Taiwan university increases IT performance and efficiencies with Nutanix private cloud

Chung Yuan Christian University boosts application speeds by at least 4 times while reducing TCO by 50% with a hyperconverged infrastructure.

BUSINESS BENEFIT

The Chung Yuan Christian University need to replace its ageing legacy IT, which was complex, costly, and lacked performance. It chose a Nutanix hyperconverged infrastructure—gaining an increase of at least four times in application speed and cost savings of up to 50 percent, while consolidating the datacenter footprint by more than 85 percent. Nowadays, just one administrator takes care of all routine management tasks, freeing up the rest of the IT team to focus on higher-value work to build out its private cloud infrastructure.

> **"To provide the best service to teachers and students, universities must keep up with the trend of digital transformation. With Nutanix, we are more at ease driving digital innovation to ensure high-quality services for Chung Yuan Christian University."**
>
> – Dr. Jong Wen-Ren, IT Director and Professor, Department of Mechanical Engineering, Chung Yuan Christian University

> **"Nutanix allows our IT to focus on higher value tasks. Efficiency has certainly improved substantially, and even our application speed has improved by at least four times."**
>
> – Yeh Ping, IT Head and Lecturer, Department of Technology Services, Chung Yuan Christian University

INDUSTRY
Education Higher Ed

BENEFITS
- Improved speed of applications by at least 4 times
- Moved to IT-as-a-service private cloud model, launching projects faster
- Reduced TCO by 50%
- Cut hardware footprint in the data center by more than 85%
- Freed up IT team for higher value work by enabling one administrator to complete all management tasks
- Enabled easier upgrades through one-click management via a console
- Gained peace of mind with excellent after-sales service support

SOLUTIONS
- Nutanix AOS
- Nutanix Prism

APPLICATIONS
- University database system
- School administration system
- Education administration system
- Enterprise applications for university departments

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CHALLENGE

Founded in 1955, Chung Yuan Christian University (CYCU) is a private university in Taoyuan, Taiwan. CYCU currently has more than 16,000 teachers and students. The IT team at CYCU ensures systems across the university campus support both teachers and students well. Yet, the legacy infrastructure—which had been in use for nearly 10 years—was complex, costly to manage, and increasingly lacked performance. When Yeh Ping, IT head and lecturer at the Department of Technology Services at CYCU saw the maintenance cost exceeded his budget, he decided to take action. Yeh remembers, "The single-year maintenance contract extended the use of the equipment, but didn't address our performance and management challenges. Our legacy system couldn't keep pace with increasing data traffic, resulting in reduced response times and more frequent equipment failures."

The issues were especially evident at the beginning of each semester during registration and course selection as well as other peak periods of activity during the academic year. As such, CYCU looked for a solution that could improve performance and reduce total cost of ownership (TCO).

SOLUTION

CYCU evaluated solutions, including Nutanix, conducting thorough tests for more than a month. As part of the process, the IT team performed lifecycle tests, observed rates of data deduplication and compression, and checked that performance speed and stability were on target. Yeh recounts, "We turned off all the Nutanix nodes in one of the data rooms at one point; however, data processing and service status were not affected at all, and there was no operational interruption."

Immediately after deploying Nutanix, the university began migrating all 3,000 of its administrative systems and applications to the hyperconverged infrastructure (HCI). The applications include the school's website structure, the user interface for the university information system, the teachers' courses system, and the students' achievement system. Using Nutanix Prism for single-pane management, IT administrators can quickly check CPU and memory usage as well as the status of virtual machine through a single console.

CUSTOMER OUTCOME

Application speed increases by 4x with improved efficiency using IT-as-a-Service model

"The performance of Nutanix exceeded our expectations during the testing phase. End-users reported application speeds increasing by at least four times," recounts Yeh. In the past, all IT staff were responsible for administrative duties like IT procurement, management, and backups. Now, using Nutanix, one datacenter administrator handles all three because processes are simplified and administrative workloads greatly reduced. Yeh says, "Other IT colleagues can focus on higher value development work and can spin up new projects immediately. All they do is give their requirements to the datacenter administrator." In all, the team's overall operational efficiency has increased, transforming operations into an IT-as-a-service model.

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Nutanix Prism offers single pane management and automates processes

Ms Guo Ya Zhen, IT administrator and lecturer in the Department of Technology Services at CYCU comments, "We used to cycle through several consoles and interfaces to understand the overall environment. Now everything is available on a single dashboard through Nutanix Prism, including information on CPUs and memory. Plus, we get VM [virtual machine] health statistics through the same interface."

Using Prism, the IT team has automated management to reduce operational workloads. Automated processes nowadays include pre-checks for HCI-based environments, workflow commands to update Nutanix AOS as well as drivers, firmware, storage software, and hypervisors.

TCO reduced by 50%, footprint size decreased by 85%

Yeh reports, "We are surprised to see this level of performance and storage space—with just half the TCO." CYCU currently has nine Nutanix nodes, operating in three clusters. In the past, CYCU operated nearly 80 servers, filing around four large cabinets. With Nutanix, the hardware footprint was reduced to just half a single cabinet—a reduction of more than 85 percent in the datacenter—lowering powering and cooling costs.

Excellent after-sales service support, customer gains confidence and peace of mind

For CYCU, Nutanix's support service is one of the most important gains. Yeh explains, "When we had problems with our legacy infrastructure, the vendor support services would handle only issues with their products. Nutanix support, however, will go the extra mile beyond just troubleshooting. It will take the initiative to do thorough checks and ensure the full system is running smoothly. We have not met a better support team than Nutanix's."

NEXT STEPS

In the future, CYCU will strengthen its research and development capabilities, becoming a hub for technological development in Taoyuan and creating the "Chung Yuan Entrepreneurship Village". The IT team will also develop innovative IT strategies for CYCU to join the ranks of the world's leading universities.

Dr. Jong Wen-Ren, IT director and professor at the Department of Mechanical Engineering at CYCU concludes, "We will continue to work with Nutanix to provide higher quality information system services for teachers and students on campus. We will also cooperate with external business partners to enhance the university's competitiveness to establish the Chung Yuan University brand."

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