

TechyEdz Solutions

A Blended Learning Approach



Apache Cassandra

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APACHE KAFKA



COURSE OVERVIEW:

Apache Kafka is an open-source stream processing platform and a high-performance real-time messaging system that can process millions of messages per second. It provides a distributed and partitioned messaging system that is highly fault tolerant. This Kafka Training course will guide participants through Kafka architecture, installation, interfaces and configuration on their way to learning the advanced concepts of Big Data.



COURSE OUTLINE:

1. GETTING STARTED

- 1.1 Introduction
- 1.2 Use Cases
- 1.3 Quick Start
- 1.4 Ecosystem
- 1.5 Upgrading

2. APIS

- 2.1 Producer API
- 2.2 Consumer API
- 2.3 Streams API
- 2.4 Connect API
- 2.5 Admin API

3. CONFIGURATION

- 3.1 Broker Configs
- 3.2 Topic Configs
- 3.3 Producer Configs
- 3.4 Consumer Configs
- 3.5 Kafka Connect Configs
- 3.6 Kafka Streams Configs
- 3.7 AdminClient Configs

4. DESIGN

- 4.1 Motivation
- 4.2 Persistence
- 4.3 Efficiency
- 4.4 The Producer
- 4.5 The Consumer
- 4.6 Message Delivery Semantics
- 4.7 Replication
- 4.8 Log Compaction
- 4.9 Quotas

5. IMPLEMENTATION

- 5.1 Network Layer
- 5.2 Messages
- 5.3 Message format
- 5.4 Log
- 5.5 Distribution

6. OPERATIONS

- 6.1 Basic Kafka Operations
 - Adding and removing topics
 - Modifying topics
 - Graceful shutdown
 - Balancing leadership
 - Checking consumer position
 - Mirroring data between clusters
 - Expanding your cluster
 - Decommissioning brokers
 - Increasing replication factor
- 6.2 Datacenters
- 6.3 Important Configs
 - Important Client Configs
 - A Production Server Configs
- 6.4 Java Version
- 6.5 Hardware and OS
 - OS
 - Disks and Filesystems
 - Application vs OS Flush Management
 - Linux Flush Behavior

- Ext4 Notes
- 6.6 Monitoring
 - Selector Monitoring
 - Common Node Monitoring
 - Producer Monitoring
 - Consumer Monitoring
 - Connect Monitoring
 - Streams Monitoring
 - Others
- 6.7 ZooKeeper
 - Stable Version
 - Operationalization

7. SECURITY

- 7.1 Security Overview
- 7.2 Encryption and Authentication using SSL
- 7.3 Authentication using SASL
- 7.4 Authorization and ACLs
- 7.5 Incorporating Security Features in a Running Cluster
- 7.6 ZooKeeper Authentication
 - New Clusters
 - ZooKeeper SASL Authentication
 - ZooKeeper Mutual TLS Authentication
 - Migrating Clusters
 - Migrating the ZooKeeper Ensemble
 - ZooKeeper Quorum Mutual TLS Authentication
- 7.7 ZooKeeper Encryption

8. KAFKA CONNECT

- 8.1 Overview
- 8.2 User Guide
 - Running Kafka Connect
 - Configuring Connectors
 - Transformations
 - REST API
- 8.3 Connector Development Guide

9. KAFKA STREAMS

- 9.1 Play with a Streams Application
- 9.2 Write your own Streams Applications
- 9.3 Developer Manual
- 9.4 Core Concepts
- 9.5 Architecture
- 9.6 Upgrade Guide

WHO SHOULD ATTEND

The Apache Kafka course is suitable for many roles, including:

- Professionals aspiring for a career in Big Data
- Analytics professionals, research professionals, IT developers, testers and project managers
- Students
- Individuals looking for a change in career

PREREQUISITES

- Knowledge of any messaging system
- Basic knowledge of Java or any programming language
- Some knowledge of Linux- or Unix-based systems (not required)

Number of Hours: 45hrs

Key Features:

- One to One Training
- Online Training
- Fastrack & Normal Track
- Resume Modification
- Mock Interviews
- Video Tutorials
- Materials
- Real Time Projects
- Virtual Live Experience
- Preparing for Certification