Challenge
Sakura KCS Corp needed to optimize on-site operations with a plan to restructure the development team from the perspective of infrastructure systems engineers in charge of environment creation; as to not only rely on improving on-site staff’s skills.

Solution
Linking Puppet Enterprise (“Puppet” hereafter) to many IT infrastructure-related devices permits unified management of monitoring and updating settings. In addition, Sakura KCS Corp aims to automate testing of the programs developed by systems engineers on development sites by creating virtual environments with Puppet for development use.

Results
By consolidating management and verification that had been conducted on an individual or manual basis, IT teams reduced the workload by 1-2 hours. Sakura KCS Corp also aims for improvement in the development phase based on the achievements in acceptance tests. Storing and sharing the results internally resulted in a system in which development proceeded more smoothly.
A dramatic reduction in time spent on management work through automation

At SAKURA KCS Corporation’s data center business, the increasing workload associated with manually managing the ever-growing IT infrastructure and various devices was becoming a serious problem. Even the daily monitoring of checking for abnormalities took three people one to two hours per day. There were many instances in which updating settings or managing servers had to be done manually and this was prone to human error. Puppet was introduced to automate these processes and reduce workload. For instance, by linking server accounts to Puppet, the burdensome workload of routinely changing passwords and such was combined into one task. The operational workload was reduced drastically by removing the need to configure servers one by one.

The automation of operations through Puppet is also effective from a security perspective. Simply by being able to block offensive IP addresses, problems occurring late at night or on weekends are handled in real-time. Sakura KCS Corp is currently creating an environment in which on-site operators can specify IP addresses to block. For a small team managing a vast infrastructure with large quantities of devices, this kind of automation provides a powerful means to increase efficiency and accuracy.

Vast improvements to the development environment from the perspective of infrastructure systems engineers

The concept of “supporting development sites through environment creation” by Infrastructure Systems Engineers behind the scenes also helps with contracted systems development, which is one of Sakura KCS Corp’s key businesses. The recent increase in the sophistication of the technology and feature requirements has caused the level of difficulty of projects to rise. Particularly large-scale projects could not have been handled simply by increasing the skill level of developers. It is not only a matter of mere individual improvement, but the development methodologies and environment had to be changed. Against such a background, an awareness spread throughout Sakura KCS Corp that DevOps must be introduced.

On-site Systems Engineers were unstructured until recently and proceeded with development individually, resulting in insufficient sharing of objective verification and knowhow of the developed systems along with code-reuse. Sakura KCS Corp then made the decision to introduce Puppet’s unified environment. With Puppet, Infrastructure Systems Engineers can design unified virtual test environments, and automate the verification of programs developed by On-site Systems Engineers. The advantage of virtual environments created by Puppet is that all environment settings and test cases can be stored in the code, meaning that they can be shared as assets within Sakura KCS Corp. This brings great benefits from the perspectives of quality and efficiency. Sharing of knowhow and the state of progress also becomes easier, delivering dramatic improvements to the development flow.

A reliable support system – another reason to introduce Puppet

There have been calls to revise the development structure in the past. However, the risks associated with large-scale changes and the lack of clearly identifiable cost-effectiveness led to a situation in which they were not properly implemented. As Puppet has broad scope, it was difficult to imagine “the exact circumstances in which it should be used” and to gain an understanding of it within Sakura KCS Corp. What led to the eventual introduction of Puppet was having the opportunity to be able to confirm directly with the developers concerning “what Puppet could improve about the business” and “what Puppet itself made possible” at events and so forth. When introducing a new solution, the existence of a reliable support system was a major factor in providing peace-of-mind.

Sakura KCS Corp mainly uses Puppet to automate infrastructure management and development tests. However, the way it is employed varies considerably depending on the line of business. There is surely a host of methods of utilizing it as-yet unknown to Sakura KCS Corp. By collecting “ideas for ways in which it might be able to be used”, Sakura KCS Corp is able to further expand the possibilities Puppet provides. Sakura KCS Corp provides feedback as appropriate concerning points of improvement and additional functionality. Puppet has exceeded the level of being a mere tool at Sakura KCS Corp and is truly a partner for improving the business. It has a powerful role as an indispensable tool for business.

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