

THOMSON REUTERS RIGHT TIME AND OPTIMISATION

ENABLING THE INTEGRATED ENTERPRISE

BUSINESS CHALLENGES

In an increasingly complex and competitive market-place, with increasing market fragmentation and greater demand for faster price discovery and execution, the cost of IT services spirals. The higher the IT costs, the greater the impact on business profitability:



- The exponential growth of market data volumes and market venues is putting strain on your existing market data infrastructure
- The need to minimise the complexity of the enterprise. There is a lack of transparency across the multiple technology systems and applications and the integration of new technologies and systems is complex, lengthy and costly. How can you connect to new venues and on-board new applications with the minimum amount of integration required to rationalise with existing services?
- Complexity of the messaging protocols between in-house applications
- How do you minimise costs to ensure that the technology on which your enterprise infrastructure is based is fit for purpose in the future?
- How can you retain competitiveness amongst major banks? How can you continue to operate a profitable algorithmic trading model?
- Market data messages are unreliable – message packets regularly get dropped

THE CHANGING LANDSCAPE OF TODAY'S FINANCIAL MARKETPLACE HAS DRIVEN THE NEED TO CONSUME HIGHER VOLUMES OF DATA AND TO RECEIVE THE RIGHT DATA AT THE RIGHT TIME. THE MARKET-PLACE HAS BECOME A MORE FRAGMENTED AND COMPLEX ENVIRONMENT WHERE ACCESS TO TIMELY DATA IS CORE TO REMAINING COMPETITIVE.

THE CHALLENGE IS NOT JUST ABOUT DELIVERING THE PLATFORM TO HANDLE THESE GROWING DATA VOLUMES IN A TIME-SENSITIVE MANNER TODAY BUT THE PROVISION OF A ROBUST, SCALABLE SOLUTION FOR TOMORROW WITHOUT INCREASING THE COMPLEXITY AND ASSOCIATED OPERATIONAL COSTS.

THE THOMSON REUTERS ENTERPRISE PLATFORM FOR REAL-TIME IS AN EXTENSIBLE, HIGH-PERFORMANCE SOLUTION CAPABLE OF MEETING THE CHALLENGES OF BOTH TODAY'S FRAGMENTED, DATA-CONGESTED ENVIRONMENT AND THOSE OF THE FUTURE.



THOMSON REUTERS™

PERFORMANCE, SCALABILITY AND LATENCY

- **The Platform can collect, federate and distribute large volumes of real-time data from multiple venues.** Capable of handling tens of millions of updates per second, the Platform has proved that it is robust enough to handle the volumes required for today's market and well beyond most radical projections, thereby future-proofing your infrastructure
- **Working with key technology partners** has enabled us to develop a platform built on leading-edge processing technology and the ability to maximise the capabilities of multi-threaded processing provided by multi-core processors. This has given unparalleled performance on industry-standard hardware and operating systems with the added benefit of being able to leverage the latest processor capabilities as they are introduced
- **Maximising the performance** of the Platform requires the ability to manage latency through the associated infrastructure without simply growing your hardware footprint. Data throughput has to be consistent, predictable and reliable in order to support trading automation and accurate algorithmic models. Understanding the services that can be leveraged on top of the core components will help you identify what is required to meet your latency demands
- **The Platform is capable of achieving lowest latency throughput** and the ability to deliver the most appropriate data service required through tiered architecture and services based on the specific needs of your consuming applications. Control data through conflation, delay and data catching to achieve right-time delivery of the right data
- **Distributing and managing data from multiple venues is complex.** The Platform simplifies the ability to do this. Using the Enterprise Platform for Real-Time provides a single, agnostic service that enables you to extend the distribution of all your data types from front office through to back office applications
- **Availability** of a single, open API enables you to create a unified Enterprise based on a single programmatic interface. Extend the value of the Platform by integrating all your proprietary and third-party applications with this API – and simplify your distribution and transactional flow
- **Leverage an open message model** to more easily integrate market data and transactional messaging protocols and flow
- **Infrastructure simplification** – leveraging the principles of software licensing enables valued services to be extended across existing core components, negating the need for additional hardware
- **Extending the platform beyond market data** – the platform has been built to support the interaction of all messaging types, not just data, across multiple systems, including the delivery of transactional information

DELIVERING BUSINESS VALUE

THE PERFORMANCE, SCALABILITY AND INTER-OPERABILITY OF THE ENTERPRISE PLATFORM FOR REAL-TIME EXTENDS THE OPPORTUNITY TO BECOME THE ENABLER OF A SINGLE PLATFORM ADDRESSING THE FLOW COMPLEXITY BETWEEN THE FRONT, MIDDLE AND BACK OFFICE TO FULLY REALISE THE POTENTIAL OF THE TRULY INTEGRATED ENTERPRISE.

- **Establishing an infrastructure** fabric for tomorrow
- **Addressing the needs** of both your market data and transactional flow through a single, unifying platform
- **Simplifying the integration process** with existing applications and the speed and ease at which it will be possible to deploy to new services
- **Understanding and addressing** your latency needs through the ability to leverage core services. Latency is something that is commonly spoken about. However, understanding the level of latency is paramount to ensure the right tiered architecture is leveraged for your specific needs
- **Providing the framework** to achieve faster price discovery to maintain a competitive automated trading strategy
- **Rationalisation** of server footprint required

HOW CAN THESE CHALLENGES BE MET TODAY?

We have taken the benefits associated with our platform, Thomson Reuters Market Data System, a proven, reliable, data distribution platform, and enhanced the core components. This has provided significant performance improvements with the addition of a number of new capabilities to create the next generation Enterprise Platform for Real-Time.

- **Advanced Data Hub** – multi-threaded source distributor
- **Advanced Distribution Server** – multi threaded distribution service maximising fan-out scalability

Leveraging state of the art chip processing technology and the capabilities of both the Advanced Data Hub and Server, performance throughput has been measured at 37 Million updates/second.¹

- **RFA** – Simplified integration is now possible using a single programmatic interface, which includes the Open Message Model to provide the capability to generate generic messages across multiple message types
- **Ultra Performance API** – the lowest level API available. It is the foundation upon which Thomson Reuters Enterprise Platform for Real-Time core products are built. UPA provides greater flexibility for the development of new applications whilst enabling the highest performance, highest throughput and lowest latency

¹ These results were achieved based on Intel Xeon 5600 chip technology within a controlled environment.

EXTENDING THE ENTERPRISE

The Thomson Reuters Enterprise Platform for Real-Time can be leveraged to provide additional services to ensure the benefits of the distribution and transactional flow are maximised fully, including:

Data Transparency and Management – the Data Access Control System is the leading solution for entitlement management. It is a single solution for use with any enterprise application providing data usage across all market data types and beyond.

Calculation and Analytics – the Advanced Transformation System is a real-time service providing a sophisticated calculation engine for standardising pricing strategies using the available yield curve model; margin management and price blending.

Internet and Mobile Delivery – the Internet Suite and Wireless Delivery System provide a customisable solution to extending the reach of your data via web portal and wireless device capabilities.

WHY THOMSON REUTERS?

GLOBAL PRESENCE – Thomson Reuters has a global footprint, providing unparalleled expertise and support across all regions. Its market data infrastructure is used across more than 2500 financial institutions.

SINGLE PLATFORM – Simplification of data distribution and transactional flow through the consolidation and standardisation of the platform's services. More than 50,000 proprietary and third-party applications have been developed using the Robust Foundation API.

SCALABILITY – Future-Proofing the needs of your Enterprise; ensuring that the data volumes and required performance expected tomorrow can be met today.

OPEN MESSAGE MODEL – The flexibility of the Open Message Model enables both market and transactional data models to be defined as a generic message, creating a standardised method to manage the integrated flow of the Enterprise.

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