

Asia University Taiwan Partners Nutanix setting new IT benchmark for tertiary education sector

Nutanix Enterprise Cloud Platform enables teachers and students of Asia University to enjoy a smooth, efficient, and worry-free work, teaching and learning environment.

BUSINESS BENEFITS

As Taiwan's colleges and universities gear up annually to welcome the latest generation of digital natives, they have also observed a declining enrolment rate of students. Asia University believes that the way forward is to onboard innovative technologies targeted at optimising the learning environment as well as enhance the competitiveness of their school on an international level.

By replacing legacy architecture with Nutanix's hyper-converged infrastructure (HCI) technology, the IT team hopes to futureproof its foundation with an agile system. This can provide stability with current e-learning technologies like Moodle and can remain responsive to match the growth needs of the business in years to come.

“Nutanix has been a leader in the field of hyper-convergence, and the Nutanix enterprise cloud platform is not only easier to use than other brands, but also allows the highest optimisation for datacenter footprint size. Therefore Nutanix is naturally our first choice for building a new generation of information architecture and laying the foundation for the University's agile IT.”

- Dr. James Chen, Team Leader, Network Maintenance Team, Information Development Division, Asia University

INDUSTRY

Education

BENEFITS

- End-users see immediate improvement in application performance
- Significantly shortened troubleshooting process and improved workflow efficiency
- Reduced datacenter footprint by 85%
- Saved nearly NT\$1million in annual license fees

SOLUTION

Nutanix Enterprise Cloud Platform
Nutanix NX-series running AHV

APPLICATIONS

- Moodle Digital Teaching Platform
- Microsoft Exchange Server
- Microsoft SharePoint

CHALLENGES

Established in 2001, Asia University is one of the fastest growing universities in Taiwan, with many featured research centers such as Artificial Intelligence Research Center, Precision Medical Research Center, Big Data Research Center, and Financial Technology Blockchain Research Center etc.

Setting its sight to be one of the top universities in the world and to meet the school's future development goals, Asia University launched a new generation datacenter in 2013. Virtualisation technology was introduced with the aim to go-green and reduce the number of physical servers. However traditional architecture used at the time created frustrations and burdens in operational management. The inflexibility of their legacy architecture soon cracked at the seams as the university embarks on a digitalization journey and increased the number of applications running on their datacenter. It is obvious that the existing infrastructure will not carry the university forward in its ambition for gaining international standing.

Education sector is digitalising; accelerating growth of data, storage and capacity

The University's digitalisation journey fuels an unpredictable acceleration of growth in data, storage and capacity. It is one of the main reason driving Asia University to upgrade their system in order to prepare for the future.

Today, Asia University have already used Moodle, a digital teaching and online learning platform designed to provide educators and learners with an integrated system for personalised learning. Although the current usage rate is still not very high, the university is optimistic and actively promotes e-learning. All course content today must be stored in the Moodle platform even if the subject is not offered for distance learning.

"Moodle's usage will continue to grow, but we cannot predict the extent of its growth for the future. With limited IT budget, resources and space constraints, we are unable to procure for the maximum capacity or performance right from the start. This inflexibility with traditional architecture forced us to review other options," said Dr. Chen, team leader of the network maintenance team in the IT department of the Asia University.

Limited IT resources, laborious troubleshooting weighs heavily on operational efficiencies

Besides being unable to start small and scale quickly and easily, the university's legacy architecture was also difficult to manage and operate. The IT personnel had to work arduously to check on every component of the legacy architecture in times of malfunction – server, storage, network – in order to determine the error. Such inefficiency creates a serious burden on Asia University's lean IT team, especially when most of them are tasked with a broad scope of responsibilities in order to keep the University's "engine" running.

SOLUTION

Hyperconverged infrastructure – Asia University's next-gen information architecture

"The initial design of our datacenter is to focus on centralisation and simplifying our architecture. We hope that by embracing new technologies such as hyperconverged infrastructure (HCI) and cloud computing, that we can decommission our legacy infrastructure, increase datacenter functions and yet take up less space than before," said Dr. Chen.

Therefore when evaluating the new solution in 2017, the team had set out three key goals for their next-generation datacenter:

- simplicity in architecture and management
- increase operational efficiency
- ability to scale and expand easily

Asia University has always prided itself with using leading edge technology and thus it was no surprise that Nutanix was their final choice. With this new next-generation datacenter employing HCI technology, the university saw an opportunity to position itself as the digital leader in the education sector, while most schools adopt a wait-and-see attitude towards this new technology and preferred other industries to take the lead.

“Asia University is the first university in central Taiwan to adopt a hyper-converged infrastructure (HCI),” Dr. Chen pointed out. “Nutanix has focused on HCI since its inception, and is a leader in the field of hyper-convergence. Its Enterprise Cloud has simplified datacenter operations and minimised footprint size more so than other competitor brands. It is naturally our first choice for a next-generation datacenter and a cornerstone of our information architecture.”

With the support of Nutanix’s engineers, Asia University successfully migrated their three core business applications onto their new Nutanix solution – Microsoft Exchange Server, Microsoft Sharepoint and Moodle.

CUSTOMER OUTCOMES

End-users see immediate improvement in application performance

“The impact on Moodle was most obvious,” said Huang Rende, system management engineer for the Network Operations Group of the Information Development Institute of the Asia University. “When using the old system, there will always be teachers and students complaining about system performance problems during the midterm and final exams period of the school term. After the introduction of Nutanix, we received less complaints and observed a significant improvement in this area.”

Significantly shortened troubleshooting process and improved workflow efficiency

Huang credits Nutanix Prism as the significant tool in shortening troubleshooting process and improve workflow processes and efficiency. With a single pane view, Nutanix can provide vital signals of all their virtualised machines and accurately detect errors or misconfigurations. Huang shared that this is a vast improvement as compared to the previous times when Huang and his colleagues had to check on each piecemeal IT infrastructure, server, network, storage, application, and other components.

Reduced datacenter footprint by 85%, more space for future expansions

The university’s datacenter launched in 2013 was designed to cater to the school’s expansion needs for the next 10-15 years. “In the past, our traditional architecture supporting the school’s core business applications took up about 14U of cabinet height. Today with Nutanix Enterprise Cloud Platform, only 2U of cabinet space is needed, saving about 85% of space,” said Dr Chen. “Nutanix has helped us to fully optimise our datacenter space. In the future, the use of Moodle will increase drastically but we are not worried about running out of space even if we have to add new nodes,” he added.

Saved nearly NT\$1million in annual license fees with hypervisor AHV

Asia University have managed to save a considerable sum of nearing NT\$1million (approx. US\$30,000) license fees annually. This means Asia University will have more budget for other IT projects.

NEXT STEPS

After seeing the benefits reaped after implementing Nutanix, Asia University plans to migrate more of their applications onto Nutanix, for example Windows AD. By the end of 2019, the university also plans to increase the number of Nutanix nodes in order to prepare for the rapid uptake of Moodle, so that teachers and students can enjoy seamless and fast access to the remote teaching platform without any disruptions or worries.



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