

# Oracle GoldenGate 12c: Advanced Configuration for Oracle Ed 1

**Course Duration: 32 Hours**

**Course code: Oracle GoldenGate 12c**

## 1. Course Overview

This course provides a strong foundation in Oracle GoldenGate 12c architecture, configuration, and administration for Oracle databases. Participants will learn how to capture, route, and deliver transactional data in real-time, design replication solutions, and implement high-availability environments using GoldenGate. Hands-on practices include installation, parameter configuration, process management, and troubleshooting replication.

## 2. What you'll learn?

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

- Describe advanced GoldenGate 12c concepts and configurations
- Implement complex replication topologies (cascaded, bidirectional, hub-and-spoke)
- Configure advanced parameter options for Extract and Replicat
- Use Integrated Extract and Replicat for Oracle
- Implement DDL replication and advanced filtering
- Tune GoldenGate performance for large-scale environments
- Manage GoldenGate security with encryption and credential stores
- Detect and resolve conflicts in bidirectional replication
- Apply advanced troubleshooting techniques for replication failures

## 3. Target Audience

- Senior Database Administrators (DBAs)
- Data Engineers and Architects
- Technical Consultants implementing complex replication
- Professionals responsible for high availability and disaster recovery using GoldenGate

## 4. Pre-Requisites

- Completion of Oracle GoldenGate 12c: Fundamentals for Oracle
- Strong knowledge of Oracle Database administration
- Proficiency in SQL and PL/SQL
- Familiarity with Linux/Unix administration

## 5. Course content

### Module 1: GoldenGate Advanced Concepts

- Review of GoldenGate architecture
- Advanced Extract and Replicat modes
- Integrated vs. Classic replication

### Module 2: Advanced Parameter Configuration

- Advanced Extract parameters
- Advanced Replicat parameters
- Filtering, mapping, and transformations
- Using macros and parameter templates

### Module 3: GoldenGate for DDL Replication

- Enabling DDL replication
- Configuring replication for schema changes
- Handling DDL conflicts

### Module 4: Integrated Extract and Replicat

- Oracle Integrated Capture process
- Oracle Integrated Replicat
- Performance tuning with Integrated mode

### Module 5: Advanced Topologies

- Bidirectional replication
- Hub-and-spoke configurations

- Cascaded replication
- Active-active replication use cases

#### Module 6: GoldenGate Security Enhancements

- Implementing encryption in trails
- Secure network transport
- GoldenGate credential store and wallet

#### Module 7: Conflict Detection and Resolution (CDR)

- Configuring CDR in GoldenGate
- Handling update and delete conflicts
- Strategies for conflict resolution

#### Module 8: GoldenGate Performance Tuning

- Tuning Extract and Replicat processes
- Parallelism and checkpoint tuning
- Monitoring and optimizing trail files

#### Module 9: GoldenGate Monitoring and Management

- Using GGSCI for advanced administration
- Oracle Enterprise Manager plug-in for GoldenGate
- Analyzing report and discard files

#### Module 10: Advanced Troubleshooting

- Diagnosing replication lag and bottlenecks
- Common errors and solutions
- Using logdump and trace files
- Recovering failed replication scenarios

#### Module 11: High Availability and Disaster Recovery

- GoldenGate with Data Guard integration
- Multi-master replication

- Designing resilient replication architectures

