Oracle GoldenGate 12c: Fundamentals for Oracle NEW

Duration: 4 Days

What you will learn

This Oracle GoldenGate 12c: Fundamentals for Oracle training focuses on Oracle-to-Oracle database replication. Expert Oracle University instructors will deep dive into the Oracle GoldenGate product suite, walking you through various product features. Oracle GoldenGate 12.3 for Oracle introduces the Microservices architecture, which allows for browser-based, REST interaction with Oracle GoldenGate. Both Classic and Microservices architectures are covered by the course, which starts by explaining replication concepts using the familiar, Classic architecture. After solid replication foundations and concepts are explained and explored, the course delves into Microservices, and students are made quickly familiar with the new architecture. Hands-on practices help solidify the theoretical knowledge acquired during the lessons. Students will implement end-to-end replication environments using both architectures, testing the established replication channels with real data, to verify that replication is taking place.

Learn How 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
Create, configure, manage and monitor replication environments using the Microservices Architecture

Benefits to You

Integrate your organization's disparate data across heterogeneous databases to facilitate sophisticated analysis and faster decision-making
Become more efficient at configuring and implementing Oracle GoldenGate. You'll learn to install both Classic and Microservices Oracle GoldenGate architectures and prepare the source and target environments.
Enrolling in this course teaches you how to use the Oracle GoldenGate command line interface (GGSCI) efficiently, as well as the new browser-based interface.
You'll learn GoldenGate configuration processes.
You'll also develop the knowledge and skills to configure Change Capture (Extract), Change Delivery (Replicat) and Initial Load. You'll learn how to extract trails and files using Extract Pump, create parameter files and manage Oracle GoldenGate instances.
Advantages and limitations of the newly introduced Microservices architecture will be analyzed in detail.
Special consideration will be given to unidirectional replication and capture/apply of both DML and DDL statements.

Explore New Features in 12.3

Features new to 12c, such as Parallel Replicat, and support for Database Sharding are highlighted along the way. This course is based on Oracle GoldenGate version 12.3.0.1. Please note that the labs are done in Linux.

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

Familiarity with editing Linux text files using gedit or vi

Suggested Prerequisites
Familiarity with basic encryption techniques

Course Objectives

Configure, start, stop, and monitor Change Capture (Extract), Change Delivery (Replicat), and Initial Load using the Classic architecture

Configure, start, stop, and monitor Change Capture (Extract), and Change Delivery (Replicat) using the Microservices architecture

Filter, map, transform and encrypt in-transit data

Design replication solutions using Oracle GoldenGate products and environments

Install Oracle GoldenGate and prepare the source and target database for replication (assumes an Oracle-to-Oracle environment)

Learn and make use of GGSCI commands

Use the browser-based interface to configure and manage replication occurring within a Microservices architecture

Manage Extract trails and files using utilities such as logdump

Introduction
Uses of Oracle GoldenGate
Reviewing Oracle GoldenGate Use Cases
Oracle GoldenGate Use-Cases for Oracle Database
Technology Overview
Topologies
Supported Platforms
Supported Databases
Oracle GoldenGate Technology Suite

Oracle GoldenGate Architecture
The Two Oracle GoldenGate Architectures
Classic Architecture
Extracts
Initial Loads
Checkpoints
The Interaction Between Oracle GoldenGate and Oracle RDBMS

Installing Oracle GoldenGate
Listing System Requirements
Performing Installation
Configuring Environment Variables
Using Oracle GoldenGate Software Command Interface (GGSCI)
Running Oracle GoldenGate from the OS shell.
Use Obey files to automate tasks

Preparing the Environment and Configuring Integrated Extract
Configuration Overview
Preparing the Environment
Enabling Oracle GoldenGate in the Database
Enabling Supplemental Logging
Defining Roles and Permissions
Starting the Manager
Configuring Data Capture

Configuring Initial Load
Initial Load Overview
Configuring Initial Load
Setting Up the Initial Load by Using the "File to Replicat" Method
Setting Up the Initial Data Load by Using the "Direct Load" Method

Configuring Change Delivery (Replicat)
Replicat Overview
Configuring Replicat Tasks
Adding Checkpoints
Using Checkpoints
Initial Load: Avoiding Collisions with Initial Load
Initial Load: Handling Collisions with Initial Load
Troubleshooting: GGSCI Process Information
Troubleshooting: Report FIles and Log FIles

Managing Extract Trails and Files
Trail Format: Local and Remote
Trail Format: Cleanup
Trail Format: Record Header Area
Trail Format: Record Data Area
Alternative Trail Formats: Logical Change Records (LCRs)
Alternative Trail Formats: Text, SQL, and XML
logdump: Opening, Viewing, and Filtering

Oracle GoldenGate Parameters
GLOBALS
Manager
Source Manager Parameters
Target Manager Parameters
Extract
Extract Parameters on the Source Database
Replicat
Options Common to Both Replicat and Extract

Data Selection and Filtering
Mapping and Manipulation
Definition Files
Data Selection
Where
Filter
Mapping
SQLEXEC

Additional Transformation and Configuration Options
Create and Invoke Macros
Set and Retrieve Useer Tokens
Run User Exits in GoldenGate Processes
Compress Data Across the Network
Encrypt Messages, Trails, and Passwords
Automatically Trigger Actions Based on Event Records

Installing Oracle GoldenGate Microservices Architecture
Identify and Describe the Various Components of the Oracle GoldenGate Microservices Architecture
List the Operating System Pre-Requisites Needed for a Microservices Architecture installation
Perform an Oracle GoldenGate Microservice Architecture Installation and Verify its Successful Completion

Oracle GoldenGate Microservices Architecture - Administration Server
Using the Administration Server Embedded Web Application to Create Extract and Replicat Groups
Accessing Extract/Replicat Process Parameters, Statistics, Checkpoints and Reports Using the Administration Server En

Oracle GoldenGate Microservices Architecture – Distribution Server
Using the Distribution Server Embedded Web Application to Create, Start and Stop Paths
Accessing the Data Path Parameters, Statistics, SCN / RBA Positions in Trail Files, and Data Filters Using the Distributio

Oracle GoldenGate Microservices Architecture - Receiver Server and Performance Metrics Server
The Role and Functionality of an MA Receiver Server
The Role and Functionality of an MA Performance Metrics Server

MA Admin Client

Using the Admin Client to Connect to an MA Deployment

Performing Common Administrative Tasks by Using the Admin Client

Database Sharding Support, Metadata Encapsulation, Replication Lag Management, Invisible Column Support

Database Sharding Concepts and GoldenGate MA Support for It

Metadata Encapsulation Features and Advantages

Implementing a Lag Management Policy

Handling Replication of Invisible Columns