

CockroachDB for Quantitative Investment Firms

In order to solve complex problems across dynamic markets, quantitative investing platforms must deliver precision, scale, and speed. Structured, relational, and historical data are key components of quant platforms and the underlying database plays a foundational role in shaping outcomes. A distributed SQL database aligns with quant firm's relentless pursuit of innovation, enabling world-class teams to solve the hardest problems across global markets without being constrained by legacy infrastructure.

Common challenges	Solved with CockroachDB
Building a cutting-edge platform for global reach, but limited by infrastructure scale and performance.	Leverage a cloud-native, globally distributed architecture that delivers horizontal scaling without manual sharding. CockroachDB automatically rebalances data across nodes as demand changes to ensure high availability and consistent performance. Even when running globally, CockroachDB functions as a single logical database to simplify access to all of your data.
Delivering on promises to clients while safeguarding their data.	Survive any type of failure (AZ, node, region, cloud provider) with CockroachDB's self-healing infrastructure and reduce RPO and RTO to near zero so sensitive data is never lost. Make quick changes to the system to adapt to fluctuating client needs without downtime for online schema changes, rolling upgrades, and other regular maintenance.
Executing on a global multi-strategy approach with a single region database solution.	Follow the business opportunity and scale out across any region. Run a globally distributed database while achieving a single pane of glass view of all your data. Consolidate workloads where it makes sense, and allow others to be compartmentalized. CockroachDB allows you to control where data resides down to the row level, and has robust role-based access controls.
Investing heavily in proprietary technology, but the database isn't compounding returns.	Refine and improve proprietary systems with a distributed SQL database that can deliver results. Streamline application development with a familiar PostgreSQL interface and integrate CockroachDB with your existing data infrastructure. Eliminate complex, manual operations and automate tasks to improve the efficiency, reliability, and scalability of your systems.

Distributed SQL use cases for quant firms



Identity access management

Built-in replication, geo-distribution, and ACID guarantees allow for quick authentication and secure access to systems and data.



Historical data store

Store large volumes of past financial data used to model and predict future behavior of markets or assets. Ensure data is always accurate and available for financial audits.



Metadata management

Leverage a globally consistent metadata store to deliver a low latency experience to a geographically dispersed client base. Guarantee data is always available for fast access.



Trading

Scale horizontally to accommodate spikes in transactional workloads without causing downtime or creating data inconsistencies.

Trusted by dozens of companies we can't talk about.