

Course Name: Apache Kafka (3 Days)**Course Code:** IDCLKM122**Duration:** 3 Days (9 hours/Day)**Pre-Requisites:** Basics Programming Language Concepts, SQL etc.**Good to Have:** Core Java Programming knowledge

Day1	Day2	Day3
<u>Introduction to Streaming Platform</u> <ul style="list-style-type: none">• Understanding streaming data• Understanding streaming platform• Use cases of streaming data• Example of streaming platform <u>Introduction to Apache Kafka</u> <ul style="list-style-type: none">• Understanding Apache Kafka• Use case of Apache Kafka• Kafka- A Brief History <u>Core API of Apache Kafka</u> <ul style="list-style-type: none">• Producer API• Consumer API• Connector API• Streaming API <u>Kafka Runtime Architecture</u> <ul style="list-style-type: none">• Components in Kafka Cluster• Zookeeper• Producer• Consumer• Topic• Kafka Broker• Message Replication• Message Partitioning <u>Hands-on</u> <ul style="list-style-type: none">• Single Node Single Broker Kafka Cluster• Single Node Multiple Broker Kafka Cluster• Multi Node Multi Broker Kafka Cluster (Optional)	<u>Kafka Consumer Groups</u> <ul style="list-style-type: none">• Understanding Kafka Consumer Groups• Using Multiple Kafka Consumer Groups• Understanding Kafka Messaging Order <u>Kafka Producer Consumer API</u> <ul style="list-style-type: none">• Creating Custom Producer Application• Creating Custom Consumer Application <u>Event driven Architecture of Kafka</u> <u>Kafka Connector</u> <ul style="list-style-type: none">• File Connect• MySQL Connect• Implementing Change Data Capture(CDC) using MySQL as source and HDFS as Sink <u>Spark Kafka Integration</u>	<u>Kafka Streaming API</u> <ul style="list-style-type: none">• Data Processing using Kafka Streaming <u>Confluent Kafka</u> <ul style="list-style-type: none">• Introduction to Confluent Platform• Installation of Confluent Platform <u>Working with Confluent Platform</u> <ul style="list-style-type: none">• Starting services• Introduction to KSQLDB• Working with KSQL• DDL Statements• DML Statements• Concept of Streams and Table• Stream-Stream Join• Table-Table Join• Writing Stream Queries• Working with Confluent Control Center WebUI