Working with Apache Kafka (for Developers) (TTDS6760)

Category: AI, Data & Analytics | **Vendor:** Trivera Tech

Duration: 16.00 hours (2 days) **13.0 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

Apache Kafka is a real-time data pipeline processor. It high-scalability, fault tolerance, execution speed, and fluid integrations are some of the key hallmarks that make it an integral part of many Enterprise Data architectures. In this lab intensive two day course, students will learn how to use Kafka to build streaming solutions.

About This Course

Apache Kafka is a real-time data pipeline processor. It high-scalability, fault tolerance, execution speed, and fluid integrations are some of the key hallmarks that make it an integral part of many Enterprise Data architectures. In this lab intensive two day course, students will learn how to use Kafka to build streaming solutions.

Who Should Attend

This in an Introductory and beyond level course is geared for experienced Java developers seeking to be proficient in Apache Kafka. Attendees should be experienced developers who are comfortable with Java, and have reasonable experience working with databases.

Prerequisites & Entry Requirements

General Prerequisites:

This course is geared for experienced Java Developers and architects with Java development background who are new to Kafka. This course is not for non-developers.

In order to be successful in this course, and to participate in the hands-on labs, you should possess:

-Basic Java programming skills; practical Java development background.

-Reasonable experience working with databases

-Basic Linux skills and the ability to work from the Linux command line

-Basic knowledge of Linux editors (such as VI / nano) for editing code.

Learning Outcomes

Upon successful completion of this course, participants will be able to:

Working in a hands-on learning environment, students will explore

Overview of Streaming technologies

Kafka concepts and architecture

Programming using Kafka API

Kafka Streams

Monitoring Kafka

Tuning / Troubleshooting Kafka

Detailed Course Outline

Introduction to Streaming Systems

- Fast data
- Streaming architecture
- Lambda architecture
- Message queues
- Streaming processors

Introduction to Kafka

- Architecture
- Comparing Kafka with other queue systems (JMS / MQ)
- Kaka concepts : Messages, Topics, Partitions, Brokers, Producers, commit logs
- Kafka & Zookeeper
- Producing messages
- Consuming messages (Consumers, Consumer Groups)
- Message retention
- Scaling Kafka

Programming With Kafka

- Configuration parameters
- Producer API (Sending messages to Kafka)
- Consumer API (consuming messages from Kafka)
- Commits, Offsets, Seeking
- Schema with Avro

Kafka Streams

- Streams overview and architecture
- Streams use cases and comparison with other platforms
- Learning Kafka Streaming concepts (KStream, KTable, KStore)
- KStreaming operations (transformations, filters, joins, aggregations)

Administering Kafka

- Hardware / Software requirements
- Deploying Kafka
- Configuration of brokers / topics / partitions / producers / consumers
- Security: How secure Kafka cluster, and secure client communications (SASL, Kerberos)
- Monitoring : monitoring tools
- Capacity Planning : estimating usage and demand
- Trouble shooting : failure scenarios and recovery

Monitoring and Instrumenting Kafka

- Monitoring Kafka
- Instrumenting with Metrics library
- Instrument Kafka applications and monitor their performance

, Introduction to Streaming Systems

Understanding Fast data

Streaming terminologies

Understanding at-least-once / at-most-once / exactly-once processing patterns

Popular streaming architectures

Lambda architecture

Streaming platforms overview

Lab: Hands-on first look at Kafka

Introducing Kafka

Comparing Kafka with other queue systems (JMS / MQ)

Kafka Architecture

Kaka concepts: Messages, commit logs

Kafka & Zookeeper

Producing messages

Consuming messages

Consumers, Consumer Groups

Message retention

Scaling Kafka

Kafka across multiple data centers and disaster recovery

Lab: Getting Kafka up and running

Lab: Using Kafka utilities

Using Kafka APIs

Configuration parameters

Producer API - sending messages to Kafka

Consumer API - consuming messages from Kafka

Producer send modes

Message compression

Commits, Seeking

Managing offsets - auto commit / manual commit

Lab: Writing Producer / Consumer

Lab: Benchmarking Producer send modes

Lab: Comparing compression schemes

Lab: Managing offsets

Lab: Clickstream processing

Kafka Streams API

Introduction to Kafka Streams library

Features and design

Streams concepts: KStream / KTable / KStore

Streaming operations (transformations, aggregations)

Using Streams API: foreach / filter / map / groupby

Lab: Kafka Streaming APIs

Monitoring & Troubleshooting Kafka

Monitoring tools overview

Monitoring Kafka

Cluster level and host level monitoring

Identifying performance bottlenecks

Troubleshooting common Kafka issues

Bonus Content / Time Permitting

Kafka Best Practices

Avoiding common mistakes

Hardware selection

Cluster sizing

Partition sizing

Zookeeper settings

Compression and batching

Message sizing

Monitoring and instrumenting

Troubleshooting

Additional Course Details

Nexus Humans Working with Apache Kafka (for Developers) (TTDS6760) training program is a workshop that presents an invigorating mix of sessions, lessons, and masterclasses meticulously crafted to propel your learning expedition forward.

This immersive bootcamp-style experience boasts interactive lectures, hands-on labs, and collaborative hackathons, all strategically designed to fortify fundamental concepts.

Guided by seasoned coaches, each session offers priceless insights and practical skills crucial for honing your expertise. Whether you're stepping into the realm of professional skills or a seasoned professional, this comprehensive course ensures you're equipped with the knowledge and prowess necessary for success.

While we feel this is the best course for the Working with Apache Kafka (for Developers) (TTDS6760) course and one of our Top 10 we encourage you to read the course outline to make sure it is the right content for you.

Additionally, private sessions, closed classes or dedicated events are available both live online and at our training centres in Dublin and London, as well as at your offices anywhere in the UK, Ireland or across EMEA.

Frequently Asked Questions

Q: What delivery options are available for Working with Apache Kafka (for Developers) (TTDS6760)?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 2-day Working with Apache Kafka (for Developers) (TTDS6760) course provides up to 13.0 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Working with Apache Kafka (for Developers) (TTDS6760) training?

The training takes place over 2 day(s), with each day lasting approximately 16.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Working with Apache Kafka (for Developers) (TTDS6760)?

Yes, we provide corporate training, dedicated training, and closed classes for Working with Apache Kafka (for Developers) (TTDS6760). Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: Kafka; Data Science

Q: Why choose Nexus Human for Working with Apache Kafka (for Developers) (TTDS6760)?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Working with Apache Kafka (for Developers) (TTDS6760) training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

Nexus Human

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