SoftBank Corp. adopts agile DevOps approach with Red Hat Consulting

To pursue its investment strategy and expansion into new business areas, telecommunications SoftBank Corp., part of the SoftBank Group, began an initiative to improve system development using a collaborative DevOps approach and container technology. Working with Red Hat Consulting, SoftBank Corp. learned best practices and established a roadmap to adopt DevOps for its Personal Agent Manager (PAM) project. The company also improved developer productivity, collaboration, and deployment frequency by adopting Red Hat OpenShift Container Platform as the foundation of its application environment.

Software and services

Red Hat® Consulting

Red Hat OpenShift®
Container Platform

Tokyo, Japan ●

Headquarters

Telecommunications

Approximately
17,000 employees

Benefits

- Gained understanding of DevOps and container technology to create roadmap and deploy new container platform

- Improved teamwork with active communication through agile and DevOps approaches

- Increased deployment frequency from once every two weeks to 118 releases every two weeks

"*If we had tried to learn about how containers worked on our own, we would not have been able to complete the PAM project on schedule in time. Red Hat is able to form a team with many different areas of expertise. With that support, we quickly learned how to use OpenShift and develop more efficiently.*"

Takuya Sasaki
Team Member, Platform Promotion Section, SoftBank Corp.

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Supporting business growth and modern IT architecture with DevOps

SoftBank Corp., a telecommunications subsidiary of the SoftBank Group, is actively expanding into new business areas—such as robotics, the Internet of Things (IoT), and artificial intelligence (AI)—to create new, innovative services. These services are supported by up to 800 systems and are developed, maintained, and operated by nearly 5,000 internal and partner staff.

Demand for fast, efficient system development is increasing. To meet this growing demand, SoftBank Corp. began a system development platform initiative, the Global IT Platform (GIP) strategy, to create a more effective services foundation. This initiative aimed to unify SoftBank Group's companies under systems hosted by SoftBank Corp. in Japan. The company's IT department also began operational reforms to cut development costs by half while doubling productivity.

"Our GIP strategy focuses on using a new architecture to meet growing demand throughout our Information Technology Unit for a new development approach," said Toyofumi Yamashita, Director, Platform Development Department, Information Technology Unit, at SoftBank Corp. "This new system development resource will be distributed to support new business growth, but we needed to maintain service levels while we worked toward this goal."

However, improving development productivity in a large, enterprise environment proved challenging. Various ongoing projects used a waterfall model approach, where tasks and procedures were completed in order before the next step began. In addition, legacy system maintenance kept developers from focusing on more valuable work.

SoftBank Corp. decided to support its GIP strategy with a collaborative development approach, supported by a technology partner that could help the company effectively shift to DevOps.

Engaging an expert service partner to learn agile approaches

To adopt DevOps and agile work processes, SoftBank Corp. decided to work with Red Hat, a trusted technology vendor. SoftBank Corp. had used Red Hat products, including Red Hat Enterprise Linux® and Red Hat Middleware, for in-house system development for several years.

SoftBank Corp. met with Red Hat Consulting for a series of workshops to learn about the key steps of successful DevOps adoption, including agile, continuous integration and delivery (CI/CD), and automated testing. Red Hat consultants provided a detailed roadmap with clearly defined deliverables to help the company track its progress.

"We quickly understood the benefits of DevOps and scrum-based development, including in-progress CI/CD and automated testing capabilities, as well as expected outcomes," said Aya Sugimura, Manager, Platform Promotion Section, Platform Development Department, Information Technology Unit, at SoftBank Corp.

After this initial training, SoftBank Corp. selected one of its AI projects, Personal Agent Manager (PAM), to adopt DevOps. PAM is a management system for an application that automates responses to in-store customer inquiries.

To better support its new DevOps capabilities, SoftBank Corp. expanded its Red Hat software environment to include Red Hat OpenShift Container Platform. Deployed and maintained within SoftBank Corp.'s datacenter, OpenShift Container Platform stores the company's application services, offers dynamic storage provisioning, and supports work for different teams and applications through multitenancy and packaged images that support feature changes within individual containers.

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Growing agile skills and productivity with Red Hat software and services

Built container and DevOps skills with expert guidance

SoftBank Corp.'s teams worked closely with Red Hat Consulting to take advantage of expert support and guidance, including troubleshooting assistance and best practices learning.

"One of the keys to DevOps success is the use of containers. However, we had little prior experience in using them and lacked relevant skills," said Takuya Sasaki, Team Member, Platform Promotion Section, at SoftBank Corp. "If we had tried to learn about how containers worked on our own, we would not have been able to complete the PAM project on schedule. Red Hat is able to form a team with many different areas of expertise. With that support, we quickly learned how to use OpenShift and develop more efficiently."

Red Hat also provided experts for each DevOps team to ensure SoftBank Corp.'s teams gained the knowledge to successfully adopt and continue using the new, more collaborative approach, together with its new container technology.

"It was really thanks to Red Hat Consulting that we were able to fully adapt to a DevOps approach in a short period of time," said Takuya.

Established foundation for collaborative work

By adopting agile and DevOps work methods, SoftBank Corp.'s teams can work together more effectively. Scrum-based development lets team members share their work status and timelines with others, providing greater insight into project status and creating opportunities for additional collaboration.

"By communicating each member's tasks as part of our DevOps approach, we created a cooperative spirit in the workplace, where everyone was more conscious about helping move the project forward," said Takuya. "

Increased deployment frequency with iterative approach and modular technology

With more responsive technology and work approaches, SoftBank Corp.'s teams can quickly receive feedback and adjust projects and code as needed. For example, automation and CI/CD helped the team reduce repeat tasks related to testing code.

Adopting OpenShift Container Platform also helped SoftBank Corp. package applications with supporting code libraries within independent environments. This isolation accelerates iteration and testing during development by making it easier to change one application without affecting others.

As a result of these changes, SoftBank Corp.'s development teams increased the cadence of deployments from once every two weeks to 118 releases in two weeks during the PAM project.

Expanding DevOps and automation to new systems and projects

With the success of the PAM project, other development teams within SoftBank Corp.'s Information Technology Unit are adopting a DevOps work approach.

"In the future, SoftBank Corp. plans to develop more than half of all of its systems using DevOps, and we are considering automating system processes for our full IT life cycle," said Sugimura.

The company has also established a cross-department task team to promote DevOps and related skills.

"Through the PAM project with Red Hat, each developer began to proactively consider quality and efficiency as key parts of their work," said Toyofumi. "We are hoping to use PAM's success to establish DevOps as our development practice standard."

About SoftBank Corp.

Guided by the SoftBank Group's corporate philosophy, "Information Revolution — Happiness for everyone," SoftBank Corp. (TOKYO:9434) combines telecommunications services with cutting-edge technologies to create and operate new businesses. SoftBank Corp. serves more than 44 million mobile consumer and enterprise subscribers in Japan, and as part of its "Beyond Carrier" strategy, is redefining industries by leveraging its unique strengths as a network operator to fully harness the power of 5G, big data, AI, IoT, robotics and other key technologies.

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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