




# **FNBO's scalable & cost-effective migration to AWS**

Building a resilient and cost-effective infrastructure for modern banking through a strategic migration from PCF to AWS





Headquartered in Omaha, Nebraska, FNBO (First National Bank of Omaha) was founded in 1857 and offers a wide range of personal, commercial, and wealth management products, with branches across eight states. Following the progressive decommissioning of legacy platforms and rising maintenance costs, the bank began searching for an alternative to its PCF environment. With over 420 on-premises microservices to migrate, the bank aimed to eliminate costly PCF licensing fees by moving away from its legacy platform while also modernizing its infrastructure.

A key objective was to migrate applications to a modern, cloud-native platform, enabling scalability and future readiness. Additionally, the migration sought to reduce technical debt by streamlining operations and improving overall efficiency, eliminating on-premises infrastructure costs, and enhancing cost-effectiveness and operational flexibility.

The migration posed significant complexity, especially after initial attempts to transition workloads to Amazon EKS proved challenging. The organization sought a partner with a successful track record in PCF migrations to accelerate its PCF migration journey and enhance its team's skills. With a proven, phased approach for de-risked PCF migrations from on-premises to AWS, Brillio, an advanced-tier AWS partner with deep expertise in migrating PCF customers across the Financial Services, Retail, and Healthcare sectors, emerged as the ideal partner.

**“Brillio’s deep expertise in Pivotal Cloud Foundry migrations to AWS, on-time delivery, and predictable cost framework, paired with their relationship-focused approach, made Brillio a proven and trusted partner in our migration journey.”**

**– Chad Tuttle, VP of Technology, FNBO**

# Scaling the Transition to Cloud with a 'Migration Factory'

Following the successful completion of the application migration assessment, Brillio developed a detailed roadmap to guide the migration process. The team conducted thorough reviews of the CI/CD pipelines, infrastructure, and code for each identified application archetype.

Dependency mappings were created for complex applications that used proprietary libraries and PCF tiles, resulting in a clear migration execution plan for approximately 420 microservices. In this phase, select applications and microservices within the Partnership and Banking segments were also migrated, including two applications made up of 15 microservices.

In Phase 2, Brillio worked closely with the customer to set up a 'migration factory' to streamline migrating all remaining applications and microservices.

Insights were drawn from both the Pilot Migration and Migration Assessment, transitioning around 120 microservices from PCF to AWS Non-Prod environments.

This phase included a comprehensive analysis of each microservice's dependencies, with Brillio provisioning and configuring the necessary infrastructure using Infrastructure as Code (IaC), covering databases, queues, secrets, and roles.

Each migrated component was validated to ensure that functionality was preserved, aligning with the bank's technical and business objectives for a smooth AWS transition. To ensure seamless compatibility, each application was adapted to the new cloud platforms and services with dual-mode deployment, allowing legacy and new environments to operate concurrently.

During the pilot phase, Brillio's proprietary migration tool was leveraged to scan, identify, and map the microservices in scope.

# Expected Projected Cost Savings of approx \$5 million over 3 years

By leveraging AWS-managed services, the bank achieved significant cost reductions and enhancements in performance, scalability, and resilience. Migrating from PCF MySQL to Aurora MySQL or Aurora PostgreSQL allowed the bank to capitalize on automatic scaling and cost-efficiency features. Advanced security measures and simplified management capabilities provided a resilient and cost-effective database solution, aligning with goals to optimize operations and improve performance.

In addition, transitioning from PCF RabbitMQ to Amazon MQ significantly

reduced operational overhead, improved reliability, and simplified scalability with enhanced monitoring and management. This migration also strengthened security and provided substantial cost savings, resulting in a more efficient and resilient messaging infrastructure to support the bank's needs.

Through the use of auto-scaling and multi-zone EKS clusters, the bank was equipped to scale with demand, ensure minimal downtime, and increase agility and efficiency.

Over the next three years, these improvements are projected to save the bank over \$5 million in licensing costs alone.



## ABOUT BRILLIO

Brillio is one of the fastest growing digital technology service providers and the partner of choice for many Fortune 1000 companies seeking to turn disruption into a competitive advantage through innovative digital adoption. We help clients harness the transformative potential of the four superpowers of technology: cloud computing, Internet of Things (IoT), artificial intelligence (AI) and mobility. Born digital in 2014, we apply our expertise in customer experience solutions, data analytics and AI, digital infrastructure and security, and platform and product engineering to help clients quickly innovate for growth, create digital products, build service platforms, and drive smarter, data-driven performance. With 17 locations across the U.S., the UK, Romania, Canada, Mexico, and India, our growing global workforce of nearly 6,000 Brillians blends the latest technology and design thinking with digital fluency to solve complex business problems and drive competitive differentiation for our clients. Brillio has been certified by Great Place to Work since 2021.



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