


Web Services Support over Java EE 5

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Java EE 5 Web Services Framework

- Java EE 5 Web Services Framework
 - JAX-WS
 - JAXB
 - StAX
 - SAAJ
 - JAXR
 - Java XML Digital Signature API


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JAX-WS

- JAX-WS stands for Java API for XML Web Services
- JAX-WS is a technology for building web services and clients that communicate using XML
- JAX-WS allows developers to write message-oriented as well as RPC-oriented web services


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JAXB

- JAXB stands for Java Architecture for XML Binding
- JAXB provides a fast and convenient way to bind between XML schemas and Java representations
- JAXB provides methods for
 - Unmarshalling XML instance documents into Java content trees
 - Marshalling Java content trees back into XML instance documents
- JAXB also provides a way generate XML Schema from Java objects


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StAX (1/2)

- StAX stands for Streaming API for XML
- StAX is a streaming Java-based, a streaming Java-based, event-driven, pull-parsing API for reading and writing XML documents
- StAX enables you to create bidirectional XML parsers that are fast, relatively easy to program, and have a light memory footprint.


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StAX (2/2)

- StAX provides is the latest API in the JAXP family
- It provides an alternative to SAX, DOM, TrAX, and DOM for developers
 - High-performance stream filtering, processing, and modification
 - Operable with low memory and limited extensibility requirements
- StAX provides a standard, bidirectional *pull parser* interface for streaming XML processing
 - A simpler programming model than SAX
 - More efficient memory management than DOM.


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SAAJ

- SOAP with Attachments API for Java (SAAJ) is used mainly for the SOAP messaging that goes on behind the scenes in JAX-WS handlers and JAXR implementations.
- It is an API that developers can use when they choose to write SOAP messaging applications directly rather than use JAX-WS.
- The SAAJ API allows you to do XML messaging from the Java platform:


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Web Services Support in EJB 2.1

- Defines Stateless Session Bean-based Web services endpoint model
 - Stateless session bean can be web services implementation
 - Web services endpoint interface (service definition interface) for Stateless session bean
 - Can implement SOAP Message Handlers for stateless session bean based endpoint


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JAXR

- Standard Java API for performing registry operations over diver sets of registries
 - Web service publication & discovery
- A unified information model for describing business registry content
- JAXR allows access to both UDDI and ebXML registries at a basic level
- JAXR provider supports access only to UDDI version 2 registries.


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Java XML Digital Signature API

- Java XML Digital Signature API is a standard API for generating and validating XML Signatures
- XML Signatures can be applied to data of any type, XML or binary
 - The resulting signature is represented in XML
- An XML Signature can be used to secure your data and provide data integrity, message authentication, and signer authentication.

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Resources

- Sun Microsystems, "The Java Web Services Tutorial for Java Web Services Developer Pack v.20", Feb 2006

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

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