Confluent Schema Registry & REST Proxy using Avro

Prerequisites: Basic knowledge of Apache Kafka

Duration: 2 Days (8 Hrs./Day)

Course Objective: This comprehensive two-day course is designed to provide participants with a deep understanding of Avro schemas, their integration with Apache Kafka, and the use of Confluent tools. By the end of this course, participants will be proficient in defining and using Avro schemas, managing schema evolution, and utilizing the Confluent Schema Registry and REST Proxy.

Apache Kafka version: Latest.

Lab Requirement: Koenig DC/Linux (CentOS 9) (customizable).

Module 1 - Introduction to Avro Schemas

What is Avro?

Avro Primitive Types

Avro Record Schema Definition

Avro Complex Types

Avro Logical Types

The complex case of Decimals

Module 2 – Avro in Java

Lab: Generic Record in Avro

Lab: Specific Record in Avro

Lab: Avro Tools

Lab: Reflection in Avro

Lab: Schema Evolution

Module 3 - Confluent Schema Registry and Kafka

Confluent Schema Registry

Lab: Kafka Avro Console Producer & Consumer

Lab: Writing a Kafka Avro Producer in Java

Lab: Writing a Kafka Avro Consumer in Java

Kafka Schema Registry Deep Dive

Module 4 - Confluent REST Proxy

Kafka REST Proxy Introduction and Purpose

Lab: Insomnia Setup (REST Client)

Lab: Topic Operations

Lab: Producing in Binary with the Kafka REST Proxy

Lab: Consuming in Binary with the Kafka REST Proxy

Lab: Producing in JSON with the Kafka REST Proxy

Lab: Consuming in JSON with the Kafka REST Proxy

Lab: Producing in Avro with the Kafka REST Proxy

Lab: Consuming in Avro with the Kafka REST Proxy