

# Financial Services

## Transform financial services with real-time data and analytics

For financial services companies to thrive in today's highly competitive digital environment, they will need to connect and streamline information flow across an exploding array of data sources and datasets. Aerospike sits at the core of the modern digital banking ecosystem, capturing streaming data at the digital edge, feeding robust AI and machine learning analysis, and pushing instructions and transaction outcomes back to the edge in real time. Aerospike provides hyperscale performance to process massive datasets quickly and at extremely low latency to ensure the integrity of financial transactions, data and analysis.

## At the core of modern digital financial services ecosystem

The Aerospike data platform powers mission-critical globally distributed applications and analysis in real-time, with unmatched uptime and proven industry use cases.

## Key Benefits

### IMPROVE DATA ACCURACY

Refresh market, customer and transactional data more frequently from multiple feeds simultaneously

### SPEED AT ANY SCALE

Modern data architecture handles millions of transactions per second while scaling to meet petabyte-range data volume needs

### HIGH RELIABILITY

Unmatched availability with demonstrated uptime of five 9s and strong data consistency

### EXCEPTIONALLY LOW TCO

Fueled by our patented Hybrid Memory Architecture™, Aerospike provides unmatched performance at 40-60% reduction in TCO

### AI/ML-POWERED ANALYSIS

High-performance ML pipeline, cut Spark jobs execution time by 80%

### OFFLOAD MAINFRAME WORKLOADS

Support ever-growing workloads during trading hours with a distributed, intraday real-time operational data layer

# Financial Services Solutions

## Fraud Prevention

### IMPROVED DETECTION WITH MORE DATA, FASTER

Today's financial services and payment companies must be able to immediately validate digital identities and prevent fraudulent transactions without causing customer friction or inconvenience online. Fraud prevention requires machine learning at the edge and Aerospike analyzes millions of events, billions of data points, and petabytes of historical information in milliseconds. Reducing fraud can save millions of dollars per day and empower organizations to provide more personalized services, reduce customer churn and strengthen customer trust in your brand at the same time.



### AEROSPIKE HELPS YOU

- Leverage hyperscale speed and performance with up to 80% lower TCO for your fraud prevention solutions
- Reduce false positive and AML exposure by up to 30x with tighter adherence to fraud calculation SLA time windows
- Improve fraud detection ML algorithms by enabling 10x the number of attributes to be analyzed without increasing customer friction
- Move quickly down the technical runway along your AI journey, replacing rule-based processes with powerful neural net and deep learning analysis

## AI & Machine Learning

### PERFORM FASTER AND DEEPER AI/ML-POWERED DATA ANALYSIS

AI and machine learning are critical enablers of the next generation of financial services systems that ensure fraud prevention, customer 360, risk management and compliance. As financial service organizations grow

infrastructure to accommodate more data from both a wider array of datasets and existing ones, Aerospike scales with you, from terabyte-to-petabyte range and beyond. Perform faster and deeper AI and machine learning data ingestion at consistently low latency. Aerospike optimizes the frequency of model training, preparation, tuning, enrichment and validation to build a high-performance pipeline to feed data-hungry AI and ML applications.

## AEROSPIKE HELPS YOU

- Leverage hyperscale speed and performance with up to 80% lower TCO for your AI/ML-powered solutions
- Create low latency inference pipeline at the edge by connecting the Aerospike NoSQL database with pre-built integration for Spark, Kafka & PrestoSQL/Trino
- Cut Spark job execution time by 80% with massive parallelism to reduce training time, increase frequency of retraining, and maximize ROI
- Conduct in-place data exploration to eliminate compliance challenges by removing the need to copy data into multiple systems
- Support 1,000's of adaptive machine learning models simultaneously
- De-risk your challenger/champion testing with proven 30 day playback



## Customer 360 & Hyper-Personalization

DELIVER AN IMMERSIVE, PERSONALIZED DIGITAL EXPERIENCE TO OPTIMIZE CUSTOMER VALUE

In today's highly competitive financial services market, financial institutions must differentiate their brand the moment consumers come to their site or risk losing their business. With Aerospike's modern data architecture powered by AI and machine learning, brokerages, banks, payment companies and others can build a connected 360-degree profile of each customer and deliver immersive, personalized experiences to tens of millions of users globally.



## AEROSPIKE HELPS YOU

- Connect data across disparate silos, third-party sources and transactional data at the edge to build an instant, accurate profile of each consumer
- Create hyper-targeted digital content such as next-best offers, tailored pricing and rates, upsell and cross-sell opportunities, smarter chat bots, better credit scoring and investment portfolios optimized for performance
- Speed customer onboarding, transaction and response times to drive faster and deeper online services adoption and grow customer lifetime value
- Build a seamless, omnichannel interconnected digital experience spanning web, mobile, call center & in-branch activity
- Predict customer churn before it happens and take immediate, automated action

# Sector-Specific Solutions

## Brokerages

With the seismic shift to digital transactions and a surge of trading volume, online brokerages have an opportunity to grow their businesses with a modern data infrastructure that optimizes real-time front-office, middle-office and back-office operations. Aerospike connects, analyzes and manages massive volumes of datasets to streamline the key processes that differentiate your business in a competitive marketplace. Aerospike powers highly personalized front-end digital experiences to AI-powered portfolio optimization, more profitable margin lending, faster clearing and settlements, and better data privacy and compliance.



## FRONT OFFICE

- ✓ Build instant, accurate profiles of each consumer to personalize recommendations for upselling and cross-selling, optimize portfolio management and improve the trading experience
- ✓ Enable smart trading and robo-advisory services with AI-powered portfolio allocation and diversification to exactly match customer needs
- ✓ Enable low latency algorithmic trading for stocks, bonds and financial instruments across multiple exchanges in real-time to trigger buy/sell actions
- ✓ Improve your ability to sell higher-margin instruments such as order flow, 12-b-1 fees, options, futures, bonds & more

## MIDDLE OFFICE

- ✓ Maximize margin loans while minimizing risk with real-time analysis to ensure users stay within their buying power
- ✓ Improve your ability to authorize investment and trading decisions quickly based on more robust risk models
- ✓ Conduct AI/ML-powered post trade analysis to improve and automate compliance, liquidity, and confirm best price received
- ✓ Link customer portfolio data with the system of record, making it available in real-time in a consumable format with full visibility into all client account activity
- ✓ Manage liquidity by better understanding how much capital is needed to make a trade

## BACK OFFICE

- ✓ Scale settlement processing and clearing of trades in sub millisecond per transaction and with massive throughput
- ✓ Provide visibility and transparency to front-office entities to optimize costs for clients
- ✓ Help adherence to data privacy (GDPR) and compliance mandates (CCPA, CCAR), and deliver risk reporting in real time
- ✓ Leverage AI to generate analysis on trade rights, disputes, reconciliation, compliance reports and trade reports

## Digital Payments

The financial services industry is in the midst of a dramatic shift to real-time digital payments, and payments companies now face a highly discerning customer base that expects a secure and convenient digital experience with every interaction. Aerospike's advanced data architecture enables payments companies to capitalize on real-time data and AI-powered analytics to ensure secure online user authentication, friction-free payment processing, and a valuable tool to battle fraud.



## AEROSPIKE HELPS YOU

- Surface patterns of fraud quickly, matching past behavior against fraud patterns and risk scoring for AI-driven anomaly detection
- Create hyper-personalized digital offers based on a 360-degree customer profile, such as next-best offers, credit scoring, interest rates, loyalty programs, and tailored pricing
- Ensure data privacy and regulatory compliance with a secure data architecture
- Deliver reliable real-time payments and instant money movement extremely cost-effectively within a secure, and hassle-free digital experience

# Banking

As banking institutions face a rapidly evolving digital environment, they are being forced to modernize their data infrastructure across front-, middle- and back-office operations – utilizing data as a strategic asset to optimize their business. Aerospike sits at the heart of the retail, corporate and investment banking ecosystem, connecting and analyzing massive volumes of datasets in real time to understand customers on the deepest level, hyper-personalize the digital experience, and ensure the integrity and compliance of every financial transaction.



## FRONT OFFICE

### For Retail and Corporate Banking

- ✓ Enable AI-powered online recommendation engines, tailored pricing and rates, and upsell opportunities with faster and deeper knowledge of each customer
- ✓ Master fraud detection and reduce false positive exposure by enabling 10x the number of attributes to be analyzed without increasing customer friction
- ✓ Speed transaction, payment and response times to improve user experience and engagement
- ✓ Gain deeper insight into customer background and activity to lower risk, prevent fraud, improve opportunities for upselling and cross-selling
- ✓ Predict customer churn before it happens and take immediate, automated action

## FRONT OFFICE

### For Investment Banking

- ✓ Speed development and presentation of portfolio research, risk models and complex investment strategies
- ✓ Empower front-office sales teams with 360-degree customer view, recommendation engines and upsell/cross-sell opportunities
- ✓ Enable low latency algorithmic trading for stocks, bonds and financial instruments across multiple exchanges in real-time

**Personalization can lead to annual revenue increases of 10% for banks. For every \$100 billion in assets that a bank has, it can achieve as much as \$300 million in revenue growth by personalizing its customer interactions.**

## For All Banking Benefits

- ✓ Link customer portfolio data with the system of record, make it available in real-time in a consumable format with full visibility into all client account activity
- ✓ Optimize the frequency of AI and ML model training, preparation, tuning, enrichment and validation to build a high-performance pipeline to feed AI and ML applications
- ✓ Leverage AI-powered analysis to accurately measure credit, market and operational risk
- ✓ Build a more profitable, data-driven margin lending business to differentiate your offerings and compete more effectively on lending rates

## For All Banking Benefits

- ✓ Scale and speed back-office automated processing for clearing, settlements, reconciliation, ACH and wires, commissions and charges, entitlements and securities, and real-time reporting
- ✓ Ensure adherence to data privacy (GDPR) and compliance mandates (CCPA, CCAR), and deliver risk reporting in real time
- ✓ Provide visibility and transparency to front-office entities to optimize costs for clients
- ✓ Leverage AI to generate analysis on trade rights, disputes, reconciliation, compliance reports and trade reports

## AEROSPIKE

Aerospike is the global leader in next-generation, real-time NoSQL data solutions for any scale. Aerospike enterprises overcome seemingly impossible data bottlenecks to compete and win with a fraction of the infrastructure complexity and cost of legacy NoSQL databases. Aerospike's patented Hybrid Memory Architecture™ delivers an unbreakable competitive advantage by unlocking the full potential of modern hardware, delivering previously unimaginable value from vast amounts of data at the edge, to the core and in the cloud. Aerospike empowers customers to instantly fight fraud; dramatically increase shopping cart size; deploy global digital payment networks; and deliver instant, one-to-one personalization for millions of customers. Aerospike customers include Airtel, European Central Bank, Experian, Nielsen, PayPal, Snap, Verizon Media and Wayfair. The company is headquartered in Mountain View, Calif., with additional locations in London; Bengaluru, India; and Tel Aviv, Israel.

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