

Application Integration on Oracle Cloud Ed 5 LVC

Application Development Learning Subscription

DURATION

4 Days

MODULES

10 Lectures

COURSE CODE

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Course Overview

This training teaches you about leveraging Oracle Integration Cloud to create and configure connections and integrations for SaaS to SaaS, and SaaS to On-Premise integration use cases. This course is designed for business users and implementers who are responsible for defining and creating these integrations using the OIC dashboard

What You Will Learn

Module 1: Introduction to Oracle Integration Cloud (OIC)

1.1 OIC Fundamentals

- OIC Overview
- Oracle Integration 3
- Editions of Oracle Integration 3
- Defining OIC Terminology

1.2 OIC Core Capabilities

- Integrations
- Process Automation
- Visual Builder
- File Server
- B2B

1.3 Integrations Feature Deep Dive

- Integrations Feature Overview
- Integrations Feature Use Cases
- Integration Patterns
- Application-to-Application Integration
- Automating Business Workflows
- Real-Time Data Synchronization
- Extending Applications

- Legacy Systems Integration

1.4 Integration Use Cases

- Unified Support Ticketing System
- Data Migration
- IoT Integration

1.5 Integration Architecture

- Elements of an Integration
- Integration Flow
- OIC Service Roles

1.6 Integration Projects

- About Projects
- Reasons to Use Projects
- Adding a New Project
- Determining Project RBAC Permissions
- Project Views and Sections
- Demo: Using Projects

1.7 Getting Started with Integrations

- Integration Development Workflow
- Example Use Case

Module 2: Adapters and Connections

2.1 Adapters and Connections Basics

- What is an OIC Integration?
- What is an OIC Adapter?
- Design-Time Adapter Configuration Wizard
- Overview of OIC Adapters

2.2 Creating and Managing Connections

- Creating vs Configuring Connections
- Creating Additional Connections
- Connection Creation Workflow
- Select Adapter
- Provide Basic Information
- Adapter Configuration
- Connection Testing

2.3 Connection Sharing and Security

- Connection Sharing Between Projects
- Demo: Connection Sharing
- Connection and Security Properties (Part 1 & 2)

2.4 SOAP Adapter Connections

- SOAP Adapter Overview
- SOAP Invoke Connections
- SOAP Trigger Connections
- Use Cases

2.5 REST Adapter Connections

- REST Adapter Overview
- REST Invoke Connections
- REST Trigger Connections
- Use Cases

2.6 Private Connectivity

- Connecting to Private Resources
- Private Endpoint Adapter Support
- Connectivity Agent Adapter Support
- Differences Between Private Endpoints and Connectivity Agents

2.7 Connectivity Patterns and Architecture

- Connectivity Agent Architecture
- Public Internet Pattern
- FastConnect Public Peering Pattern
- Private Peering Patterns
- On-Premises Deployment
- OCI VCN Deployment
- Agent Deployment and Runtime Behavior
- High Availability Scenarios

Module 3: Configuring Connections

3.1 Trigger Connections

- Trigger Concepts and Message Exchange Patterns
- Implementing Message Exchange Patterns
- Trigger Scenarios and Integration Patterns
- REST Trigger Configuration
- SOAP Trigger Configuration
- Database Trigger Configuration

3.2 Database Trigger Adapters

- Adapter Role Concepts
- Supported Database Systems
- Trigger Configuration

3.3 ERP Cloud Trigger Connections

- Receiving Business Events

- Receiving Callback Events for FBDI Jobs
- Trigger Request Page Options
- Demo: ERP Cloud Trigger Configuration

3.4 Invoke Connections

- Invoke Concepts and Use Cases
- REST Invoke Configuration
- Database Invoke Configuration
- Adapter Role Concepts
- Running SQL Statements
- Invoking Stored Procedures
- Performing Operations on Tables

3.5 ERP Cloud Invoke Connections

- Query, Create, Update, and Delete Operations
- Importing Bulk Data into ERP Cloud
- Sending Files to ERP Cloud

Module 4: Data Transformation

4.1 Map Editor Fundamentals

- Map Editor Overview
- Integration Development Workflow
- Accessing the Map Editor
- Mapping Canvas Basics

4.2 Using the Map Editor

- Using the Map Editor – Part One
- Expression Builder
- Set Text Mode and Literal Values
- Using the Map Editor – Part Two
- Node Information
- Developer Toggle Button
- Filter Options and Search Data Fields
- Element Node Context Menu
- Troubleshooting Mapping Errors

4.3 Advanced Mapping Techniques

- Working with Functions
- Working with Operators
- Working with XSLT Statements
- Conditional Mappings
- For-Each Statements (Automatic Creation)
- Setting Default Values
- Working with Multiple Value Statements
- Deep Copy Using copy-of Constructor

4.4 XSLT and Lookups

- Editing XSLT Code in Map Editor
- Editing XSLT Code in Oracle JDeveloper
- Creating and Managing Lookups
- Using lookupValue Function
- Viewing Lookups in Use
- OIC Lookup Use Cases

4.5 Runtime Configuration Elements

- Variables
- Integration Properties
- Schedule Parameters

Module 5: Using Integration Actions

5.1 Actions Overview

- Actions Overview and Elements
- Adding and Configuring Actions
- Action Logic Design

5.2 Variables and Context

- Global Variables
- Assigned Variables
- Scoped Variables
- Comparisons and Summary Concepts

5.3 Data Stitch Action

- Data Stitch Overview
- Stitch Operations
- Capability Comparisons
- Assigning and Appending to Global Variables
- Demo: Data Stitch Action
- Using Data Stitch in Orchestrations

5.4 Flow Control Actions

- Looping Actions Overview
- While Action: Use Cases and Considerations
- For-Each Action: Use Cases and Differences
- Switch Action
- Parallel Action
- Demo: While, For-Each, Switch, and Parallel Actions

5.5 Scope and OCI Actions

- Scope Action and Context Considerations
- OCI Function Action

- OCI Object Storage Action

5.6 Utility Actions

- Wait Action: Usage and Demo
- Note Action: Configuration and Use

Module 6: File Processing

6.1 File Handling Fundamentals

- Virtual File System
- Receiving and Retrieving Files
- Writing and Sending Files
- Structured vs Opaque Files

6.2 File and FTP Adapters

- Defining FTP and File Adapter Connections
- Trigger and Invoke Role Use Cases
- Comparing FTP Adapter and File Adapter

6.3 File Operations Configuration

- FTP and File Adapter Operations – Part One & Two
- File Server Action Operations
- Stage File Action Operations
- Demo: File Server Action

6.4 File Transformation

- Transforming Native File Formats
- Defining Structured Files
- File Definition Wizard
- Native XML Schema (nXSD)

Module 7: Error Handling

7.1 Designing Beyond the Happy Path

- Error Handling Concepts
- OIC Error Hospital

7.2 Global Fault Handling

- Implementing the Global Fault Handler
- Default Global Fault Handler
- Fault Entry and End Actions

7.3 Runtime and Scope Faults

- Handling Runtime Errors
- Scope Fault Handlers

- Additional Fault Handlers
- Catching Faults

7.4 Advanced Fault Management

- Throw New Fault Action
- Skip Condition Considerations
- Fault Mitigation Techniques

7.5 Error Handling Best Practices

- Dedicated Fault Handlers
- Monitoring Strategy
- Manual Intervention Using Processes
- Resubmitting Failed Instances
- Parking Lot and File-Based Reprocessing Patterns

Module 8: Additional Integration Topics

8.1 Packages and Projects

- OIC Packages Overview
- Packages vs Projects
- Converting Packages to Projects
- Demo: Projects and Dependencies

8.2 Integration Lifecycle Management

- Activation and Deactivation
- Tracing Levels
- Cloning and Versioning
- Handling Locked Integrations

8.3 Observability and Events

- Integration Instance Tracking
- Publishing Endpoints to OCI API Gateway
- Using Events for Decoupling

8.4 Scheduling Integrations

- Scheduling Concepts and Patterns
- Creating and Managing Schedules
- Advanced Scheduling Options
- Schedule Parameters and Overrides

8.5 Monitoring and Accelerators

- Monitoring Integration Runs
- Resubmitting Failed Runs
- Recipes and Accelerators
- B2B Feature Overview and Demos

Module 9: OIC Administrator Tasks

9.1 Provisioning and Security

- Provisioning OIC Instances
- Assigning OIC Service Roles

9.2 Connectivity Agent Administration

- Installing Connectivity Agents
- Agent Groups and Configuration
- Monitoring and Restarting Agents
- Demo: Connectivity Agent Management

9.3 Observability and Governance

- Allowlist Configuration
- OCI Metrics and Logging
- Dashboards and Fusion Monitoring
- Embedded File Server Administration
- Activity Streams

Module 10: Integration Solution Examples

- Business Event Subscriptions
- ERP Cloud to Shopify Integration
- ChatGPT to Slack Solution
- Google Cloud Pub/Sub Adapter
- OCI AI Document Understanding
- OCI Streaming for Pub/Sub
- ERP Cloud and Third-Party Accelerators
- Multi-System Enterprise Integration Demos