

## Oracle GoldenGate 11g: Fundamentals for Oracle

**Duration:** 4 Days

### What you will learn

The Oracle GoldenGate 11g: Fundamentals for Oracle Edition 2 course focuses on Oracle-to-Oracle database replication. This course introduces the Oracle GoldenGate architecture as well as various product features. Participants learn to install Oracle GoldenGate and prepare the source and target environments. The course teaches how to use the Oracle GoldenGate command line interface (GGSCI) efficiently. Participants configure Change Capture (Extract), Change Delivery (Replicat), and Initial Load. They learn to extract trails and files using Data Pump, create parameter files, and to manage Oracle GoldenGate instances. Capture of both DML and DDL will be configured for both uni- and bi-directional replication.

Learn To:

- Install Oracle GoldenGate on Linux and Windows platforms
- Issue GGSCI commands
- Configure, start, stop, and monitor Change Capture and Delivery processes
- Manage Extract trails and files using Data Pump and logdump
- Create parameter files to transform data
- Manage multiple Oracle GoldenGate instances

This course is based on Oracle Golden Gate version 11.2.1.

### Audience

- Configuration Consultant
- Data Warehouse Administrator
- Data Warehouse Analyst
- Data Warehouse Developer
- Database Administrators
- Database Designers
- System Integrator
- Technical Consultant

### Related Training

#### *Required Prerequisites*

Familiarity with Oracle Database and basic SQL using SQL\*Plus.

#### *Suggested Prerequisites*

Familiarity with Linux text editors such as vi or gedit

### Course Objectives

Design replication solutions using Oracle GoldenGate products and environments

Install Oracle GoldenGate on Linux and Windows platforms (the labs are Linux)

Prepare the source and target database environments (assumes Oracle-to-Oracle replication)

Issue GGSCI commands (batch Obey scripts and command-line interactive)

Configure, start, stop, and monitor Change Capture (Extract)

Configure, start, stop, and monitor Change Delivery (Replicat)

Configure, start, stop, and monitor Initial Load

Manage Extract trails and files using Data Pump and utilities such as logdump

Control network transmission using compression and encryption

Create parameter files

Transform data

Manage multiple Oracle GoldenGate instances

## Course Topics

### Introduction

Discussing Required versus Suggested Knowledge

Listing Course Objectives

Discussing Course Non-Objectives (available as other follow-on courses)

### Technology Overview

Creating Oracle GoldenGate Topologies

Reviewing Oracle GoldenGate Use Cases

Assembling Building Blocks

Listing Supported OS

Listing Supported Databases

Listing the Oracle GoldenGate Product Line

Describing GUI Management Options

Listing Non-Database Sources and Targets

### 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

## **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

## **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

## **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**

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

### **Bidirectional Replication**

- Reviewing Bidirectional Considerations
- Detecting Loops
- Avoiding Conflicts
- Configuring and Using Conflict Detection and Resolution
- Describing Identity Types Issues

### **DDL Replication**

- Reviewing Data Description Language Replication Overview
- Configuring and Using Options for DDL Replication
- Configuring and Using String Substitution in DDL