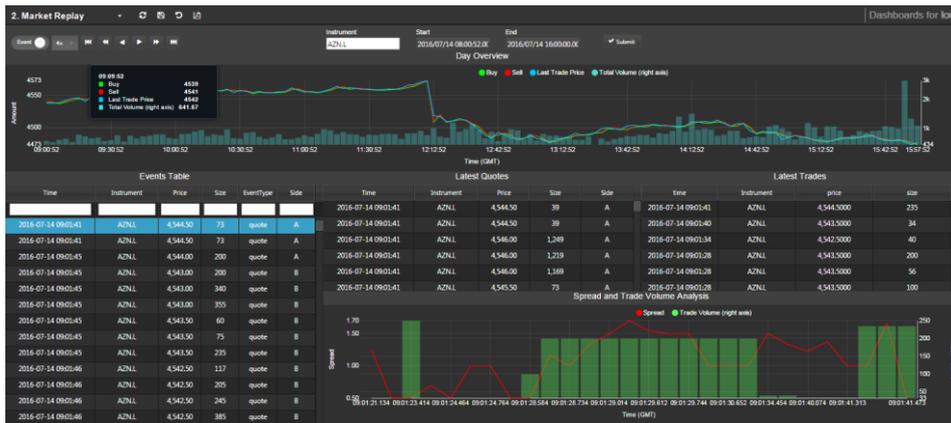# kx | it's about time

Kx Data Refinery

Flexible access to rich data and analytics

Outsourced processing, distributed systems and, worst of all, Shadow IT have led to uncontrolled replication of data throughout organizations – and with it considerable cost and risk. From flawed investment decisions and trading errors to false reporting and misstated accounts the implications of poor quality and inconsistent data are enormous. What traders, quants, auditors and regulators want is a single, validated, consistent source of data, one they can query easily, perform calculations on and share securely with others. Kx Data Refinery makes that possible.

Kx Data Refinery is built on Lambda/HTAP architecture and provides a high performance platform for time-series operations on both real-time and historical data seamlessly. It is designed to take the data management and processing burden away from the user and let them concentrate instead on exploiting its potential. Kx Data Refinery adds value throughout the organization where market data content and analytics are required.

Sample Uses - Kx Data Refinery can be used over the entire trade lifecycle, across all asset classes, on level 1 and level 2 tick data, using pre-built analytics and utilizing nanosecond-precision timestamps for enhanced reporting.

- Pre-trade analytics
- Transaction Cost Analysis
- Post-trade reporting
- EOD risk and position keeping
- Test data for Algo profiling
- Best execution
- Surveillance
- MiFID II reporting

Sample Content –Global Cash equities, Closing price history, Historical and real-time derived data, Security Master and history files, Symbologies, Global FX Spot rates, holiday calendars and in-house sources.

Controlled –A sandbox environment provides an open, flexible platform for independent research activities where quants and analysts can write and test code, import local data sets and use the accompanying Analyst for Kx suite for data preparation and investigation.
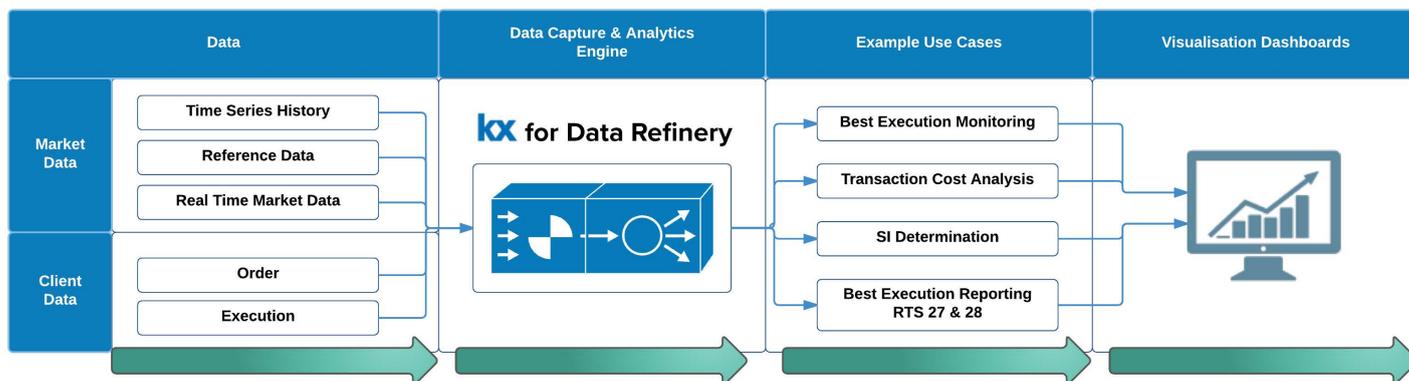
At a Glance

Kx Data Refinery is a high performance low-latency platform providing flexible real-time access to time-series data and powerful analytics.

The Kx Advantage

- Single Integrated software stack for quicker, easier implementation, lower cost and reduced TCO

- Cross Asset, Cross Department - all analytics, data structures and functionality are configurable and portable

- Reusable analytics library for swift implementation and quicker time to market

- Rich, customizable visualization through integrated HTML5 dashboards enabling self-service BI

- Consolidated Lambda/HTAP architecture for combining historical and streams data into analytics and visualization

- Supports both request/reply and pub/sub mechanisms for integrating to downstream client applications

- Ingest, filter, validate, tag and enrich data from multiple sources

- Enterprise features, security, auditing, logging, archiving and compression

- Deploy on premises, in the cloud or as a hybrid

Data		Data Capture & Analytics Engine	Example Use Cases	Visualisation Dashboards
Market Data	Time Series History	**kx** for Data Refinery	Best Execution Monitoring	
	Reference Data		Transaction Cost Analysis	
	Real Time Market Data		SI Determination	
Client Data	Order		Best Execution Reporting RTS 27 & 28	
	Execution			

Ease of Use

For non-technical users Kx Data Refinery offers an intuitive interface that enables them to form queries simply by stating
what data they want and the parameters for calculating their results. So users do not necessarily need know about query languages or schemas, they can focus instead on what they really want - the data. Advanced users can use the programming language q for more complex queries.

Not just another historical tick databasee

Kx Data Refinery is an easy to use interactive platform enabling users to execute queries and get responses in milliseconds, not hours. Traditional request/reply (query) functionality is available, as are real-time publish/subscribe mechanisms to retrieve data from the oldest historical tick to the very latest update from the exchange with analytics like VWAP and statistical measures attached.

Enterprise Features

A comprehensive security and entitlements framework imposes strict control on access and authorization rights. An accompanying audit trail provides details logging of all user actions and system changes.

Functionality

- All asset classes supported
- Level 1 and Level 2 data
- Dynamic order book snapshots, rebuild and replay
- Historical symbology management
- Corporate Action Adjustments
- Analytical (calculated) filtering on any column
- Dynamic bucketing, racking and filling at any level
- Cancellations & corrections
- Timezone management
- Nanosecond timestamping

Benefits

Faster time-to-market through simplified data access, out-of-the box analytics and code reuse

Reduced maintenance, hardware and technology costs through consolidating to a single platform

Standardized data and analytics across the organization to improve accuracy, reporting and decision making

Ability to monetize your data and provide a value added service to customers by enabling them to query, enrich and merge data from multiple sources

About Kx

Kx has been the software leader for complex analytics on massive-scale streaming data for over two decades. The Kx technology is an established and trusted standard for trading, surveillance and research in financial services. Kx has emerged as the elegant, integrated solution to the analytic needs of the Pharma, Retail, Utilities and High Tech Manufacturing industries scaling effortlessly to the data challenges of the Internet of Things.

Kx is a division of First Derivatives plc. Listed on the London Stock Exchange [FDP:LN] First Derivatives is a specialist software and consulting organization with a uninterrupted track record of customer success and profitable growth since it was listed in 2002.

Kx in Action

Visualize and Explore Data
- Dashboards for Kx
- Analyst for Kx

Control, Deploy & Monitor
- Control for Kx
- Stream for Kx
- Kx for Monitoring

Industry Solutions
- Finance
  - Surveillance
  - Algo
  - Flow
- Pharma
- Utilities
- IoT

kx

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