Real-Time Portfolio Risk Analysis

Financial services organizations managing complex portfolios need to understand the impact of billions of market transactions every day, each one with the potential to materially affect the risk exposure of their portfolio. They need to gain real-time insight into risk to maximize revenue and minimize downside to meet both business and regulatory requirements.

Numerous recent examples abound that highlight how investment firms' systems did not react fast enough to spot significant risk exposure. Lenders typically examine aggregate risk on weekly and monthly lag cycles despite increasingly volatile markets where assets swing widely on an intraday basis.

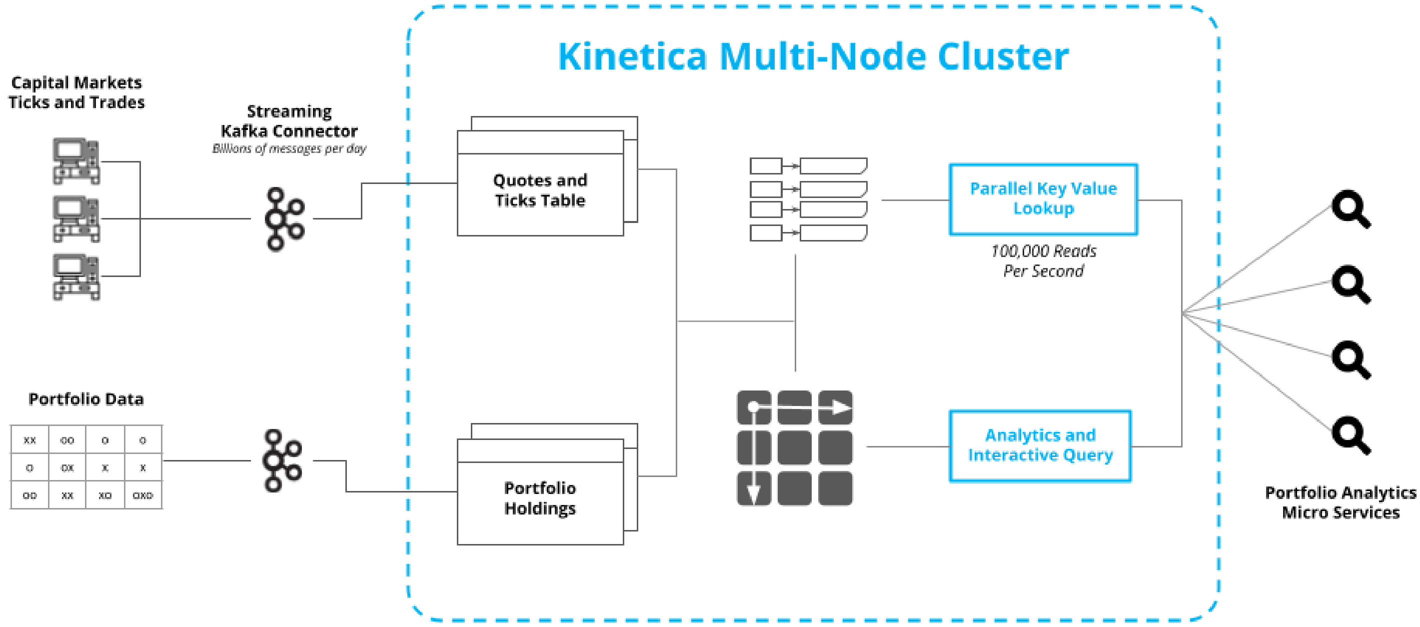
The Challenge

Traditional risk analysis systems were never designed to handle the high-cardinality joins and the constant aggregation and re-aggregation as streams of new data force changes. Further, analysis of time series data requires specialized temporal joins such as AS-OF joins.

Traditional risk analysis systems aren't keeping pace and have critical flaws.

They are too limited, too slow, or too hard.

- Streaming tools like Spark Streams and Kafka are **too limited**. They lack valuable context and have limited time series capabilities.
- Data warehouses and data lakes like Databricks and Snowflake are **too slow**. They introduce latency, require complex data engineering, and provide only rudimentary time series analysis.
- Complex point solutions that cobble together tools with microservices like Redis, Datastax, Flink, Couchbase, Spark, and others are **too hard**. They require complex data engineering and introduce intense infrastructure management and coordination.

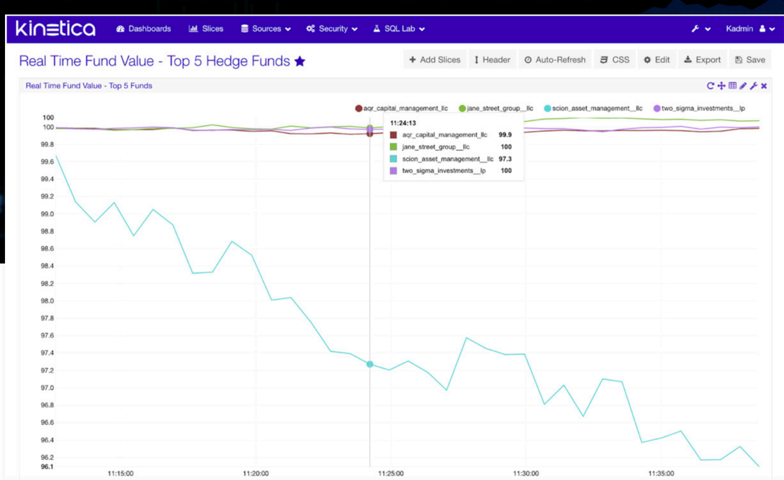


Kinetica

Kinetica converges streaming and historical context with integrated pricing and risk models in a single platform to unlock real-time portfolio risk analysis. This is powered by a native vectorized database that enables large scale, high performance analytics that doesn't require burdensome index updates that increases latency. The ability to combine analytics with data science and multiple risk and pricing models without complex data movement or data engineering is valuable for organizations that need to understand risk and opportunity in real time. Financial services organizations can leverage Kinetica to deliver on-demand results to end users and also enable the ability to provide self-service insights to clients. Our work with customers such as Citibank and Point72 on their next generation risk platforms have given us valuable experience in delivering at the speed and scale needed for banking and capital markets.

"Kinetica offers bank and investment firms near-real-time tracking of their risk exposures, allowing them to monitor their capital requirements at all times."

The Economist



Minute by minute recalculation of aggregate risk by hedge fund

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citibank

Contact us to get a demo and learn more.

kinetica