WSO2 Micro Integrator – Course Outline

1 Duration

- 4 days

2 Objectives

After this course, the attendees will able to understand

- EAI Patterns and standard notations used for elements participating in EAI
- Get overview on different Enterprise Integration tools viz Camel, Spring Integration and Micro Integrator
- Get understanding on WSO2 Micro Integrator concepts, features and it's usage
- How to design and implement integration with various connectors with WSO2 Integration Studio
- How to build, deploy and monitor the integration solutions with Docker and K8s

3 Audience

- This course is for architects and developers who want to learn EIPs, WSO2 Micro Integrator to build enterprise-level, mission-critical, high-performance integration solutions.

4 Pre-requisite

- A good working knowledge of Java, including a good understanding of Java IDEs and Build tools
- A basic understanding of distributed systems concepts (SOA, web services, messaging) and the related standards (XML, JMS)

5 Hardware & Network Requirements

- Desktop/Laptop with minimum 8GB RAM (16 GB recommended)
- High-speed open internet connection (minimum 10 mbps per user)

6 Software Requirements

- Windows / Linux / Mac OS
- Java 11 and above
- Eclipse / Intellij IDE
- WSO2 Integration Studio
- Docker Desktop
- Git Client

7 Outline

Day-1

Module-1: Introduction to Enterprise Integration Patterns (EIP)

- Evolution of Integration solutions
- Solving Integration Problems using Patterns
- Integration Styles – Compare and Contrast
- Components of a Messaging System
- Characteristics of Messaging Channel
- Different types of Message Construction
- Overview of Message Routing patterns
- Different ways to transform Messages
- Understanding Messaging Endpoints
- Best Practices in designing control systems

Module-2: Intro to Enterprise Integration Tools / Frameworks

- Apache Camel Overview
- Developing EIPs with Camel
- Spring Integration Overview
- Developing EIPs with Spring Integration
- WSO2 Micro Integration Overview

Module-3: Introduction to Micro Integrator

- Working with Micro Integrator
- Introduction to decentralized/centralized architectures
- Introduction to WSO2 Integration Studio (Tooling)
- WSO2 Micro Integrator Key Features
- Lab: Getting Started with WSO2 Micro Integrator
- Lab: Getting Started with WSO2 Integration Studio

Day-2

Module-4: API Integration and Triggering Messages

- Integration with REST API connectors
- APIs and Proxy Services
    - Lab: Configuring a REST API
    - Lab: Configuring a Proxy service
- Working with Tasks
    - Lab: Periodic Execution of Integration Processes
- Inbound Endpoints
    - Lab: Using Inbound Endpoint

Module-5: Mediating Messages

- Integration with Messaging Connectors
- Message Routing
    - Lab: Message Routing
- Message Transformation
    - Lab: Message Transformation
- Service Orchestration
    - ○ Lab: Service Orchestration

Day-3

Module-6: Data Integration

- Data Integration capabilities
- Creating data services
    - Lab: Data Integration

Module-7: SaaS and B2B Integration

- Connecting to a SAAS Application
    - Lab: Connecting Web APIs/Cloud Services
- Connecting B2B
    - Lab: Connecting to a File System

Module-8: Debugging Mediation

- Debugging Mediation
    - Lab: Debugging Mediation
- Handle errors in WSO2 Micro Integrator

Day-4

Module-9: Building Unit Tests for your artifacts

- Unit Tests
- Mock Services
- Local and Remote Testing
    - Lab: Using the Unit Testing Framework

Module-10: Artifact Deployment and Monitoring

- Docker Overview
- Kubernetes Overview
- Microservices Deployment
    - Docker Exporter
    - Kubernetes Exporter, Helm Resources
    - Lab: Run WSO2 Microintegrator on Containers (Using Operator)
- Micro Integrator CLI and Dashboard
- Monitoring Messages