

A wide-angle photograph of the Golden Gate Bridge in San Francisco. The bridge's iconic orange-red towers and suspension cables are prominent against a clear blue sky. The bridge spans across a body of water, with a thick layer of fog or mist partially obscuring the lower sections and the distant tower. The surrounding landscape includes green hills and rocky outcrops.

OCI Golden Gate

The best in-class Data Replication



Alexandre Fagundes
Cloud Architect, Oracle Corporation



Safe harbor slide



The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions.

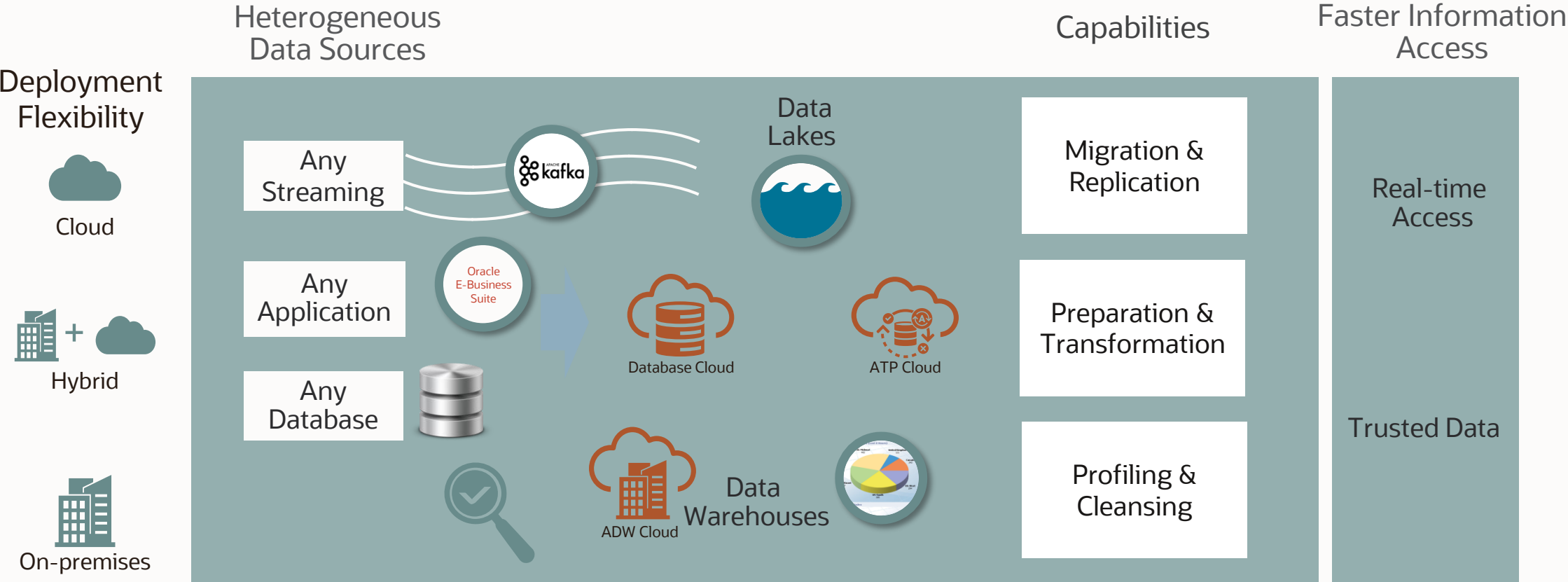
The development, release, timing, and pricing of any features or functionality described for Oracle's products may change and remains at the sole discretion of Oracle Corporation.

Agenda

- 1 **Data Replication challenges**
- 2 **OCI GoldenGate**
- 3 **Concepts**
- 4 **Summary**

Data Replication Challenges Nowadays

Move and transform data for advance analysis

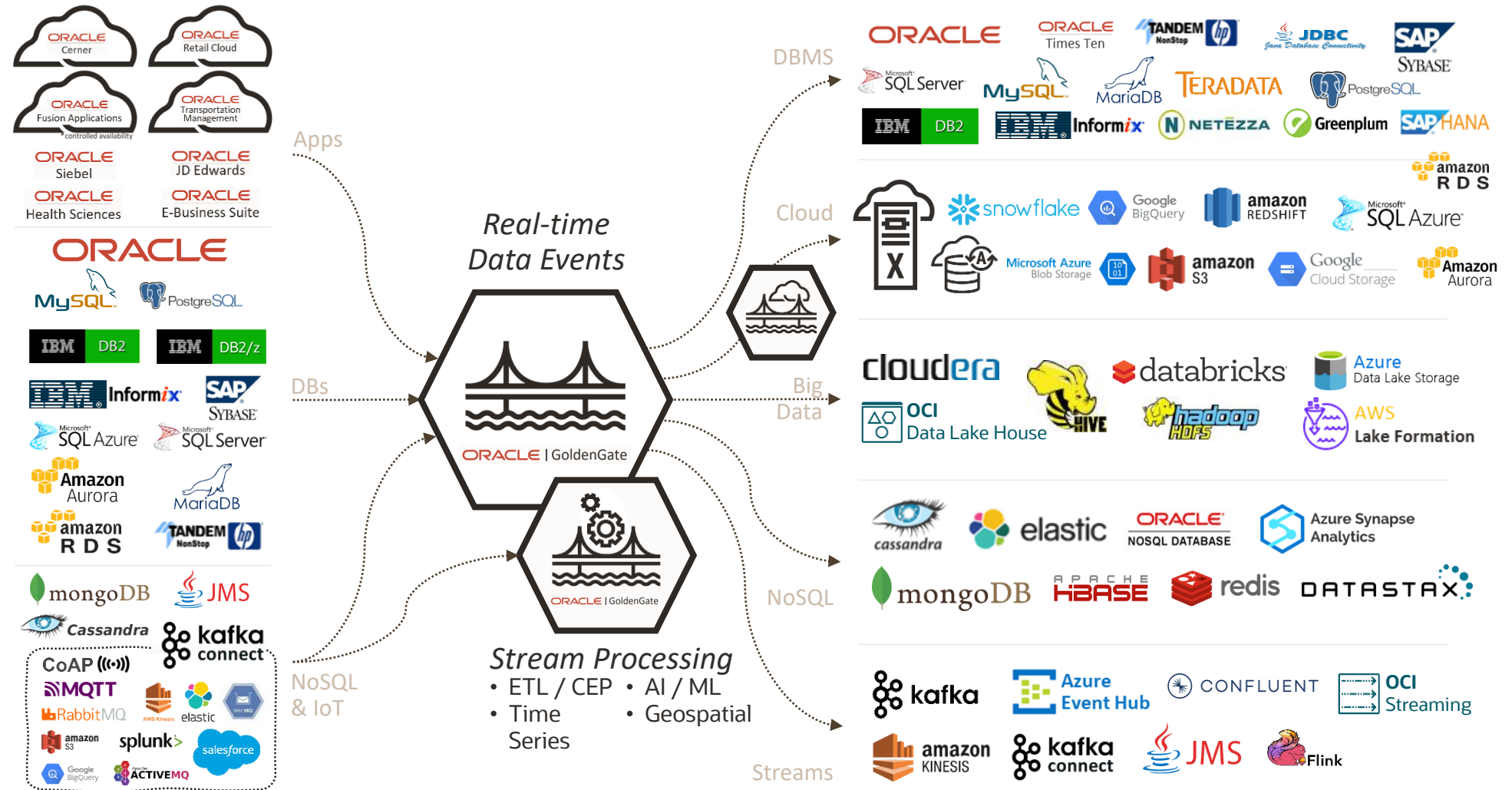


Oracle GoldenGate

Real-time data replication



1000+ combinations of supported data platforms



Oracle Cloud Infrastructure GoldenGate

Market-leading real-time data solution is also available as a fully managed service



Industry Leader for Real-Time Data Events

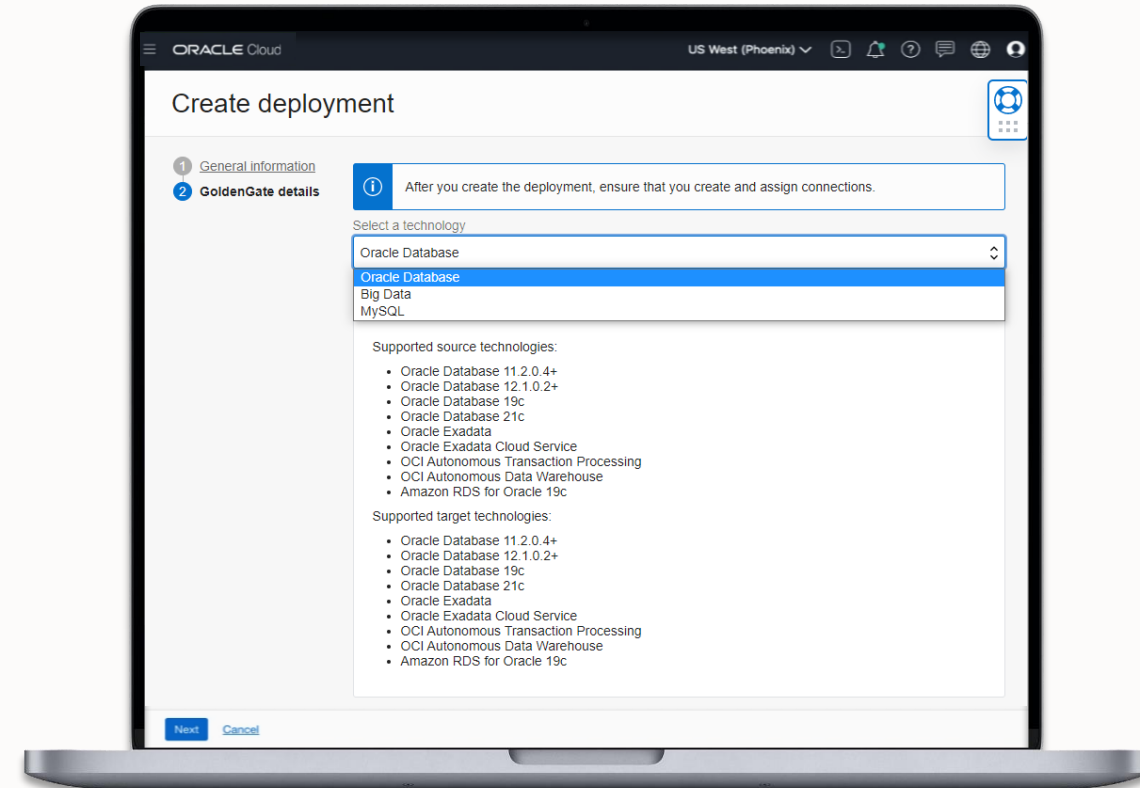
- Powered by the latest GoldenGate 21c microservices architecture

Cloud Native

- Fully managed by Oracle: upgrades, patching, etc.
- Auto-scale: true cloud elasticity, low operations cost
- Connect to the most popular Oracle, MySQL, MariaDB, and Big Data technologies

Differentiated Use Cases

- Active-active, real-time data warehouse, data lake, data lakehouse, data mesh and more...
- Capture or deliver data with Autonomous DBs
- Sources and targets may be running in Oracle Cloud, on-premises, and 3rd party Cloud



GoldenGate Enhancements



ORACLE | GoldenGate

GoldenGate 12.2

- Big Data Delivery
- Meta Data in Trail
- Automated Heartbeat Table
- Parameter File Validation
- Oracle Data Pump Integration

12.2

OGG for
Big Data

GoldenGate 12.3

- Oracle Database 12.3
- Microservices Architecture
- Parallel Replicat
- Auto CDR
- Sharding Support
- Procedural Replication
- More Sources/Targets

12.3

Microservices
Architecture

GoldenGate 18.1

- Oracle Database 18c
- Delivery to ADW and ATP
- Identity Column Support
- In-Row Database Archival support

18c

Stream
Analytics

GoldenGate 19.1

- Oracle Database 19c
- Microservices Security
- Cross Endian Remote Capture for Oracle
- Easier Upgrades
- More Sources/Targets

19c

LTS Release

Cloud
Marketplace
Deployments

GoldenGate 21.3 & 21.6

- Oracle Database 21c
- Microservices for non-Oracle and Big Data
- New Auto-CDR rules
- Auto-Capture on Oracle DB
- More Sources/Targets
- Simplified Installation

21c

Innovation Release

Fully Managed
Gen2 Cloud



Fully managed, reduced operational overhead

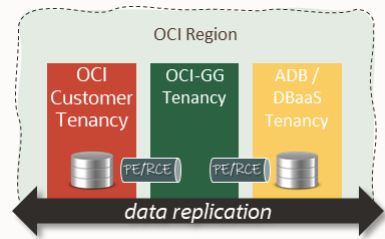


		GoldenGate	GG OCI Marketplace	OCI GoldenGate
Solution Management				
	Create and Manage GoldenGate Deployments	<----- customer responsibility ----->		
	Create and Manage Connections	Customer Managed	Customer Managed	Auto Assigned
	Dependency JAR Files	Customer Managed	Customer Managed	Pre-Installed
	Replicat Configuration	Customer Managed	Customer Managed	Simplified
Platform Services				
	Oracle Cloud Automations	Not Available	Not Available	Oracle Managed
	Automatic Scaling (up to 3x)			
	OCI Monitoring / Service Telemetry			
	Metering and Billing per second			
	Full REST API for Control Plane and Data Plane	Customer Managed	Customer Managed	
	Disaster Recovery, Backup and Restore			
	Upgrades and Patching			
	Private Endpoints and Secure Vault			
	Wallet Integration w/Autonomous DB			
	Operating System Administration			
Infrastructure Management				
	Virtualization & Terraform Stack Automation	Customer Provided	Oracle Provided	Oracle Provided
	Install / Rapid Provisioning			
	Server Administration			
	Storage and Durability Guarantees			
	Core Networking			

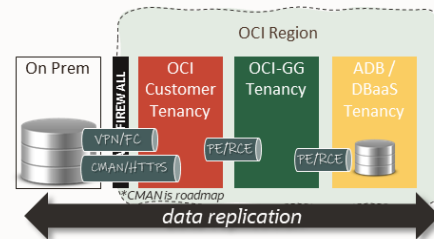
OCI GoldenGate supported use cases



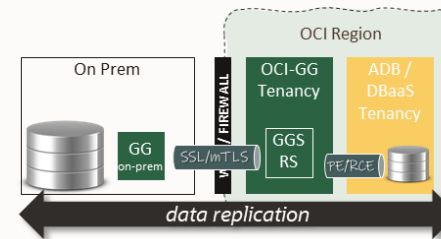
1: OCI DB to OCI DB



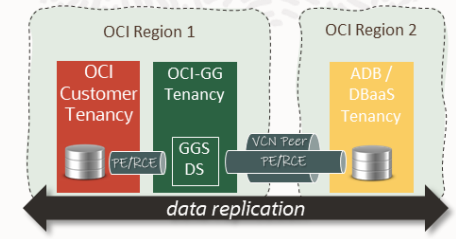
2a: On-prem to OCI (SQL*net)



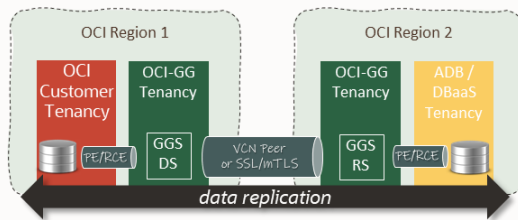
2b: On-prem to OCI (Dist→Rec)



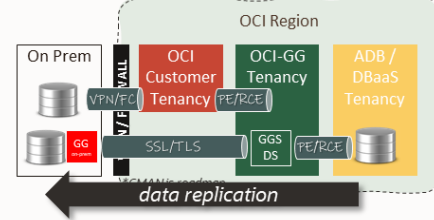
3a: Cross-Region (SQL*Net)



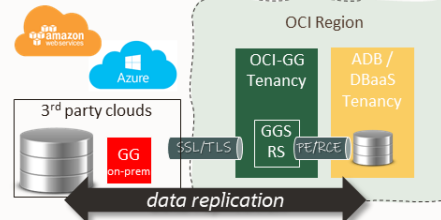
3b: Cross-Region (Dist→Rec)



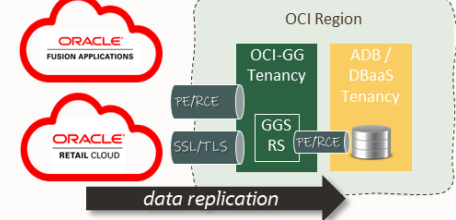
4: Autonomous to On-Prem



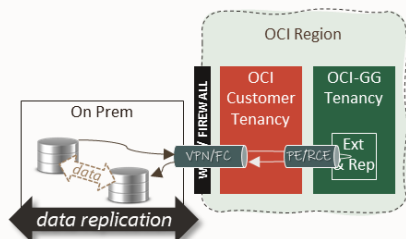
5: Non-Oracle Cloud to OCI



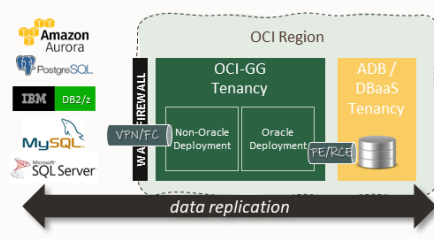
6: SaaS to OCI



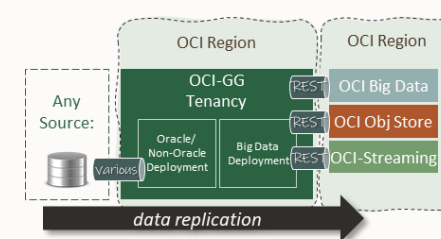
7: On-prem to On-prem



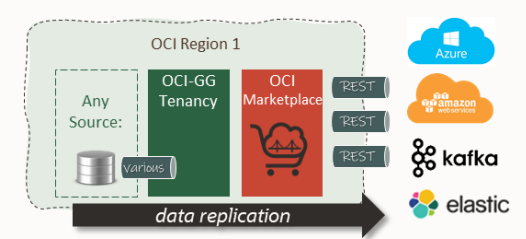
8: Non-Oracle DBs to OCI



9: Any to OCI Non-Relational



10: Stream Analytics to Other Clouds



OCI GoldenGate

Concepts

Deployment

A container for your OCI GoldenGate resources, such as the OCI GoldenGate Deployment Console

When you create an OCI GoldenGate deployment, you must select how many OCPUs the deployment will use.

Enabling Auto Scale ensures additional OCPUs are available when they're needed. You're only billed when the additional OCPU cycles are consumed

Auto scaling enables OCI GoldenGate to scale up to three times the number of OCPUs you specify for OCPU Count, up to 24 OCPUs

OCI GoldenGate

Concepts

Database Registration



Captures source and target credential information and enables networking between the OCI GoldenGate service tenancy virtual cloud network (VCN) and your tenancy VCN using a private endpoint.

A database registration contains the connectivity information to source or target end points

Create deployment

- 1 General information
- 2 GoldenGate details

After you create the deployment, ensure that you create and assign connections.

Select a technology

Oracle Database

Oracle Database

Big Data

MySQL

PostgreSQL

Supported source technologies:

- Oracle Database 11.2.0.4+
- Oracle Database 12.1.0.2+
- Oracle Database 19c
- Oracle Database 21c
- Oracle Exadata
- Oracle Exadata Cloud Service
- OCI Autonomous Transaction Processing
- OCI Autonomous Data Warehouse
- Amazon RDS for Oracle 19c

Supported target technologies:

- Oracle Database 11.2.0.4+
- Oracle Database 12.1.0.2+
- Oracle Database 19c
- Oracle Database 21c
- Oracle Exadata
- Oracle Exadata Cloud Service
- OCI Autonomous Transaction Processing
- OCI Autonomous Data Warehouse
- Amazon RDS for Oracle 19c

OCI GoldenGate Concepts

Deployment Backup

Deployment Backups can help you troubleshoot issues, clone deployments, and restore deployments

A backup of a deployment's current state, retained for 60 days. It can be used to restore a deployment or create a new deployment with the state of the original deployment at the time the backup was taken.

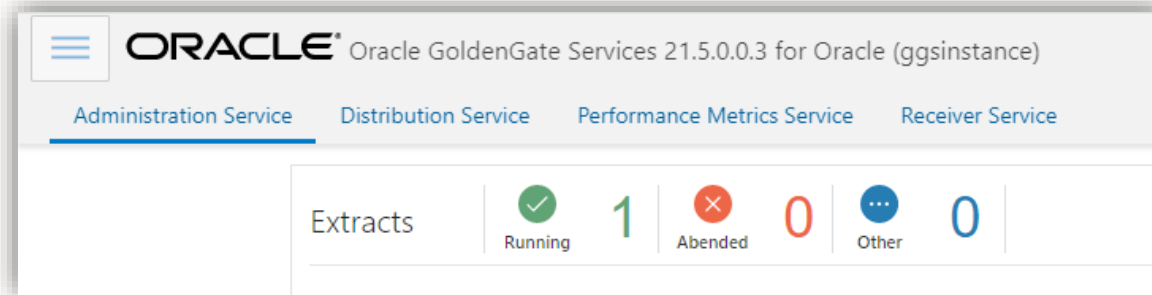
Deployment Backups are created daily

You can also create manual backups at any time, and save them to your Oracle Object Storage tenancy

OCI GoldenGate

Concepts

Extract



A process that runs against the source database and extracts, or captures data.

Before you create an Extract, you must have supplemental logging enabled

OCI GoldenGate

Concepts

Trail

A series of files on the source, intermediary, and/or target system where Oracle GoldenGate stores the captured changes to support the continuous extraction and replication of database changes.

Managing Trail Files



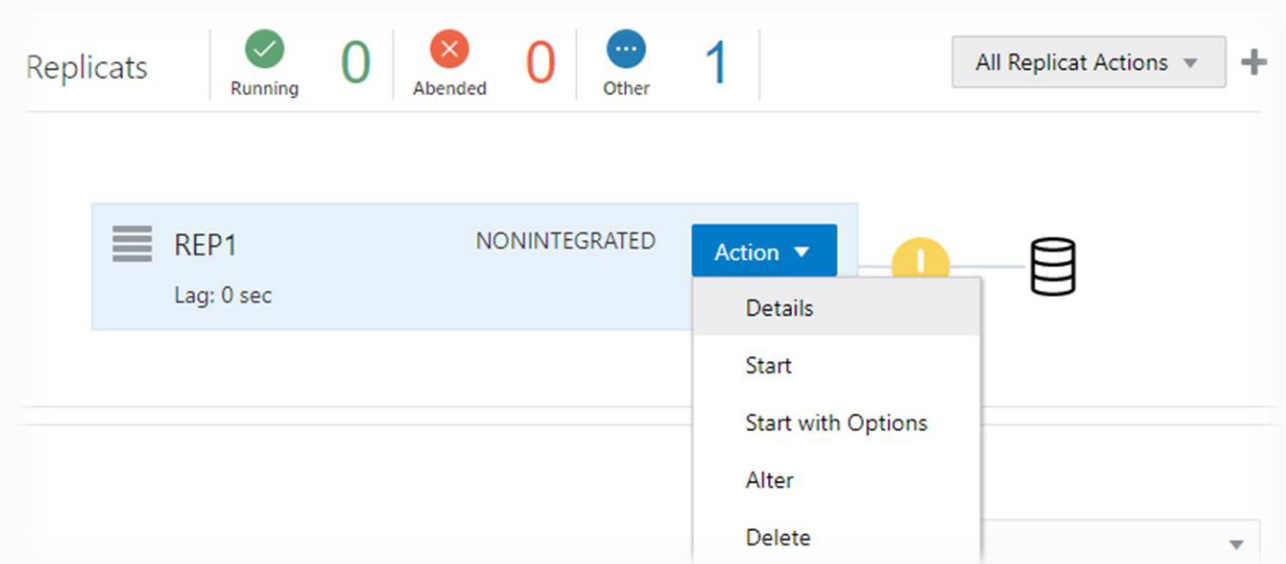
OCI GoldenGate Trail files quickly add up over time. Without purge tasks in place to manage these trail files, daily backups will take exponentially longer to complete and use compute resources that could otherwise be used elsewhere.

OCI GoldenGate Concepts

Replicat

A process that delivers data to a target database. It reads the trail file on the target database, reconstructs the DML or DDL operations, and applies them to the target database.

Before you create a Replicat, ensure that you first [create a checkpoint table](#)



Summary

Turn your data into a competitive advantage

High performance, real-time data movement and transformation

Non-invasive, low-impact data movement
Database migration tools

Process data faster

Access data without disruption

Simplify migration to the cloud

What Next?

Read the Latest News

<http://blogs.oracle.com/dataintegration>

YouTube Channel for GoldenGate

<https://www.youtube.com/c/oraclegoldengate>

Try OCI GoldenGate yourself!

<https://www.oracle.com/cloud/free/>

2hr Hands-on Guided Lab:

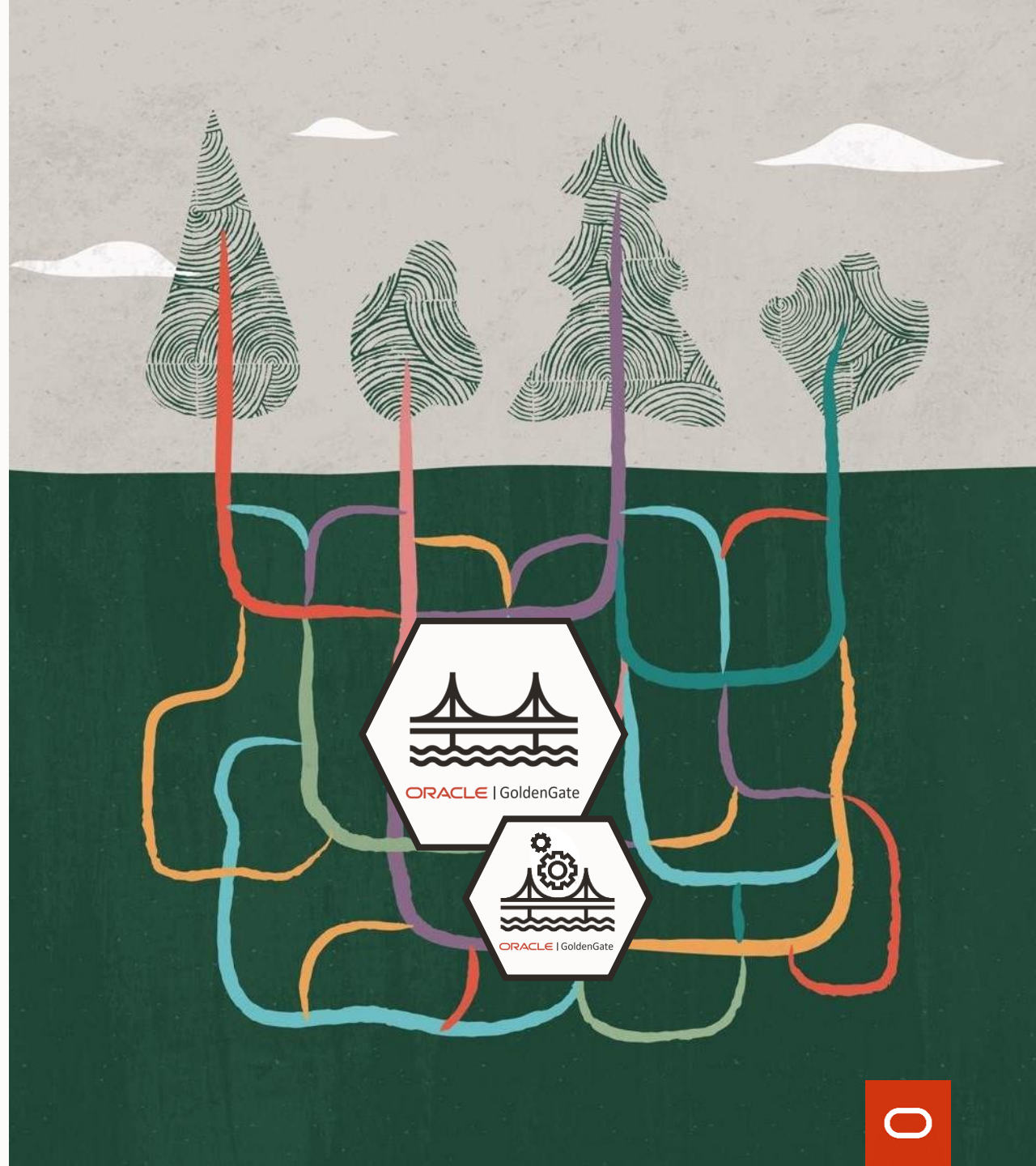
<https://apexapps.oracle.com/pls/apex/dbpm/r/livelabs/view-workshop?wid=797>

GoldenGate Data Mesh tech paper

<https://www.oracle.com/a/ocom/docs/techbrief-enterprisedatameshandgoldengate.pdf>

#1 in Data Fabric strategy

https://blogs.oracle.com/dataintegration/oracle_forresterwave_datafabric_2020





ORACLE

Our mission is to help people see
data in new ways, discover insights,
unlock endless possibilities.

