

WHITEPAPER

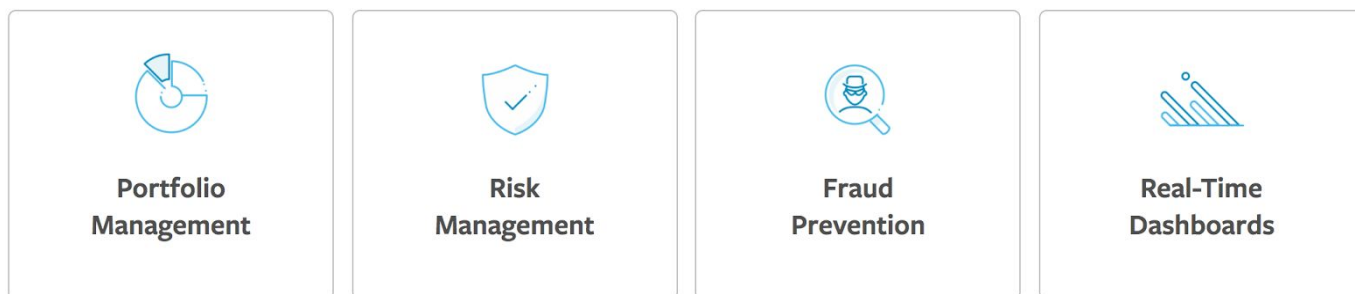
Financial Services Solutions

August 2017

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Financial markets move quickly. Access to real-time data gives banks, asset managers, analysts and advisers a leg up. Leading banks and trading firms leverage MemSQL to ingest, query, and serve data to thousands of simultaneous users.

Optimized for the following use cases



Premium Portfolio Management

Real-Time Dashboards for Portfolio Analysis

High-net-worth investors have large portfolios with hundreds to thousands of positions. The performance of MemSQL allows sub-second refresh of a dashboard with real-time data, including multiple tables and charts, even for large portfolios. This provides first-class service for these clients. This in turn drives up their satisfaction, improves customer retention and facilitates portfolio growth. And that yields improved profits and growth for MemSQL customers.



Sub-second refresh of dashboards with real-time data, including multiple tables and charts

Customer Benefits

- Uninhibited portfolio exploration due to near-instant screen refresh
- Both aggregate and drill-through queries run interactively
- Latest updates are always visible

Technical Benefits

- Interactive query response time through scale out and compilation
- Broad tool support through industry-standard SQL and connectivity APIs
- Runs on industry-standard hardware

Portfolio Management Analytics

Portfolio managers work with hedge funds, sovereign wealth funds, endowments, bond management institutions, or investment banks. They manage up to tens of thousands of positions. Their satisfaction with their analytical applications rises as its response time drops to sub-second. Analytics applications built on MemSQL allow them to investigate investment alternatives seamlessly without troublesome pauses. This allows them to make better investment decisions, giving a return on investment to their institutions that easily justifies the purchase of MemSQL.



Investigate investment alternatives seamlessly without troublesome pauses

Customer Benefits

- Sub-second response allows more thorough analysis
- Can run more analytical scenarios per day
- Make faster and better investment decisions

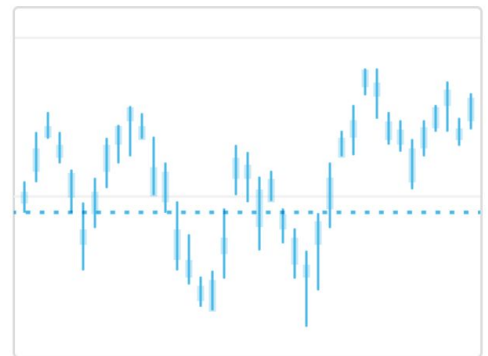
Technical Benefits

- Scales on industry-standard hardware
- Compiled query performance
- Real-time update support

Risk Management

Risk Analysis

Increased regulations after the financial crisis, including the Dodd-Frank Act and Basel III, as well as self-interested vigilance against excessive risk, have caused major financial institutions to carefully study and track their risk profile. Institutions want to track risk measures for their own portfolios, trading departments, funds they offer, and individual client portfolios, in real time. Customers have built MemSQL solutions to track portfolio risk using high speed joins of position risk, index and fund composition, and risk factors.



Use high-speed joins of position risk, index and fund composition, and risk factors to calculate overall risk in real time

Customer Benefits

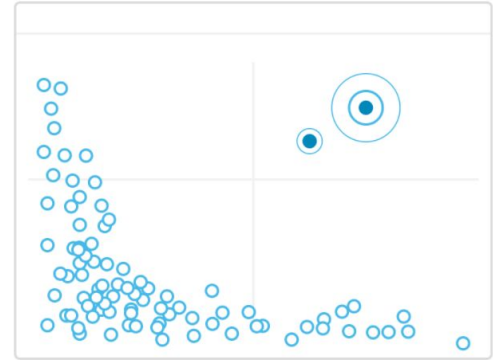
- Risk calculations done on up-to-date position and risk data
- Response time in seconds, vs. hours with competing solutions
- Risk numbers can be produced on demand

Technical Benefits

- Risk calculations done in-database with SQL instead of harder-to-maintain application code
- Scale-out parallelism in risk calculation handled transparently by the database platform

Fraud Prevention

In this era of global finance, vigilance against fraud is more important than ever. Our customers have successfully used MemSQL to build anti-fraud applications. For example, in lending, extreme measures are required to prevent fraud where a loan officer authorizes credit to a friend or relative who is not a qualified borrower. MemSQL enables this application with fast distributed parallel SQL query capability and spatial data management.



Identify outliers where loan officers and applicants match on characteristics like location or last name

Customer Benefits

- Screen every potential loan interactively for possible insider fraud
- Prevent damaging publicity, fines, and loan defaults

Technical Benefits

- High performance spatial data management enables checking if loan officer and applicant ever lived near each other
- Fast parallel query processing for many-to-many joins based on similar last names
- Fraud prevention logic runs in the database, reducing application code development time

[Learn more at memsql.com](https://memsql.com)