



Apache Kafka

Content:**Part-1: Kafka EchoSystem**

1. Why apache kafka?
2. What is apache kafka?
3. Overview on Kafka API
 - ✓ Kafka Core
 - ✓ Kafka Connect
 - ✓ Kafka Streams
 - ✓ Kafka SQL Core
4. Kafka Installation
 - ✓ Single Node Cluster[Local and AWS Cloud]
 - ✓ Multi Node Cluster[AWS Cloud]

5. Kafka Storage Architecture

- ✓ Topics
- ✓ Partitions
- ✓ Replications
- ✓ Log Segments
- ✓ Message offsets and index

6. Kafka Cluster Architecture

- ✓ Zookeepers and Brokers
- ✓ Partition allocation and Fault Tolerance
- ✓ Leader Vs Follower

7. Kafka Producer

- ✓ Record



Apache Kafka

- ✓ Partitioner
 - ✓ Serializers and Deserializers -JSON Schema, AVRO Schema
 - ✓ Multi Thread Kafka Producer
 - ✓ Transactions in Kafka Producer
8. Kafka Consumers
 - ✓ Consumer Groups and Scalability
 - ✓ Consumer Partitions and Offset
 9. Error handling, Retry and Recovery
 10. Kafka Security Using SSL
 11. Fault Tolerance and data recovery

Part-2:

Kafka Streams

- ✓ Kafka Streams API
- ✓ Kafka Streams Architecture
- ✓ Understanding the States and Stores
- ✓ KTable
- ✓ KStream
- ✓ Streaming Joins

Application:

- Live Streaming Application Development Using SpringBoot3.x and Microservices

