

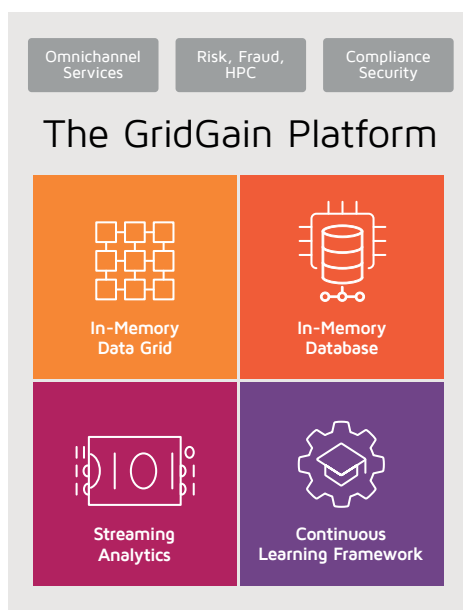
Delivering Speed, Scale and Innovation in FinTech With In-Memory Computing

The opportunity for FinTech has never been greater. Over the last decade following the financial crisis, over 2000 new companies across banking, capital markets, investment management, insurance and real estate have received over \$200 Billion in funding. The growth of FinTech to approximately \$4B in global revenues has been driven in large part by FinTech's ability to deliver digital innovation and satisfy new regulatory requirements, which new entrants have quickly leveraged. In financial services, new banks have captured up to one third of new revenues across regions. Incumbents in turn have started to adopt FinTech both for innovation and to satisfy new regulatory requirements ranging from PSD2 and GDPR to Basel I, II, III and FRTB.

But as adoption increases, FinTech companies are faced by many of the same challenges as their largest customers with speed, scale and innovation. Their new channels and services, as well as core banking, insurance and real estate systems must deliver 100-1000x speed and scale compared to existing systems. They must adopt new technologies from streaming analytics to machine and deep learning to implement real-time analytics and decision automation. The latest regulations also require 100-1000x more computations than before.

THE GRIDGAIN IN-MEMORY COMPUTING PLATFORM FOR FINTECH SPEED, SCALE AND INNOVATION

GridGain is the leading in-memory computing platform for real-time risk analytics and compliance. It's built on



Apache® Ignite™, one of the top five Apache open source projects. GridGain Systems contributed the code that became Ignite to the Apache Software Foundation and continues to be a leading contributor to the project. GridGain is used by leading FinTech companies including Finastra, IHS Markit, and The Glue, as well as banks, investment management and insurance companies. It's used to help manage trillions of dollars of assets globally. These companies rely on GridGain's ability to combine real-time transaction processing and analytics, which Gartner calls hybrid transactional/analytical processing (HTAP). The foundation for real-time HTAP is in-memory computing. GridGain's HTAP support allows companies to add real-time risk, analytics and compliance computations into the many trading activities from pricing to settlement. With GridGain, FinTech companies and banks have scaled risk-related applications to billions of transactions and analytics computa-

Enabling Fusion.Fabric PAAS at Finastra With In-Memory Computing

Finastra, with 2000+ customers, including 48 of the top 50 banks and 12 of the top twenty asset management firms, needed to transition traditional services to a real-time cloud service that supported reporting and compliance for the newer regulations including Fundamental Review of the Trading Books (FRTB), which can increase computations up to 50x.

By using GridGain, Finastra was able to roll out Fusion.Fabric, a platform-as-a-service (PaaS) for everything from trading to accounting and settlement for all securities. GridGain enabled low latency, real-time processing for real-time risk assessment, regulatory calculations and reporting for FRTB and other complex financial models. GridGain's massively parallel processing (MPP) and horizontal, elastic scalability helps ensure Fusion.Fabric is able to support its future growth.

"With GridGain, we have achieved real-time processing of massive amounts of trade and transaction data, eliminating bottlenecks and enabling us to offer next-generation financial services to our customers"

Felix Grevy, Director of Product Management for FusionFabric.cloud, Finastra (formerly MisyS)

tions per second using petabytes of in-memory data, and lowered latency up to 1,000x without ripping out or replacing existing systems.

A PROVEN PLATFORM FOR FINTECH

GridGain has helped leading fintech, investment management, commercial banking, insurance and other more specialized financial services companies add speed and scale to existing systems, as well as deliver innovative new real-time capabilities to market. Examples include real-time:

- Market & credit risk management
- Portfolio valuation
- Pricing analytics
- Pre-deal limit checking
- Trade settlement
- Cybersecurity, fraud prevention
- Regulatory compliance for Basel I, II, III and FRTB
- Omnichannel banking
- High performance computing (HPC)

A PROVEN PLATFORM FOR REAL-TIME RISK ANALYTICS AND COMPLIANCE

GridGain has been used for many years by many as part of their trading infrastructure. A major reason for GridGain's broad adoption is that it is the only in-memory computing platform that can both add speed and scalability to existing applications, and enable new applications and analytics. GridGain's native SQL and key-value support enables it to slide in-between leading databases and applications as an [in-memory data grid](#) (IMDG) without having to rip out and replace trading or risk infrastructure. Once in place, GridGain makes it easy to leverage the full platform and quickly deliver new risk analytics and compliance capabilities for the business. This includes using its distributed [in-memory database](#) (IMDB) for data ingestion, transactions and risk computations; its [streaming analytics](#) and Apache Spark™ support for processing trade or market data, and its [Continuous Learning Framework](#) to help leverage machine and deep learning across trading, fraud or portfolio management.

Throughout the platform, GridGain combines in-memory computing with a horizontal, shared-nothing architecture and massively parallel processing (MPP) that collocates computing with the data to deliver the best combination of in-memory speed and unlimited scale for HTAP. Developers can use GridGain's distributed, ANSI-99 compliant SQL, its built-in machine and deep learning, and its native support for Java, .NET and C++ to implement any computing. GridGain collocates the code with the data in memory across any cluster for unlimited horizontal scale on-premise, in a private cloud, or on Amazon Web Services, Microsoft Azure or Google Cloud.

By using GridGain, leading fintech and financial services companies have been able to perform real-time risk, analytics and compliance processing with unmatched in-memory speed and petabyte-scale. It has successfully supported billions of present value (PV), "x" value adjustment (XVA) or Monte Carlo calculations per second.

Learn More

[Finastra \(formerly misys\) case study](#)

[Introducing the GridGain In-Memory Computing Platform](#)

Contact GridGain Systems

To learn more about how GridGain can help your business, please email our sales team at sales@gridgain.com, call us at +1 (650) 241-2281 (US) or +44 (0)208 610 0666 (Europe), or complete our [contact form at www.gridgain.com/contact](http://www.gridgain.com/contact) and we will contact you.

About GridGain Systems

GridGain Systems is revolutionizing real-time data access and processing by offering an in-memory computing platform built on Apache Ignite. GridGain solutions are used by global enterprises in financial, software, e-commerce, retail, online business services, healthcare, telecom and other major sectors, with a client list that includes ING, Sberbank, Finastra, IHS Markit, Workday, and Huawei. GridGain delivers unprecedented speed and massive scalability to both legacy and greenfield applications. Deployed on a distributed cluster of commodity servers, GridGain software can reside between the application and data layers (RDBMS, NoSQL and Apache® Hadoop®), requiring no rip-and-replace of the existing databases, or it can be deployed as an in-memory transactional SQL database. GridGain is the most comprehensive in-memory computing platform for high-volume ACID transactions, real-time analytics, web-scale applications, continuous learning and HTAP. For more information, visit www.gridgain.com.

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