

Stoxkart's Digital Transformation: Revolutionizing Trading with Modern Infrastructure

Executive Summary

In the fast-paced world of financial trading, milliseconds can define success. Stoxkart, a new-age discount broker under the esteemed SMC Group, recognized the imperative to evolve beyond its traditional monolithic systems to maintain a competitive edge and deliver superior customer experiences.

Partnering with Motherson Technology Services (MTSL), Stoxkart embarked on a comprehensive digital transformation journey, migrating to a scalable, cloud-native platform on AWS. This strategic initiative not only addressed critical operational and cost inefficiencies but also positioned Stoxkart as an innovator.

Key outcomes include:

- **5x higher trading loads** capacity
- **90% reduction** in latency for certain pre-trade use cases

This case study details Stoxkart's achievements in innovation and Motherson's role as a trusted technology and innovation partner.

About SMC Stoxkart

Stoxkart, established in 2017, is a dynamic discount brokerage firm dedicated to empowering traders and investors with cutting-edge, technology-driven solutions. With a rapidly growing client base of over 150,000 across India, Stoxkart simplifies access to a wide array of investment options, including equities, commodities, derivatives, and IPOs, through robust web and mobile platforms.

As a part of the esteemed SMC Group, a leading financial services conglomerate with over three decades of industry leadership, Stoxkart benefits from a strong foundation of stability, brand credibility, and expertise.

Mission

To make investing smarter, faster, and more affordable for all types of traders.

Vision

To build a scalable, secure, and intelligent trading ecosystem that anticipates and adapts to market dynamics.

The Seven Elements of Cloud Computing Value



Industry Context & Challenges

The Indian financial services sector is undergoing a profound digital transformation, driven by the rise of fintech companies, increasing demand for financial inclusion, and the need for real-time, low-latency transactions. In this highly competitive environment, traditional on-premises infrastructures often struggle to meet the dynamic demands of modern trading, leading to bottlenecks in performance and reliability.

Operational Inefficiencies

Legacy infrastructure relied on manual deployment processes, leading to delayed releases, inconsistent environments, and increased operational risk. The absence of an integrated CI/CD pipeline limited visibility and agility.

Customer Experience

To deliver a seamless and modern trading experience, it became essential to move beyond the inherent limitations of traditional data centre operations. Factors such as limited agility in scaling infrastructure, dependency on manual interventions, and complex capacity planning often led to longer release cycles and delayed responses to market opportunities.

Additionally, maintaining resilience, security compliance, and observability across a distributed on-prem setup demanded significant operational overhead. These challenges, though well-managed, constrained the pace of innovation and responsiveness that today's customers expect in a fast-evolving digital ecosystem.

Migrating to the cloud was therefore a strategic step — enabling faster time-to-market, higher system reliability, and an enhanced customer experience powered by real-time scalability and automation.

Cost Inefficiencies

Reliance on on-premises servers which resulted in significant operational expenditure. Idle infrastructure contributed to unnecessary costs, and a lack of a unified cost management framework hindered visibility into resource utilization and cost attribution.

Competitive Market Pressures

Recognizing the rapid evolution of the fintech landscape, Stoxkart's leadership proactively embarked on a technology transformation journey to stay ahead of emerging trends. The goal was to leverage cloud-native capabilities to accelerate innovation, enhance scalability, and deliver superior trading experiences — not just to keep pace with the market, but to set new benchmarks in agility and reliability.

The Transformation: Solution & Approach

Recognizing these challenges, Stoxkart partnered with Motherson Technology Services (MTSL) to architect a future-ready solution. MTSL adopted a holistic modernization approach, moving beyond a mere lift-and-shift migration to focus on automation, scalability, and data-driven decision making.

Cloud-Native Modernization

Migrated legacy workloads to a modern, elastic architecture powered by AWS. Transitioned to microservices-based architecture and integrated AWS Graviton processors for optimized performance and efficiency.

Enterprise Data Lake Foundation

Built a centralized AWS S3 Data Lake to create a scalable and secure data ecosystem. Empowers real-time dashboards, AI/ML based trade analytics, and improved data governance.

Resilience & Incident Automation

Integrated AWS Incident Manager, CloudWatch, and SNS for proactive alerts, automated incident handling, and improved fault recovery, ensuring high availability and rapid response to service disruptions.

Automated DevSecOps Framework

Deployed a fully automated CI/CD pipeline with integrated DevSecOps controls, streamlining deployments, enhancing security across development stages, and enabling zero-touch deployments.

Network Optimization

Replaced legacy MPLS and VPN setups with AWS Transit Gateway, delivering low-latency, scalable, and secure multi-VPC connectivity crucial for consistent performance in trading operations

Business Impact & Outcomes

The strategic improvements implemented by Motherson Technology Services delivered significant, quantifiable benefits to Stoxkart, transforming its operational capabilities and market position.

Focus Area

Scalability
Cost Efficiency
Automation
Performance
Monitoring
Availability
Future-Readiness

Business Impact

5x higher capacity to handle simultaneous trading sessions seamlessly
40% reduced compute cost through Graviton adoption and efficient tagging
Zero manual deployments, leading to faster and more reliable release cycles
Low-latency trade execution with real-time market data broadcasting
Proactive detection and automated issue resolution, ensuring operational stability
Achieved **99.99% uptime** with a resilient AWS cloud design
Platform built to support continuous innovation, AI, and advanced analytics



Abhishek Chawla
CTO, SMC Global Securities

Client Testimonial

At SMC Global Securities and Stoxkart, our collaboration with Motherson Technology Services has transformed the foundation of our trading ecosystem. Transitioning from traditional infrastructure to a modern, cloud-native environment has enhanced system reliability, scalability, and performance. We've eliminated the complexity of manual scaling, patching, and maintenance, allowing our teams to focus on product innovation and customer experience. With automated operations, real-time visibility, and on-demand scalability, we've built a secure, high-performing platform capable of sustaining rapid trading growth while delivering consistent value to our customers.



Devesh Kaushik
Business Head India

Partner Perspective

Stoxkart's journey demonstrates the tangible power of strategic modernization. Through a scalable architecture and AI-ready foundation on AWS, we've delivered measurable impact and future innovation potential. By adopting cloud-native infrastructure, Graviton-based compute, and DevSecOps automation, we enabled Stoxkart to achieve greater scalability, cost efficiency, and operational agility. The migration eliminated manual dependencies, optimized resource utilization, and strengthened their digital backbone. Today, Stoxkart operates on a future-ready trading platform, one that adapts seamlessly to dynamic market demands and supports continuous innovation.

Conclusion

Transformation Impact

Stoxkart's collaboration with Motherson Technology Services marks a decisive step toward building a future-ready financial trading ecosystem. This modernization journey not only improved operational agility and reduced costs but also positioned Stoxkart to innovate confidently in a data-driven marketplace.

This partnership exemplifies how strategic collaboration and technical expertise create lasting value. Stoxkart's vision for innovation has been realized through Motherson's proven capabilities, establishing a benchmark for cloud-enabled fintech success.

Future Outlook

By integrating automation, DevSecOps, and intelligent data foundations, Stoxkart now operates with the speed, scalability, and intelligence required to lead in the digital-first trading era. The platform is built to support continuous innovation, AI, and advanced analytics.

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