

EMC HIGH-PERFORMANCE DATA ANALYTICS SOLUTION

Front-office analytics data store in a pub/sub messaging environment

ESSENTIALS

- Joint R&D and go-to-market strategies between two leading technology providers—EMC and Informatica
- Provides a solution accelerator instead of a complex technical integration between various components
- Easily ingests millions of messages per second from disparate systems
- Able to operate directly with any low-latency messaging bus infrastructure
- Allows data elements to be extracted from messages and to be queried within seconds of arrival
- Enables capital market firms to easily adjust to various market conditions for risk management and profit and loss analysis

HIGH-PERFORMANCE DATA ANALYTICS SOLUTION

EMC and Informatica have joined together to provide the High-Performance Data Analytics (HPDA) solution accelerator for the investment banking and capital markets industry. The HPDA solution runs parallel to existing systems and databases and participates in an existing pub/sub messaging environment. It delivers high-speed message acquisition and processing, enabling near-realtime data availability for areas such as compliance, risk management, credit checking/monitoring, confirmations, and settlements.

HPDA is an easily deployable platform capable of ingesting billions of realtime messages per day from a wide variety of disparate sources, ranging from exchanges and market data, corporate actions, and news feeds to cross-asset class and algorithmic trading systems. The platform also allows the data to be queried and analyzed in near real time using massively parallel compute strategies. The net result is that analytics which currently take hours or days can now be computed within seconds or minutes of the realtime events occurring. HPDA has been designed utilizing experience gained working with leading investment banks, hedge funds, and exchanges over the last decade to help them keep pace with exploding volumes of data and increasingly complex regulatory requirements.

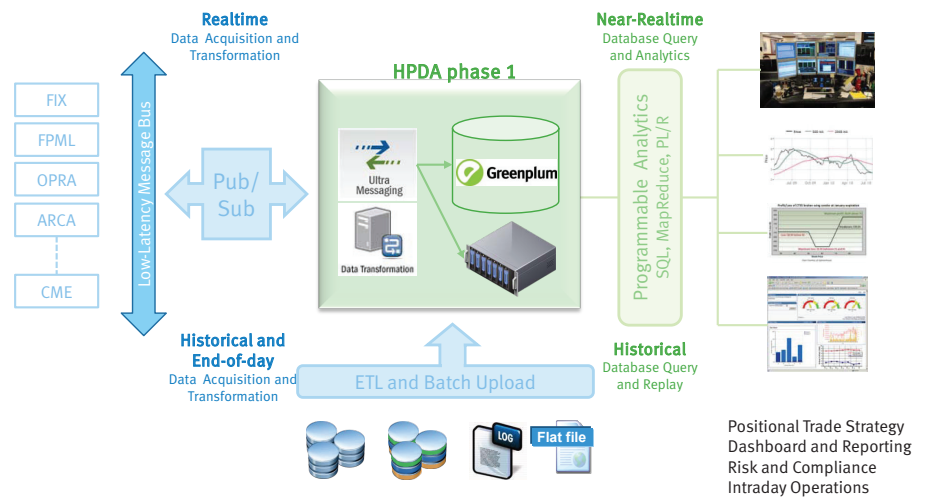
UNIQUE VALUE PROPOSITION

- Unlike in-memory databases frequently used for caching small message stores, the HPDA solution easily expands to allow realtime ingestion of millions of messages per second from disparate systems and can consume petabytes of data per day from non-messaging sources.
- The solution allows data elements extracted from those messages to be queried within seconds of arrival. Interoperating directly with the low-latency messaging bus infrastructure, message replay or regular publishing results of analytics become simple configuration tasks instead of a complex integration project.
- When configured with an Informatica Ultra Messaging-base message bus, the HPDA solution has zero impact on existing High-Frequency Trading systems or low-latency messaging applications, protecting revenue and simplifying architecture.
- The modular design of the solution together with the inherent reliability of Ultra Messaging solutions and the shared nothing architecture of EMC Greenplum ensures a highly scalable, fault-tolerant solution.

HOW DOES IT WORK?

1. **Capture/Cache:** A high-speed, low-latency message bus moves as many as millions of market data messages per second from disparate sources into the Informatica Ultra Messaging Cache Option, where messages are first received, and then rapidly cached and processed for downstream message transformation and replay. Informatica Ultra Messaging Option can cache messages from any source, including TIBCO, MQ, Ultra Messaging, and other messaging infrastructures.
2. **Transform:** Message types such as FIX, FPML, OPRA, SWIFT, ACCORD, and others are then transformed in real time into usable data elements using the Informatica B2B Data Transformation (DT) technology. These transformations can be quickly developed using DT's visual development environment and can be easily extended to adopt new and changing message streams.
3. **Ingest:** The resulting data elements are then ingested by the EMC® Greenplum® database, whose shared-nothing and massively parallel processing architecture optimizes continuous ingest capabilities, ensuring that market data is available in near real time.
4. **Analyze:** EMC Greenplum's standard and open interfaces enable developers to access data using SQL and advanced in-database analytics, allowing lightning fast correlation of previously disparate data sources like prices, volatility, corporate actions, news feeds, network latency, instant messages, and others. This enables ultra high-speed response to simple questions about a single instrument, enables complex questions about liquidity positions and risk to be answered rapidly, and simulations of new trading or hedging strategies.

High-Performance Data Analytics (HPDA) Realtime and Historical Data Acquisition and Near-Realtime Query



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