

Cisco Unified Computing Systems Case Study

Japan Women's College of Physical Education

Installation of a virtual environment using the Cisco UCS platform will allow reductions in space and energy of more than 50% in the college IT system and also help with labor saving and controlling costs in operations management

EXECUTIVE SUMMARY

Installation Solution

Cisco Unified Computing System (UCS)
B-Series Blade Server
C-Series Rack Mount Server
VMware vSphere
EMC VNX

Issues and cases for review prior to installation

- When carrying out our four-yearly replacement of the college IT system, we needed to improve space-saving and energy reduction compared to the system devices we had previously been using.
- We were looking for a system platform that offered reliability and a sense of security to improve the service provided to students and teaching staff.
- We needed to promote labor savings and cost cuts in operations management.

Benefits of Installation

- The consolidation of system devices by virtualization will allow space and energy savings of as much as 50%.
- Increased efficiency and labor savings will allow an operations system managed by fewer people alongside improvements in services from a variety of perspectives, including the provision of a server environment and remote operations.

Japan Women's College of Physical Education operates a policy whereby the college IT system is completely replaced every four years, and the major aim of the current update for fiscal 2012 was to save space and energy. To achieve these reductions, we have made a full-scale installation of a virtual environment using the Cisco computing architecture Cisco Unified Computing System (Cisco UCS) as the platform. This will also help achieve stable operations and reduce the burden of operations management.

Details of installation - Installation process

Full-scale installation of virtual technology to save space and energy

Evaluation of the reliability of the system as an aid to virtualization

Japan Women's College of Physical Education has ICT-related mandatory subjects and has implemented initiatives including the loan/distribution of iPads and iPod Touches as mobile terminals. The systems platform providing services to students and teachers has been consolidated into our Data Processing Center and is managed by a small team of staff.

Mr. Nobuo Suzuki, the Center Director, has the following to say about the college's initiative.

"I want to allow students to experience the most cutting-edge ICT environment available so that, as far as possible, they do not need to worry about the future, such as finding a job. Many of our classes are also active, practical courses, and we are also considering approaches to e-learning, such as streaming videos and distributing mobile terminals. The system we manage here is the platform for the whole college, so reliability and sense of security are important and we are constantly aware of cost performance. We have focused on these points during the current cycle of replacement."

MR. NOBUO SUZUKI

Center Director, Data Processing Center, Japan
Women's College of Physical Education
Instructor

MR. YUYA YAMAGUCHI

Japan Women's College of Physical Education
Data Processing Center

In order to move ahead with space and energy saving from system devices, on this occasion the college decided on the full-scale installation of a virtual environment and operations began in March 2012. Mr. Yuya Yamaguchi of the Data Processing Center has this to say about the circumstances under which Cisco UCS was used for the platform.

"Although we made energy savings when we changed to a Blade Server during the previous replacement, there was more waste heat than we had expected and problems of energy reduction remained.

We proceeded with discussions about improvements, and received proposals from several vendors of virtual environments. It was then that we heard that Cisco had released a server product suitable for virtualization. We were hesitant as we had never used the product, but the fact that the solution was provided as a consortium with the storage vendor EMC and the virtualization vendor VMware meant that it met our specifications for reliability and performance, and we made up our minds to use it."

The product was apparently also well received not only for its innovation, but also for its physical simplicity, such as in its internal architecture and rear cables, and the fact that each network and storage component can be centrally managed. During testing prior to the installation, we confirmed with the installation vendor that there were no problems migrating to Cisco UCS, including the migration of image files from the old system. Mr. Yamaguchi says that replacing the equipment was done in one go in the summer of 2011.

"This was a complete replacement that we make once every four years, so it was hard work. We constructed the system in about four to five months, and managed to get it done on time.

Results of the installation - Future development

Achieving space and energy savings of 50%, which was much above our target Examination of further system consolidation making use of abundant resources

Our server, consisting of a total of about 90 units for the existing system and newly added parts, was consolidated into one Cisco UCS B-Series chassis and four C-series units. The seven racks we were using were reduced to four, achieving great space savings. Energy savings were considerable and exceeded our initial target of a 30% reduction, reaching a total reduction of about 50%. Mr. Yamaguchi considers this a great result.

"Outside visitors are surprised by our server room. Looked at purely from the servers, slightly greater energy savings are possible, but energy savings for the system as a whole, including other devices, are settled at about 50%."

According to the college system update policy, no augmentation can be made during the intervening years, so we allow enough expandability for a flexible response to management for the next four years. Mr. Yamaguchi says that although costs have increased somewhat, this is balanced by a decrease in the burden of management. Since few personnel are assigned to operations management, labor savings in operations management was also an issue in this replacement cycle.

"Launching a new service or providing a server to teachers on demand has become so easy we can do it within an hour. Another benefit is that we can respond remotely wherever we are. The speed of our response to a malfunction has also increased remarkably and has helped to improve the quality of service and satisfaction within the college."

SUMMARY

Japan Women's College of Physical Education

Address:

8-19-1 Kita-Karasuyama, Setagaya-ku, Tokyo

Established:

1965

Number of students:

2144 (as of May 1, 2012)

URL

<http://www.jwcpe.ac.jp/>

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For the future, Mr. Yamaguchi is considering changing the systems in the high schools of both Tokyo and Chiba Prefecture to Cisco UCS and including these schools in the college virtual environment.

"Teachers at these schools also have ideas about the inclusion of school computer rooms in UCS and we postponed dealing with this on this occasion. However, the college and schools are connected by a 1 Gbps line and in some cases, I wonder if it would be possible to consolidate everything here without placing a system in each school. Maintenance is currently performed at the schools, but if they could also be handled remotely, efficiency would be increased and there would also be improvements to services."



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