



# Accelerating and Simplifying Oracle GoldenGate Deployments with Solace Message Routers

Oracle GoldenGate is Oracle's flagship logical data replication product for Oracle and heterogeneous database environments. It enables real-time data integration using log-based change data capture technology to replicate, transform and synchronize information across a wide range of systems including databases, operational and analytic systems.

Using a high performance publish/subscribe message bus to distribute information updates reduces the complexity of your system's architecture, operations and administration, makes it easier to keep any number of databases, applications and analytics engines up to date at all times, and improves the speed of updates being made over local and wide area networks.

## Simplifying Data Distribution

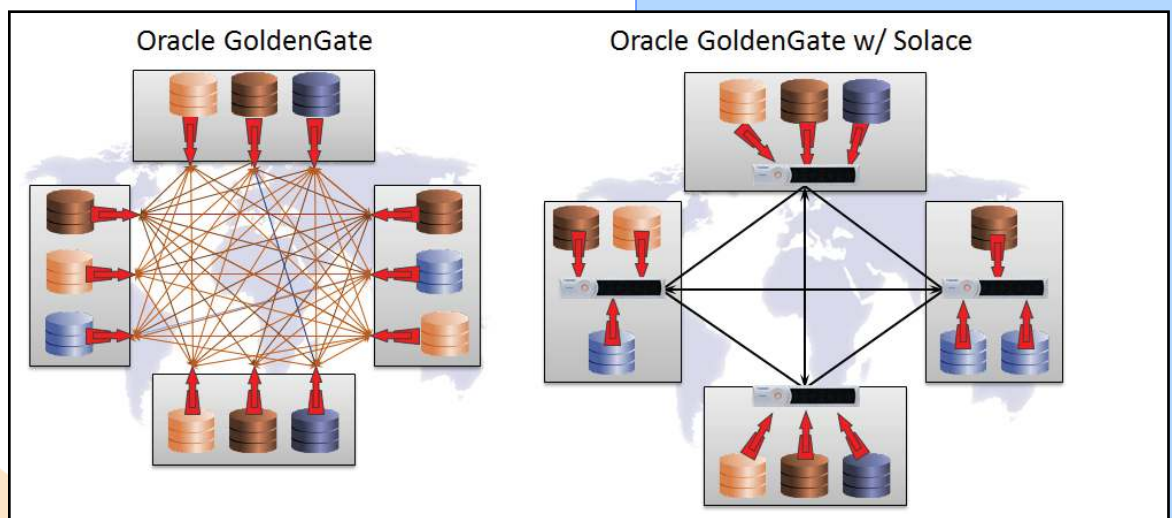
The diagram below shows the difference between Oracle GoldenGate's native architecture which requires discrete connections between GoldenGate components and a Solace-based architecture in which GoldenGate components connect to a Solace message router which handles all the routing, delivery and fanout.



## Deployment Patterns

Solace supports all of the typical data distribution patterns associated with Oracle GoldenGate deployments:

- **Unidirectional** for query offload and zero-downtime migration.
- **Bi-Directional** to enable hot standby systems for fast failover high availability.
- **Peer-to-Peer** for load balancing and multi-master scenarios.
- **Broadcast** for fanout to many databases.
- **Consolidation** for aggregating high-volume data streams into data warehouses.
- **Messaging** for distribution to all different kinds of systems over local, wide area and internet networks.



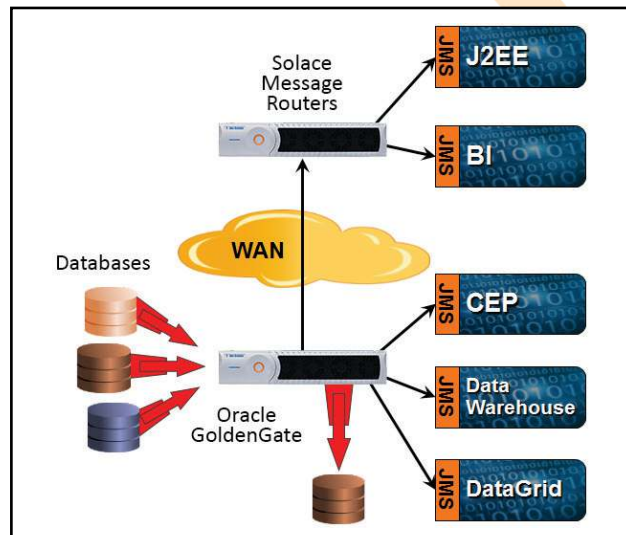
## Supporting Real-Time Applications and Analytics

Solace makes it easy to distribute Oracle GoldenGate updates to any number and variety of applications, storage systems and user interfaces.

For example, many customers synchronize databases with in-memory data grids or send real-time database updates for complex event processing. Others stream the latest updates to business intelligence dashboards or client-facing mobile applications.

Solace provides a flexible platform that enables information to flow to a diverse set of end points using whatever networks, communications protocols and qualities of services are available and appropriate.

Oracle GoldenGate scales far beyond the capacity of most software-based messaging products, which leads to complex and expensive horizontal scaling of your messaging layer. Solace message routers can route millions of messages a second so architects can confidently feed GoldenGate streams directly into the message bus and distribute messages to all the systems where they are needed.

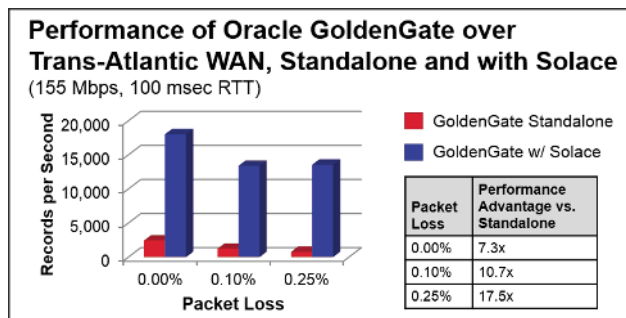


## Accelerating Global Information Flow

Solace can improve throughput over Oracle GoldenGate alone by as much as 20x.

Oracle GoldenGate transfers data over various kinds of networks using TCP. Solace appliances improve performance over WANs through a series of TCP optimizations that stream up to 20 times as much data over the same wide area link. Solace has solved the “long fat pipe” problem – the difficulty stop-and-wait protocols like data synchronization have fill the available bandwidth over a high latency network. To learn more visit <http://solacesystems.com/wan>.

This chart shows the results of a real-world test conducted over a transatlantic WAN link with and without Solace. It measures the effect of packet loss on throughput. Generally, WANs are less reliable than LANs and some packet loss is expected. Published data from the WAN suppliers show that 0.1% over a month is not uncommon, and 0.25% packet loss can occur in bursts during periods of congestion. Solace’s performance advantage increases when packet loss is at its worst.



Solace enables application-aware networks with its message routers that improve the way information moves between distributed applications. High-speed, reliable information sharing is an essential part of virtually all modern IT initiatives from accelerating legacy business processes to enabling big data, cloud computing and the Internet of Things. Solace message routers unify many kinds of data movement so companies can efficiently and cost-effectively move all of the information associated with better serving customers and making smarter decisions.

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