Training: Capstone Courseware
561 Developing SOAP Web Services in Java

TRANING TERMS

2025-06-16 | 5 days | Virtual Classroom

TRAINING GOALS:

A comprehensive look at the state of the art in developing interoperable web services on the Java EE 6 platform. Students learn the key standards -- SOAP, WSDL, and the WS-I Basic Profile -- and the Java architecture that has evolved to build interoperable services and clients. We begin with an introductory module that covers both SOAP-based and RESTful services, and therefore both JAX-WS and JAX-RS.

But JAX-WS is central to the course, and we cover both WSDL-driven and Java-driven development paths, as well as message handlers and attachment support. With the new Provider and Dispatch APIs, it's now much easier to integrate SAAJ, JAXB, and JAXP code into services and clients, and we explore these strategies in depth as well.

(For training within the J2EE 1.4 environment, and a concentration on JAX-RPC and SAAJ, please see version 1.5.3 of this course. We also continue to offer versions of the course that support Java EE 5 application servers and JAX-WS 2.1: see the version 2.1 outline.)

CONSPECT:

- Chapter 1. Overview of Web Services
  - Why Web Services?
  - Service-Oriented Architecture
  - HTTP and XML
  - SOAP
  - WSDL
  - The SOAP Vision
  - The REST Vision
  - UDDI
  - The WS-I Basic Profile
  - Security
- Chapter 2. Web Services for Java EE

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- Handlers and Handler Chains
- Configuration by XML or Annotation
- MessageContext and SOAPMessageContext
- Processing Model and Patterns
- Logical and Protocol Handlers
- Client-Side Handlers

- Chapter 16. Handling Binary Content
  - The WS-I Attachments Profile
  - Using base64Binary
  - MTOM and XOP
  - JAX-WS Support
  - Configuration by XML or Annotation
  - Client-Side Support
  - SAAJ Support

Appendix A. Course Tools and Utilities

Appendix B. Handy Guide to Web-Services Acronyms

REQUIREMENTS:

- Strong **Java programming** skills are essential - Course 103 is excellent preparation.
- Students must be able to read **XML** documents and to write well-formed XML by hand - consider Course 501.
- Knowledge of **XML Schema** will be helpful, too, but is not a strict prerequisite - consider Course 517.
- Experience with other **Java EE** standards, especially servlets and JSP, will be very helpful in class, but is not strictly required.

Difficulty level

CERTIFICATE:

The participants will obtain certificates signed by Capstone Courseware.

TRAINER:

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Authorized Capstone Courseware Trainer.

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