

LogPath: [APACHE\_HOME]\Axis\logs\AxisLog

WSDDFilePath: [APACHE\_HOME]\Axis\conf\WSDDFILE

WSDDFILE is located at [APACHE\_HOME]\Axis\conf\server.wsdd for Apache 1.3 and Apache 2. (There will be three wsdd files in the [APACHE\_HOME]\Axis\conf\ rename the relevant wsdd file of your platform to server.wsdd).

Also in order to run the provided samples do the following.

Open server.wsdd for editing. For each service element, locate the element "parameter", which has the value "classname" for the "name" attribute. Give the absolute path of the indicated webservice.dll in the "value" attribute

Rename axiscpp.conf\_win which is in AXIS\_FOLDER to axiscpp.conf

13. Restart the apache web server. If you have done correctly apache server will start without giving any error.

### apache 1.3.X :

It is recommended to start apache 1.3.X as "apache -k start" on the command line

### apache 2.X :

While testing the apache 2 module a problem was noted with the apache 2 web server, in that the webserver takes about 98% of CPU time and the server does not even serve the startup page.

The workaround for this is to start the apache web server as "apache -X" to make it run single threaded.

While this is sufficient to test the apache 2 module this problem needs to be investigated further.

(However on a different machine, when I simply run the apache2 executable (version 2.0.49) without any arguments, as, "apache" on windows 2000 professional, service pack 5, with/without Axis C++ it seems to be working fine.

But in this machine the apache could not be started as "apache -k start" (i.e. as a service). It simply exists and does not start. The 98% CPU usage scenario cannot be reproduced in this machine.

It could happen with some other apache 2 versions or in different service packs. )

14. Open an internet browser and check <http://localhost/axis>. If the module has loaded properly then you will get the axis welcome page with a listing of deployed web services.

## **5. Installation with Simple Axis Server**

### **STEPS:**

1. Create a folder of your choice. We will call this folder as SIMPLE\_AXIS\_SERVER\_FOLDER.
2. Unzip axis-c-1.1-win32.zip to a folder of your choice. Say this folder is AXIS\_EXTRACT.
3. Inside the extracted folder AXIS\_EXTRACT there is a sub folder called deploy. Copy whole deploy folder to SIMPLE\_AXIS\_SERVER\_FOLDER.
4. Rename copied "deploy" folder to "Axis". Lets say this folder to be AXIS\_FOLDER.
5. Set environment variable AXISCPP\_DEPLOY to point to above folder.
6. Copy the SimpleAxisServer.exe from AXIS\_EXTRACT/bin to the SIMPLE\_AXIS\_SERVER\_FOLDER.
7. Copy the content of AXIS\_FOLDER/lib to the SIMPLE\_AXIS\_SERVER\_FOLDER.
8. Start the SimpleAxisServer by providing the port to which it operates.(eg: c:\SimpleAxisServer>SimpleAxisServer 80)

## **6. Running Provided Samples**

If Axis installation is a complete success, then the following sample web services and handlers have been installed successfully.

You will find the built console applications at AXIS/c/bin directory. Following are the built .exe files.

- 1.base.exe
- 2.cbase.exe
- 3.doclitbase.exe
- 4.doclitgroupB.exe
- 5.groupB.exe
- 6.cgroupB.exe

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In order to run these samples you should have AxisClient.dll in the PATH environment variable or in the same directory where the client .exe is located.

You can run the provided client programs to confirm whether the Axis cpp server and clients are working fine.

To run these sample client applications you need to have the path to libexpat.dll in the "PATH" environment variable or libexpat.dll should be placed where the apache.exe is. (libexpat.dll can be found in [EXPAT\_EXTRACT\libs])

**Note: These sample clients are compiled with the assumption that server is running at localhost port 80.**

### **7. Using Visual C++ to play with provided samples.**

In your AXIS\_EXTRACT/samples folder you have the samples.

If you are using Visual C++ you can open the workspace file for client applications which are in AXIS\_EXTRACT\c\samples\client\interoptests\interoptests.dsw

Deployable webservices are in  
AXIS\_EXTRACT\c\samples\server\interoptests\interoptests.dsw and you can play with them.

There are seven projects in the workspace.

### **8. Writing your web services and client applications using Axis C++.**

For writing your own web services and client applications see the [Windows User Guide](#)