

University Chooses Nutanix to Resolve Perfect Storm of IT Demands

Ageing Infrastructure, Datacentre Move and Public Cloud Integration Lead Cranfield University To Put Nutanix Enterprise Cloud at Core of Digital Plans.

BUSINESS NEED

A leading UK postgraduate teaching and research body, Cranfield University is tasked with a mission to create leaders in technology and management through transformational research, postgraduate education and professional development. A mission which was becoming increasingly hampered by outdated IT infrastructure that was proving difficult to scale, time consuming to support and costly to maintain. That, however, wasn't the only pressure. As a big user of Microsoft Azure, the University was also keen to find an alternative solution to fit with ambitious hybrid cloud plans, added to which the on-campus data centre was earmarked for other uses. Plus, of course, the team were tasked with migrating to any new solution within strict budgetary limits while, at the same time, minimising operational spend.

With the migration from its old traditional IT infrastructure to the Nutanix Enterprise Cloud solution complete, the University has the small footprint yet highly scalable, easy to manage and portable infrastructure needed. It is also making significant financial savings and has been empowered to press forward to fully realise its hybrid cloud plans, as further outlined in this case study

“We needed to replace our entire infrastructure stack with a more scalable solution which we could pick up and take to a new location if and when required. Nutanix was the only vendor able to meet that immediate need while also delivering cost savings and providing the completeness of vision to allow us to leverage other, public cloud, investments going forward.”

– Edward Poll, Head of IT Infrastructure, Cranfield University

CHALLENGE

The IT team at Cranfield University was at a crossroads. It needed to modernise its entire infrastructure, comprising almost five racks full of blade servers, storage

INDUSTRY

Higher Education

BENEFITS

- No requirement to build replacement on-premise data centre - avoided spending an estimated £3 million over five years
- Operational savings of 60% delivered through economies in power and cooling plus lower support and management costs
- Reduced risk to critical applications and services from built in resilience and recovery capabilities
- Enhanced support for public cloud integration as part of a hybrid cloud approach to IT
- Enhanced agility in a small and portable rack footprint – down from 5 racks to 12U

SOLUTIONS

- Nutanix Enterprise Cloud OS on NX-Series
- VMware vSphere

APPLICATIONS

- 500+ VMs running Microsoft Windows and Red Hat Linux
- Finance and student records systems
- Microsoft Windows infrastructure servers (Domain Controllers, Web, file and print etc.)
- Oracle and Microsoft SQL Server Databases
- VMware Horizon View (virtual desktops) systems

appliances and networking hardware, whilst also planning for a possible physical move due to the imminent re-purposing of its primary on-campus data centre.

“As part of wider University plans, we were faced with having to move our main datacentre to a new location, presenting us with both a challenge and an opportunity,” explained Edward Poll, Head of IT Infrastructure. “The challenge was finding a solution that would be easy to relocate if and when needed; the opportunity was the go ahead to build a much more scalable and easy to manage infrastructure which would fit better with our hybrid cloud plans.”

The team was also tasked with not only keeping within budgetary limits but, if possible, coming up with a solution able to deliver operational savings, further adding to the pressures heaped upon the project.

SOLUTION

As part of a competitive tender process the team considered hyperconverged infrastructure (HCI) products from four leading vendors, ultimately choosing the Nutanix Enterprise Cloud solution for a number of reasons.

“The Nutanix solution ticked all the boxes in terms of scalability, integrated management and space saving,” Poll explained, “enabling us to slim down from five racks to just 8U for our main cluster. It was also the only solution to provide us with a potential VMware exit strategy which will enable us to make significant cost savings when our hypervisor licences come up for renewal.”

Another advantage was close integration with their existing cloud-based backup solution, which meant the only other requirement was for additional local resilience. To this end therefore, the University also deployed a second, Nutanix Enterprise Cloud cluster configured to provide on-premise replication and fast disaster recovery for key applications.

CUSTOMER OUTCOME

Thanks to having fully virtualised workloads already, migration to the new Enterprise Cloud was both swift and straightforward. Poll and his team were allowed three weeks but took just five days to move 500+ VMs to the new platform and the old infrastructure has since been switched off. This has freed up the old data centre for other purposes with all the Enterprise Cloud equipment located in what Poll refers to as a “Data room”, with huge implications when it comes to both capital and operational spending.

“The small rack footprint means we have a lot more choices beyond simply building a new datacentre” said Poll. “We were looking at six or even seven figures to build a new on-premise facility which is a huge saving, added to which we’re already benefitting from substantial reductions in power and cooling plus much simplified management using the integrated Prism management console.”

Users have reported a significant improvement in performance, in addition to which there is a lot more storage headroom with 45% free space to accommodate future growth. Poll and his team have also been impressed by the level of support that comes with the Enterprise Cloud which has made getting to grips with the new software a lot easier than anticipated. Moreover, the solution has delivered both in terms of availability. Indeed, the only real issue has been a single disk failure which was automatically detected and replaced without any noticeable impact.

NEXT STEPS

Top of the list of immediate plans is a move from VMware to the AHV Hypervisor included in the Enterprise Cloud software stack at no additional cost. Not only can AHV support all the existing virtual workloads, it enables them to be managed alongside physical resources using the same integrated Prism management console, thus enabling the University to further lower costs without loss of functionality when its VMware licenses come up for renewal.

Looking further forward, the University is planning to make further use of Microsoft Azure and is also evaluating the use of Amazon Web Services (AWS) as part of a hybrid cloud approach to IT now centred around the Nutanix Enterprise Cloud. It is also looking to make use of built-in tools that will allow it to leverage containers, microservices and other cloud-native technologies as part of a cloud-first approach to future application development.



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