NTT DATA Group refines Unified Development Cloud with Red Hat

NTT DATA Group Corporation launched its Unified Development Cloud (UDC) in 2017 to provide multiple IaaS, including OpenStack. The foundation of OpenStack is Red Hat OpenStack® Platform, which spans several regions, operates and includes hundreds of nodes, and is credited with transforming development productivity. However, customizing Red Hat OpenStack Platform required close collaboration with Red Hat's engineering department. Through its engagement with Red Hat Technical Account Managers (TAMs), NTT DATA Group swiftly addressed the issues and has continued to enhance and refine the platform.

Question: Tell us about the Unified Development Cloud.

Takashi Horie, Deputy Manager, NTT DATA Group Corporation: The Unified Development Cloud was designed to improve our system development technology by moving the entire NTT DATA Group system development platform to the cloud. The service is built on three pillars.

Firstly, we want to provide development environments for private and public clouds along with stacks tailored to cloud platforms.

We then offer support for system development by providing the tools to manage projects, IT systems, and automation.

Finally, we provide networks to connect the various platforms and development sites for individual projects provided by the Unified Development Cloud.

Question: What changes does the Unified Development Cloud bring to a system development environment?

Horie: Our goal has been to achieve four outcomes with this service.

▸ Reduced costs: By having system development and operations performed on one platform, the UDC can help to reduce costs.

▸ Improved speed: The UDC can also help to improve speed by automating the process of building a system platform. This used to take two to three months, but can now be reduced to as fast as instant payout.

▸ Strengthened governance: By making the Unified Development Cloud a de facto standard, we can disseminate the Group's guidelines for development environments and security to team members.

▸ Flexibility: The UDC can also help to accommodate different work styles by making the system development platform accessible from outside the company, depending on employee status.

About Red Hat Innovators in the Open

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Since launch, the Unified Development Cloud has proved to be a stable, long-term system development platform, all while new regions were being added and large-scale maintenance performed. The deployment is used by the whole NTT DATA Group, and as of September 2023, it is being used in over 2,000 projects (Among these, about 900 projects use private cloud services).

Question: What challenges have you faced running a platform on Red Hat OpenStack Platform?

Horie: We introduced Red Hat OpenStack Platform 13 as a cloud platform, but it was necessary to integrate the internal infrastructure and the Red Hat OpenStack Platform 13 environment for use within the NTT DATA Group, including links to our authentication platform, connections to our tenants, and linking various service menus that make up the dashboard. This type of customization required close collaboration with Red Hat's engineering department.

We also had lifecycle-related challenges. One significant operational challenge was looking beyond the end-of-life of individual products and deciding how to deploy the service so that our tenants could smoothly transition to the new system. We also experienced difficulties when implementing minor updates on various products, and those challenges had to be dealt with to ensure stable operations.

Question: Why did you decide to engage Red Hat TAMs?

Horie: The Unified Development Cloud is a system development platform that spans the entire NTT DATA group of companies and requires ongoing rapid troubleshooting and proactive response. Depending on the nature of the problem, normal technical support services could take a long time to respond. To overcome this, we decided to go with a dedicated technical advisor well versed in Red Hat OpenStack Platform. In addition, we believed that Red Hat TAMs can effectively facilitate collaboration with the engineering department in the integration of the internal infrastructure and Red Hat OpenStack Platform 13.

Question: What do you feel is the greatest benefit of engaging Red Hat TAMs?

Horie: I think one big factor is psychological, that sense of security of having TAMs available. If anything goes wrong, you have the reassurance that they will deal with it quickly and show us how to solve the problem.

Stable operations are a prerequisite, so we tend to adopt a defensive posture to avoid mistakes. However, with the presence of TAMs, we've been able to actively take on new challenges, constantly improve, and switch to a more proactive mode of operation. Being able to switch our mindset that way has been a significant advantage.

Question: Have you started any new routines or initiatives since engaging Red Hat TAMs?

Horie: We've implemented a new routine of regular weekly meetings with the TAMs. During these meetings, the TAMs exchange information and opinions with our team members, discuss improvements, and go over future concerns. This information sharing has allowed us to solve problems in a timely manner.

With normal support cases, the focus is almost always on a specific issue that arises and is then resolved. However, in these regular meetings, we may broaden the discussion topics to include future product roadmaps and new information about upcoming products. It makes it easier to take proactive steps to get ahead of the curve.

Question: Were there any unexpected or secondary outcomes?

Horie: The regular weekly meetings and moving through problem-solving cycles have resulted in skill transfers from the TAMs to members of our team, so we've felt a steady improvement in the team's skills. This is a significant benefit that we'd not initially anticipated. The improvement in skills has also increased the rate at which we can resolve issues on our own, so we haven't had to ask Red Hat for help as often as before.

Fundamentally, Red Hat OpenStack Platform has a broad range of software components, making it an ideal platform for mastering skills like Pacemaker or RabbitMQ, or putting Python expertise to use. For engineers, I think Red Hat OpenStack Platform can serve as a sort of textbook for acquiring a very broad skill set.

Question: What do you feel makes Red Hat TAMs unique?

Horie: A distinctive feature of the Red Hat TAMs is that they offer various suggestions based on the current state of the Unified Development Cloud, from perspectives beyond the Red Hat OpenStack Platform. Their support isn't limited to technical advice on Red Hat products, but always aligns with the advancement of the Unified Development Cloud and improving our skills. I think this kind of support that is close to the project is rare.

While being closely aligned with the project they have steadily built up support over the long term. For example, we once had an issue where minor updates were taking a long time in the environment we had. Red Hat reproduced this problem in its internal environment and made repeated adjustments, and thanks to those efforts we were able to update the system pretty quickly in the end.

Moreover, Red Hat collates such use cases internally, sharing this information with other TAMs, and utilizing it in troubleshooting for other companies. This kind of system helps speed up the problem-solving process.

Question: What are your future plans for the Unified Development Cloud?

Horie: Currently, we have two regions using Red Hat OpenStack Platform 13, and we're in the process of migrating to Red Hat OpenStack Platform 16. Since the end-of-life for Red Hat OpenStack Platform 16 isn't too far, we're planning to deploy the next generation of Red Hat OpenStack Platform — Red Hat OpenStack Services on OpenShift.

Additionally, from the perspective of resource optimization and integration with CI/CD (continuous integration/continuous delivery) pipelines, there's significant demand for a container platform, and tenants are currently building their own container platforms on Red Hat OpenStack Platform. We're studying how the Unified Development Cloud can comprehensively meet these needs.

Regardless of the direction we take, we look to Red Hat TAMs for continuing support.

Question: What would you like to see from Red Hat TAMs in the future?

Horie: Specifically, we're looking for advice on how to streamline our response to support desk inquiries. Also, given the need for container platforms, we're keen for more expertise on OpenShift.

Having the TAMs act as a bridge between the Unified Development Cloud and Red Hat's engineering department, provide follow-through to ensure smooth progress, and continually provide proactive advice beyond solving current issues are the kind of flexible responsiveness that is vital for running the Unified Development Cloud. We eagerly look forward to the continuous rollout of such highly reliable technological capabilities, and support for us in these areas.

NTT DATA Group Corporation

NTT DATA Group Corporation provides IT services in over 50 countries worldwide. It is one of Japan's leading companies in the information services business, with a wide range of activities spanning public works, social infrastructure, finance, retail, manufacturing, healthcare, and more. The company is actively promoting projects such as collaboration and partnerships with industries, academia, and government, driving advanced technologies from a medium to long-term perspective to create the future of society.

About Red Hat

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