The Apache Kafka Certification Training course provides an overview of Kafka Architecture, Installation and Configuration. The course enables the delegates to gain expertise in Apache Kafka and become a successful Kafka Big Data Developer. The course covers both fundamental concepts and advanced topics of Kafka like Kafka API, Kafka Cluster, Kafka streams, Kafka Connect, Kafka integration with Storm, Spark and Hadoop. During the course, the delegates will be introduced to Kafka Internals, Partition Allocation, Kafka Multi-Cluster Architectures, Mirroring, and ZooKeeper Coordination, Kafka Connect API, Kafka Monitoring, Stream Processing, Kafka Streams & Kafka Streams API, different types of Programming Paradigm. Lastly, the course familiarises delegates to Apache Hadoop, Apache Storm, Spark Ecosystem and Hadoop Architecture. The course also enables delegates to integrate Kafka with Hadoop, Storm, and Spark and also integrate Kafka with Talend, Flume and Cassandra.

Apache Kafka is an open-source stream processing platform for processing Big Data in real-time. The Apache Kafka Certification Training course helps the delegates in gaining knowledge of Apache Kafka including architecture, topics and partitions, Performance Tuning, producers and consumers, use cases for Kafka, creating producers and consumers using the Java API. By the completion of the course, the delegates will be able to install ZooKeeper and Kafka, understand the role of ZooKeeper, classify different type of Kafka Clusters, construct a Kafka Producer, configure Producers, create & handle Partitions, define Kafka Consumer and Consumer Groups, configure Kafka Consumer and implement different Types of Commit.

Prerequisites

The delegates must have a fundamental knowledge of Java concepts before attending the course.

Course Objectives

- Get insights into Kafka, its architecture and components
- Learn how to integrate Kafka with Spark and Storm (real time streaming systems)
- Use Kafka to produce and consume messages from various sources like Twitter (real time streaming sources)
- Implement Twitter Streaming with Kafka, Storm, Flume and Hadoop
- Along with Hadoop and YARN cluster, create end to end Kafka cluster
- Understand the fundamental and advanced features while developing high performing messaging system
- Understand Kafka API and Kafka Stream APIs

Introduction to Big Data

Overview of Kafka

- Publish/Subscribe Messaging
- Enter Kafka

- The Data Ecosystem

Installing Kafka

- Installing Java and Zookeeper
- Installing Kafka Broker
- Broker Configuration
- Hardware Selection
- Kafka Clusters

Kafka Producers

- Creating a Kafka Producer
- Sending Message to Kafka
- Configuring Producers
- Serializers
- Partitions

Kafka Consumers

- Create a Kafka Consumer
- Pool Loop
- Configuring Consumers
- Commits and Offsets
- Rebalance Listeners
- Deserializers

Kafka Internals

Reliable Data Delivery

- Reliability Guarantees
- Replication
- Broker Configuration
- Using Producers and Consumers in a Reliable System

Building Data Pipelines

Cross-Cluster Data Mirroring

- Use Cases of Cross-Cluster Mirroring
- Multicluster Architectures
- Apache Kafka's MirrorMaker

Administering and Monitoring Kafka

Stream Processing

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- Stream-Processing Concepts
- Stream-Processing Design Patterns
- Kafka Streams: Architecture Overview

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