

Objectifs

Describe SOA concepts and related technology Create an SOA Composite application using JDeveloper Work with Mediator components with routing rules, filters, and transformations Orchestrate business process flows by using BPEL Implement Business Rule component with IF-THEN rules and decision tables Implement Human workflow with Human Task components Perform basic administration and monitoring tasks of SOA Composite applications Test, debug, and troubleshoot an SOA Composite application Interact with an ADF Business Component Service as an Service Data Object (SDO) Initiate SOA Composite applications using the Events Delivery Network Integrate services by using Oracle Service Bus Apply security policies to service endpoints to secure interactions

Participants

Application Developers Business Analysts Developer SOA Architect Technical Consultant

Prérequis

Cours pré-requis obligatoire(s) Conceptual knowledge about XML, XML Schema, XSL Transformations and XPath. Oracle ADF basic concepts Some basic SQL query skills Knowledge of Web Services and Web Service standards specifically SOAP and WSDL

Pédagogie

La pédagogie est basée sur le principe de la dynamique de groupe avec alternance d'apports théoriques, de phases de réflexion collectives et individuelles, d'exercices, d'études de cas et de mises en situations observées. Formation / Action participative et interactive : les participants sont acteurs de leur formation notamment lors des mises en situation car ils s'appuient sur leurs connaissances, les expériences et mettront en oeuvre les nouveaux outils présentés au cours de la session.

Profil de l'intervenant

Consultant-formateur expert sur cette thématique. Suivi des compétences techniques et pédagogiques assurée par nos services.

Moyens techniques

Encadrement complet des stagiaires durant la formation. Espace d'accueil, configuration technique des salles et matériel pédagogique dédié pour les formations en centre. Remise d'une documentation pédagogique papier ou numérique à échéance de la formation.

Méthodes d'évaluation des acquis

Exercices individuels et collectifs durant la formation. Evaluation des acquis et attestation de fin de stage adressés avec la facture.

Programme

Oracle SOA Suite 11g - Build Composite Applications

5 jours - 35 heures

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Pédagogie

This course covers designing and developing SOA composite applications for application integration with services by using a Service-Oriented Architecture (SOA) implementation approach. Composite applications are modeled and developed according to the Service Component Architecture (SCA) specifications. Oracle JDeveloper 11g is used to design, develop and deploy applications to an Oracle SOA Suite 11g run-time environment, in which the composite applications are executed. With the Oracle JDeveloper 11g Integrated Development Environment (IDE), participants learn how to design, develop, deploy, and test SOA Composite applications comprised of Mediator, BPEL, Business Rules, Human Tasks (Workflow) components. They also learn the usage of these components in depth that is sufficient to implement a reasonably complex business solution, based on a purchase order processing scenario. Learn to: Test, debug, and troubleshoot an SOA Composite application Interact with an ADF Business Component Service as an Service Data Object (SDO) Initiate SOA Composite applications using the Events Delivery Network Apply security policies to service endpoints Perform basic administration and monitoring tasks of SOA composite applications Create an SOA Composite application using JDeveloper

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Programme

Overview of SOA and SCA Concepts

Describing Service-Oriented Architecture (SOA)

Reviewing of Services and key standards

Explaining Service Component Architecture (SCA) and Service Data Object (SDO)

Describing Event Driven Architecture (EDA)

Discussing the course application and environment

Handling Exceptions in Composite Applications

Describing basic error handling and propagation in SOA Composites

Describing the SOA fault management framework

Creating a WSDL fault and message for a synchronous service

Creating messages for asynchronous faults

Throwing faults in a BPEL process

Catching faults in a BPEL process

Managing Transactions with Services

Describing transactions with services

Managing transactions with the Database adapter

Describing and accessing Service Data Objects with Entity Variables

Managing transactions with SDOs

Understanding compensation handling within a BPEL process

Implementing Human Task Services

Describing Human Task Concepts

Designing a Human Task

Invoking a Human Task from a BPEL process

Generating ADF Task Forms for Human Tasks

Adding E-mail Notification to a BPEL process

Developing Business Rules

Explaining business rules concepts

Describing the Oracle Business Rules architecture

Creating rules and decision tables by using Oracle JDeveloper Rule Editor

Integrating a simple rule with a BPEL process

Describing the role of the Rules SDK

Testing and Debugging Composite Applications

Creating test suites for composite applications

Testing initiation of inbound messages, emulating outbound, fault, and callback messages

Creating test cases with value-based and XML-based assertions

Evaluating techniques and tool for debugging applications

Securing Services and Composite Applications

Explaining security for services

Describing the Fusion Middleware security architecture

Attaching security policies at design time in Jdeveloper

Attaching security policies post-deployment in Enterprise Manager

Discussing security propagation between applications and an SOA Composite

Designing and Managing Business Events

Describing the Event Delivery Network

Explaining the Event Delivery Network Configuration Types

Describing Event Definition Language (EDL)

Creating a business event

Publishing an event

Subscribing to an event

Managing events in Oracle Enterprise Manager

Monitoring Composite Applications with Sensors and Oracle BAM

Creating and configuring BPEL sensors

Creating and configuring Composite sensors

Viewing Sensor information in Enterprise Manager

Publishing Sensors to Oracle BAM

Viewing BPEL sensor information in a BAM Dashboard

Introducing Oracle Complex Event Processing (CEP) Copyright

Designing Composite Applications with Oracle SOA Suite 11g

Explaining the Oracle SOA Suite 11g architecture and components

Implementing an SOA application design approach

Describing basic synchronous and asynchronous interaction patterns

Discussing the course application implementation with Oracle SOA Suite 11g

Creating a Composite Application

Creating, editing, and deploying a composite application

Creating composite service entry points

Creating composite components, such as Mediator, BPEL, Human Task, and Business Rule components

Creating service references

Wiring composite constructs

Testing a composite using Web based interfaces

Introducing working with adapters

Create a file adapter service reference

Managing and Monitoring a Composite Application

Managing SOA composite application by using Oracle Enterprise Manager

Tracking messages through SOA composite application by using Oracle Enterprise Manager

Deploying a composite application

Un-deploying a composite application

Moving a composite application to a production environment

Creating Adapter Services

Introducing the adapter framework

Identifying types of adapters

Invoking a File adapter to read a file

Implement a Database adapter to query database data

Working with the JMS adapter

Working with Mediator Components

Explaining the Service Infrastructure

Creating a Mediator component

Defining a Routing Service

Adding Routing Rules

Creating XSL Transformations with the XSLT Mapper

Creating content-based routing filters

Exploring Domain-Value Maps and cross references

Developing a Simple BPEL Component

Creating BPEL components

Describing the Types BPEL Process Structure

Structuring a BPEL Process with Scope activities

Choosing global or local variables

Creating an Assign activity

Defining copy operations for the Assign activity

Creating and configuring a Transform activity

Orchestrating Services with BPEL

Describing conditions for business process orchestration

Providing and accessing services from BPEL

Importing XML schemas and setting message types

Creating and configuring a Partner Link

Invoking a service synchronously and asynchronously

Describing WS-Addressing and correlation concepts

Performing conditional branching by using a Switch activity

Adding and configuring cases for conditional branching

Implementing Coordination and Interaction Patterns

Implementing parallel processing by using a Flow activity

Adding and configuring Flow activity branches

Exploring request-response interaction patterns

Implementing a Pick activity with messages and alarm branches

Creating an execution loop with a While activity

Suspending a BPEL process with a Wait activity

1204

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Code formation : log-

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