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Oracle GoldenGate Replication Training

2 days (14 hours)

Presentation

Master Oracle GoldenGate in its entirety thanks to this comprehensive, structured and resolutely practical training course. From installation to multi-master replication, you'll learn how to deploy, supervise and optimize real-time data flows to meet the critical challenges of database availability, migration and synchronization.

You'll start with the fundamentals of GoldenGate: architecture, key processes (Extract, Pump, Replicat), replication types and capture modes. Objective: understand how the engine works and its use cases.

You'll learn step-by-step how to install and configure an Oracle-Oracle replication, manage database prerequisites and secure the environment. Practical workshops will enable you to validate your knowledge at each stage.

Advanced scenarios such as bidirectional replication, multi-target or heterogeneous architectures will be explored in depth, with a particular focus on conflict management and high availability.

As with all our training courses, this one will be presented with the latest Oracle [GoldenGate](#) updates.

Objectives

- Understand Oracle GoldenGate architecture, its role in real-time replication and its use cases in high availability, data migration and inter-system synchronization.
- Install, configure and supervise GoldenGate components (Manager, Extract, Pump, Replicat), while mastering data capture, transformation and application flows
- master unidirectional, bidirectional and heterogeneous replication mechanisms (Oracle to PostgreSQL, SQL Server, etc.), ensuring integrity, consistency and performance
- Be able to diagnose, correct and optimize replication processes using the following tools GoldenGate tools (GGSCI, Monitor, Veridata), ensuring resilience, auditability and flow security

- Apply best practices in structuring, access management, monitoring and documentation within a project logic, to become immediately operational on critical replication architectures.

Target audience

- Data Base Administrator

Prerequisites

- Mastering SQL fundamentals

Oracle GoldenGate Replication Training Program Introduction to

Oracle GoldenGate

- Positioning in the Oracle ecosystem
- Typical use cases
- Replication architecture
- Main processes: Extract, Pump, Replicate
- Trail files, checkpoints, metadata
- Unidirectional
- Bidirectional
- Broadcast, Consolidation, Cascading

Technical architecture and components

- Source vs. Target
- Data flow
- Logical mapping between databases
- Manager
- Extract
- Data Pump
- Replicat
- Classic Capture vs Integrated Capture
- Classic Replicat vs Integrated Replicat

Installation and configuration

- Supported versions
- User rights and initial settings

- Download and installation
- Environment settings (variables, folders)
- Launching the Manager
- Log activation
- GoldenGate user configuration

Setting up a replication environment

- Initial setup
- Defining tables to be captured
- Verification and start-up
- Intermediate trail file
- Filtering, transformation
- Source/target table mapping
- Collision management
- Transactional application
- Initial synchronization
- Data validation
- Process monitoring

Continuous replication management

- GoldenGate Command Interface (GGSCI)
- Statistics and reports
- Alerts and logs
- Disaster recovery
- Bidirectional collision management
- Retry mechanisms
- Critical parameters
- Compression, batch, parallelism
- Latency and throughput

Advanced replication scenarios

- Loop detection
- Conflict resolution
- Use of SQLEXEC, Conflict Detection & Resolution (CDR)
- Oracle to MySQL, SQL Server, PostgreSQL
- Limitations and adaptations
- Database consolidation
- n to 1 replication

Additional tools and functions

- Graphical replication development
- Deployment and versioning
- Centralized supervision
- Dashboards and alerts

- Source/target data comparison
- Synchronization and auditing

Security and best practices

- Trail encryption
- TLS authentication
- Roles and privileges
- File and process security
- Parameter export/import
- Configuration transfer

Case studies and practical workshops

- Installation, configuration and testing of unidirectional replication
- Configuration adaptation, data type mapping
- Crash simulation
- Lossless replication recovery

Companies concerned

This course is aimed at both individuals and companies, large or small, wishing to train their teams in a new, advanced IT technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the forthcoming course, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical training: 60% hands-on, 40% theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition

skills.

Certification

A certificate will be awarded to each trainee who has completed the entire course.