Oracle Service Bus 12c: New Features Ed 1

JAVA

DURATION	MODULES	COURSE CODE
2 Days	**10 Lectures**	**—**

Course Overview

This Oracle Service Bus 12c: New Features Ed 1 training teaches you to about the new features and capabilities of Service Bus 12c as compared to the OSB 11g product version. It's designed for service designers and developers transitioning from the Eclipse IDE in 11g to the new JDeveloper IDE for 12c.

What You Will Learn

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- Goals I-2
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- Prerequisites I-4
- Class Introductions I-5
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- Where to Go for More Information I-8

Overview

- Service Bus 12c: New Features
- SOA Suite 12c Expanded
- Developer and Production Distributions
- Integrated with JDeveloper
- Creating Service Bus Resources in JDeveloper
- Splitting Proxy from Pipeline
- Using Shared Variables Between Pipelines
- Promoting Reusability and Best Practices with Pipeline Templates
- Creating REST Services Based on a Pipeline
- Resequencing Messages
- New Component and Properties Palettes
- Using Shared Data in Design-Time MDS Repository
- Updated Validation Action

- Test Expressions at Design-Time
- Disable Stages or Actions
- Test and Debug Pipeline Actions
- OSB Maven Support
- Service Bus Tools
- Enterprise Manager Fusion Middleware Control 12c
- Monitoring and Administering in EM Console
- New Features of Service Bus 12c: Summary
- Additional New or Changed Features for SB 12c
- Course Scope

Quick Start for Developers

- Objectives
- Developer and Production Distributions
- Downloading Software from OTN: Extracting the FMW Archive
- Running the Quick Start Installer
- Choosing the Location for Middleware Home
- Starting the Installation
- Installation Complete
- Starting JDeveloper from the File Browser
- JDeveloper Startup Screens
- Domain Configuration Options
- Domain Configuration with QuickStart Installation
- Domain Configuration Options
- Starting the Integrated WebLogic Server
- Configuring the Default Domain
- Default Domain Location
- Quick Start Installation Choices
- Installing the Stand-Alone Domain
- Starting Stand-Alone Domain Configuration
- Configuring the Domain
- Domain Configuration Complete
- Stand-Alone Domain Is Running
- Creating a New Application Server Connection
- The Application Server Connection Configuration Wizard
- Testing the Connection
- Installation Summary
- Summary
- Practice 2 Overview: Quick Start Configuration

Getting Familiar with SB 12c and JDeveloper

- Objectives
- Agenda
- Oracle SOA Suite and Service Bus Product Architecture
- Mediator Versus Service Bus

- SOA Reference Architecture
- Oracle SOA Suite and Oracle Service Bus Deployment Topology
- Agenda
- Development Tools: JDeveloper or Service Bus Console
- Development Tasks Support for 12c
- JDeveloper SB “Applications”
- Projects and Resources
- Developing Service Bus Resources in JDeveloper
- Pipeline Message Flow Component
- Pipeline Editor
- Component and Properties Palettes
- Dependency Explorer
- High-Level Steps for Creating a SB Project: Review
- Creating a Business Service
- Creating a Proxy Service
- Testing
- Choosing the Component or Service to Test in JDeveloper
- Testing a Proxy Service, Pipeline, or Business Service
- Import and Export Resources
- Agenda
- Sharing Artifacts with MDS
- Managing Shared Data with File-Based MDS
- Design-Time MDS Repository Default Location
- Resources Window Operations
- Using Shared Data in MDS
- Sharing Artifacts with Design-Time MDS
- SOA-MDS Transfer Wizard
- Transfer to Another MDS Repository
- Summary
- Practice 3: Overview

Service Bus Administration and Management Tools

- Objectives
- Agenda
- New in 12c: EM Fusion Middleware Control for SB
- Administrator Tasks Supported by the FMW Control and Service Bus Consoles
- in 12c
- Service Bus in the EM Fusion Middleware Control
- Accessing the Fusion Middleware Control
- Dashboard
- Alert History
- Service Health
- Operations
- Global Settings
- Service Bus Home Page and Menu

- Service Bus Project Menu
- Agenda
- The New Service Bus Console
- Accessing the Service Bus Console
- Service Bus Console 12c
- Working with Sessions: Review
- Session Management in 12c
- Change History
- Viewing the Change History
- Projects and Folders
- Project Definition Editor
- Available Resource Types
- Service Configuration
- Editing Pipeline Message Flow
- Viewing References
- Performing Simple Actions on Resources
- Importing Resources
- Service Bus Console: Admin Tab
- Customizing the Service Bus Environment
- Finding and Replacing Properties
- Exporting Resources
- Agenda
- Service Bus Roles
- Access to Resource Actions in SB Console
- Access to Administrative Functions in SB Console
- Access to Session Management in SB Console
- Access in the EM Fusion Middleware Control
- Summary
- Practice 4: Overview

Shared Variables, Pipelines, and Templates

- Objectives
- Message Flow
- Pipeline Component
- Pipeline Construction
- Creating a Pipeline
- Shared Variables: New in 12c
- Shared Variable Rules
- Creating a Shared Variable
- Pipeline Templates
- Creating and Using Pipeline Templates
- Editing a Template-Based Pipeline Component
- Unlinking a Template-Based Pipeline Component
- Summary
- Practice 5: Shared Variables, Pipelines, and Templates

Monitoring SLA Alerts and Reports

- Objectives
- Agenda
- Service Bus Monitoring in Fusion Middleware Control
- Service Bus Dashboard in Fusion Middleware Control
- Server Health
- Monitoring and Preserving Settings
- Service Bus Monitoring Framework
- Aggregation Interval
- Service Health
- Agenda
- Alert Use Cases
- Alert Types
- Alert Destinations
- Email Destinations
- Enable Alerts
- Service-Level Agreements
- SLA Rule Conditions
- Monitor Alerts
- Agenda
- Reporting Examples
- Service Bus Reporting Architecture
- Enable Reporting
- Reporting Alert Destinations
- Monitor Reports
- Purge Reports
- Summary
- Practice 6: Monitoring SLA Alerts and Reports

Testing and Debugging

- Objectives
- Agenda
- Pipeline Logging
- Log Action
- Configuring OSB Log Level
- Enabling/Disabling Stages and Actions
- Service Bus Debug Files
- Agenda
- Launching the SB Test Console: Review
- Choosing the Component or Service to Test in JDeveloper: Review
- Testing a Pipeline
- Invocation Trace
- Enabling Message Tracing to the ODL
- Agenda

- SB Debugger: New to 12c
- Features and Limitations
- Configuring For Remote Stand-Alone Domains
- Setting Breakpoints
- Starting the SB Debugger
- Stepping Through a Debugging Session
- Viewing and Modifying Variable Values
- Ending a Debugging Session
- Summary
- Practice 7: Overview

Transforming Messages

- Objectives
- Agenda
- Transforming Data Using the New XSLT Mapper
- XSL Transformations
- XSLT Mapper: New to 12c
- Using XPath Functions in XSLT Mapper
- XQuery Support in Service Bus
- XQuery Expression Builder
- XQuery Mapper
- Types of XQuery Maps
- Steps for Creating XQuery Map Files
- XSLT Versus XQuery
- Testing Expressions at Design-Time
- Agenda
- XML to Non-XML with nXSD
- Working with Native Format Data
- Native Data Transformation
- Starting the Native Format Builder Wizard
- Specifying File Name and Native Format Type
- Specifying a Sample File
- Defining a Schema for a Native Format
- Using nXSD Transformations in Message Flow
- nXSD Translate Action
- Summary
- Practice 8: Overview

Adapters and Transports

- Objectives
- Agenda
- JCA Transport
- JCA Adapters
- Supported Adapters and Transports
- Agenda

- SOA-DIRECT Transport
- Features of SOA-DIRECT Transport
- Transactional Boundaries
- Synchronous Invocation of a SOA Composite
- Endpoint URI Linking to a SOA Composite
- Synchronous Invocation from a SOA Composite
- Asynchronous Invocation of a SOA Composite
- Service Roles in Asynchronous Invocation
- Agenda
- Creating REST Services Based on a Pipeline
- REST: Overview
- REST-ful Style Examples
- Comparing REST and SOAP
- Example: Use Cases for REST and SOAP
- Supported Features in OSB
- Creating a REST Binding
- Configuring a REST Binding
- Summary
- Practice 9: Overview

Additional Topics

- Objectives
- Agenda
- Options For Migrating an 11g Project to 12c
- Direct Deployment Using SB Console or FMWC
- Summary Page of Imported Resources
- Comparing Old and New SB Archives
- Importing 11g Projects into JDeveloper
- Viewing the Migrated Project in JDeveloper
- Agenda
- OWSM Policy Support in 12c
- Viewing the Policies Attached to a Service
- Attaching and Detaching Security Policies
- Attaching OWSM Policies to Services in JDeveloper
- User Interface (UI) Support
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- Managed File Transfer (MFT)
- SB and MFT Integration
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- Resequencing Messages
- Configuring the Resequencer
- Resequencing Messages
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- Concepts and Terminology
- SB Maven Support

- Building Service Bus Projects with Maven
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