

ORACLE GOLDENGATE APPLICATION ADAPTERS FOR JAVA AND FLAT FILE

EXPANDING ORACLE GOLDENGATE INTEGRATION TO NON-DATABASE SYSTEMS THROUGH JAVA, JMS AND FLAT FILES

KEY FEATURES

- Deliver real-time change data to Flat Files, JMS Messages and Java APIs
- Capture data in real-time from JMS messages and deliver to databases
- Plug into the Oracle GoldenGate architecture for centralized management and monitoring
- Out-of-the-box templates, samples and formats for major third party systems
- Simple Java API for customization and integration into your existing code

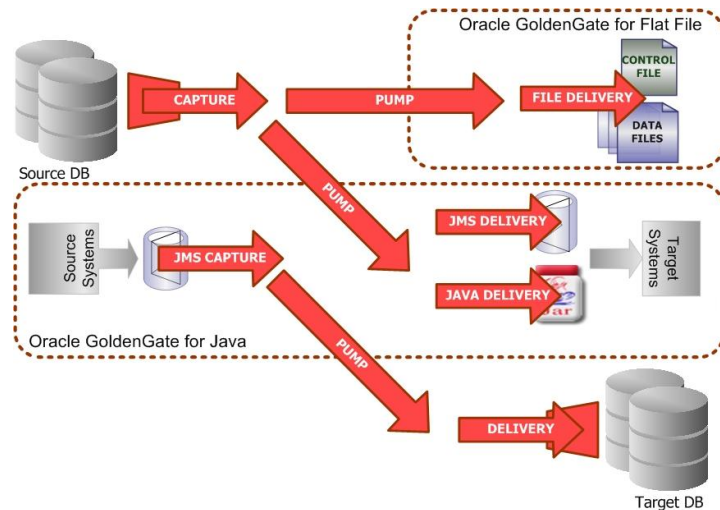
KEY BENEFITS

- Enables GoldenGate to interchange real-time relational transactional data with non-relational systems
- Flexible Flat File output and micro-batch strategy facilitates bulk integration of change data through many leading ETL tools
- Customizable Java and JMS integration provides easy delivery of real-time change data to SOA, BPM, CEP and other event based architectures
- Seamlessly integrating database change events into SOA environments using Oracle GoldenGate provides a non-intrusive, low impact, highly scalable solution with end-to-end transaction integrity

Oracle GoldenGate is a high-performance software application for real-time transactional change data capture, transformation, and delivery. Oracle GoldenGate has been used in a wide range of enterprise solutions for both high availability and data integration where both the source and target of the data are relational databases. The Oracle GoldenGate Application Adapters for Java and Flat File extend the capabilities of Oracle GoldenGate to provide mechanisms for real-time integration with SOA through an Enterprise Service Bus (ESB); Extract, Transform, Load (ETL) tools; native database loaders; event processing systems; business intelligence (BI); and other non-relational sources and targets.

Oracle GoldenGate Adapters – Real-Time Data Integration

The Oracle GoldenGate Adapters can be used to apply transactional changes to targets other than a relational database: for example, ETL, JMS messaging, or custom Java APIs. There are a variety of options for integration with Oracle GoldenGate using these Adapters:



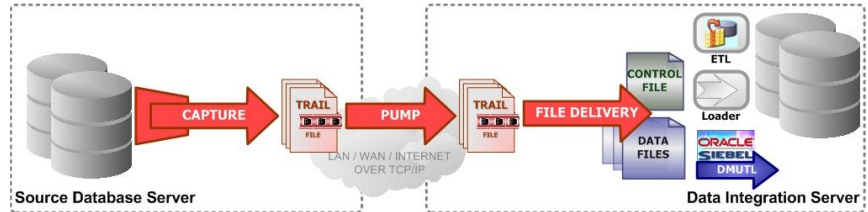
Flat File Integration: Oracle GoldenGate for Flat File can write micro batches to disk to be consumed by tools that expect batch file input such as ETL, proprietary or legacy applications. The data is formatted to the specifications of the target application such as delimiter separated values, or length delimited values. Near real-time feeds to these systems are accomplished by decreasing the time window for batch file rollover to minutes or even seconds.

JMS Messaging: Oracle GoldenGate for Java provides out-of-the-box functionality allowing transactions or operations to be published as JMS messages. Similarly, transactions can be captured from JMS messages and delivered through GoldenGate to supported target systems.

Java API: custom event handlers can be written in Java to process transaction, operation and metadata changes captured by Oracle GoldenGate on the source system. These custom Java handlers can apply these changes to a third-party Java API exposed by the target system.

Oracle GoldenGate for Flat File – Micro-Batch Integration

Oracle GoldenGate for Flat File is used to output transactional data captured by Oracle GoldenGate to rolling flat files to be consumed by third party products. Oracle GoldenGate for Flat File integrates with Oracle GoldenGate by reading previously captured Trail Files and delivering the data as micro batches.



The output files are typically consumed by ETL tools, third party native database loaders (for cases where batch loader is considerably faster than direct SQL), and for integration into the Oracle Siebel Remote product in GoldenGate’s zero downtime upgrade solution.

The roll over mechanism for the files is very flexible and can trigger a new micro-batch based on system time, original commit time, file size or a combination. Users can determine whether file rollover is synchronized to facilitate end-of-day processing type use cases.

Two modes of output are supported:

- DSV – Delimiter Separated Values (commas are an example)
- LDV – Length Delimited Values using data length for binary support

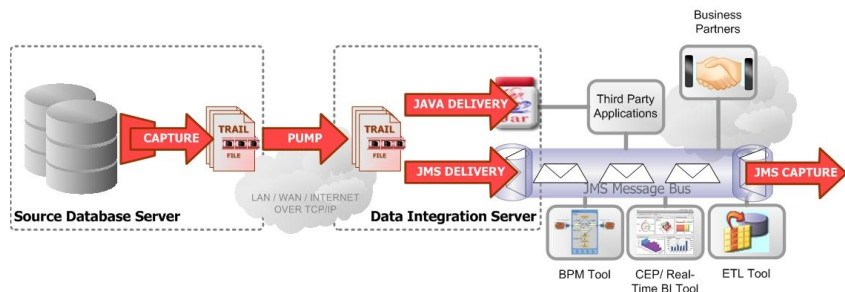
And it can output data:

- All to one file
- One file per table
- One file per operation code

Additionally, a control file can be written that contains a list of rolled-over files for synchronization with the supported data integration product and can also produce a summary file for use in auditing. Further configuration controls formatting (delimiters, other values), directories, file extensions, and metadata columns (such as table name, file position, etc.)

Oracle GoldenGate for Java – JMS and API Integration

Oracle GoldenGate for Java can be used to seamlessly integrate real-time transactional data from the Oracle GoldenGate environment to Java systems. Using Oracle GoldenGate for Java customers can deliver data captured by any Oracle GoldenGate capture process to Java APIs.



Out of the box functionality provides direct integration with JMS APIs to enable data captured by Oracle GoldenGate to be delivered to JMS-compliant message buses in a variety of highly customizable formats. In addition customers can write custom handlers in Java that plug into the Adapter to enable delivery directly to their third party or custom APIs where appropriate.

JMS Delivery is very flexible. Out-of-the-box, customers can choose to output Map Messages (containing name-value pairs) or Text messages. The latter can be generated with one of the supplied formats (XML or delimited) or customized using templates or Java code.

This tight Java and JMS integration facilitates a wide variety of use-cases including JMS based publish/subscribe data distribution, real-time ETL integration, invoking of business processes, complex event processing and cache updating / invalidation.

Oracle GoldenGate for Java – JMS Capture

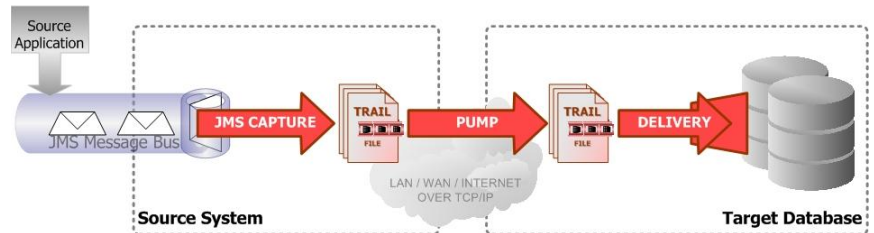
Oracle GoldenGate for Java also provides the capability to capture data present in JMS text messages and write it to Oracle GoldenGate Trail Files, from where it can be delivered to any of the supported target systems.

EXPANDING ORACLE GOLDENGATE INTEGRATION TO NON-DATABASE SYSTEM THROUGH JAVA, JMS AND FLAT FILES

Oracle GoldenGate Application Adapters for Java and Flat Files enable Oracle GoldenGate to interchange real-time relational transactional data with non-relational systems

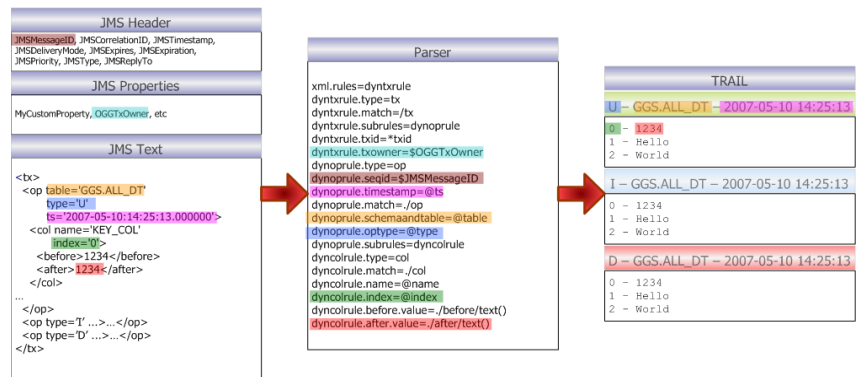
RELATED PRODUCTS

- Oracle GoldenGate
- Oracle GoldenGate Veridata
- Oracle Management Pack for Oracle GoldenGate



JMS Capture enables data present on an existing enterprise service bus to be persisted for business intelligence or data warehousing purposes. It also enables sources that are not supported by the core Oracle GoldenGate product, such as custom applications and change events in a SOA environment, to deliver changes into Oracle GoldenGate solutions, which can then feed the data in real-time to a relational database.

JMS Capture supports fixed, delimited and XML text messages as the data source. Data can be extracted from the message text, header and custom properties. In the case of XML, multiple database operations on multiple tables can be constructed from a single piece of XML using XPath-like rules.



In this way, a source XML document placed on a JMS bus representing an entire order could be used to generate the many database operations required to update a master and multiple detail tables.

JMS Capture can also be integrated with JMS delivery to provide data distribution over a messaging system. Utilizing JMS topics enables many sources and targets to be integrated over JMS using a plug-and-play publish / subscribe model without needing to configure each source to deliver data to each target – vastly simplifying configuration and management.

Summary

Oracle GoldenGate Application Adapters for Java and Flat File includes two separate, but complementary, products: Oracle GoldenGate for Flat File delivers real-time change data captured by Oracle GoldenGate to rolling micro-batch files for bulk integration scenarios. Oracle GoldenGate for Java provides direct delivery to Java APIs as well as capturing and delivering data using JMS messages, facilitating event-based architectures. Together they expand the reach of Oracle GoldenGate's low-impact, reliable, and scalable real-time data integration solutions beyond traditional relational databases.

Contact Us

For more information about Oracle GoldenGate Application Adapters for Java and Flat File visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.



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