

Outline of Components

Tomcat

Tomcat implements the Java Servlet and the JavaServer Pages (JSP) specifications from Sun Microsystems. It includes its own internal HTTP server.

Axis

Axis is essentially a *SOAP engine* -- a framework for constructing SOAP processors such as clients, servers, gateways, etc. The current version of Axis is written in Java.

But Axis isn't just a SOAP engine -- it also includes:

- a simple stand-alone server,
- a server which plugs into servlet engines such as Tomcat,
- extensive support for the *Web Service Description Language (WSDL)*,
- emitter tooling that generates Java classes from WSDL.
- some sample programs, and
- a tool for monitoring TCP/IP packets.

This release includes the following features:

- SOAP 1.1/1.2 compliant engine
- Flexible configuration / deployment system
- Support for "drop-in" deployment of SOAP services (JWS)
- Support for all basic types, and a type mapping system for defining new serializers/deserializers
- Automatic serialization/deserialization of Java Beans, including customizable mapping of fields to XML elements/attributes
- Automatic two-way conversions between Java Collections and SOAP Arrays
- Providers for RPC and message based SOAP services
- Automatic WSDL generation from deployed services
- WSDL2Java tool for building Java proxies and skeletons from WSDL documents
- Java2WSDL tool for building WSDL from Java classes.
- Preliminary security extensions, which can integrate with Servlet 2.2 security/roles
- Support for session-oriented services, via HTTP cookies or transport-independent SOAP headers
- Preliminary support for the **SOAP with Attachments** specification
- An EJB provider for accessing EJB's as Web Services
- HTTP servlet-based transport
- JMS based transport
- Standalone version of the server (with HTTP support)
- Examples, including a client and server for the SoapBuilders community interoperability tests and experimental TCP, JMS, and file-based transports.

Axis implements the JAX-RPC API, one of the standard ways to program Java services. See the specification and tutorials on Sun's web site. Axis also provides extension features that in many ways extend the JAX-RPC API.

Axis is compiled in the JAR file *axis.jar*; it implements the JAX-RPC API declared in the JAR files *jaxrpc.jar* and *saaj.jar*. It needs various helper libraries, for logging, WSDL processing and introspection. All these files can be packaged into a web

application, *axis.war*, that can be dropped into a servlet container. Axis ships with some sample SOAP services. You can add your own by adding new compiled classes to the Axis webapp and registering them.

jUDDI

jUDDI is a pure Java web application and as such can be deployed to any application server or servlet engine that supports version 2.1 or later of the servlet API. If you need an application server, we recommend Jakarta Tomcat. jUDDI also requires an external datastore in which to persist the registry data it manages. Typically this is a relational database management system such as MySQL, Oracle or DB2.

jUDDI consist of a core request processor that unmarshalls incoming UDDI requests, invoking the appropriate UDDI function and marshalling UDDI responses (marshalling and unmarshalling is the process of converting XML data to/from Java objects).

To invoke a UDDI function jUDDI employs the services of three configurable sub-components or modules that handle persistence (the DataStore), authentication (the Authenticator) and the generation of UUID's (the UUIDGen). jUDDI is bundled and pre-configured to use default implementations of each of these modules to help your registry up and running quickly. These sub-components and a description of the default implementations are described below.

Jess

Eclipse

Eclipse plug-ins

Jess

JessDE: <http://herzberg.ca.sandia.gov/jess/docs/70/eclipse.html>

JADE

EJIP: <http://www.mars-team.com/ejip/>

Under "Downloads, click "Access to the forum." You must then register (see the link at the top of the page).

Web Tools Platform (WTP) Project: <http://www.eclipse.org/webtools/>

To download: <http://download.eclipse.org/webtools/downloads/drops/R2.0/R-2.0.1-20070926042742/>

Download, for example, the all-in-one package and copy the plug-ins and prerequisites as needed.

JADE

JADE Add-ons

WSIG

Tab at the top “Community & Developers”,

Tab at top or link in the body: “Add-ons and 3rd party software”

In the table, click (in column “FILE”) “WSIG”

LEAP

Same, but click “LEAP”