

The goal of web services is to enable heterogeneous software systems to interoperate using XML and well-known protocols such as HTTP.

In this one-day course, students learn a combination of web service fundamentals and the basics of the Axis2 platform. Web service topics such as SOAP and WSDL are covered from both client and server implementation perspectives. Students will learn how to create a Java SE web service client by generating client helper code from a WSDL file. They will then learn how to create and deploy Java web services to Apache Tomcat by using either Java code or WSDL as the starting point.

**Course Objectives:**

- Communicate between clients and web services with SOAP messages
- Describe web service operations with WSDL.
- Create web service clients and services with the Apache Axis2 web service framework
- Automatically convert Java objects to XML with the Apache Data Binding mechanism.
- Debug SOAP messages with the Axis2 SOAP Monitor.

**Audience:** Java programmers who need to create distributed applications using Axis2.

**Prerequisites:** *Introduction to XML and Java Programming.*

**Number of Days:** 1 day

<p><b>1. Intro to Axis2 and Web Services</b>          What is a Web Service?          XML Based Web Service Technologies          Why Web Services?          Web Service Standards          Java Web Services          Apache Axis2          Axis2 Features          Axis2 Architecture and Processing Model</p> <p><b>2. Simple Web Services</b>          Deploy the Service          Run the Client          SOAP Overview          The SOAP Document          WSDL Overview          WSDL Content          Abstract WSDL Elements          Concrete WSDL Elements          SOAP Monitor</p> <p><b>3. Axis2 Clients</b>          Databinding in Axis2</p>	<p>ADB Databinding          Clients          Steps to Create a Client          Obtain the WSDL File          The wsdl2java Tools          Wsdl2java Options          Generated Code          Client Code Overview          Import the Generated Classes          Instantiate the Stub          Set the Request Parameters          Call the Service Method and Get the Results          Compile and Run the Client Code</p> <p><b>4. Axis2 Services</b>          Creating Server Code          Steps to Create a POJO Service          Building a POJO          The Server Descriptor          The service Element          MEPs and Message Receivers          More services.xml Configurations</p>
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AAR Files

Generating WSDL from Java Code

Steps to Create a WSDL Based Service

Generate Server Artifacts from WSDL

Steps to Edit the Skeleton

Import the Generated Classes

Get the Parameters

Write the Business Code

Instantiate a Response

Build and Deploy