CUSTOMER CASE STUDY

CASIO BUILDS HIGH-AVAILABILITY STORAGE WITH SOFTWARE AND COMMODITY SERVERS

CASIO

SOFTWARE

Red Hat® Enterprise Linux®

Red Hat Enterprise Virtualization

Red Hat Gluster Storage

HARDWARE

IBM System x servers

Casio Computer Company, Limited develops and sells a wide variety of digital devices ranging from watches and electronic dictionaries to cameras, handheld terminals, and page printers. Casio had been using monolithic storage virtualization products to make efficient use of its storage environments for server virtualization. However, the storage hardware itself was extremely expensive, and operation and maintenance ultimately had to be entrusted to the vendor.

To avoid vendor lock in and enable self-operation and maintenance capabilities, Casio migrated to Red Hat Gluster Storage, whereby a virtual storage environment can be implemented using the internal disks of commodity servers.

CONSUMER ELECTRONICS INDUSTRY

11,276 EMPLOYEES

CUSTOMER SINCE
2010

"Our costs, including various procurement costs and operating fees, fell to less than half of what we had been before implementing Red Hat Gluster Storage. The solution's flexibility enabled us to build a storage environment using commodity servers and its ease of operational control was also a major advantage."

KAZUYASU YAMAZAKI
GROUP MANAGER OF THE IT INFRASTRUCTURE GROUP,
CASIO INFORMATION SERVICE, CO., LTD.

BENEFITS

- Reduced storage cost by 50%
- Centralized infrastructure management
- Increased flexibility and scalability

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VENDOR LOCK IN AND COST ESCALATION

In the past, Casio used monolithic storage virtualization products to make efficient use of its storage environments for server virtualization. However, the storage hardware itself became extremely expensive, and operation and maintenance had to be ultimately entrusted to the vendor.

"We were progressively standardizing our server and network environment, and commodification had gone some way toward keeping hardware costs down," said Kazuyasu Yamazaki, group manager of the IT Infrastructure Group at Casio Information Service, Co., Ltd.. "One item that accounted for a large percentage of our IT infrastructure costs was storage environments. In terms of storage, we were also locked in by vendors' proprietary technologies, so we couldn't manipulate the system ourselves. That led to further cost escalation."

Building and maintaining a conventional storage environment involves procurement costs for hardware, software, and Fiber Channel, which, when combined with annual maintenance and operation fees, can quickly become expensive. It also inevitably means buying expensive hardware with functions and performance that meet maximum requirements. "Our IT usage was by no means optimal or efficient," said Yamazaki.

CUTTING STORAGE COSTS AND AVOIDING VENDOR LOCK IN

Casio's greatest challenges were to cut its unremittingly high storage costs and to avoid vendor lock in. In 2012, Casio adopted Red Hat Enterprise Virtualization to replace its existing virtualization environment from 2005. Casio migrated to Red Hat Enterprise Virtualization to future proof its cloud deployments while also saving costs.

At the time, the company was also looking for a way to reduce its storage costs. Casio selected Red Hat Gluster Storage because it was compatible with the existing server virtualization environment, and it allowed a storage environment to be implemented using commodity servers.

"However much we virtualized our storage environment, we couldn't get out of using expensive storage, and we couldn't escape from vendor lock in," said Yamazaki. "This outlook changed when Red Hat proposed that we use Red Hat Gluster Storage."

Red Hat Gluster Storage is a software-defined storage product enabling the internal disks of multiple commodity servers to be integrated and used as one large storage pool, which is available to access from server virtualization.

"Finally, we could build a storage environment at a low cost while using commodity servers," said Yamazaki. "We also recognized that Red Hat Gluster Storage would enable us to control both server and storage environments from one single console."

Casio started evaluating Red Hat Gluster Storage with Red Hat Enterprise Virtualization in October 2012, purchased the product in January 2013, and deployed and began using it in March of 2013.

FROM VIRTUALIZATION TO SCALABLE STORAGE

The greatest benefit provided by the combination of Red Hat Gluster Storage and Red Hat Enterprise Virtualization was a dramatic reduction in storage costs, which had posed problems for many years.

"Our costs, including various procurement costs and operating fees, fell to less than half of what they had been before implementing Red Hat Gluster Storage," said Yamazaki. "The solution's flexibility enabled us to build a storage environment using commodity servers and its ease of operational control was also a major advantage. And because Red Hat Enterprise Virtualization uses commodity servers, we were able to control both our server and storage environments centrally."

The virtual storage environment that Casio has implemented also accommodates rarely used data that still needs to be stored, such as design data and backup data. Casio now uses Red Hat Gluster Storage as a data-store of Red Hat Enterprise Virtualization.

"The transition, with Casio maintaining close communication with Red Hat consultants, went smoothly," said Yamazaki. "We were able to establish our own technology and acquire a good sense of our IT needs, which is in itself another benefit."

MORE RED HAT SOLUTION DEPLOYMENTS PLANNED

Casio now keeps an eye out for new technologies it can use, and has started incorporating them into its information systems. Norihito Kuniyoshi, managing director of Casio Information Service Co., Ltd., describes the company's outlook.

"It has been nine years since we started working on server virtualization, and our integration is fairly well advanced," said Kuniyoshi. "New technologies that we can use in this environment are popping up one after another. We will continue to verify them ourselves, and adopt them from time to time. That way, if we can achieve more efficient consolidation, operational control will become even easier."

Casio is currently evaluating Red Hat JBoss® Data Virtualization, a data integration platform that abstracts data from multiple distributed databases, virtually integrates it, and provides the user with a single view.

"We have not yet decided when we will adopt the product or where we will apply it in," said Kuniyoshi. "But we are evaluating it in specific areas and in keeping with our enterprising spirit, we intend to continue engaging proactively with the latest technology."

ABOUT RED HAT

Red Hat is the world's leading provider of open source solutions, using a community-powered approach to provide reliable and high-performing cloud, virtualization, storage, Linux, and middleware technologies. Red Hat also offers award-winning support, training, and consulting services. Red Hat is an S&P company with more than 70 offices spanning the globe, empowering its customers' businesses.

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