

## **Confluent Certified Developer for Apache Kafka**

Duration: 4 Days (8Hours per day)

- Building a Practice Cluster
  - Setting Up Kafka Servers
  - Building a Kafka Cluster
  - Creating a Kafka Cluster with Confluent
- Kafka Architecture Basics
  - What is Apache Kafka?
  - Kafka from the Command Line
  - Publisher/Subscriber Messaging in Kafka
  - Kafka Architecture
  - Partitions and Replication
  - The Life of a Message
  - Working with Kafka from the Command Line
  - Consuming Kafka Messages with Multiple Consumer Groups
- Kafka and Java
  - The Kafka Java APIs
  - Connecting to Kafka Programmatically in Java
- Kafka Streams
  - What Are Streams?
  - Kafka Streams Stateless Transformations
  - Kafka Streams Aggregations
  - Kafka Streams Joins
  - Kafka Streams Windowing
  - Streams vs Tables
  - Working with Stream Processing in Kafka
- Advanced Application Design Concepts
  - Kafka Configuration
  - Topic Design
  - Metrics and Monitoring
  - Configuring Kafka Topics
  - Configuring a Kafka Client
- Working with Kafka in Java
  - Building a Producer in Java
  - Building a Consumer in Java

- Working with the Confluent Kafka Rest APIs
  - The Confluent REST Proxy
  - Producing Messages with REST Proxy
  - Consuming Messages with REST Proxy
- Confluent Schema Registry
  - What is Confluent Schema Registry?
  - Creating an Avro Schema
  - Using Schema Registry with a Kafka Producer
  - Using Schema Registry With a Kafka Consumer
  - Managing Changes to an Avro Schema
- Kafka Connect
  - What is Kafka Connect?
  - Using Kafka Connect
  - Exporting Data to a File with Kafka Connect
  - Importing Data from a Database with Kafka Connect
- Kafka Security
  - TLS Encryption
  - Client Authentication
  - ACL Authorization
  - Using Client Authentication with Kafka
  - Kafka Authorization Using CLIs
- Testing
  - Testing Producers
  - Testing Consumers
  - Testing Streams Applications
  - Writing Tests for a Kafka Producer
  - Writing Tests for a Kafka Consumer
  - Writing Tests for a Kafka Streams Application
- Working with Clients
  - Monitoring Clients
  - Producer Tuning
  - Consumer Tuning
- Confluent KSQL
  - What is KSQL?
  - Using KSQL
  - Working with KSQL Streams
  - Joining Datasets with KSQL