

# KBTG speeds and scales digital services with Red Hat



## Software

Red Hat® Enterprise Linux®

Red Hat JBoss® Enterprise Application Platform

Red Hat OpenShift® Container Platform

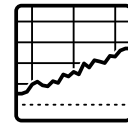
Red Hat AMQ

## Services

Red Hat Consulting

Red Hat Training

To accommodate dramatically increasing demand for its mobile banking app, Kasikorn Business-Technology Group (KBTG) sought to update and optimize its IT infrastructure. By combining its new Red Hat platform, container, and messaging technology with agile and DevOps approaches, the bank has created a unified notification system and achieved the speed and scale needed to handle massive transaction volumes as its user base continues to grow. With this foundation, KBTG plans to work with partners to continue exploring new performance and security-focused use cases for its responsive, reliable application environment.



## Financial services

**20,712** employees

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**Thanussak Thanyasiri**  
Senior Delivery Manager,  
Kasikorn Business-Technology Group (KBTG)

## Benefits

- Cut development time from one month to two weeks
- Achieved scale to handle 5,000 transactions per second
- Centralized operational insight for more responsive management and security



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*“While this was new technology to us, online and classroom training provided by Red Hat Training helped us build our skills so we could handle much of the migration ourselves.”*

**Thanussak Thanyasiri**  
Senior Delivery Manager,  
Kasikorn Business-Technology Group  
(KBTG)

## Supporting Thailand’s most popular mobile banking app

Kasikorn Business-Technology Group (KBTG) supports the day-to-day operations of KBank and serves as a technology developer and partner for fintech firms in Thailand. One of the services it manages for KBank is K PLUS, Thailand’s most popular mobile banking application with more than 11 million users<sup>1</sup>. With this app, users can make payments via QR (Quick Response) code, transfer funds internationally, manage their investments, and more.

Over the past five years, K PLUS has expanded to double its user base. To support this growth and bring new features and services to market faster, KBTG needed to overhaul its existing IT environment. For example, KBTG introduced K PLUS AI-Driven Experience (KADE), a solution that incorporates AI into its legacy back-end systems to analyze customer behavior and provide personalized experiences. In addition, the bank decided to build an open banking platform that could connect with its business partners’ systems.

“Our old technology platform took considerable effort to maintain, and its capacity could not support our growth,” said Thanussak Thanyasiri, Senior Delivery Manager at KBTG. “We have millions of customers who are performing a total of 5,000 transactions per second. We wanted to introduce a new technology approach that would provide the high availability, performance, and security that our customers expect.”

## Building a new application environment with Red Hat

KBTG evaluated available solutions, including proposals from three vendors. After a pilot, the company chose to work with Red Hat based on its mobile and industry expertise.

Over four months, KBTG worked with Red Hat Consulting to migrate from its existing platform to Red Hat Enterprise Linux and Red Hat JBoss Enterprise Application Platform (EAP). Professional Services also provided OpenShift Implementation Service including OpenShift Infrastructure Workshop, OpenShift Application Workshop, CI/CD Integration Workshop, OpenShift Installation, Application Onboarding, CI/CD Integration, and OpenShift ongoing support.

Red Hat Enterprise Linux provides a consistent foundation across deployments and the tools to deliver services and workloads faster with less effort—with any application, on any footprint, at any time. Red Hat JBoss EAP, an open source Java™ EE 8-compliant application server, helps KBTG integrate its front- and back-end systems to deploy and manage applications faster across environments.

Additionally, KBTG has created a unified notification feed system, called UCenter, and deployed it on Red Hat OpenShift Container Platform, a Kubernetes-based application platform. UCenter uses Red Hat AMQ, a lightweight messaging platform, to provide service alerts for various offerings, from financial services to lifestyle services—such as product promotions—to money transfers and payments in the K PLUS app.

To help its teams gain experience with its new Red Hat application environment, KBTG engaged Red Hat Training. “While this was new technology to us, online and classroom training provided by Red Hat Training helped us build our skills so we could handle much of the migration ourselves,” said Thanussak.

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<sup>1</sup> “Banks star in list of top Thai apps”. *Bangkok Post*. July 21, 2018.

## Improving responsiveness to accommodate growth

### Faster time to market for new services

Combining its new Red Hat container, platform, and messaging technology with DevSecOps and agile development approaches has helped KBTG cut its application development time by half by working more efficiently and gaining faster access to resources.

“Previously, it took us over a month to add new features, but now it takes as little as two weeks,” said Thanussak. “We can react much more quickly to changing consumer demands and give them the features they expect, with less time invested.”

By working more efficiently, KBank can maintain its position as Thailand’s leading mobile bank by continuing to offer innovative products at the pace of demand.

### Improved transaction speed and scale

Improved messaging technology from Red Hat, combined with a container- and microservices-based approach, have dramatically improved the volume of transactions that KBTG can process—as well as improving integration with KBank’s business partners to further scale the business.

“With Red Hat OpenShift Container Platform and Red Hat AMQ, we’ve added a unified notification feed system to the K PLUS app,” said Jarung Kiatsupapong, Chief Information Officer of KBTG.

“These systems includes alerts for both financial and lifestyle services, such as money withdrawals. We believe these enhancements will help increase K PLUS accounts from 12 million to 20 million with 5,000 transactions per second in 2020.”

### Simplified management for better operational insight

To streamline its operations, KBTG used open source monitoring and logging technology with the OpenShift management console to create a single, unified source of insight. Maintenance and incident resolution are now less complex and completed faster, further improving availability without draining internal IT resources.

“We’ve packaged all of our commands in one place to gain complete visibility into our IT infrastructure,” said Thanussak. “We can resolve issues much more quickly and with less stress. Also, because the solutions are open source, there are many resources we can draw on in the community to solve problems quickly.”

Additionally, integration of KBTG’s Red Hat application environment with its existing security infrastructure and policies. This integration helps provide greater visibility into security and helps simplify protection of customer data and internal IT assets by maintaining compliance with regulatory policies.



## Reliable enterprise platform lays foundation for future expansion

Following the success of this deployment, KBTG plans to extend Red Hat’s reach to other applications and challenges across the business. For example, KBank is leading new security-focused financial initiatives in its region—such as PromptPay, a money transfer app, and blockchain technology—in collaboration with the Bank of Thailand.

“The UCenter project has proven that Red Hat can fully support our ambitions. Being able to scale without compromising availability and security is critical to our ambitious growth targets, and Red Hat gives us that capability. We have identified five additional applications and use cases, such as threat detection, where we are confident that Red Hat can also add value,” said Thanussak. “We are delighted with the service provided by Red Hat, particularly its local technical expertise, so we look forward to deepening our relationship.”

## About Kasikorn Business-Technology Group (KBTG)

Kasikornbank (KBank) is amongst the top five largest banks in Thailand, as measured by total assets, loans, and deposits. To prepare for future changes and challenges, KBank established Kasikorn Business-Technology Group (KBTG), worth \$1.1 billion in revenue. Over the next five years, KBTG plans to focus on the Internet of Things, UX/UI (user experience/user interface) design, application programming interfaces (APIs), advanced mobile programming, blockchain technology, and machine learning.

[www.kbtg.tech/en](http://www.kbtg.tech/en)

## 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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