Course Outline

WSO2 API Manager 4.2.0

Micro Integrator Profile

Developer Advanced

[**Email:** training@wso2.com]

Table of Contents

Executive Summary

WSO2 API Manager Developer Advanced - Micro Integrator Profile is a course aimed at training software engineers on the integration and extension features and capabilities of the product.

Duration

4 sessions - online (4-hours each)
2 days - onsite (8-hours per day)

Training Type

WSO2 product training and hands-on session

Target Audience

Software Engineers

Complexity

Intermediate/Advanced

Prerequisites

- WSO2 API Manager 4.2.0 - Micro Integrator Profile Developer Fundamentals
- Review WSO2 API Manager - Micro Integrator Profile architecture and features for:
    - Features and Functionality
    - Basic Mediators
    - Connectors

Open Standards

Review the standards and architecture for:
- Service Oriented Architecture
- REST [1]
- SOAP [2]

[1] http://www.ics.uci.edu/~fielding/pubs/dissertation/rest_arch_style.htm
[2] https://www.w3.org/TR/soap/

Course Agenda

WSO2 API Manager 4.2.0 Developer Advanced - Micro Integrator Profile

Session 01
WSO2 API Manager 4.2.0 - Micro Integrator Profile - Advanced Concepts
- Product configurations
- High-level messaging architecture
- Transports
  Lab: Micro Integrator as a JMS Producer and Consumer
- Message builders/formatters
- Message relay

Session 02
Extending Micro Integrator
- Extension points in the Micro Integrator
- Script Mediator
- Custom Mediator
  Lab: Creating a Custom Mediator
- Custom Task
  Lab: Creating a Custom Task
- Custom Connector
  Lab: Creating a Custom Connector
- Custom Message Builders and Formatters

Troubleshooting Micro Integrator
- Troubleshoot timeout issues
- Debugging configurations
- Debugging network connectivity
- Debugging the product instance

Session 03
Applying Security
- Kubernetes secrets
- Docker secrets
- Secure Vault
- Using CLI tool
- Using Secure Vault for Encryption
  Lab: Securing Secrets for a VM deployment
  Lab: Securing Secrets for a container deployment
- Securing an API

Lab: *Applying Security to an API*

Session 04
Deployment Strategy
- Clustered Deployment on a VM
- Kubernetes Deployment
    - Deployment Patterns
    - Building a CICD Pipeline

Performance Tuning
- Tuning JVM Performance
- Tuning the Network and OS Performance
- Tuning the HTTP Transport
- Tuning the JMS Transport
- Tuning the VFS Transport
- Tuning the RabbitMQ Transport
- Tuning the Inbound Endpoints

Message Mediation - Advanced
- File processing
    Lab: *Streaming Files Using the VFS Transport*

Infrastructure Requirements

Hardware Requirement

During the lab session attendees are required to deploy the created samples in multiple middleware products. Participants are required to have a workstation with at least 6GB of memory to run the samples smoothly.

Software Requirement

Java

Oracle Java 1.8.x [1]
Other requirements [2]

[1] http://www.oracle.com/technetwork/java/javase/downloads/index.html
[2] https://apim.docs.wso2.com/en/4.2.0/install-and-setup/install/installation-prerequisites/

WSO2 Products Used

WSO2 API Manager