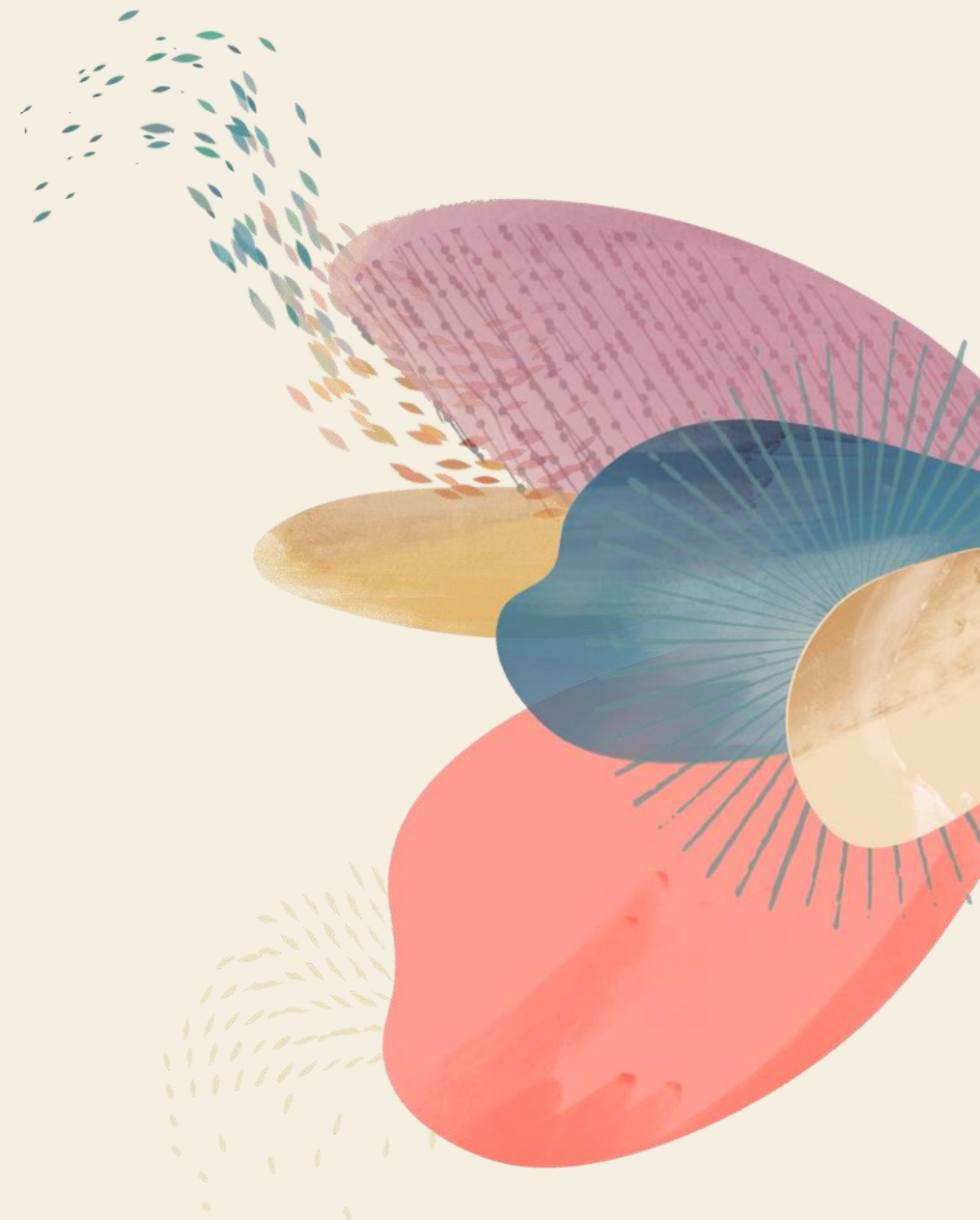
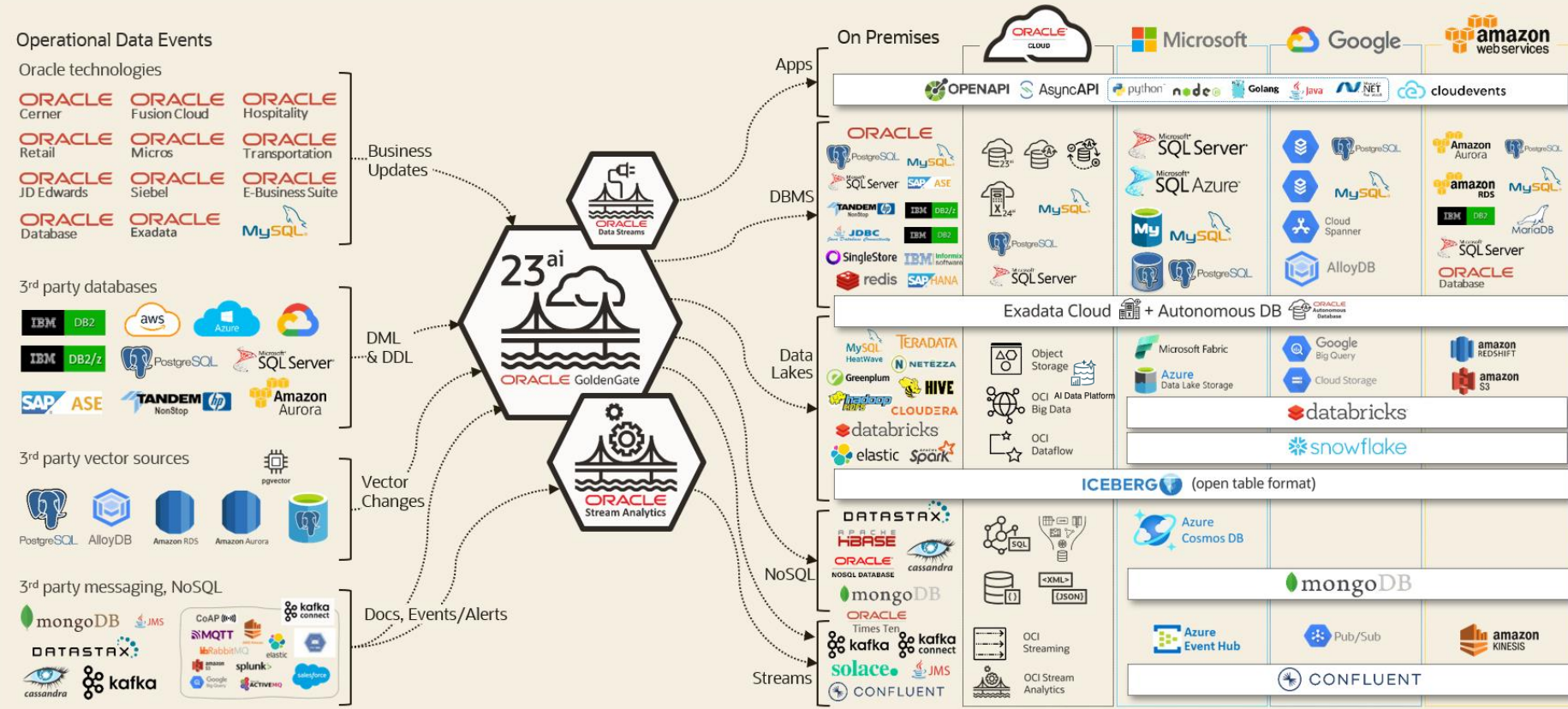


ORACLE

Unlocking AI's full potential with GoldenGate



GoldenGate bridging the gap between operational systems and AI



Enterprises have thousands of data repositories from multiple vendors distributed across a multitude of on-prem data centers and clouds.

This can create AI deserts and AI silos.

GoldenGate helps companies move trusted data in real-time into their AI platforms.



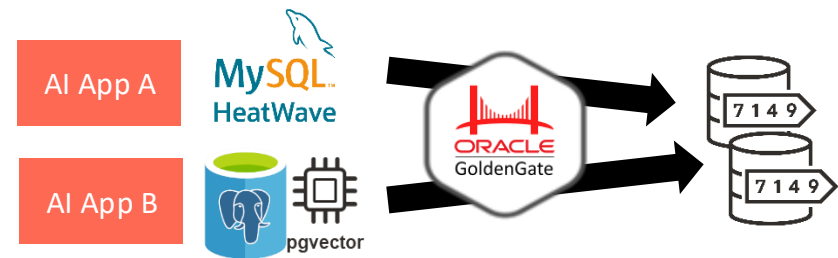
Using GoldenGate 23ai with vectors



A. Migrate vectors into Oracle vector database

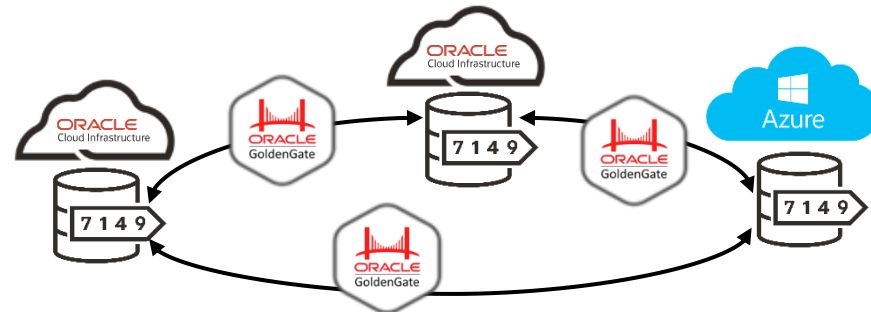


B. Replicate/consolidate vector changes



*Embedding models must be same across vector stores

C. Multi-cloud, multi-active Oracle vector database



D. Stream changes (text/vector) to search engines



*Embedding models must be same across vector stores

Relevant, fresh business data for AI applications with GoldenGate

Business Operations

Oracle technologies

ORACLE
Cerner

ORACLE
Retail

ORACLE
JD Edwards

ORACLE
Database

ORACLE
Fusion Cloud

ORACLE
Micros

ORACLE
Siebel

ORACLE
Exadata

ORACLE
Hospitality

ORACLE
Transportation

ORACLE
E-Business Suite

MySQL

3rd party databases

IBM DB2

aws

Azure

Google Cloud

IBM DB2/z

PostgreSQL

Microsoft SQL Server

SAP ASE

TANDEM NonStop

hp

Amazon Aurora

3rd party vector sources

PostgreSQL

AlloyDB

Amazon RDS

Amazon Aurora

pgvector

3rd party messaging, NoSQL

mongoDB

JMS

DATASTAX

cassandra

kafka

CoAP (IIC)

MQTT

RabbitMQ

amazon

Google Big Query

kafka connect

elastic

splunk

ACTIVEHQ

salesforce

Real-time Data

Business Updates

DML & DDL

Vector Changes

Docs, Events/Alerts

Data & Vector Hub

to_embeddings()

real-time data

Jon Smith | ... | [1,4,8,2]

Lucy Suh | ... | [1,6,2,3]

Pat Brown | ... | [1,5,2,2]

Data+Vectors

Retrieval Augmented Generation (RAG)

Embedding Model

Enhanced Prompt

Chat History

+

Prompt

Embedding

Similarity Search

"What are my corporate benefits?"

"What's the policy?"

Business Data

Augmented Prompt

LLM / GPT

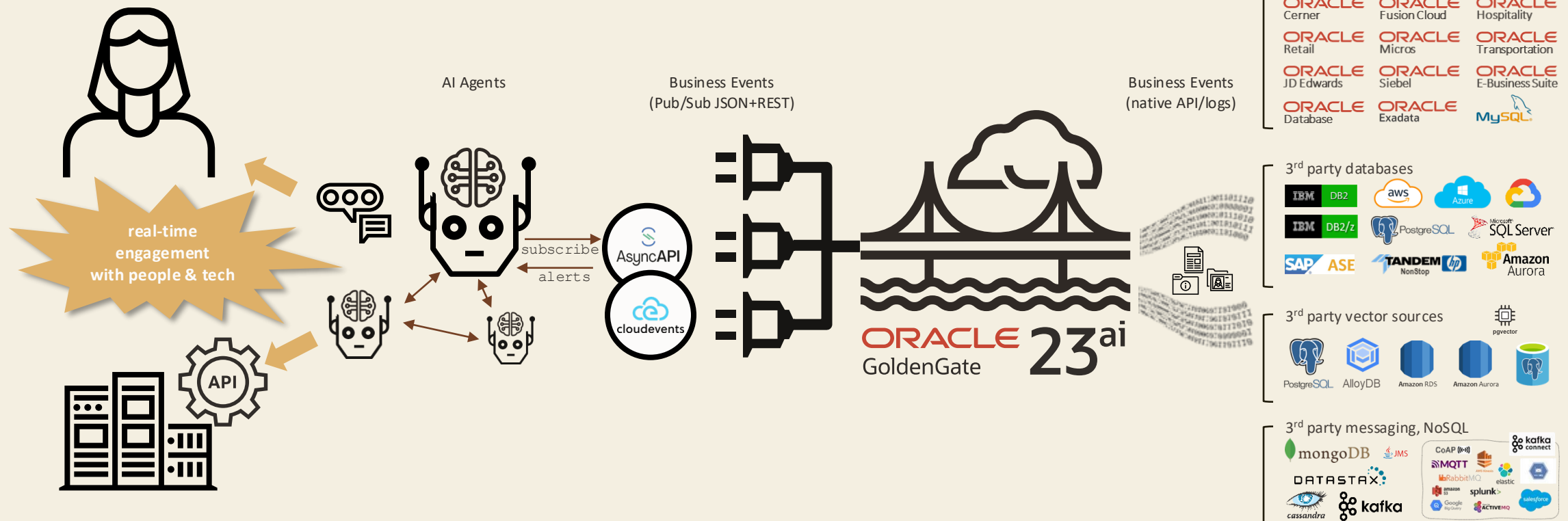
real-time business data and reduced hallucinations in your Generative AI answers

relevant answers from fresh data



Agentic AI from business events with GoldenGate Data Streams

Plug-in GoldenGate Data Streams to an agentic mesh with AsyncAPI automations, creating a powerful framework for **reactive AI agents** to sense and respond to business events in real-time



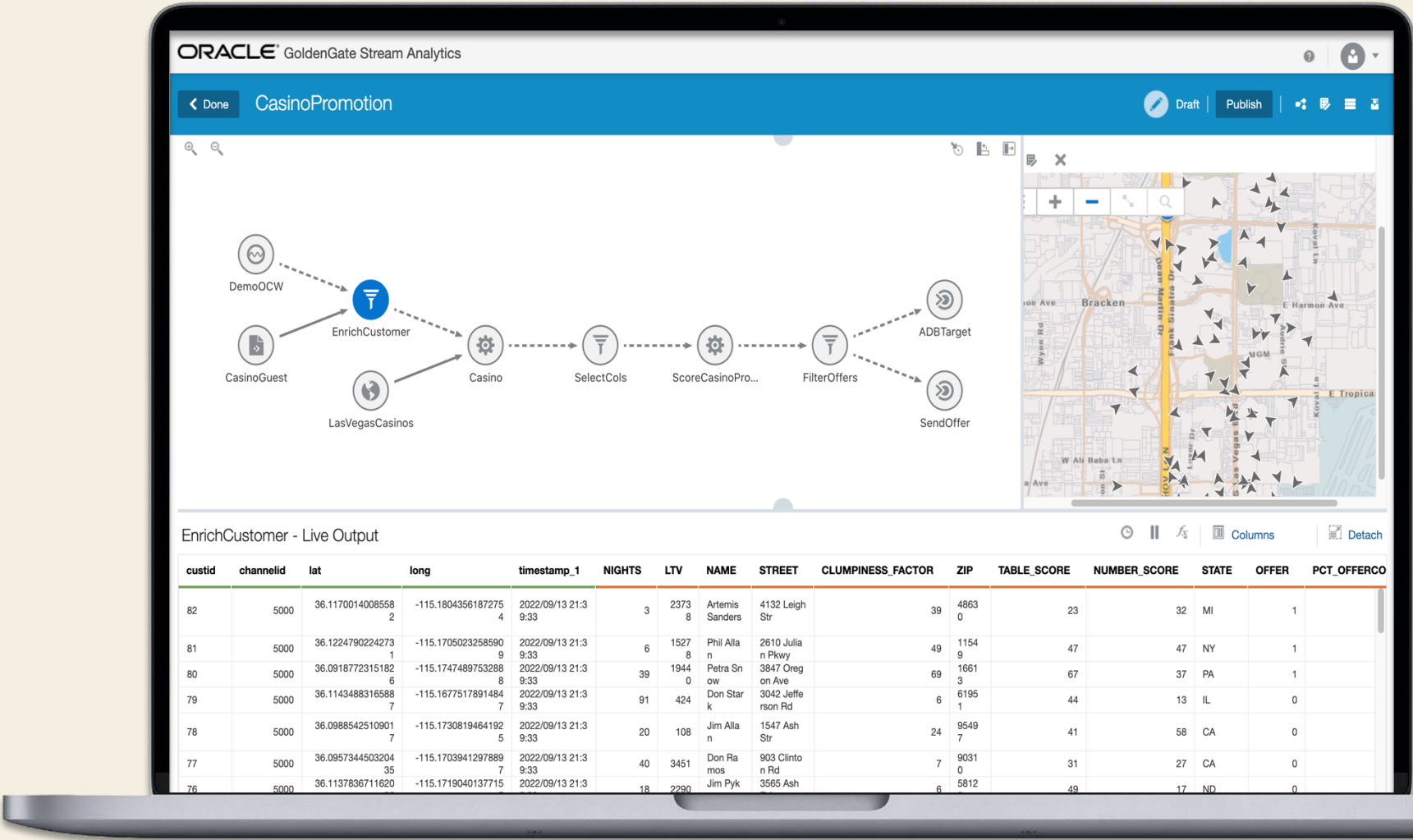
GoldenGate Stream Analytics for AI/ML

Microsecond data

Time-series and
geospatial

Plug-in AI/ML as
pipeline step

ONNX compatible



GoldenGate for DAA for Oracle AI Data Platform

Operational Data Events

Oracle technologies *



Business Updates

3rd party databases *



DML & DDL

3rd party vector sources *

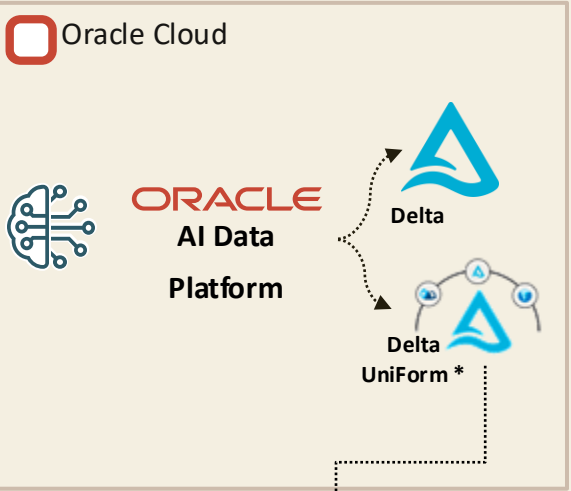
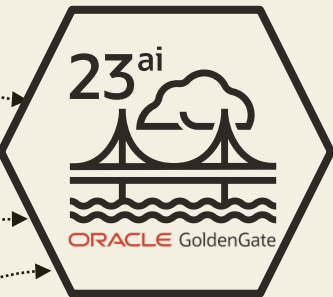


Vector Changes

Sources included in GoldenGate for DAA



Docs, Events/Alerts



- Native Oracle Database integration
- High volume data replication
- Target table instantiation
- Native Delta support
- Delta Uniform support for Iceberg clients

* Road map item

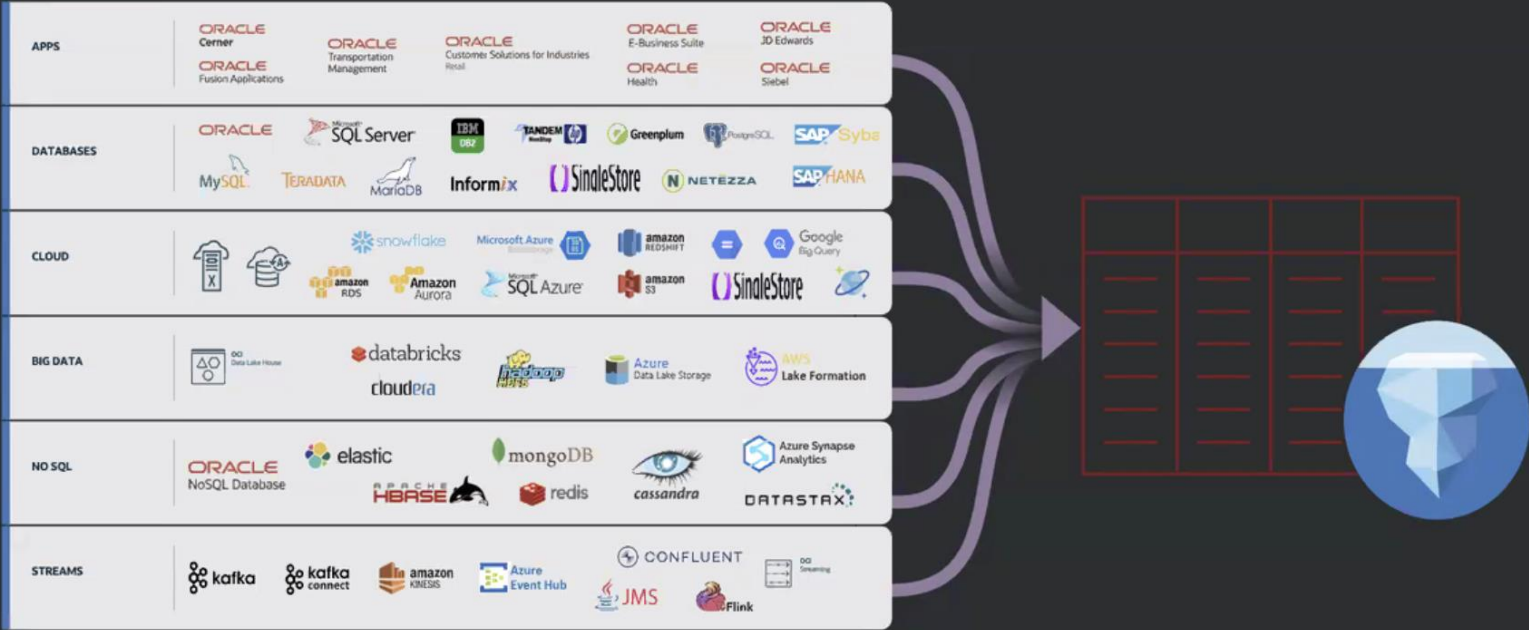


* Requires additional GoldenGate license, not included in GoldenGate for DAA



GoldenGate and Oracle ETL Supporting Iceberg

Data that is not in Iceberg can be easily moved to Iceberg

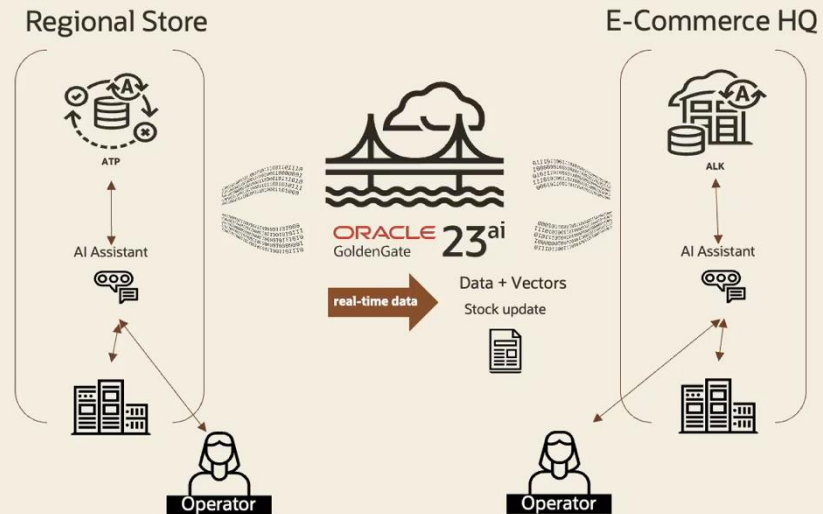


GoldenGate and Oracle ETL provide best-of-breed real-time data pipelines to Iceberg Tables from hundreds of **operational** and **analytical** data sources

Real-time AI-augmented Inventory Management Demo

Demo Components

- Source: **Autonomous AI Transaction Processing**
- Target: **Autonomous AI Lakehouse**
- **OCI GoldenGate 23ai**
- **AI-powered APEX applications** combined with
- **Retrieval-Augmented Generation (RAG), AI Assistant in APEX**



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<https://youtu.be/Z8NNtGPtIA4>

