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Oracle GoldenGate 21c

GoldenGate delivers real-time trusted information. For over 20 years, GoldenGate has been a leader for trusted Data Fabric architectures. Oracle GoldenGate 21c is the foundation for trusted Data Mesh capabilities built around data product thinking, decentralized architectures, event-driven pipelines, and polyglot data payloads.

The GoldenGate platform excels at change data capture (CDC), transactional data replication, data ingestion, data pipelines for continuous transformation and loading (CTL), and a wide variety of analytics on streaming data. Only through leveraging such trusted data in real-time can organizations make better, faster business decisions and actions.

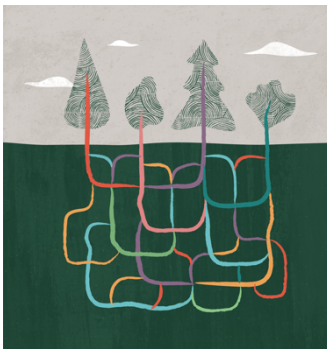
Real-time access to real-time information

Oracle GoldenGate software provides business continuity and data high availability for databases like HP NonStop, DB2 for i, LUW and z/OS, SQL Server and GoldenGate is also the pinnacle of the Oracle Database Maximum Availability Architecture 'Platinum Tier' service level. Many thousands of global banks, retailers, telecoms, healthcare companies, etc. run their operational data platforms on the trusted foundation of Oracle GoldenGate.

At its core, GoldenGate is a real-time data replication tool that can detect data events and route them across networks at very low latencies while transforming data in-flight. The GoldenGate technology is used for geographic replication of operational databases, low downtime, zero data loss, data migrations, active-active (online) data stores, real-time data ingestion to cloud, data lakes, and data warehouses.

GoldenGate has been increasingly focused on polyglot big data and NoSQL data payloads and has been completely refactored for native Microservices 'as a service' deployments. In addition to traditional database replication use cases, GoldenGate can still be used for raw data ingest, and can now also be used to directly create high value data products.

Using Oracle GoldenGate 21c customers can reduce IT costs and risk, while achieving a faster time to value for operational and analytical systems**.** Oracle GoldenGate 21c for Oracle, DB2/Z, SQL Server, MySQL and PostgreSQL leverages a microservices/REST based architecture to help companies address the continuous availability and real-time integration demands of enterprise systems, on-premises and in the cloud.



Unify your distributed data sources and targets, and use real-time operational data to deliver streaming analytics.

Key Capabilities

- Polyglot data integration with full heterogenous support
- High value Data Products
- Enabled external Data Mesh and Data Products
- Self-service, low-code and strong governance
- Streaming integration and analytics

Key Use Cases

- Database high availability
- Transaction replication
- Data warehouse loading
- Data Lake and pipeline ingestion
- Real-time data transformation
- Data operations (DataOps)
- Event stream analysis

What's New in Oracle GoldenGate 21c?

Oracle GoldenGate 21c new features:

- Oracle Database 21c Support
- Simplified installation process for all Oracle Versions from 11.2.0.4 through 21c
- Autonomous Database capture for Oracle
- Microservices for non-Oracle platforms
- Parallel Replicat for non-Oracle platforms
- Expanded heartbeat table topologies
- Auto-Capture tables for Oracle

Maintain continuous availability of critical systems

Oracle GoldenGate 21c helps organizations eliminate the downtime caused by both unplanned and planned outages and improves system performance and scalability. The following scenarios are supported:

- **Zero-downtime operations.** Enables uninterrupted business operations during system upgrade, migration, and maintenance activities.
- **Scalable Active-Active architecture.** Synchronizes changes made across two or more databases to scale out workloads, provide increased resilience, and near instantaneous failover across multiple geographic regions.
- **Data distribution.** Replicate data for distributed applications in real time across geographies for reliable access to timely data.
- **Query offloading.** Ensure high performance for production systems while supporting reporting and analytics activities by replicating data between heterogeneous sources and targets.

Real-time data integration across the enterprise and cloud

Oracle GoldenGate 21c captures and delivers real-time changed data to on-premises or cloud-based data warehouses, lakes and object stores, reporting systems, and other online transaction processing (OLTP) databases with minimal source system impact. Real-time data access enables improved business insight and analytics.

- **Real-time data warehouse.** Provide continuous, real-time capture and delivery of changed data between OLTP and data warehouse systems. Oracle GoldenGate 21c integrates easily with Oracle Data Integrator Enterprise Edition and other extract, transform, and load (ETL) solutions. It is certified to capture from and deliver to Oracle Exadata, Oracle Autonomous Database (ADW, ATP, JSON), and Oracle Cloud@Customer platforms to enable real-time data warehousing or data consolidation solutions.

Key Benefits

- Ensure transactional integrity across heterogeneous source and target systems
- High-performance replication with minimal impact on production system
- Increase IT flexibility with heterogeneous infrastructure support
- Enhance decision-making with real-time data
- Access mission-critical applications without disruption

GoldenGate Product Family

The following Oracle products and cloud services comprise the Oracle GoldenGate product family:

- OCI GoldenGate
- Oracle GoldenGate for Oracle
- Oracle GoldenGate for non-Oracle
- Oracle GoldenGate for Big Data
- Oracle GoldenGate for Mainframe
- Oracle Stream Analytics
- Oracle GoldenGate Foundation Suite (Veridata, Management Pack, Studio)
- Management Pack for Oracle GoldenGate
- OCI Database Migration

- **Operational reporting.** Offload reporting activity from production databases to lower-cost secondary systems with current data for real-time reporting.
- **Operational data integration.** Integrate operational data between OLTP systems in real-time. Enable service-oriented architectures, including Oracle SOA Suite, OCI Data Integration, Oracle IoT Cloud Service to operate with real-time data by publishing changed data.
- **Big Data integration.** GoldenGate for Big Data provides real-time streaming integration to all major Big Data targets such as Apache Hadoop ecosystem (HDFS, HBase, Hive), messaging infrastructure (Apache Kafka, JMS), NoSQL databases (MongoDB, Cassandra and Oracle NoSQL), Elasticsearch, Amazon Web Services ecosystem (AWS S3, Kinesis, Redshift), Microsoft Azure ecosystem, and cloud data warehouses (Google BigQuery, Snowflake) and Oracle Cloud ecosystems (OCI Object Store, OCI Streaming, and OCI Big Data)
- **Real-time streaming analytics.** GoldenGate for Big Data includes Oracle Stream Analytics to enable users to identify events of interest by executing queries against event streams in real time. It can apply ML/AI capabilities for time-series, geo-spatial analytics, allowing for the creation of custom operational dashboards that provide real-time monitoring, transformation of streaming data and/or alerts based on stream analysis.

Related products and services

The following Oracle products and cloud services are engineered and/or certified with Oracle GoldenGate:

- Oracle Active Data Guard
- Oracle Data Integrator
- Oracle Exadata
- Oracle Autonomous Database
- OCI Data Integration
- OCI Big Data
- OCI Streaming

Conclusion

Oracle GoldenGate 21c helps organizations harness the value of their IT investments and improve business operations by providing continuous access to mission-critical information in real time. With support for a wide array of continuous availability, disaster tolerance, and data integration uses, GoldenGate provides a modular foundation that easily scales to address the mission-critical, high-volume, low-impact data integration and replication challenges faced by enterprises today.

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