Lotte Card builds cloud-based customer service system with Red Hat

Software and services

Red Hat OpenShift®
Container Platform

Red Hat JBoss® Enterprise
Application Platform

Red Hat Consulting

Partner

IBM

Overview

Korean payment card company Lotte Card sought to modernize its financial customer service system to better respond to rapid changes in market and customer demand by releasing new features and services faster. Using flexible yet supported platform technology from Red Hat, Lotte Card created a new, cloud-based environment for its customer service system. This agile, responsive environment has helped the company's developers work faster and use big data insights to create personalized marketing experiences—at a lower cost than the previous system. After its initial success, Lotte Card now plans to migrate its critical core financial system to the cloud with Red Hat and IBM.

Seoul, South Korea

HEADQUARTERS

Financial services

1,700 employees

Benefits

- Increased system responsiveness with autoscaling to support more than 10 times higher volume of concurrent processes
- Reduced time needed to build IT infrastructure for new services by 53%
- Expects to achieve 47% savings for 5-year total cost of ownership (TCO)

Pull quote:

"Among the many cloud vendors and IT companies we considered, only Red Hat provided the technology capabilities that we needed to innovate."

Jung Hwan Kim
CIO, Lotte Card

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Pioneering cloud-based, digital financial services

One of the biggest payment card companies in South Korea, Lotte Card responds to the changing payments market by offering innovative, personalized services for close to 9 million customers.

As business demands grew, Lotte Card needed to expand its systems and processes. Its existing IT system relied solely on hardware performance to run applications, restricting responsiveness—for example, autoscaling in response to marketing campaigns suddenly triggering massive customer traffic volume. Additionally, the company experienced difficult service launches that required extensive time to rebuild and prepare supportive IT infrastructure.

While much of the financial sector is currently migrating from UNIX to Linux systems to solve similar performance challenges, Lotte Card decided to become the first organization in Korea's financial sector to adopt Platform-as-a-Service (PaaS) cloud computing technology.

"Red Hat has helped us build a customized cloud platform to improve cost efficiency and respond quickly to the rapidly changing environment."

Jung Hwan Kim
CIO, Lotte Card

"After considering the changes in the market and the limitations of our existing system, we decided to build a cloud foundation to transform from traditional development to a more agile method that would allow us to develop applications in a faster, more practical way," said Jung Hwan Kim, CIO of Lotte Card.

As an early adopter without a reference for building a scalable, open source-based private cloud environment, the company faced a lack of skilled staff and reference architectures to support their cloud journey. Additionally, strict compliance regulations and security requirements would require ongoing inspection and issue response during the project to avoid any risks during migration.

Building a cloud platform with enterprise open source solutions

To create this cloud-based services system, Lotte Card sought flexible, innovative open source technology, while regulations—and a lack of in-house-expertise—led the company to seek a supported, enterprise-ready solution. Lotte Card chose to partner with Red Hat to build and deploy a reliable platform based on enterprise open source technology, designed for the company's specific needs and supported by continuous expert guidance.

"Among the many cloud vendors and IT companies we considered, only Red Hat provided the technology capabilities that we needed to innovate and create a custom, rather than generic solution," said Jung Hwan.

The foundation of Lotte Card's new cloud platform is Red Hat OpenShift Container Platform, a solution for managing applications across cloud and on-premise infrastructure using Kubernetes container technology. OpenShift Container Platform supports collaborative work across development and operations teams, with self-service developer capabilities managed centrally.

Lotte Card also used Red Hat JBoss Enterprise Application Platform (EAP) to create a modular, more agile architecture for developing managed services. Red Hat offers a containerized image for JBoss EAP that is designed for use with OpenShift. Using this image, developers can quickly and easily build, scale, and test applications that are deployed across hybrid environments.

Working with Red Hat Consulting, Lotte Card became the first South Korean company to build a PaaS-based, customer-facing digital banking platform, supported by a customized cloud environment. This new solution unites several previously independent services—including SmartLotte, Lotte Card Clutch, Mobile Payment and Lotte Card App—for a simpler user experience.

"Red Hat's continuous support ensured that we acquired the technical capabilities to make the best use of their products and achieve excellent results," said Jung Hwan. "Red Hat has helped us move our business forward."

Enhancing performance and efficiency to improve customer experience

Greater stability for reliable customer service

Lotte Card handles more than 3 million transactions each day and must process various requests at the same time. By establishing a cloud-based digital platform using OpenShift and JBoss EAP, Lotte Card can complete concurrent business processing at more than 10 times higher volume than before. Autoscaling capabilities also help the company adapt to increasing user numbers. For example, when the number of concurrent users suddenly increased by more than 200% at one point, Lotte Card's applications services continued to operate without disruption.

With a reliable foundation for its services, the company can now run marketing campaigns with higher potential interaction. New big data analysis capabilities that support simultaneous processing of multiple requests mean that Lotte Card can categorize its customers into 200 preference indexes to personalize services and marketing based on a customer's location, personal or financial requirements, and previous engagement with the brand.

Faster, more efficient work

The company has also reduced the time needed to build IT infrastructure for new services by 53%. Its IT teams can now expand or allocate infrastructure resources to processes or services as needed in real time. By making its overall application process more efficient, Lotte Card's developers can now optimize development talent to complete new, valuable projects.

Anticipated TCO savings

With its open source-based technology from Red Hat, Lotte Card expects to reduce the five-year total cost of ownership (TCO) of its customer service system by 47%. Optimizing its use of resources will also help improve costs as its operations become more efficient.

"With Red Hat, we gained several financial benefits, such as optimizing our resource use, that will allow us to invest in valuable projects," said Jung Hwan.

Extending cloud to core financial system

Its adoption of open source based-PaaS has offered Lotte Card the foundation of a more agile organizational culture that is receptive to new technology in a rapidly changing payment market. Lotte Card plans to extend its cloud to its core customer transaction financial system. Lotte Card is working with Red Hat and IBM to analyze its entire enterprise IT system, including its existing banking system, and design a new hybrid cloud architecture to optimize operational performance and costs.

By adopting cloud-native enterprise open source technology for hybrid cloud from Red Hat and IBM, Lotte Card aims to continue delivering innovative services to its clients with minimal cost and risk.

"Red Hat has helped us build a customized cloud platform to improve cost efficiency and respond quickly to the rapidly changing business environment," said Jung Hwan. "With the knowledge we acquired while creating our new, innovative customer-facing service system and Red Hat's support, we will next transition our internal systems to a cloud-based environment to further our competitive leadership."

About Lotte Card

Founded in 2002, Lotte Card is South Korea's leading and most representative retail credit card company with the nation's largest distribution and service network. Lotte Card provides benefits tailored to customers' lifestyles, encompassing distribution, culture and services. Lotte Card constantly challenges itself to provide diverse and differentiated benefits. www.lottecard.co.kr

About Red Hat

Red Hat is the world's leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers integrate new and existing IT applications, develop cloud-native applications, standardize on our industry-leading operating system, and automate, secure, and manage complex environments. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500. As a strategic partner to cloud providers, system integrators, application vendors, customers, and open source communities, Red Hat can help organizations prepare for the digital future.

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