



MICROSOFT TRAINING

Apache Kafka, Kafka Streams and ksqlDB Course Overview

Master Apache Kafka, Kafka Streams, and ksqlDB to build robust, real-time data streaming applications. Gain practical skills for advanced data pipelines.

DURATION

2 hours

LEVEL

Intermediate

FORMAT

Instructor-Led

- Globally Recognized Certification

- Expert-Led Hands-On Training

- Flexible Scheduling

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COURSE OVERVIEW

This intensive 2-hour overview course, brought to you by Microsoft, is meticulously designed to introduce you to the transformative world of Apache Kafka, Kafka Streams, and ksqlDB. You'll gain a fundamental understanding of how these powerful technologies form the backbone of modern real-time data processing and event-driven architectures. Discover how Kafka, as a distributed streaming platform, enables high-throughput, fault-tolerant, and scalable data pipelines, empowering organizations to react instantly to business events. Through this course, participants will demystify the core components of the Kafka ecosystem, including brokers, topics, producers, and consumers, laying a solid groundwork for further exploration. Furthermore, this course delves into the essential capabilities of Kafka Streams, a powerful client library for building sophisticated stream processing applications directly on Kafka. Learn how to transform, analyze, and aggregate data streams with ease, unlocking insights from continuously flowing information. You will also be introduced to ksqlDB, an event streaming database for Kafka that allows you to perform SQL-like queries and build real-time event streaming applications with familiar declarative syntax. By completing this course, you will not only grasp the theoretical underpinnings but also understand the practical benefits of implementing these technologies. You will be better equipped to contribute to projects involving real-time analytics, microservices communication, and data integration, significantly enhancing your value in today's data-driven IT landscape. This overview is your gateway to becoming proficient in building scalable, resilient, and responsive data systems.

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Level	Intermediate
Vendor	Microsoft

COURSE CURRICULUM

01 Module 1: Introduction to Apache Kafka Ecosystem

- What is Apache Kafka?
- Key Kafka Concepts: Producers, Consumers, Brokers, Topics, Partitions, Zookeeper
- Use Cases and Benefits of Kafka in Modern Architectures

02 Module 2: Core Kafka Functionality and Architecture

- Publishing Messages to Kafka Topics (Conceptual)
- Consuming Messages from Kafka Topics (Conceptual)
- Overview of Kafka's Distributed Architecture

03 Module 3: Understanding Kafka Streams

- Introduction to Kafka Streams API for Real-time Processing
- Stream Processing Concepts: KStream and KTable
- Conceptualizing Simple Stream Transformations and Aggregations

04 Module 4: Exploring ksqlDB for Stream Processing

- Introduction to ksqlDB as an Event Streaming Database
- Basic ksqlDB Queries and Commands for Kafka Data (Conceptual)
- Creating Streams and Tables with ksqlDB (Overview)

05 Module 5: Broader Ecosystem and Next Steps

- Brief Overview of Kafka Connect and Schema Registry
- Common Kafka Deployment Patterns and Considerations

- Pathways for Further Learning and Hands-on Development

CAREER PATHWAYS

Graduates of this program are prepared for the following roles:

- > **Real-time Data Engineer**
- > **Streaming Application Developer**
- > **Event-Driven Architecture Specialist**

FREQUENTLY ASKED QUESTIONS

Q: What foundational knowledge is recommended before taking this Apache Kafka, Kafka Streams, and ksqlDB Overview course?

This course is designed as a foundational introduction. While no deep prior Kafka experience is required, a basic understanding of data processing concepts, distributed systems, and fundamental programming logic will be beneficial. Familiarity with SQL concepts will also aid in grasping ksqlDB effectively.

Q: How does this 2-hour overview course contribute to my career as a Data Engineer or Streaming Developer?

This course provides a critical foundational understanding of Apache Kafka, Kafka Streams, and ksqlDB – core technologies for real-time data processing and event-driven architectures. It equips you with the conceptual framework and terminology needed to engage in discussions, understand system designs, and identify opportunities for applying these powerful tools in modern data pipelines and streaming applications, setting the stage for more advanced learning and practical implementation.

Q: Given its 'overview' nature and 2-hour duration, will this course include practical, hands-on labs or focus primarily on theoretical concepts?

Due to the concise 2-hour duration and 'overview' focus, this course will primarily concentrate on delivering a strong conceptual understanding of Apache Kafka, Kafka Streams, and ksqlDB. While it won't feature extensive hands-on labs, it will include illustrative examples and architectural discussions to solidify your grasp of how these technologies function and integrate. It serves as an excellent springboard for subsequent dedicated hands-on training.

ABOUT COMPUTER PRIDE



East Africa's Premier IT Training Center

With over 15 years of excellence, Computer Pride delivers globally recognized certification programs from leading technology vendors. Located on Kenyatta Avenue in Nairobi's CBD, our state-of-the-art facilities and expert instructors have empowered thousands of professionals across East Africa.

15+

Years of Excellence

10,000+

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READY TO ENROL?

Take the next step in your technology career.

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