

Web Services with WSAD

Course No.

3483

Description

This course introduces the components of the Service-Oriented Architecture and explains the basics of Web Service communication. Students will learn how to define a Java Web Service and develop a Java Web Service in WSAD from an EJB or a WSDL file. The WSAD wizards and the WSAD administration console are used. Students will create a web service client for an existing Web Service, examine how exceptions influence web service clients and how to test Web Services using various types of test clients.

Audience

This course is designed for experienced Java developers who want to learn to use Web Services.

Prerequisites

Students should have knowledge of the Java programming language and the WSAD environment. Knowledge of XML is desirable but not required.

Objectives

- Define a web service
- Understand the components of Service-Oriented Architecture
- Explain the basics of Web Service communication
- Define a Java Web Service
- Develop a Java Web Service
- Understand web service files
- Use the WSAD administration console
- Create a Web Service client
- Test Web Services
- Understand the benefits of various types of test clients

Major Topics

- Components of the Service-Oriented Architecture
- Web Service communication
- Defining a Web Service in WSAD
- Developing a Java Web Service from an EJB
- Developing a Java Web Service from a WSDL file
- Web Services – A Look at the Generated Code
- WSAD Administration Console
- Web Service Clients
- Testing Web Services
- Test Client Options
- WSAD Advanced Wizard

Duration

2 days



Course Contents

1. Web Services Overview

- Objectives
- Web Service Definition
- Web Service Benefits
- Roles of Web Services
- Service-Oriented Architecture
- SOA Roles
- The Service Provider Role
- The Service Requestor Role
- The Service Broker/Service Registry Role
- SOA Operations
- Publish Operation
- Find Operation
- Bind Operation
- Service-Oriented Architecture Implementation
- What is UDDI?
- What is a WSDL?
- What is WSIF?
- What is SOAP?
- SOAP Message Structure
- Structure of a SOAP Call
- How do Web Services Communicate?
- Web Services Communication Architecture
- Consumer
- Communication Component
- Web Service – Listener
- Web Service – Responder
- Java Web Services
- Summary

2. Creating Web Services – “Bottom-Up Approach”

- Objectives
- Java Web Service Definition
- Java Web Service Example
- Example 1 : Existing EJB
- Example 1 : Creating a Web Project
- Example 1 : findClaimSum()
- Deployment Settings Dialog
- Java Bean Selection Dialog
- Java Bean Identity Dialog
- Scope
- Example 1 : WSDL Naming

- Java Bean Methods Dialog
- Reviewing the Artifacts
- Administrator Pages
- Things to Note
- Summary

3. Creating Web Services – “Top-Down Approach”

- Objectives
- Java Web Service Example 2
- Example 2 : Definition Files
- Complex Types
- Example 2 : Definition Files (continued)
- Example 2 : Details
- Example 2 : Create Java Bean Skeleton
- WSDL File Selection Dialog
- Java Bean Configuration Dialog
- Viewing the Java Bean Skeleton
- Viewing the WSDL
- Top-Down vs. Bottom-Up
- Summary

4. Web Service Clients

- Objectives
- Web Service Clients
- Java Web Service Client Example
- Example 1 : Create Java Bean Proxy
- Binding Proxy Generation Dialog
- Reviewing the Artifacts
- Exceptions
- Web Service Client Example
- Generated Proxy Issues
- Summary

5. Testing Web Services

- Objectives
- Testing a Web Service
- Generating a Sample Application
- Sample Application Wizard
- Web Service Sample JSPs
- Web Tool Java Bean JSPs
- Universal Test Client
- Summary



6. Using the Advanced Wizard

- Objectives
- What is the Advanced Wizard?
- Java Web Service Example 3
- Example 3 : get Employee()
- Example 3 : Creating a Web Service
- Web Services Dialog
- Deployment Settings Dialog
- EJB Configuration Dialog
- Java Bean Identity Dialog
- Java Bean Methods Dialog
- Binding Proxy Generation Dialog
- Test Dialog
- Publication Dialog
- Example 3 : Universal Test Client
- Web Service Example 3
- Web Service Tips
- Web Service Resources
- Summary

