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CASE STUDY

Setting Up Leading Bank's Data Platform Infrastructure for Future Growth

Data Engineering Infrastructure Set-up



Background

A leading bank modernized its data infrastructure through the implementation of a centralized data platform to enhance data processing efficiency, reduce latencies, and offer near real-time data visualization. The bank engaged Stratpoint's agile dedicated team to set up the baseline infrastructure for this initiative, ensuring seamless data streaming between on-premise core banking systems and Cloud services. The data platform improved operational efficiency, scalability, and centralized access to data, positioning the bank as one of the leaders in data-driven financial services.

Addressing high latency and data fragmentation

The bank faced critical challenges in its data infrastructure, including high latencies, decentralized data sources, and limited accessibility, impacting the bank's operational efficiency and making it challenging for internal teams to make timely, data-driven decisions. Key issues included:



High latency in data processing, with transaction data updates being done in batches. Reliance on batch processing limited real-time accessibility, which was crucial for internal users who needed up-to-date insights to support timely decision-making, efficiency, and inter-departmental collaboration.



Fragmented data access, requiring users to connect to multiple core systems and applications, complicating the user experience and making it more time-consuming.



Technical teams faced increased workloads due to the high maintenance demands of the outdated system, adding to technical debt and diverting resources from innovation.



Customer dissatisfaction due to delays in response times, leading to frustration.

With no shift toward real-time capabilities, the bank would risk falling behind more responsive competitors and losing agility, preventing them from seizing emerging opportunities and adapting effectively to market changes.

These challenges, combined with the rising demand for digital services, pushed the bank to seek a solution to streamline data processes and enable faster and more accurate information access.



Building a future-ready data infrastructure

To address these challenges, the bank engaged Stratpoint's agile dedicated team of data and Cloud engineers to lay the groundwork for a more efficient data streaming architecture for the the bank's centralized data platform initiative. The primary objective was to implement a secure, scalable infrastructure to support real-time data streaming from the bank's on-premise core banking systems to Cloud services. The solution involved:

- **Deploying MongoDB Atlas** for secure and scalable database management.
- **Utilizing Confluent Kafka** for real-time transaction processing, allowing near-instantaneous updates across digital banking channels.
- **Setting up AWS Transit Gateway** for secure, high-speed connectivity between the bank's on-premises networks and Cloud infrastructure.

This infrastructure enabled the bank to achieve real-time data processing capabilities, significantly reducing latency, with an 84% improvement. It also consolidated data from various sources, ensuring greater data accuracy and consistency across the organization. Stratpoint's agile dedicated team's flexibility and technical expertise allowed for smooth project execution, completing the project within the one-year engagement period, undeterred by network redesigns and changes in the firewall setup schedule.



84% improvement in latency

The infrastructure set-up delivered measurable improvements in both system performance and user experience:

Reduced latency with 84% improvement, allowing teams to access the latest transaction data instantly, streamlining processes, and cutting down manual data-handling tasks.

Centralized data management, simplifying data access for internal teams and enhancing operational efficiency, reducing time and effort spent on accessing disparate systems.

Reduced maintenance demands associated with batch processing and minimized disruptions, supporting a more proactive approach to internal data needs.

Improved scalability, allowing the bank to handle increased demand from its digital banking channels without sacrificing performance.

> Stratpoint went beyond the original scope to ensure all our needs were met. The non-production environment setup was completed successfully and finished on-time. Stratpoint actively supported the bank's internal teams.

-The Bank's Platform Architect Lead



Laying the foundation for future innovation

The successful implementation of the data platform infrastructure set-up marked a significant milestone in the bank's digital transformation journey. Stratpoint's support in setting up a scalable, resilient, and future-ready infrastructure helped position the bank to continue its modernization efforts, empowering internal teams, reducing operational friction, and supporting data-driven strategies across various departments. This project has enhanced the bank's operational capabilities as well as strengthened its competitive position in the rapidly evolving banking industry.

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About Stratpoint

Stratpoint is the digital acceleration partner for companies ready to transform. With expertise in agile software development, quality assurance, Cloud, data, and AI, it empowers businesses to boost efficiency, improve decision-making, and gain a competitive advantage in today's digital economy.

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