

Middleworks Oracle Service Bus 12c Development Course Syllabus

This course provides a 4-day hands-on introduction for developers new to Oracle Service Bus (OSB) version 12c. It is intended to include everything a new OSB developer will need to know to be productive developing services with REST and SOAP interfaces, using the adapters and JDev to integrate with a wide variety of back-end systems, securing, testing and deploying services. For training in developing SOA Composites with Oracle SOA Suite, see the Middleworks course on Oracle SOA Suite 12c Development.

1. Introduction to Oracle Service Bus

- Enterprise Service Bus Overview
- Point-to-point vs Service-Oriented Integration
- Virtualizing Back-end Services
- Key Features of Oracle Service Bus
- Oracle SOA Suite and Oracle Service Bus
- Installing Oracle Service Bus 12c for Developers

2. Getting Started with Oracle Service Bus

- Basics of WSDL and XSD
- OSB Components – Business Services, Proxy Services and Pipelines
- Creating, Deploying and Testing
- MDS and Maven Support

3. Basics of Message Flow

- Message Exchange Patterns
- Pipeline Components
- Message Processing Actions
- Context Variables
- Pipeline Templates
- Debugging

4. Validating Messages and Error Handling

- Message Validation
- Fault Handling
- Reporting

5. Transforming Messages

- XPath

- XSLT Transformation
- XQuery Transformation
- nXSD and Native Format Builder

6. Routing Messages

- Routing Overview
- Content-based Routing
- Dynamic Routing

7. Enriching Messages

- Service Callout
- Java Callout

8. Processing Messages with Concurrent Calls

- Split-Join
- Transactions

9. Adapters and Transports

- JCA Transport and Adapters
- File, Database, JMS Adapters
- SOA-Direct Transport
- REST Binding
- Invoking and Exposing REST Interfaces with OSB

10. Reliable Messaging

- Quality of Service
- Persistence

11. Securing Services

- Security Concepts – Transport and Message-level Security, WS-Policy and WS-Security, SAML
- Oracle Web Services Manager (OWSM) Security
- Securing Services with OWSM Policies
- Identity Propagation
- Test Console and Security
- Access Control Policies

12. Advanced Topics

- Best Practices
- Service Result Caching
- SLA Alerts
- Integrating with MFT
- Message Resequencing
- Continuous Integration
- OSB Internals