

Hands on Training for WebSphere Process Server V 6.1.2

Customizable instructor lead course with hands on exercises

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Topics include building integration solutions using IBM WebSphere Integration Developer (WID) and IBM WebSphere Process Server. This class starts with Service Oriented Architecture (SOA) basics and proceeds to using the tools to build SOA applications. Participants will learn about the Service Component Architecture (SCA) programming model and the Service Data Objects (SDO) data model.

Top Reasons for Attending our Training Engagement

Content

The training content is structured to match your organizations specific business objectives and needs. Based on the course you choose, our training engagement topics make the attendees to completely leverage the WPS capabilities.

Structure

Our innovative and flexible learning approach consists of instructor-led learning methods, supplemented with hands-on exercises, mentoring including our World-class training material. You have the choice to customize your training plan by choosing from 50 different topics or use our full training engagement (*See our complete course outline on page 3 of the brochure*)

Scheduling

Dates and times are set by you.

Location

We offer flexibility of location. Training can be provided at your company site or you can choose to join us at our world class training facility in Novi, MI location.

Collaboration

Our learning environment and approach promotes team members and encourages team to have a high degree of collaboration and teaming.

Budget

We offer a great value for your money. If the training takes place at your own premises, you will eliminate travel costs and avoid time away from the office (*Any training engagement work is done at your company site will be charged at \$1500-\$2000 per day + Actual Expenses (Unlimited attendee's if training engagement is hosted at your company site, prefer to have 6 – 8 max attendees per session for better hand holding)*)

Pre-Requisites

Experience or understanding in the areas of J2EE platform and distributed computing is strongly preferred.

Our Premium Services

Miracle along with IBM offers an integrated portfolio of services supported by a standards based service oriented infrastructure. Miracle provides a complete range of integration solutions through WebSphere Process Server

Miracle delivers business flexibility by integrating data, applications, processes and people across and beyond companies, giving the power to leverage existing IT investments.

Course Objective

- Understand the business advantages of SOA
- Explain the SOA runtime element
- WID fundamentals
- Develop complex business processes using WS-BPEL
- Develop a web based client for a business process
- List the various tooling features in WID and use them to build integration solutions
- Describe the various IBM Adapters available to integrate disparate systems
- Explain the Java Connector Architecture (JCA) and learn to use JCA adapters

Course Duration

A full-length engagement spans over 5 business days (1 Week). Course outline and duration can also be customized based on your time and need

Audience

This course is suitable for integration developers involved in integrating applications primarily by developing business processes, system administrators and other technical staff involved with working with a business process.

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- The fundamentals of SOA
- Understand the business advantages of SOA
- Explain the SOA runtime element
- WID fundamentals
- Develop complex business processes using WS-BPEL v2.0
- Develop a web based client for a business process
- List the various tooling features in WID and use them to build integration solutions
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Typical Course Outline

SOA Fundamentals

Introduction to WebSphere Integration Developer (WID) v6.1

WebSphere Integration Developer (WID) v6.1
SCA Basics
Key Features of WID
The Project Structure
Working With Shared Components
The Build Process
Controlling the Build Activities
Exporting Applications
SCA Artifacts Deployed to WebSphere Process Server
Enterprise Service Bus (ESB)
ESB Example
Introduction to WebSphere Enterprise Service Bus (WESB)
Introduction to WebSphere Process Server (WPS)

Service Component Architecture (SCA)

SCA Vendor Support
Service Component Architecture
SCA Basics
Assembling Services
SCA Components
Service Components
References and Wires
Service Components
Imports and Exports
Service Implementation Types

Business Objects

Introduction
Editing a Business Object
Advanced Data Modeling
Refactoring Business Objects
Private Business Object
Data Type Inheritance

Service Interface Design

Objectives
What is a Service Interface?
Uses of an Interface
The Structure of an Interface
Creating an Interface
The Interface Editor
Refactoring Interfaces

Mediation Flow

Uses of Mediation Flow
High Level Structure
Mediation Flow Editor
The Request Pipeline
Mediation Primitives
Message Passing by Primitives
Business Object Map
Message Filter
Service Invoke
Sharing Data
Message Element Setter
The Response Pipeline
Assembling a Mediation Flow

Mapping Interfaces and Business Objects

Creating a Business Object Map
Adding Business Objects to the Map
Business Object Map Editor
Types of Data Transformations
Automatic Mapping
Mapping Schema Wildcards
Need for Reverse Maps
Interface Maps
Creating an Interface Map
Adding Interfaces
Interface Map Editor
Types of Parameter Mappings

Introduction to Service Oriented Analysis & Design (SOAD)

Introduction to SOAD
Abstraction, Encapsulation, Modularity and Hierarchy in SOAD
The Need for Loose Coupling
The SOAD Methodology
The SOAD Methodology Steps
Stage 1: Requirements Gathering & Process Modeling
Stage 2: Service Identification
Stage 3: Service Implementation
Stage 4: Process Implementation
SOAD Stages and SOA Lifecycle

Mediation Flow

Uses of Mediation Flow
High Level Structure
Mediation Primitives
Business Object Map
Message Filter
Service Invoke
Sharing Data
Message Element Setter

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- Learn to use the Human Tasks feature when developing Business Processes (BPEL)
- Explain the Common Event Infrastructure (CEI)
- Understand the basics of WebSphere Process Server administration

WS BPEL 2.0 A Technical Overview

WS BPEL 2.0

Activities

Imports

Correlation Sets

BPEL Basic Activities like invoke, receive and so on

Structured Activities like sequence, if and so on

BPEL Scopes , Handlers

WebSphere Adapters

Adapter Support from WID

Inbound, Outbound Processing

Enterprise Discovery

Flat File Adapter

Inbound File Adapter

Configuring the Inbound Service

Outbound File Adapter

Configuring Outbound Service

Adapter Administration

Human Task Development

Types of Human Tasks

Auxiliary Task Types

To-do Task

Creating Inline, Regular To-do Tasks

Creating Invocation, Collaboration Tasks

Dealing With Task Expiry

Providing GUI for Human Task

Customizing BPC Explorer

The Input Data Display JSP

Output Form JSP

Task Security

Escalation

Business Rules

Business Rules in WebSphere Integration Developer

Rule Sets

Rule Sets versus Decision Tables

Business Rules at Runtime

Business versus Technical role

WebSphere tooling

Business Rules Manager Web tool

Selectors

Overview of Selectors

Selectors versus Business Rules

Selectors in WebSphere Integration Developer

Using XPath Selection Criteria

The XPath Expression Builder

Benefits of using Selectors

Selectors at runtime

Selector Administration

Displaying Selectors

Locating Selectors

Messaging and Asynchronous Communication

Basic Messaging Patterns

Implementing Callbacks

BPEL Correlation Sets

Parallel Activity

Implementing the Publish Subscribe Pattern

SOA Client Behavior

BPEL Events Handling

Asynchronous Operation Invocation

Asynchronous Invocation

Publishing a JMS Message

Consuming a JMS Message

Error Handling and Transaction

Error Handling in a Service, Process

Fault Handler

Transaction in SOA

Introduction to Compensation

Activity Transaction Identifier

Creating a Transaction Group

Transaction and Parallel Activities

Propagating Transaction Context

Checklist for Propagation

Compensation in WID

Business Process Versioning

Introduction to Business Process Versioning

Need to Version a Process?

Creating, Invoking a New Version of a Business Process

Invoking a New Version of a Business Process

Early Binding, Late Binding

Relationship Service

Introduction to Static Relationship

Introduction to Dynamic Relationship

Object Update Event

Defining the Service Interfaces