

# Oracle GoldenGate 12c: Troubleshooting and Tuning Ed 1

**Course Duration: 32 Hours**

**Course code: D85725**

## 1. Course Overview

This course focuses on the diagnosis, troubleshooting, and performance tuning of Oracle GoldenGate 12c environments. It equips learners with the skills to identify, analyze, and resolve issues in replication processes, while also optimizing performance for large-scale deployments. Topics include monitoring Extract and Replicat processes, analyzing lag, tuning parameters, managing checkpoints, handling data consistency issues, and recovering failed processes. Hands-on labs provide real-world experience in resolving replication failures and enhancing GoldenGate performance.

## 2. What you'll learn?

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

- Understand the common failure points in GoldenGate replication
- Perform systematic troubleshooting for Extract and Replicat processes
- Analyze trail files, discard files, and logdump output for debugging
- Troubleshoot Integrated Extract and Replicat issues
- Diagnose and resolve lag and bottlenecks in replication
- Optimize GoldenGate parameters for performance
- Tune memory, checkpoints, and parallelism settings
- Use monitoring tools for proactive troubleshooting
- Apply best practices for high availability and scalability

## 3. Target Audience

- Senior Database Administrators (DBAs)
- GoldenGate Support Engineers
- System Integrators and Consultants
- Professionals managing large, complex Oracle GoldenGate environments

## 4. Pre-Requisites

### Completion of Oracle GoldenGate 12c: Fundamentals for Oracle

- Familiarity with Oracle Database administration
- Knowledge of GoldenGate advanced configuration concepts
- Experience with SQL and Linux/Unix

## 5. Course content

### Module 1: GoldenGate Troubleshooting Essentials

- GoldenGate architecture review
- Identifying failure points in Extract and Replicat
- Key diagnostic tools and logs

### Module 2: Extract Process Troubleshooting

- Common Extract failures
- Diagnosing connectivity issues
- Handling redo log and archive log problems
- Restart and recovery procedures

### Module 3: Replicat Process Troubleshooting

- Identifying mapping and transformation errors
- Handling duplicate records and data collisions
- Replicat abends and corrective actions

### Module 4: Integrated Capture and Replicat Issues

- Troubleshooting Integrated Extract
- Troubleshooting Integrated Replicat
- Managing Oracle Streams and LogMiner issues

### Module 5: Trail Files and Data Analysis

- Analyzing trail files with logdump
- Understanding discard files

- Interpreting report files for errors

#### Module 6: Lag and Bottleneck Analysis

- Identifying causes of replication lag
- Analyzing network and I/O bottlenecks
- Monitoring checkpoints and transaction sizes

#### Module 7: GoldenGate Tuning Fundamentals

- Parameter tuning for Extract and Replicat
- Memory and cache tuning
- Parallelism and performance optimization

#### Module 8: Checkpoint and Commit Tuning

- Checkpoint frequency and impact on performance
- Commit strategies for large transactions
- Fine-tuning checkpoints for stability

#### Module 9: Monitoring GoldenGate Processes

- Using GGSCI for process monitoring
- GoldenGate Monitor and Enterprise Manager integration
- Proactive alerting and notifications

#### Module 10: Advanced Troubleshooting Scenarios

- Handling out-of-sync data
- Resolving primary key and uniqueness conflicts
- Recovering from replication failures

#### Module 11: Best Practices for Troubleshooting & Tuning

- GoldenGate health checks
- Documentation and escalation procedures
- Designing for resiliency and scalability