Course Outline

Oracle GoldenGate 12c Microservices - Fundamentals for Administrators

Course Summary

Description

This 5-day course covers the infrastructure and architecture of both Oracle's GoldenGate software and related source and target databases as it affects replication and migration. In the class students will obtain the skill set required to design, deploy, install, and configure GoldenGate software. Students will learn "best practices" for managing GoldenGate in multiple scenarios. The course focuses not just on syntax but on real-world deployment issues including data security, performance tuning, debugging, trouble-shooting, and removal of GoldenGate from the environment.

Objectives

After taking this course, students will be able to:

- Have a working knowledge of implementation requirements for homogeneous and heterogeneous replication and migration.
- Create a GoldenGate Deployment using the Microservices Architecture
- Deploy and configure GoldenGate software connecting two database instances
- Run and manage Oracle GoldenGate software providing replication between database instances
- Using the Admin client
- Creating and managing a distribution path
- Learn basic troubleshooting skills for the GoldenGate environment
- Understand bi-directional replication

Topics

- Technology Overview
- Replication Architecture Overview
- The Microservices Architecture
- Installation and Deployment of Oracle GoldenGate software
- Oracle GoldenGate Configuration Management “Best Practices”
- Basic Troubleshooting, Exception Handling and Debugging
- Oracle GoldenGate DDL Replication Overview
- Bi-Directional Replication using GoldenGate
- System Clean-up

Audience

This course is designed for those wanting to obtain the skill set required to design, deploy, install, and configure GoldenGate software. Students will learn "best practices" for managing GoldenGate in multiple scenarios.

Prerequisites

There are no prerequisites for this course.

Duration

Five days

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I. Technology Overview
   A. Brief overview of database replication and migration technologies
   B. Review of database preparations for successful replication deployment
   C. Security features

II. Setting up a Deployment
   A. Adding users
   B. Creating a Self-Signed root certificate
   C. Creating the Deployment

III. Overview of the GoldenGate Microservices Architecture
   A. Overview of the Microservices Architecture Components
   B. Using the Admin Server
   C. Design and architectural considerations for basic replication, high availability and disaster recovery scenario

IV. Replication Architecture Overview
   A. Review of single, bi-directional, and multi-directional use cases
   B. Detailed examination of GoldenGate architecture, tools, and processes including trail files
   C. Design and architectural considerations for basic replication, high availability and disaster recovery scenarios
   D. Change Management and DDL Replication
   E. Review of initial load technologies, considerations, and configuration

V. Installation and Deployment of Oracle GoldenGate software
   A. Hands-on pre-installation steps for GoldenGate
   B. Hands-on GoldenGate software installation
   C. Hands-on post-installation review of the deployed GoldenGate infrastructure
   D. Hands-on configuration of GoldenGate parameters and parameter files
   E. Hands-on Initial data load

VI. Using the Admin Server
   A. Add credentials
   B. Add extracts
   C. Add replicats
   D. Setting up automation
   E. Viewing events

VII. Oracle GoldenGate Configuration Management "Best Practices"
   A. Deep dive into management "Best Practices"
   B. Hands-on change data capture management
   C. Hands-on Change Data Capture configuration
   D. Hands-on Change Delivery configuration
   E. Hands-on starting and stopping GoldenGate processes
   F. Hands-on running GoldenGate commands from the O/S shell
   G. Hands-on running GoldenGate commands in GGSCI
   H. Hands-on running GoldenGate commands from obey files
   I. Hands-on trail file management

VIII. Basic Troubleshooting, Exception Handling and Debugging
   A. Reporting and statistics collection
   B. Basic exception handling
   C. DDL replication errors
   D. Managing TCP/IP errors
   E. Troubleshooting GoldenGate environments
   F. Introduction to the LOGDUMP utility

IX. Oracle GoldenGate DDL Replication Overview
   A. Reporting and statistics collection
   B. Basic exception handling

X. Oracle GoldenGate Bi-Directional Replication Overview
   A. How to configure GoldenGate for Bi-Directional Replication
   B. Conflict Detection and Resolution
   C. Exception Handling

XI. System Clean-up
   A. Uninstalling GoldenGate from Linux/UNIX
   B. Uninstalling GoldenGate from the source and target database

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