



## Oracle19c Goldengate Training

### Oracle GoldenGate Architecture

Describing Oracle GoldenGate Process Groups  
Explaining change Capture and Delivery (with and without a data pump)  
Explaining Initial Data Load  
Contrasting Batch and Online Operation  
Explaining Oracle GoldenGate Checkpointing  
Describing Commit Sequence Numbers (CSN)  
Describing Oracle GoldenGate Files and Directories

### Installing Oracle GoldenGate

Listing System Requirements  
Performing Installation  
Configuring Environment Variables  
Using GGSCI  
Running Oracle GoldenGate from the OS shell.

### Configuration Overview and Preparing the Environment

Reviewing Configuration Overview  
Configuring Manager Process  
Creating Source Definitions  
Preparing the Source Database  
Assigning Oracle Database Roles/Privileges Required  
Using DBMS\_GOLDENGATE\_AUTH Package

### Configuring Change Capture (Extract)

Reviewing Extract Overview  
Accessing Logs on Oracle ASM  
Accessing Logs Remotely  
Configuring Extract Tasks  
Adding Extract Group  
Editing Extract Parameters  
Extracting Use of Archived Transaction Logs  
Adding Trails



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## **Configuring Change Delivery (Replicat)**

Reviewing Replicat Overview  
Configuring Replicat Tasks  
Configuring a Sample Environment

## **Configuring Extract Trails and Files (Data Pump)**

Reviewing Extract Trails and Files Overview  
Describing Trail Formats  
Using Logdump for Viewing Trails  
Reversing the Trail Sequence  
Configuring and Using Data Pumps

## **Performing Initial Load**

Oracle GoldenGate Methods  
Listing Database-specific Methods  
Describing Resource Limitations  
Listing Advantages of Oracle GoldenGate Methods  
Configuring File Load Methods  
Configuring Direct Load Methods  
Handling Collisions with Initial Load

## **Editing Configuration Parameters**

Editing Parameter Files  
Contrasting GLOBALS versus Process Parameters  
Configuring GLOBALS Parameters  
Configuring Manager Parameters  
Configuring Extract Parameters  
Configuring Replicat Parameters

## **Oracle GoldenGate Integrated Capture/integrated Delivery**

What is Oracle GoldenGate Integrated Capture?



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Why it is Needed and What Additional Replication Features it Makes Possible

How to Prepare a Database for Integrated Capture – Creation of Users, Assignments of Roles and Privileges, etc

Oracle GoldenGate Integrated Capture Deployment Modes

Integrated Replicat/Apply Architecture

Integrated Replicat: How it works

Integrated Delivery in Detail

## **DDL Replication**

Reviewing Data Description Language Replication Overview

Configuring and Using Options for DDL Replication

Configuring and Using String Substitution in DDL

## **Bidirectional Replication**

Detecting Loops

Avoiding Conflicts

Configuring and Using Conflict Detection and Resolution

Describing Identity Types Issues

## **Filtering and Data Selection**

Filtering and Data Selection

Mapping Columns Between Different Schemas

Using Built-in "@" (at) Functions

Using SQLEXEC to Interact Directly with a Database

## **Additional Transformation Concepts**

Configuring and Using Macros

Configuring and Using User Tokens

Configuring and Using User Exits

Configuring and Using Oracle Sequences

## **Configuration Options**



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Configuring and Using BATCHSQL  
Configuring and Using Compression  
Configuring and Using Encryption  
Configuring and Using Event Actions

## **Troubleshooting Oracle GoldenGate**

Common Problems and Solutions

Process failures

Trail-file issues

Synchronization problems

Startup problems on source and target systems

Database configuration and availability issues

## **Conflict Detection and Resolution – Custom Techniques**

Primary Key Generation

Custom Conflict Resolution Techniques: Quantitative Methods for Conflict Resolution and Data Convergence

Automatic Conflict Resolution Based on Time stamp or Trusted Source

Automatic Data Convergence of Numeric Values Based on Additive Value or Average Value

## **Bidirectional Replication Conjunction with USEDELTA, USEMAX, and IGNORE:**

Bi-Directional Replication

Data Conflict Types

Getting Before Image Information from Source Database

Using RESOLVECONFLICT

Handling UPDATEROWEXISTS in Conjunction with USEDELTA, USEMAX, and IGNORE

Exceptions MAP Statement



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Creating and Populating Exception and Discard Tables

## **Data Mapping, Data Selection/Filtering and Data Transformation**

TABLE (for Extract) and MAP (for Replicat) Options Which Allow for Data Selection

COLMAP and COLMATCH Options

Exploring Simple Filtering (Achieved Through the WHERE Clause) and Complex Filtering (Using the FILTER Clause)

## **Conflict Detection and Resolution – Custom Techniques**

Workload Partitioning

Geographic or Topic-Based Segmentation

Primary Key Generation

Custom Conflict Resolution Techniques: Quantitative Methods for Conflict Resolution and Data Convergence

Automatic Conflict Resolution Based on Time stamp or Trusted Source

Automatic Data Convergence of Numeric Values Based on Additive Value or Average Value

## **Configuring Zero-Downtime Migration Replication**

Zero-Downtime Migration Prerequisites

Zero-Downtime Migration Topology

Configuring Initial Setup and Required Steps

Configuring Primary Extract, Data pump and Replicat for Fallback

Simulating fallback

## **Oracle GoldenGate Event Marker System**

Starting, Suspending, Stopping Processes, Performing a Transformation, Reporting Statistics, and Capturing Lag History Using Invoking Stored Procedures When Specific Events Occur Using SQLEXEC

Activating Tracing Following the Exceeding of a Data Threshold

Running OS Shell Commands at the Occurrence of Specific Data-Driven Events



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Extracting Details Analysis of the TABLE, MAP, FILTER, WHERE and SQLEXEC Statements

Implementing Event Marker Actions on the Extraction Side and on the Delivery Side of Replication

**For Any Clarification please feel free to contact @ +91 9867328291.**

Cheers,

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