

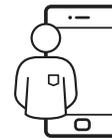
KT CORPORATION IMPROVES I.T. COSTS AND EFFICIENCY BY ADOPTING OPEN SOURCE



SOFTWARE

Red Hat® Enterprise Linux®
Red Hat JBoss® Enterprise Application Platform

KT Corporation (formerly Korea Telecom) is South Korea's largest telephone company. When the company faced constantly increasing maintenance costs for the commercial software in its IT environment, it sought to replace proprietary software with cost-effective open source solutions. After completing an initial pilot project with its subsidiary kt ds, KT shifted over 50 IT systems, as well as customer-facing services, to Red Hat Enterprise Linux and Red Hat JBoss Enterprise Application Platform. As a result, the company established a standardized, flexible IT architecture, reduced five-year total cost of ownership (TCO) by 89%, and improved efficiency with support for a DevOps development approach.



TELECOMMUNICATIONS

23,531 EMPLOYEES

“Taking decisive action on TCO-based system analysis and clearly defined goals is our key success factor. The full technical support from Red Hat Korea also played a huge role in the success of our shift to open source. With the help of our subsidiary kt ds and Red Hat, we gained new, valuable capabilities that contributed to both our IT operations and service offerings.”

EUNJUNG SHIN
DEPUTY GENERAL MANAGER, I.T. ASSET PLANNING TEAM, KT CORPORATION

BENEFITS

- Gained a standardized, flexible, and more secure IT architecture built upon open source solutions
- Reduced five-year TCO by 89%
- Improved efficiency with support for DevOps approach to application development



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MITIGATING GROWING PROPRIETARY VENDOR COSTS

KT Corporation (formerly Korea Telecom) is South Korea's largest telecommunications company. It provides mobile, landline, and satellite communication services, as well as high-speed internet, internet protocol television (IPTV), and enterprise solution services. In 2015, KT reported revenue of 22.3 trillion Korean won and an operating income of 1.3 trillion won. It owns 41 subsidiary companies in Korea and 12 international subsidiaries.

In 2010, KT established a strategic plan to adopt open source software across the organization. As part of this process, KT began hiring experts to evaluate open source software solutions and support the adoption of open source technology. KT engaged kt ds, one of its Korean subsidiaries, to design and implement the new IT architecture for this project. kt ds provides IT integration, process outsourcing, and IT consulting services. kt ds focuses on convergence services for key technologies, including open source, big data, Internet of Things (IoT), cloud, and security.

Ms. Eunjung Shin, deputy general manager, IT Asset Planning Team, KT Corporation said, "We were experiencing performance issues with our legacy systems and the maintenance costs of our existing commercial software was increasing at 20% annually. To address that problem, we decided to move away from proprietary software systems, to open source architecture to reduce costs, eliminate vendor lock-in, and enhance the reliability of our service delivery."

DEPLOYING ENTERPRISE OPEN SOURCE TECHNOLOGY

kt ds evaluated a number of solutions through system pre-assessments, proofs-of-concept (POCs), and other proven methods of open source adoption. During the process, Red Hat solutions were rated to be the strongest for its POC and cost requirements, making it the preferred standard architecture for KT Corporation. An initial pilot of having two of its systems moved onto open source software further reinforced the company's confidence in the performance, reliability, and financial value of open source software.

As a result, KT began a broader adoption of open source. The company shifted its previous, proprietary operating system to Red Hat Enterprise Linux and migrated its middleware to Red Hat JBoss Enterprise Application Platform (EAP). These enterprise solutions from Red Hat are now part of KT's standard reference architecture for creation of new IT systems.

During the deployment and standardization processes, KT and kt ds worked closely with local Red Hat technical support staff to ensure a seamless transition and gain insight into best practices for Red Hat and other open source technology.

"It was pretty impressive to have Red Hat's technical support team working alongside us to solve problems throughout the transition," said Sang-gab Lee, assistant director of open source technology at kt ds. "Our well-trained team helped make our switch to open source and Red Hat software a lot easier."

With the success of implementation, kt ds deployed Red Hat products in KT's new information and communications technology (ICT) services, such as platform-based and convergence services. KT now operates over 180 IT systems on open source software—including critical and platform-based, customer-facing systems and services—with 50 of these systems running on Red Hat's software.

TRANSFORMING I.T. FOR BETTER COSTS AND INNOVATION

DRAMATICALLY REDUCED TOTAL COST OF OWNERSHIP

As a result of transitioning its IT systems from proprietary to open source technologies, KT eliminated vendor lock-in and related ongoing maintenance costs.

As a result, the company achieved an average of 89% reduction in five-year TCO. For example, KT's shift of its customer-facing mobile reservation and sales system to open source resulted in an 85% reduction in five-year TCO for its mobile phone reservation system.

"Taking decisive action on TCO-based system analysis and clearly defined goals is our key success factor. Using x86 servers equipped with open source software allows us to cut costs compared to commercial software," said Shin.

MORE EFFICIENT AND RELIABLE I.T. PERFORMANCE

By standardizing its IT architectures for critical service systems on Red Hat and other open source products, KT has not only decreased costs but also improved its IT productivity and agility—particularly in application development and cloud operations.

"Red Hat JBoss EAP is very lightweight and reliable. With the agility it offers, we achieved an incredibly fast boot time of less than eight seconds and minimized app development time and downtime," said Shin. "This allowed us to enhance the performance of our IT system and allowed us to respond reliably in the cloud environment."

In the same customer-facing mobile reservation and sales system example, KT reduced latency during peak traffic times and increased its processing performance to 800,000 transactions per five minutes.

SUPPORT FOR OPEN SOURCE INNOVATION

Throughout the open source adoption process, kt ds worked closely with Red Hat's technical support staff to learn best practices for system pre-assessments, POCs, and deployments—including from UNIX to Red Hat Enterprise Linux, from IBM WebSphere Application Server (WAS) to JBoss EAP, and from proprietary to open source database management.

With this newly acquired expertise, kt ds has expanded its open source services to include deployments and technical support. The company has now completed over 300 open source projects.

"With our accumulated open source project experience, kt ds has been leading the open source trend in the Korean market over the last seven years," said Ju Seuk-hun, team leader at kt ds. "Our open source services are fueled by close cooperation with Red Hat's technical experts and Red Hat's extensive partner network."



CUSTOMER CASE STUDY KT Corporation Improves IT costs and efficiency by adopting open source

CHAMPIONING OPEN SOURCE ADOPTION

The success of its adoption of open source has prompted KT Corporation to promote open source solutions as the most efficient operational technology for enterprise IT environments.

kt ds plans to continue to build its skills in open source software deployment and expand the use of open source software in Korea. The company took advantage of its experience with this deployment and Red Hat's partner network to expand its services to cover Red Hat JBoss Middleware products.

"With the help of our subsidiary kt ds and Red Hat, we gained new, valuable capabilities in the change to open source software," said Shin.

ABOUT KT CORPORATION

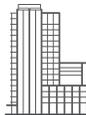
KT Corporation is South Korea's largest telecommunications company with solutions in mobile/landline communication, high-speed internet, IPTV, leased line, satellite communication, and enterprise solution services. In fiscal year 2015, KT saw revenue of 22.3 trillion Korean won and operating income of 1.3 trillion won. It has 41 subsidiaries in Korea and 12 subsidiaries abroad.

As one of KT's subsidiaries in Korea, kt ds was established in 2008 to provide services in ICT consulting, system integration, network integration, IT outsourcing, business process outsourcing, and education. In 2015, kt ds started focusing on becoming the leading convergence service provider based on five key technologies—open source, big data, Internet of Things, cloud, and security (OBICS). Leveraging its experience in open source software implementation and migration projects, it has become a total open source services provider.

www.kt.com

ABOUT RED HAT

Red Hat is the world's leading provider of open source software solutions, using a community-powered approach to reliable and high-performing cloud, Linux, middleware, storage, and virtualization technologies. Red Hat also offers award-winning support, training, and consulting services. As a connective hub in a global network of enterprises, partners, and open source communities, Red Hat helps create relevant, innovative technologies that liberate resources for growth and prepare customers for the future of IT.



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NORTH AMERICA
1 888 REDHAT1
www.redhat.com

EUROPE, MIDDLE EAST,
AND AFRICA
00800 7334 2835
europe@redhat.com

ASIA PACIFIC
+65 6490 4200
apac@redhat.com

LATIN AMERICA
+54 11 4329 7300
info-latam@redhat.com