

IBM Apache Kafka Administration by Confluent

Cursusduur: 3 Dagen Cursuscode: ADMINKAFKAG Trainingsmethode: Virtual Learning

Beschrijving:

Gain hands-on expertise in Apache Kafka and the Confluent Platform.

Learn to deploy, secure, and optimize clusters using proven industry standards, and build seamless data pipelines with Kafka Connect through practical, scenario-based exercises.

Throughout the course, hands-on exercises reinforce the topics being discussed. Exercises include: Using Kafka- s command-line tools Exploring configuration Using Kafka- s administrative tools Tuning Producer and Consumer performance Securing the cluster Building data pipelines with Kafka Connect

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Virtueel en Klassikaal™

Virtueel en Klassikaal™ is een eenvoudig leerconcept en biedt een flexibele oplossing voor het volgen van een klassikale training. Met Virtueel en Klassikaal™ kunt u zelf beslissen of u een klassikale training virtueel (vanuit huis of kantoor) of fysiek op locatie wilt volgen. De keuze is aan u! Cursisten die virtueel deelnemen aan de training ontvangen voor aanvang van de training alle benodigde informatie om de training te kunnen volgen.

Doelgroep:

This course is designed for System Administrators and Operations staff responsible for building, managing, monitoring, and tuning Kafka clusters and components of Confluent Platform. Architects and DevOps staff who want a tour on how the Central Services (Kafka, KRaft, Schema Connect, Registry, etc.) work are also welcome.

Doelstelling:

- During this hands-on course you will learn how:
 - To set up, manage, monitor and tune your cluster
- Kafka and the Confluent platform work, and how their main subsystems interact
 - To use industry best practices developed by the world- s foremost Apache Kafka experts

Vereiste kennis en vaardigheden:

Attendees should have a working knowledge of the Kafka architecture. It is also important to have strong knowledge of Linux/Unix and understand basic TCP/IP networking concepts. Familiarity with Java Virtual Machine (JVM) is helpful. Participants are required to provide a laptop computer with unobstructed internet access to fully participate in the class.

Examens en certificering

- None

Vervolg cursussen:

- None recommended

Cursusinhoud:

Bridging From Fundamentals

- Fundamentals Review
- Replication Review

Replicating Data: A Deeper Dive

- Which messages can be consumed-
- Managing Replica Placement
- Partition Leadership Tracking
- Partition Follower Responsiveness

Producing Messages Reliably

- Message Production Acknowledgement
- Dealing with same-session duplicates in Producers
- Transactional Messages Production

Providing Durability in Other Ways

- How Kafka Organizes Partition Data Files in Local Storage
- Beyond Local Storage (Tiered Storage)
- Persistence of Consumer Offsets

Configuring a Kafka Cluster

- Static Kafka Server Configuration
- Dynamic Server Configuration
- Topic Dynamic Configuration Overrides

Managing a Kafka Cluster

- Notes on Installation and Upgrading
- Kafka Server Roles: Controllers and Brokers (KRaft)
- Basics of Kafka Monitoring
- Message Retention Policies
- Replica Workload Management (Self-Balancing Cluster)
- Elastic Cluster: adding and removing Brokers

Balancing Load with Consumer Groups

- How do Partitions and Consumer Scale
- How does Kafka Manage Consumer Groups

Introduction to Performance Optimization

- Sending Multiple Messages in one Request (Batching)
- Broker Anatomy for Produce and Fetch Requests
- Metrics and Configuration related to Broker Anatomy
- Client Quotas
- Performance Tests

Securing a Kafka Cluster

- Security Concepts applicable to Kafka
- Options to Secure Kafka/Confluent Deployments
- Authorization (Access Control Lists - ACL)

Kafka Connect

- Concepts related to Kafka Connect
- Connect Workers and Connector Configuration
- Finding and Deploying Connectors

Deploying Kafka in Production

- Reference Architecture for Apache Kafka and the Confluent Platform
- Capacity Planning

Extra informatie:

Official course book provided to participants

Nadere informatie:

Neem voor nadere informatie of boekingen contact op met onze Customer Service Desk 030 - 60 89 444

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