Kafka for Developers

Course 35678 – 24 Hours

View our course intro video

Overview

This 3-day course, "Kafka for Developers", is designed to provide developers with a comprehensive understanding of Apache Kafka. The course covers a wide range of topics from the basics to more advanced concepts, including hands-on exercises and real-world applications.

By the end of this course, participants will have a solid understanding of Apache Kafka and its application in various scenarios.

The course will delve into many microservices design discussions, exploring patterns such as Command Query Responsibility Segregation (CQRS) and event sourcing with practical examples and labs. Participants will also learn how to build a high-performance real-time Kafka setup. This interactive and engaging course provides plenty of opportunities for participants to apply what they've learned, ensuring a thorough understanding of Apache Kafka's capabilities and best practices

Who Should Attend?

- Developers
- Architects
- DevOps

Prerequisites

- Good understanding of Python
- Prior hands-on experience with Apache Kafka is a must
- Familiarity with concepts related to distributed systems and streaming data would be beneficial.

Course Contents

Day 1: Apache Kafka 101 and Kafka Connect 101

- Introduction to Apache Kafka

- What is Apache Kafka?
- Events and Event Modeling
- Kafka Architecture
- Kafka Topics and Partitions
- Kafka Producers and Consumers
- Kafka Streams
- Kafka Streams DSL
- Kafka Connect
- Schema Registry

- Introduction to Kafka Connect

- What is Kafka Connect?
- Kafka Connect Architecture
- Kafka Connect Connector Plugins
- Kafka Connect Connectors
- Kafka Connect Workers
- Kafka Connect Distributed Setup

Day 2: Kafka Streams 101, Schema Registry 101, and ksqlDB 101

- Introduction to Kafka Streams

- What is Kafka Streams?
- Kafka Streams Architecture
- Kafka Streams DSL
- Kafka Streams State Stores
- Kafka Streams Topology
- Kafka Streams Performance

- Introduction to Schema Registry

- What is the Schema Registry?
- Schema Registry Architecture
- Schema Registry Schemas
- Schema Registry Avro
- Schema Registry JSON
- Schema Registry Protobuf

- Introduction to ksqlDB

- What is ksqlDB?
- ksqlDB Architecture
- ksqlDB Language
- ksqlDB Queries
- ksqlDB Streaming
- ksqlDB Integrations

Day 3: Apache Kafka® for Python Developers, Apache Kafka® Security, Apache Kafka® on Kubernetes, Kafka Streams Advanced Topics, and Governing Data Streams

- Introduction to Apache Kafka for Python Developers

- What is Python?
- Kafka Python API
- Kafka Streams with Python
- Kafka Connect with Python

- Introduction to Kafka Security

- What is Kafka Security?
- Kafka Authentication
- Kafka Authorization
- Kafka Encryption
- Kafka Security Best Practices

- Introduction to Apache Kafka on Kubernetes

- What is Kubernetes?
- Kafka on Kubernetes
- Kafka Connect on Kubernetes
- Schema Registry on Kubernetes
- ksqlDB on Kubernetes

- Kafka Streams Advanced Topics

- Kafka Streams Architecture
- Kafka Streams DSL
- Kafka Streams State Stores
- Kafka Streams Topology
- Kafka Streams Performance
- Kafka Streams Anomaly Detection
- Kafka Streams Migration

- Governing Data Streams

- Overview
- Streaming at Scale
- Stream Governance
- Hands-On: Setup Confluent Cloud
- Stream Quality
- Schema Registry
- Hands-On: Use the Schema Registry
- Discovering Streams
- Stream Catalog
- Hands-On: Use the Stream Catalog
- Visualizing Streams
- Stream Lineage
- Hands-On: Use the Stream Lineage
- Stream Security
- Hands-On: Use Advanced Governance
- Data as a Product

This course is designed to be interactive and engaging, with plenty of opportunities for participants to apply what they've learned!!