Oracle SOA Suite 10g: SOA Essentials

Duration: 2 Days

What you will learn

In this two day hands on course, participants learn the concepts of Service-Oriented Architectures and how Oracle SOA Suite 10g (10.1.3.1.0) meets the requirements for organizations implementing a SOA strategy.

The course covers the foundations of SOA-enabled applications, and standards that enable SOA implementations, Web Services, Adapters, Business Process Execution Language (BPEL) for process orchestration, Oracle Enterprise Service Bus (ESB), Oracle Rules for implement Decision Services, Oracle Web Services Manager (OWSM) for apply security to SOA-enabled processes.

Learn To:

Work with the components of SOA Suite 10g
Create and deploy Web Services with Oracle SOA Suite 10g
Configure an ESB
Orchestrate services with BPEL
Integrate services through Adapters
Transform messages in ESB and BPEL
Work with components of Oracle Web Services Manager (OWSM)

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Audience
Application Developers
Business Analysts
J2EE Developer
SOA Architect
Sales Consultants
Technical Consultant

Prerequisites

Required Prerequisites
XML, XML Schema, XPath, and XSLT, Web Service basics, such as WSDL and SOAP

Suggested Prerequisites
Equivalent knowledge from http://www.w3schools.com
Course Objectives
Explain the basic concepts of Service Oriented Architectures and related technology
Develop a Java Web service
Modify a BPEL process to invoke a Web service
Deploy and execute an BPEL Process to Oracle SOA Suite 10g
Manage and monitor an BPEL Process
Configure Oracle ESB services
Define Oracle Rules and observe their behavior
Secure a BPEL process and services

Course Topics

Introducing the Course and SOA Concepts
Service-Oriented Architecture
Services
Defining Web Services
Describing Composite Applications
Identifying Standards that enable SOA
Examining the Life Cycle SOA Applications
Describing the Course Environment
Describing the Course Practice Scenario

Introducing Oracle SOA Suite 10g
Describing Oracle ESB Architecture
Describing Oracle BPEL Process Manager Architecture
Describing Oracle Business Rules and Decision Services
Describing Oracle Web Services Manager
Describing Oracle Service Registry
Describing Oracle Service Registry
Describing Oracle Application Server
Monitoring Business Activity with Oracle BAM

Creating Web Services with Oracle SOA Suite 10g
Introducing the Web Services Architecture
Describing Web Service Standards
What is SOAP?
What is WSDL?
What is UDDI?
Implementing Web Services in Oracle Application Server
Developing Web Services using Oracle JDeveloper
Designing a Web Service using a top-down and bottom-up approach

Configuring an Enterprise Service Bus
Introducing ESB Architecture and Components
ESB Adapter Framework
Exploring Adapters Available in Oracle ESB
Managing Transactions with ESB Adapters
Working with the ESB Designer
Transforming Messages in Oracle ESB
Accessing the ESB Control
Orchestrating Services with BPEL
Describing Process Orchestration Concepts
Introducing Business Process Execution Language (BPEL)
Developing a BPEL Process in JDeveloper
Creating a Synchronous BPEL Process Project
Invoking a Synchronous Service with BPEL
Exploring Process Orchestration with BPEL Activities
Implementing Human Workflow Services
Deploying and testing a BPEL Process

Implementing Decision Services with Rules
Introducing Decision Service Concepts
Describing Oracle Rules Architecture and Components
Accessing Oracle Rule Author
Creating a Rule Repository
Creating Business Rules with the Rule Author
Creating a Rule Set and a Rule
Implementing Rules with a BPEL Process
Rules SDK

Integrating Services Through Adapters
Defining Adapter Services
Describing the Adapter Framework
Types of Adapters
Creating a PartnerLink for an Adapter in BPEL
Invoking the service of a BPEL adapter
Virtualising Services through ESB Adapters
Deciding to use BPEL or ESB Adapters
Designing Routing Patterns

Transforming Message Data in ESB and BPEL
Creating Transformation activity in a BPEL Process
Creating Transformation Mapping by using the XSLT Mapper
Saving a XSLT Transformation
Applying a Transformation to XML data
Creating a Domain Value Map in BPEL and in ESB
Applying a Transformation in ESB
Applying Domain Value Map to a Transformation in ESB
Contrasting Transformation in ESB and BPEL

Securing Services with Oracle Web Services Manager
WS-Security
Identifying Oracle Web Service Manager Components and Architecture
Registering a Gateway and an Agent
Managing Security Policies
Creating Policy for a Gateway
Creating Policy for an Agent
Applying a Security Policy
Testing and Monitoring the Policy Usage