Case Study

$5M Savings Through PCF to AWS EKS Migration for a US Bank

Modernizing 420+ microservices for a leading U.S. financial institution

As one of the largest privately held banks in the United States, this organization has built a 150+ year legacy serving customers across multiple lines of business, including agribusiness lending, credit cards, and commercial banking. A top-ranked financial institution nationally, it operates at a scale where technology resilience, security, and operational efficiency are business-critical.

As digital demand increased and application complexity grew, the organization recognized the need to modernize its infrastructure foundation, moving away from legacy platform dependencies toward a cloud-native architecture capable of supporting future growth.

Scaling Beyond PCF Without Disrupting the Business

The bank's application landscape had evolved into a large and complex ecosystem, with more than 420 microservices running on a PCF-based environment. Over time, this created increasing operational overhead, rising licensing costs, and growing technical debt tied to legacy platform constraints.

While the organization had already explored migration paths to Amazon EKS, early attempts proved challenging due to the scale of the environment, inter-service dependencies, and the need to ensure uninterrupted business operations. The bank required a structured, low-risk approach that could modernize its platform while maintaining stability, security, and performance across mission-critical workloads.

Through a combination of cloud-native engineering experience, automation-led migration capabilities, and a pragmatic understanding of regulated banking environments, Brillio was chosen as the partner to lead the endeavor.

A Factory-Led, Cloud-Native Migration to AWS

Brillio designed and executed a comprehensive modernization program centered on scale, repeatability, and business continuity.

The engagement began with a phased migration roadmap, supported by detailed dependency mapping across applications, databases, messaging services, and shared infrastructure. This ensured that complex interdependencies were clearly understood before any workloads were transitioned.

To accelerate delivery, Brillio established a Migration Factory model, enabling standardized and repeatable migration of microservices from PCF to Amazon EKS. Automation played a central role, with Infrastructure as Code used to provision and configure AWS services such as Amazon EKS, Amazon Aurora, and Amazon MQ in a consistent, governed manner.

To minimize risk, Brillio enabled a dual-mode deployment strategy, allowing workloads to run concurrently during transition phases. Proprietary Brillio migration tooling was used to scan, map, and align microservices, ensuring accuracy while reducing manual effort.

Beyond infrastructure and application migration, Brillio worked closely with the organization's CI/CD platform teams to identify pipeline inconsistencies, defects, and improvement opportunities. These insights resulted in enhancements that improved deployment reliability, standardization, and developer experience across future application teams.

Need for a Factory-led, cloud-native migration enabling scalable, automated and low-risk modernization on AWS.

Modernizing the Data Layer and Observability Foundation

As part of the broader transformation, Brillio supported the migration of multiple Microsoft SQL Server databases to Amazon Aurora, using AWS Database Migration Service with Change Data Capture enabled. This approach ensured data consistency while minimizing downtime. Brillio handled migration planning, replication execution, validation, and full end-to-end documentation.

To further strengthen visibility and control, Brillio extended an internal client tool originally designed for application metadata and dependency discovery. New integrations with Dynatrace and APIs enabled automated discovery of microservice dependencies across databases, RabbitMQ queues, and Redis clusters, visualized through interactive dependency graphs.

Additionally, Brillio conducted in-depth analysis of PCF resource consumption across application teams, establishing accurate CPU, memory, and scaling baselines prior to migration. These insights informed optimized Kubernetes configurations in EKS, including fine-tuned pod requests, limits, and Horizontal Pod Autoscaler thresholds to balance performance with cost efficiency.

Brillio led seamless database migration, dependency visibility, and optimized cloud resource modernization.

The Result

The migration delivered significant business and technology outcomes for the client.

Over 420 microservices were successfully migrated from PCF to AWS, enabling the bank to eliminate PCF licensing costs and achieve **projected savings of $5 million** over three years.

Beyond cost reduction, the organization gained a modern, cloud-native platform that improved scalability, resilience, and operational efficiency through AWS-managed services. Security and reliability were enhanced through standardized infrastructure and managed data services, while observability improvements provided deeper architectural insight and faster troubleshooting across engineering teams.

The result is a future-ready foundation that supports modern banking innovation, delivers predictable performance, and reduces infrastructure waste, positioning the bank for continued growth and agility in a rapidly evolving digital landscape.

- **420+** microservices migrated from PCF to AWS
- **$5m** savings over 3 years
- Improved scalability & operational efficiency
- Future-ready clout platform for modern banking
- Enhanced security and reduced operational overhead

Significant cost savings with a secure, scalable, future-ready cloud platform.

ABOUT BRILLIO

Brillio is a digital technology services company that drives AI-first engineering and design-led experiences for global enterprises. Born digital in 2014, its consulting-led services span Customer Experience, Data & AI, Product Engineering, and Digital Infrastructure. With an industry-leading NPS of 71, Brillio accelerates time to market through its proprietary BrillioOne.ai platform, powered by AI-ready talent with deep domain expertise.

Brillio is the official Digital Transformation Partner and the official Data and AI Services Provider of Atlassian Williams Racing. Brillio partners with leading technology providers including Microsoft, AWS, Google Cloud, Salesforce, Adobe, Databricks, and Snowflake and operates with 6,000+ “Brillians” across 15 global delivery centers. Consistently recognized as a Great Place to Work® since 2021, Brillio blends innovation, talent, and purpose to deliver measurable outcomes for clients and fulfilling careers for employees.

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