Cisco Unified Computing Systems Case Study

TechnoCUVIC ITOCHU Techno-Solutions Corporation

Expanding the Cloud Platform with a New System of FlexPod Configuration Centered on Cisco

Providing an Enterprise-Grade Cloud Service by Expanding to a 10 Gbps Network, Performing Simplification and Making Operations Management More Efficient

EXECUTIVE SUMMARY

Installation Solution

Cisco Unified Computing System (UCS)

Cisco Nexus 7000 Series

Data center switch

(FlexPod for VMware structure)

VMware vSphere

NetApp Storage

Issues and cases for review prior to installation

- Improving the system's capacity was considered as the number of users increased.
- The issues were to reduce the burden of work for increasing the number of servers and installation work and to improve efficiency.

Benefits of Installation

- Migrating to a 10 Gbps network and increasing the memory load of each server greatly improved the total capacity.
- Physical cables were reduced to about a third. In addition, the time required for various operations was reduced by using the Cisco UCS Manager service profile function.

"TechnoCUVIC," the virtual hosting service from ITOCHU Techno-Solutions Corporation, has continued to maintain high standards of quality and reliability since the dawn of the cloud service. The company considered system expansion after an increase in user numbers. They greatly increased the system's capacity by using the Cisco Unified Computing System (Cisco UCS) and expanding network bandwidth. The company has also simplified the physical structure of the system and made it more efficient, which has created a superior service provider platform.

Details of installation - Installation process

Moving to a network bandwidth of 10 Gbps and installing Cisco UCS to expand systems and improve server consolidation rates in line with the increase in users

Corporate users of TechnoCUVIC have been steadily increasing each year since the service was first provided in 2008, the number of virtual machines being constructed and operated has reached

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Established

April 1, 1972

Capital

21,763,000,000 yen ($259,598,004) (as of June 22, 2012)

URL

http://www.ctc-g.co.jp/

several thousands, and these numbers are expected to continue to increase in the future. Against this background, Cisco UCS was installed to strengthen the operational platform and improve efficiency for CTC. Including NetApp storage and the VMware virtual platform that are already in operation, the total system follows the structure of FlexPod for VMware.

Yoshiki Fujioka, Division Head of the Cloud Services Marketing & Development Division, had the following comments.

"The TechnoCUVIC service is currently provided by four data centers. In response to customer requests, actions such as connecting to other systems are also possible through the data centers. Regardless of the type of business, systems are used for a wide range of activities, such as Web systems, particularly for e-commerce, SaaS (applications) platforms and internal company data systems infrastructure.

We have been providing this service since before the word 'cloud' was first bandied around, and a number of issues have come up as the number of servers and scale of operations has increased. I think that the Cisco UCS architecture is an intelligent choice for constructing and operating a cloud platform where there is likely to be future expansion, and I hope that it can solve our problems."

Increasing the basic network bandwidth from 1 Gbps to 10 Gbps is also an important point this time round. Yasuhiro Watanabe of the DC Service Technology Development Section says that Cisco UCS was chosen because of its network compatibility.

"With the increase in users, system expansion in a 1 Gbps environment was inefficient and the move to 10 Gbps was inevitable. To strengthen the network, we have been using Cisco Nexus 7000 for the control switch since around 2010, which gave Cisco priority. From the point of view of connectivity, again, Cisco UCS was the optimum choice."

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Results of the installation - Future development

Considerable reduction in physical cables and improved server consolidation

Along with the opening of new data centers, further expansion is also under discussion

With the new system, physical memory load has increased fourfold and virtual machine consolidation on each server has been greatly increased. Mr. Watanabe says that reducing the number of cables connected to servers is also important for improving consolidation and capacity.

"Up to now, the burden of increasing the number of devices and carrying out the work has been fairly large. Complicated cabling was also a significant issue. With Cisco UCS, it has been possible to reduce physical cables to around a third of their former quantity and connection has become much simpler. From this perspective, the whole system can be used more efficiently, so I feel this has produced great rewards."

From an operational perspective, it is also hoped that being able to reduce working time through the service profile function of the Cisco UCS Manager management tool will contribute to service improvements. Yuki Shikama of the Service Management Department had the following comments.

"Increasing servers involves tasks such as setting up the BIOS, installing the OS and applying various settings, but using service profile can cut BIOS and hardware-related tasks, which should improve efficiency. We expect that the substantial working time can also be cut to between a third and a half."

The company is due to open a new data center in 2013 and discussions are underway about expansion, including expansion of the system used as the TechnoCUVIC platform. With expectations for Cisco UCS and the FlexPod structure, Mr. Fujioka had the following comments about hopes for future service deployment.

"FlexPod is the shared solution of three companies, and first and foremost we expect support, along with a smooth response among vendors, and new function proposals and approaches.

We have already been using NetApp storage and the VMware virtual platform as standard architecture for the cloud platform. Installation of Cisco UCS and Cisco Nexus switch has resulted in the same architecture as FlexPod in terms of form and content. However, once again, we realized during the present installation that setting up this kind of architecture at an early stage had been no mistake. Taking advantage of the merits of the new system, we want to combine this with system integration to offer an enterprise-grade service rather than a mere public cloud."

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