

Introduction to Oracle 12c GoldenGate

by Ahmed Baraka

Introduction to Oracle Data Guard

In this lecture, we are going to talk about the basic concepts of Oracle Data Guard

Objectives

By the end of this lecture, you should be able to:

- Describe the Oracle GoldenGate features
- Describe the scenarios on which GoldenGate can be used
- List the Oracle GoldenGate topologies
- List the supported databases and operating systems
- List the Oracle GoldenGate Product Line products
- Compare between Oracle GoldenGate and Data Guard



What is Oracle 12c GoldenGate

- Real-time (almost) data replication and integration in heterogeneous IT environments.



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GoldenGate Features

- Heterogeneous sources and targets
- Tight integration with the Oracle Database
- Bidirectional replication
- High-performance data replication
- Conflict detection and resolution
- Real-time and deferred apply
- Flexible topology support
- Initial load capability



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GoldenGate Uses

- High availability: planned and unplanned failure
- DR and Data protection
- Data synchronization for distributed systems
- Real-time data integration
- Query offloading
- Verification between operational and analytical enterprise systems



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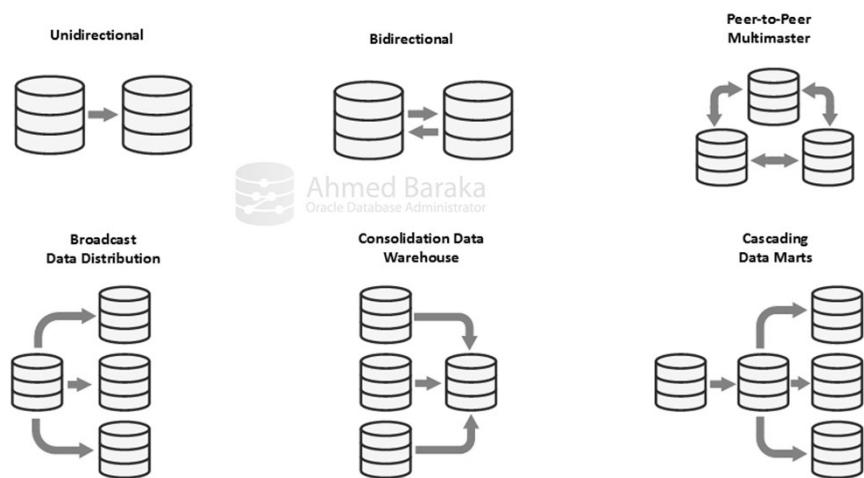
GoldenGate Uses (cont.)

- Eliminate down time for migrations and database upgrades
- Real-time data warehousing
- Operational up-to-date reports
- Operational data integration



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Oracle GoldenGate Topologies



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Supported Databases

- Oracle
- MySQL
- IBM DB2
- Microsoft SQL Server
- Sybase ASE
- Teradata
- Enscribe
- SQL/MP
- SQL/MX
- JMS message queues
- TimesTen
- Flat File products

Always check the certification matrix.



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Supported Operating Systems

- Linux
- Windows
- Oracle Solaris
- HP NonStop
- HP-UX
- HP OpenVMS
- IBM AIX
- IBM z/OS
- IBM iSeries
- z/linux

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Oracle GoldenGate Product Line

- Oracle GoldenGate
- Oracle GoldenGate Studio
- Management Pack for GoldenGate: add-on
 - Oracle GoldenGate Director
 - Oracle GoldenGate Monitor
- Oracle GoldenGate Veridata
- Oracle GoldenGate Application Adapters
- Oracle GoldenGate for Big Data
- Oracle GoldenGate Cloud Service



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Enterprise Manager Cloud Control

- Oracle Enterprise Manager can be used to manage Oracle GoldenGate.



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Oracle GoldenGate and Data Guard

	GoldenGate	Data Guard
High Availability	YES	YES
Query Offload	YES	YES
Supports unidirectional full database replication	YES	YES
Works in heterogeneous environment	YES	NO
You can define data set to replicate	YES	NO
Supports Bidirectional Replication	YES	NO
Works outside of the Database Engine	YES	NO
Supports data transformation	YES	NO

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Oracle GoldenGate on Oracle Database

- Many data types are supported
 - Fusion Middleware Installing and Configuring Oracle GoldenGate for Oracle Database
- Supported operations: insert, update, and delete on regular tables, IOT, clusters, and materialized views.
- Limitations:
 - Virtual columns
 - EXTERNAL Tables
 - Tables created with table compression
 - Materialized views created with ROWID



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Summary

In this lecture, you should have learned how to:

- Describe the GoldenGate features
- Describe the scenarios on which GoldenGate can be used
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