

Oracle GoldenGate 12c: Integrate Big Data Ed 1

Course Duration: 24 Hours

Course code: Oracle GoldenGate 12c

1. Course Overview

This course introduces participants to Oracle GoldenGate 12c for Big Data integration. It covers how GoldenGate supports real-time replication and streaming into big data platforms such as Hadoop, Kafka, HDFS, Hive, and NoSQL systems. Learners will explore GoldenGate for Big Data adapters, configuration, monitoring, and integration techniques to deliver real-time analytics and operational intelligence.

2. What you'll learn?

By the end of this course, participants will be able to:

- Describe Oracle GoldenGate 12c Big Data architecture and features
- Configure GoldenGate to stream data into Big Data platforms
- Use GoldenGate Big Data adapters for Kafka, HDFS, Hive, and HBase
- Implement change data capture (CDC) for Big Data pipelines
- Monitor and troubleshoot GoldenGate Big Data replication
- Integrate GoldenGate with Hadoop ecosystem tools and streaming platforms
- Apply security, scalability, and best practices in GoldenGate Big Data deployments

3. Target Audience

- Data Engineers and Big Data Developers
- Database Administrators (DBAs)
- Integration Specialists
- Architects working with streaming and Big Data solutions

4. Pre-Requisites

- Knowledge of Oracle GoldenGate basics
- Familiarity with Oracle Database concepts

- Exposure to Big Data technologies (Hadoop, Kafka, HDFS, Hive)
- Basic Linux/Unix administration skills

5. Course content

Module 1: Introduction to Oracle GoldenGate for Big Data

- Overview of GoldenGate 12c
- GoldenGate for Big Data architecture
- Supported targets and adapters

Module 2: GoldenGate Big Data Adapters

- Overview of adapters and handlers
- Configuring Big Data adapters
- Formatters and converters for Big Data

Module 3: Integrating with Apache Hadoop

- GoldenGate to HDFS integration
- GoldenGate with Hive
- GoldenGate with HBase

Module 4: Integrating with Apache Kafka

- Streaming data with Kafka handler
- Kafka producer configuration
- Schema evolution and message serialization

Module 5: GoldenGate with NoSQL and Other Targets

- GoldenGate integration with Cassandra
- MongoDB and other NoSQL databases
- REST-based integration

Module 6: Change Data Capture for Big Data

- CDC concepts in GoldenGate

- Real-time replication workflows
- Designing data pipelines for analytics

Module 7: Monitoring and Managing GoldenGate Big Data

- Monitoring GoldenGate Big Data performance
- Using log files and reports
- Troubleshooting common issues

Module 8: Security and Best Practices

- Configuring security in GoldenGate for Big Data
- High availability and scalability considerations
- Best practices for Big Data integration

Module 9: Case Studies and Use Cases

- Real-time analytics with GoldenGate and Kafka
- Operational reporting with Hadoop integration
- Data lake and cloud data warehouse integration