

Oracle Service Bus 12c: Design & Integrate Services Ed 1

Course Duration: 32 Hours (4 Days)

Overview

The Oracle Service Bus 12c: Design & Integrate Services Ed 1 course is a comprehensive training program that equips learners with the skills to design, deploy, and manage services using Oracle Service Bus (OSB). This course covers a broad spectrum of topics, including the fundamentals of Enterprise Service Bus, Service integration, and the distinct features of OSB compared to the Oracle SOA Suite. Participants will start by learning the basics of WSDL, XSD, and the core components of Service Bus applications, leading to more complex concepts such as Message flow, Validation, Error handling, and Transformation. The course emphasizes hands-on experience with Message routing, Enrichment, Concurrent processing, and the use of Adapters and transports. Learners will also delve into Reliable messaging, Service bus security, and advanced topics such as Service result caching, SLA alerts, and integration with managed file transfer (MFT). Additionally, the course discusses best practices and Continuous integration with Maven, ensuring that participants are well-versed in the latest methodologies for effective Service integration. By mastering these skills, IT professionals can significantly enhance their capacity for designing and integrating services efficiently within their organizations.

Audience Profile

The Oracle Service Bus 12c course equips professionals with the skills to design and integrate robust service-oriented architectures.

- IT Architects specializing in Service-Oriented Architecture (SOA)
- Middleware/System Integrators
- ESB Developers and Implementers
- Oracle SOA Suite Developers
- Technical Consultants involved in integration projects
- IT Professionals working with messaging and middleware
- Software Engineers specializing in Oracle technologies
- Technical Leads managing integration teams or projects
- Quality Assurance Specialists focused on integration testing
- Technical Analysts involved in Enterprise Application Integration (EAI)

Course Syllabus

1. Introducing Oracle Service Bus

- Overview of Enterprise Service Bus (ESB)
- Introduction to Oracle Service Bus
- Relationship Between Oracle Service Bus and Oracle SOA Suite
- Service Bus Installation and Configuration Options

2. Getting Started with Service Bus Applications

- Fundamentals of WSDL and XSD
- Overview of Service Bus Components
- Creating a Simple Service Bus Application
- Key Features for Developers

3. Basics of Message Flow

- Understanding Message Flow
- Introduction to Context Variables
- Overview of Pipeline Templates
- Debugging Message Flows

4. Validating Messages and Error Handling

- Message Validation Techniques
- Fault Handling in Service Bus
- Reporting and Monitoring Errors

5. Transforming Messages

- Overview of Message Transformation in Service Bus
- Using XPath Functions
- Creating XSL Transformations with XSLT Mapper
- Creating XQuery Transformations with XQuery Mapper
- Converting Non-XML to XML Using nXSD

6. Routing Messages

- Overview of Message Routing
- Implementing Content-Based Routing
- Understanding Dynamic Routing

7. Enriching Messages

- Use Cases for Message Enrichment
- Implementing Enrichment Using Service Callout
- Implementing Enrichment Using Java Callout

8. Processing Messages with Concurrent Calls

- Introduction to Split-Join
- Understanding Split-Join Patterns and Constructions
- Implementing Split-Join for Parallel Processing

9. Adapters and Transports

- Overview of JCA Transport and Adapters
- Understanding SOA-DIRECT Transport
- Exposing SOAP-Based Services as REST Services Using REST Binding

10. Reliable Messaging

- Reliable Messaging Support in Service Bus
- Understanding Quality of Service (QoS)
- Configuring Reliable Communication

11. Service Bus Security

- Overview of Security Concepts
- Implementing Oracle WSM Security
- Understanding Access Control Policies

12. Advanced Topics

- Best Practices for Using Service Bus

- Service Result Caching and SLA Alerts
- Integration with Managed File Transfer (MFT)
- Understanding Message Re-Sequencing
- Implementing Continuous Integration with Maven