



# 3 Days Hands-on Service Orchestration with BPEL

*Experience genuine's training sessions  
that go beyond standard course content.*

## About Genuine

We design and conceive tailor-made solutions in the area of B2B connectivity and integration. Both are key technologies that create added value in terms of improved business results. These business results can be translated into increased profitability, sales volumes, quality, reduced costs and improved risk management. Furthermore, our background enables us to seamlessly combine legacy technology with cutting edge concepts such as webServices and OOAD approaches

We rely on consultants and trainers that are well-versed in explaining complex matters in a down-to earth approach that will give you the necessary awareness of what exactly XML, UML or Middleware solutions can offer to your organization. Our consultancy services cover a broad scope of these next-generation topics and we make sure that our project knowledge is quickly translated into valuable training course material.

As we move into an era where web Services are key, you'll want to know exactly how to prepare to keep a competitive edge upon your business partners. Does it need emphasis that modeling is essential for an enterprise? We are confident that our genuine training offerings can give you the competitive edge that leaves others staring behind.

## Training

In this course, the participants will learn the basic concepts of business process integration and human workflow management using the Oracle BPEL Process Manager product. Participants will learn how to install, configure, and administer Oracle BPEL Process Manager. They will learn how to apply the Business Process Execution Language (BPEL) standard for assembling a set of discrete services into an end-to-end process flow. They will also learn how to translate and transform data using the Oracle BPEL Process Manager adapters.

## Course Objectives

- Build a BPEL process and invoke synchronous and asynchronous business services
- Include parallel processing and conditional branching in a BPEL process
- Add transformation services to BPEL
- Access adapter-enabled services
- Extend a BPEL process with human workflow mgmt
- Install and understand the basic concepts and architecture of Oracle BPEL Process Manager & Designer
- Invoke services through the creation of partner links
- Administer Oracle BPEL Process Manager and monitor business processes
- Increase process reliability through fault handling and exception management
- Invoke a BPEL service through adapters for writing to files and databases
- Extend a BPEL Process with Human Workflow Management
- Administer BPEL processes using process monitoring and sensor technology
- Deploy and run a BPEL process in development and production environments
- Incorporate email, fax, pager, and voice notifications within BPEL processes

## Course Details

**Target Audience:** consultants, technical project managers, system engineers.

**Prerequisites:** XML, XSD and XSL knowledge.

**Note:** courses available in-house; course available in English, French and Dutch.

**Duration:** 3 days hands-on training.

## Tools usage

- Oracle JDeveloper 10g BPEL Designer
- Oracle BPEL Process Manager

# Service Orchestration with BPEL

## detailed course contents

### *introduction Course*

- Objectives
- Lesson Review
- Lesson and Practice Discussion
- Topology of Practice Progression
- Discussion of Use Case

### *Understanding Basic Concepts and Architecture*

- Overview of service-oriented architecture (SOA)
- XML, XSD, XPath, XSLT, SOAP, WSDL, UDDI
- Overview of the BPEL Standard
- The BPEL Suitcase Manifest
- basic concepts of Oracle BPEL Process Manager
- BPEL Process Manager Implementation Options
- Installing Oracle BPEL Process Manager

### *Building a Simple BPEL Process*

- Introduction to Oracle BPEL PM Designer
- BPEL PM Designer Layout
- Workspaces and Projects
- Creating a BPEL Process
- Adding Activities
- XPath Expression Builder
- XPath Functions
- Deploying the BPEL Process

### *Orchestrating Services with BPEL*

- BPEL Process Modeling Support in JDeveloper
- Importing XML Schemas and WSDL Locators
- Support for Validation, Deployment, and Lifecycle Management
- Orchestrate services through BPEL for a Synchronous Service
- Orchestrate services through BPEL for an Asynchronous Service
- Partner Link Concepts and Use

### *Parallel Processing and Conditional Branching*

- Processing with Parallel Flows
- Parallel Branch Execution
- Conditional Branching
- Forms of Notification

### *Fault Handling and Exception Management*

- Defining Events
- Configuring Timeouts
- Handling Faults
- Catching Exceptions
- Compensation Management

### *Adding Transformation Services to BPEL*

- The Transformation Service and Tool
- Transformation Packaging
- Standard, User, and Extended functions
- Map Testing and Analysis
- XML Instance Generation
- Map Documentation
- XSLT Mapping Tool
- Auto Mapping

### *Break the process into scopes*

- How scopes are used
- Variables
- Scopes and concurrency

### *Invoking a BPEL Service through Adapters*

- Adapter Standards-Based Environment
- Selecting an Adapter Service
- Configuring the File Adapter
- Supported and Bundled Adapters
- Adapter Framework
- Oracle Applications Adapter
- OEM Adapters
- Optimized Bindings (WSIF, JCA)

### *Accessing Adapter-Enabled Services from BPEL*

- Invoking the File Adapter as a Service from BPEL
- Invoking a Database Adapter as a Service from BPEL
- Adding Database Exception Handling
- Adding a While Activity
- Adding an Exception Branch for the Scope Activity
- Adding a Wait Activity

### *BPEL Process with Human Workflow Management*

- Human Workflow Services Architecture
- Modeling Workflows
- Human Workflow Patterns
- Human Workflow Services: Identity Service
- Human Workflow Services: Task Details
- Human Workflow Services: Notification Services
- Human Workflow Services: Work List Features

### *Administering Processes using Process Monitoring*

- Describing the Consoles
- Exploring the BPEL Console
- Managing the BPEL Domain
- Viewing the Oracle BPEL Process Manager Administration Server
- Platform Administration
- Interfacing with BAM
- Adding a Notification to a Process
- Selecting a Notification Channel

### *Advanced Features and Interfaces for BPEL PM*

- Invocation Methods (Java Client, UI, Adapter, BPEL Service, JSP Page)
- BPEL Process Preferences
- Obtaining the Value of a Preference
- Updating a Preference Value at Runtime
- WS Addressing and Correlation
- Java Delegate Service
- WSIF Java and HTTP Bindings
- Invoking Java as a Service or as Inline Code

### *Use dynamic partner links to invoke partner services*

- Define dynamic links
- Assigning partner links
- Changing partner links

### *Understanding correlation*

- Define correlation manually
- Declare message properties
- Use of correlation sets
- Develop a complex parallel execution of activities
- Designing concurrency
- Controlling complex concurrent flows using links
- Implementing convoys