A Stabilising Influence: The University of Northampton Standardises on Nutanix for a Simpler, Stronger IT Management Platform

About University of Northampton

Industry: Education and research
Employees: 2500 and 15,000 students
Revenue: n/a
Geo: UK with international links
Website: www.northampton.ac.uk
Applications

Core operational applications and database management based on two on-prem datacentres with SaaS for HR, payroll and other services.

Products:

- AHV Virtualization
- Flow Network Security
- Intelligent Operations
- Nutanix Cloud Infrastructure (NCI)
- Nutanix Cloud Manager (NCM)

Solutions:

- VMware

Ready to get Hands-On?

Take a Test Drive

Despite the University of Northampton being among the UK's youngest universities, it enjoys a new campus, facilities, classrooms and accommodation. And now a refreshed IT to support its staff and students.

Business Need

A new, unified model for managing core IT operations that would support resilience and high availability, all to be rapidly deployed in time for the key clearing season when there is a rush to accept students for the new academic year. The University wanted a smart, flexible architecture so that services could quickly be spun up and down to serve core computing needs.

Key Results

A joined-up approach to managing IT
An elegant, flexible and powerful platform that lets Northampton standardise on the AHV hypervisor and broader Nutanix ecosystem, replacing a complex multivendor legacy solution. IT administrative staff now have simplified control over key elements across its two on-premises datacentres and SaaS applications.

Resilience, DR and fast recovery from outages
Northampton's key requirement is to avoid outages that are enormously costly in terms of time lost… and now it has that capacity.

A future-proof platform
With a stable platform in place, Northampton now has the opportunity to build out and create yet more value from the Nutanix ecosystem.

> **"This was the best migration I have ever done… and that includes internal, same-vendor projects. We were in a race to get it done before the clearing season for admitting new students. The biggest challenge we had was time and if we had extended the project by one month, we wouldn't have had time to deploy. But we placed the order and the kit arrived within the lead time. Our deployment was extremely quick and easy. We had a single 12-node production cluster up in four days to give us a seamless and modern setup."**
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> **Jack Harrison,**
> Technical Solutions Architect, University of Northampton

Challenge

Northampton is among the UK's youngest universities, having been formed from a combination of technical colleges and then being awarded university status in 2005.
The present University is based on three faculties: the Faculty of Business and Law; the Faculty of the Arts, Science & Technology; and the Faculty of Health, Education & Society. Its 15,000 students can study for diplomas, undergraduate and foundation degrees, and for a range of postgraduate qualifications.
The town is well located almost equidistant between London and England's second city, Birmingham. It enjoys fame for leatherworking and lift construction, a theme which continues as today the University is renowned for its lift engineering and technology expertise.
Beyond its academic capabilities, the University was the first in the UK to be awarded 'Changemaker Campus' status for its commitment to social innovation and entrepreneurship.
Today, the University of Northampton has about 15,000 students and 2500 staff and plays a full part in the highly competitive UK higher education sector. However, as with so many education institutions, it was struggling to manage compute resources and deal with complex IT demands and the importance of data to core operations.
"We had Microsoft Hyper V and VMware ESXi virtualisation hypervisors with a Cisco HyperFlex and vSAN environment," says Jack Harrison, technical solutions architect at the University. "We had nine clusters running across 49 nodes and we were finding that manageability levels were quite poor with so many separate management planes.
"The solution never really worked well and we had hosts and disks failing, with knock-on effects for end-users. Also, disaster recovery was challenging because of cluster stability issues. The key clearing period was approaching when we and other universities recruit students who have either made us their first choices or later choices to attend, and assessments are made as to who we accept and who they choose. But our infrastructure was fragile."

Solution

"We wanted a single-vendor solution to simplify management and the choice eventually came down to Dell VxRail with vSAN versus Nutanix on Supermicro hardware," Harrison says.
"There was some feeling in the IT department in favour of a familiar three-tier architecture but before Northampton I had worked at a private-sector Nutanix customer that had successfully moved from a three-tier architecture to hyperconverged infrastructure (HCI) without looking back. Review of what our peers were accomplishing and expert external advice made it clear we had to adopt HCI.
"VMware had become challenging to manage and we had concerns over licensing costs with the pending Broadcom acquisition of

VMware in the backs of our minds."
Ease and speed of deployment were key.
"We find that if we have a problem we can always contact Nutanix and we also work closely with a partner, Softcat; both really helped us create a rapid and smooth change-over. We weren't looking to be trailblazers in this: we wanted to go with a modern solution but also something that was the norm and we knew peers like Cranfield, Reading and Buckinghamshire New University were customers.
"We set out with the sense that technology was a given, but it's the management wrapper around it that is key. The decision to adopt Nutanix definitely wasn't a done deal at the outset but the ability to have such strong resiliency built in and get data back up within 15 minutes in the event of an outage are key as before we were looking at a 24-hour wait to get back to the best original state and that would have been catastrophic at a time like clearing.
"We were also looking at backup so we looked closely at dependencies because everything has to work well together: Nutanix has good integration with our choice of backup vendor, Rubrik."
Time was key, Harrison adds.
"This was the best migration I have ever done… and that includes internal, same-vendor projects," he says. "We were in a race to get it done before the clearing season for admitting late-entry students so the biggest challenge we had was time. If we had extended by one month, we wouldn't have had time to deploy but we placed the order and kit arrived within the lead time. We used Nutanix Move and our deployment was extremely quick and, to be fair, easy. We had a single 12-node production cluster up in four days to give us a seamless and modern setup."

Outcome

Northampton is delighted with the outcome of its migration, feeling that it now has a modern control plane and strong resilience, failover and backup capabilities. The University remains a combination of on-premises and SaaS but Nutanix is the glue that connects both and will be the foundation for any future change.
That success has also put IT in the spotlight.
"We are heavily reliant on the clearing process, so all eyes were on IT," Harrison says. "Today, they no longer have to worry about critical virtual infrastructure incidents and we have won executive praise."

Next Steps

Northampton is now considering how best to get more from the Nutanix ecosystem. Harrison says using Nutanix Frame for accessing Windows and web apps from a browser is "a big consideration for secure dial-in" as are Nutanix Database Service for simplifying database deployments across platforms.
The University now enjoys flexibility with global load balancing across its on-prem datacentres and the benefits of a stream of regular Nutanix upgrades. Despite this, its ethos is that "our start position is 'cloud where appropriate' and in future, Northampton has the ability with NC2 to run Nutanix clusters in the cloud.
"It means we are not thrown into the deep end when things change and we have that flexibility to use NC2 and NCM Ultimate for multi-VM blueprints."
As for scalability, Harison says the effect of the main upgrade was to shrink data onto a smaller footprint so that is not a concern. More broadly, he says that there is comfort in data resilience and having a sense that the IT organisation is "an enabler, not a blocker" represents real progress.

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