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# Preparatory training for Kafka CCDAK® certification

ALL-IN-ONE: EXAM INCLUDED IN COURSE FEE

2 days (14 hours)

## Presentation

Kafka is a distributed messaging system for Big Data event flows. Our Confluent Certified Developer for Apache Kafka® certification course will help you pass the exam with ease.

In this hands-on training course, you'll learn all the practical and theoretical skills you need to pass CCDAK® certification.

You'll learn about Zookeeper, Kafka Streams / KSQL, Kafka Connect and Confluent Schema Registry / Rest Proxy. You'll also learn about security features such as TLS encryption and monitoring functions for your applications.

The exam is included in the price of the course, and you can be certified at the end of the program.

As with all our training courses, our CCDAK® certification course will introduce you to the latest version and its new features: kafka 3.9.

## Objectives

- Pass the CCDAK® exam
- Mastering Kafka Stream and data processing
- Master Confluent Schema Registry and Rest Proxy.
- Mastering security in your Kafka applications

## Target audience

- Data Scientists
- Developers
- Architects
- System administrators

## Prerequisites

- Basic knowledge of a Unix system
- Basic knowledge of Kafka
- Knowledge of modern development languages: Java, Python and Scala
- Test My Knowledge

## Technical requirements

- Machine running Linux or MacOS
- Have Java installed

## OUR Kafka CCDAK® TRAINING PROGRAM

### INTRODUCTION TO KAFKA

- Introducing Apache Kafka and its role in real-time data processing
- Understanding brokers, subjects, scores and shifts
- Basic architecture and components (including Zookeeper)
- Installation and configuration of a basic Kafka environment
- Exploring the command line interface

### FUNDAMENTALS OF MESSAGE PRODUCTION AND CONSUMPTION

- Configuring and using Kafka producers and consumers
- Basic security for producers and consumers
- Message delivery semantics in Kafka
- Common error handling and troubleshooting
- Practical exercises with Kafka CLI to produce and consume messages

### KAFKA STREAMS AND DATA PROCESSING

- Introduction to Kafka Streams for real-time data processing
- Create stateful and stateless streaming applications
- Using transformations, aggregations and joins in streams
- Stream integration with existing applications
- Case studies on processing and manipulating data flows

### KAFKA CONNECT AND INTEGRATION

- Configuring and managing Kafka Connect
- Create connectors for importing and exporting data
- Integration with external databases and applications
- Monitoring and optimization
- Practical work on using Kafka Connect in real-life scenarios

### CONFLUENT SCHEMA REGISTRY AND REST PROXY

- Using Confluent Schema Registry to manage Avro schemas
- Schema Registry integration with Kafka producers and consumers
- Using Confluent REST Proxy for HTTP access to Kafka clusters
- Security and advanced REST proxy configuration
- Handling and querying data streams with KSQL

### SAFETY AND MONITORING IN KAFKA

- Setting up TLS encryption and client authentication
- Configuring ACLs for authorization
- Monitoring and tuning the performance of producers and consumers
- Using Kafka metrics for monitoring
- Strategies for securing a Kafka cluster in production

## Companies concerned

This course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

## Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

## Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

## Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

## Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

## Sanction

A certificate will be issued to each trainee who completes the course.