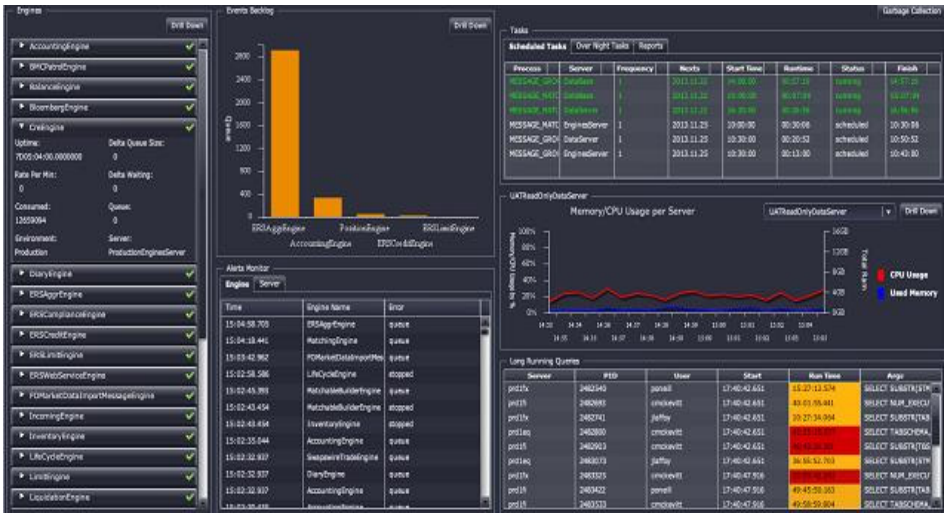
it's about time

Kx for Monitoring

Real-time monitoring, investigation and analysis of system stability and performance

Specifically aimed at platforms where system performance and efficiency is critical, Kx for Monitoring provides a sophisticated solution for capturing data on servers, processes, CPUs, file systems, NICs and network signals. These signals can be analyzed in real-time to trigger alerts and display critical information via powerful dashboards in a versatile and meaningful way. Moreover, using the power of Kx, it can incorporate previously stored data, results and signal information to further enrich its analysis and monitoring capabilities.



Real-time Customizable Alerts – High-performance analysis of monitoring data allowing the user to customize the built in alerts via parameters or define custom alerts using the Kx Alerts Framework. Multiple alert notification options including UI notifications with built in sound alerts and/or email notifications which can be targeted at different users/user groups based on the underlying data. The user can also extend the notification framework to push alerts to other applications.

Rich Visualization – Interactive analysis capabilities on aggregated monitoring data and rich graphical display enabling users to drill down to explore trends and identify root causes. The varying priorities of different user groups can be met through a single solution with a completely customizable user perspective - interactive analysis capabilities enabling users to slice and dice the signal information to identify root cause components.

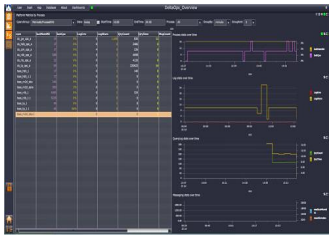
Integration API – Interface for publishing signals from other in-house systems and applications into Kx for Monitoring enabling cross–enterprise visibility and analysis of processing status external applications can interface using Java, C, C++, or C#.

At a Glance

Kx for Monitoring is an enterprise-wide, real-time monitoring, investigation and analysis solution specifically aimed at platforms where system performance and efficiency is critical.

The Kx Advantage

- Real-time configurable alerts based on both instantaneous and historical data
- Rich customizable visualization through HTML5 dashboards
- Rich store of historical data to identify trends, correlations and root causes
- Capturing process and server level signals to give detailed infrastructure insight
- Multi-Server monitoring to give a complete picture of network communications and interfaces
- High performance and scalability of Kx
- Integration API with SDK for incorporating proprietary sources
- Improve application performance by identifying processing bottlenecks and throughput issues
- Flexible & Extendible to incorporate multiple sources and formats



Process and Server Level Signals

CPU and memory usage, disk and network I/O, pings. Latency Signals: internal, point to point and roundtrip latencies. Quickly identify performance bottlenecks and avoid backlogs. Data cached to identify server memory usage/workload patterns per daily/weekly/monthly basis etc. Data integrity signals: non-tick symbols, order book validation.

Application Feedback & Training

Investigate and pinpoint latency points across systems, messages & order types. Stabilize poorly performing applications. Improve and streamline capacity planning. Maximize uptime of key applications. Customize key performance indicators (KPIs) used to provide assurance and visibility of activity and performance. Proactively identify where the problems reside.

Multi-Server Monitoring

Collect data from multiple servers to gather a complete picture of network communications and interfaces. Collate data from multiple servers into one central location for investigation, analysis and warehousing. Integration API to simplify data collection. Servers can be grouped into different logical environments such as Production, UAT and analyzed at that level.

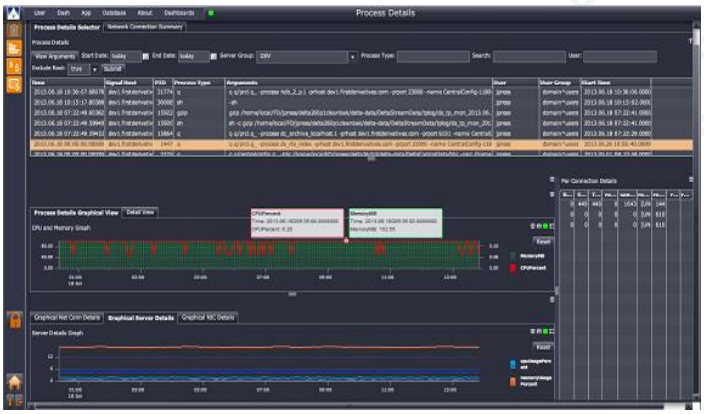
Performance and Scalability

Millions of signals can be captured and analyzed in real-time using the Kx CEP engines. Kx architecture enables rapid horizontal scaling of both the data capture and real-time analysis layers. Each Kx monitoring component can be easily configured to suit the specific needs of the business. Built in compression allows users to efficiently store large volumes of monitoring data historically for analysis.

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.



Improved Accuracy

Regulators and bank compliance departments are dealing with ever increasing volumes of complex trading data which makes identifying anomalies difficult. With Kx it is possible to backtest many years of trading data to efficiently calibrate scenarios and identify irregular behaviour, minimizing false positives.

Data Warehousing

Storage of monitoring data using the power of Kx technology augments real-time data and enables comparison of current signal information against historical data and performance metrics. The storage of large amounts of historical data allows the user to analyze different time periods and trends in order to make future predictions. Since users can quickly access critical data from a number of sources—all in one place—they can rapidly make informed decisions on key initiatives.

Flexible and Extendable

As Kx for Monitoring is built on top of the Kx platform it can be extended and customized as required. Customisation can be one by customers directly or with help from Kx. Capabilities include: the ability to scrape important log files for configured messages, implementing log growth detection and scheduling and distributing management reports. The high performance data processing architecture built on Kx ensures that from day one no compromises have to be made on what signals to capture.

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

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