CONFLUENT

Confluent Certified Developer for Apache Kafka®

Certification

Introduction

This examination is based upon the most critical job activities that a Confluent Apache Kafka® Developer performs. The skills and knowledge certified by this examination represent a level of expertise where a Certified Developer can publish data to and subscribe to data from an Apache Kafka® cluster, and effectively use Apache Kafka® to develop streaming applications. The individual taking this exam should understand the role of Apache Kafka® in the modern data distribution pipeline, be able to discuss core Apache Kafka® architectural concepts and components and review the Apache Kafka® developer APIs.

This examination is designed for Software Engineer, Data Engineer/Analyst/Administrator and Developer. The test specification addresses the knowledge and skill areas that demonstrate proficiency as a Confluent Developer for Apache Kafka®. The basic knowledge and skills required at this level should include all of the following areas and objective components below. The knowledge level can be defined as having:

Product Knowledge:

- Understanding of:
  - Apache Kafka® basic principles
  - Data replication
  - Data retention
  - Apache Kafka® security
  - Topics, partitions and offsets (data model)
  - Client configuration and tuning (batching and parallelism)
  - Apache Kafka® tools and APIs
  - Application metrics
  - Error handling (retryable v. non-retryable)
  - Message headers
  - Kafka Connect

General IT Knowledge:

- Fluency in programming languages such as Java, Python or C#
- Understanding of:
  - Serialization formats (Avro, JSON, Proto)

- Schema evolution
- Deploy applications including KStreams for example: Docker/Kubernetes
- Message keying
- Key hashing
- Data modeling
- Data security (encryption)
- Distributed systems
- Performance tuning and scaling

Exam Content

Certification Outline	Break Down by %
Section 1: Apache Kafka® Fundamentals	23%
Section 2: Apache Kafka® Application Development	28%
Section 3: Apache Kafka® Streams	12%
Section 4: Kafka Connect	15%
Section 5: Application Testing	8%
Section 6: Application Observability	13%
	100%

The exam validates a candidate's ability to complete the following tasks:

- Connect to a secured Apache Kafka® cluster
- Produce and consume from topics
- Model Apache Kafka® datasets
- Define topic configurations like partitions
- Understand compression
- Understand the Apache Kafka® Admin API
- Deploy Apache Kafka® clients
- Test Apache Kafka® client applications
- Tune Apache Kafka® applications
- Write Apache Kafka® streams applications
- Understand serialization and deserialization (SerDe)
- Monitor applications
- Implement processing semantics such as exactly once / at least once
- Configure and deploy connectors
- Troubleshoot Apache Kafka® applications
- Work with Apache Kafka® from the command line
- Understand Apache Kafka® core concepts including partitions, topics, and ordering
- Understand Kafka Connect core concepts including sink, source, and CDC

Note: This examination blueprint includes weighting, test objectives, and example content. Example topics and concepts are included to clarify the test objectives; they should not be construed as a comprehensive listing of all of the content of this examination.

Out of Scope

The following topics are out of scope for the exam:

- Confluent components (RBAC\ksqlDB\CFK)
- System specific connectors
- Plugins and extensions
- Networking
- Administer and deploy Kafka
- Infrastructure provisioning

Deepen your knowledge

- Leverage the following courses to ensure hands-on in-person learning experience:
  - Developing with Confluent (3-day Instructor led-training class)
- Round out your skills by leveraging the following resources that cover many of the topics on the exam:
  - Confluent Fundamentals Accreditation Test your Fundamental Confluent Kafka knowledge
  - Apache Kafka Fundamentals Learning Path
  - Kafka Connect 101 Learning Path
  - Designing Events and Event Streams
  - Practical Event Modeling
  - Kafka Streams 101
  - Designing Event Driven Microservices

Exam Outline

Response Limits

The examinee selects, from four (4) or more response options, the option(s) that best completes the statement or answers the question. Distractors or wrong answers are response options that examinees with incomplete knowledge or skill would likely choose and are generally plausible responses fitting into the content area defined by the test

objective.

Test item formats used in this examination are (see sample question below):

- **Multiple-choice:** The examinee selects one option that best answers the question or completes a statement. The option can be embedded in a graphic where the examinee “points and clicks” on their selection choice to complete the test item.
- **Multiple-response:** The examinee selects more than one option that best answers the question or completes a statement.
- **Matching :** The examinee will have a list of items tied to a topic that will each need to be matched with the best answer
- **Build List:** The examinee will have a list of items tied to a process that will need to put into the appropriate order