

CASE STUDY

CRANFIELD UNIVERSITY SAVE 80% ON TIME MANAGEMENT WITH IT ORCHESTRATION BY CDW™.



OVERVIEW

- Essential IT services at Cranfield University have been transformed by the introduction of hyperconverged infrastructure.
- CDW, in partnership with Nutanix and VMware, helped design and plan a platform that improves efficiency, performance and flexibility for thousands of staff and students by leveraging both cloud and on-premise architectures.
- Management time and energy costs have been cut, while resilience and security are significantly improved.

ABOUT CRANFIELD UNIVERSITY

- The UK's only exclusively post-graduate university, providing globally-recognised expertise and research facilities to support the development of future leaders in technology and management.
- It has two campus sites in the UK that employ **1,600** staff and serve **4,000** post-graduates, plus **800** PhD students and around **15,000** participants in Chartered Professional Development (CPD) programmes.

CHALLENGE

The intensive IT needs of staff, academics and students at Cranfield University were dependent on two ageing on-site data centres, housing traditional three-tier server architecture.

Modernisation had become crucial due to the existing infrastructure nearing the endpoint of a refresh cycle, with hardware and software licences plus support contracts approaching their renewal date.

The university was also looking to reduce the physical footprint of the two data centres, with one building earmarked for redevelopment.

Another challenge to overcome was the amount of time and resource dedicated to managing the data centres. The need for daily operational oversight was dominating the task lists of the university's IT Infrastructure Systems Team.

Edward Poll, Head of IT Infrastructure at Cranfield University, said: "We took this opportunity to look at the whole infrastructure stack and all the overheads the servers brought from a management point of view. Our aim was to modernise the estate while reducing both the footprint and costs associated with it."

Close alignment with government bodies and private sector partners also required the university to have robust, compliant and secure storage arrangements, with large volumes of research data being generated, processed and analysed across the campuses by staff and students. It is crucial that IT services are reliable and highly available, with enough flexibility to adapt to evolving needs.

While greater public cloud adoption was identified as a long-term ambition, the university recognised this would not be suitable for all workloads. A more multi-faceted approach to infrastructure was needed, not only to meet current needs but to enable greater adoption of as-a-service solutions in the future.

SOLUTION

The Integrated Technology Solutions Team at CDW organised a series of workshops to discuss the available options with Cranfield's IT leaders. This consultancy phase was crucial to the development of a solution which best met the university's needs and provided the foundation for the strong relationship that followed.

"Without a doubt, the pre-sales technical consultancy from CDW was streets ahead of everyone else who came in front of us," said Edward Poll. "They listened to what we wanted and really understood our needs. The solutions they presented were technically sound and well articulated."

The aim was to deliver a hyperconverged infrastructure (HCI) solution with the ability to run workloads on-premise or in the cloud, depending on the specific need. This would reduce reliance on operational expenditure and encourage a more efficient spending model.

Cranfield chose to run two sites, one being a large primary data centre and the other a smaller secondary facility. Nutanix was selected as the hyperconverged platform because it offered the flexibility to incorporate

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VMware and an element of future-proofing to allow for future changes.

"The other options we looked at would have left us with fewer options moving forward," said Edward Poll. "Nutanix gave us the flexibility to adapt to future changes in our financial and technical requirements."

With Nutanix, the university could consolidate compute, storage and virtualisation into a single entity, rather than running three tiers. The advantages of simplified infrastructure management, plus faster and easier scalability, reduced licensing costs and extremely high performance, made the Nutanix platform a clear favourite.

One of CDW's key recommendations was to implement a node into each server unit, rather than combining multiple nodes in single units.

Improving data centre security was another imperative. CDW orchestrated the wider deployment of VMware NSX, which virtualises networking and security to promote a more responsive software-defined data centre environment. Through micro-segmentation of the VM layer, firewalls could be imposed across the data centre.

VMware NSX provides the best combination of security through micro-segmentation, reducing the load on individual machines and simplifying overall management.

Another advantage of VMware NSX is that it also allows for integration of third-party anti-virus software which automates the process of identifying and reporting on threats, placing affected areas in quarantine before cleaning and restoring services.

OUTCOME

The implementation of the modern, hyperconverged infrastructure by CDW has generated numerous benefits. The on-site data centre footprint has been dramatically reduced and, with it, energy costs have come down considerably.

Additionally, infrastructure management time has decreased by 80%, enabling the IT team to pursue further modernisation projects. Further adoption of cloud-based services and SaaS products are being explored.

The security of the data centres has been stepped up and disaster recovery capabilities have been strengthened, with the ability to restore core services covering finance and student records with a speed and simplicity that was not possible previously.

Edward Poll paid tribute to the strong relationship that CDW developed with his internal team. This close collaboration instilled confidence and meant issues could be overcome quickly. "From an engagement point of view, the technical expertise CDW brought to the table far outshone anyone else," he said.

The scalable nature of the updated

infrastructure also removes concerns about capacity that could inhibit the university's future growth plans.

Neil Bailey, Head of Sales - Education, Local Government & Housing at CDW, said: "As one of the UK's most research-intensive universities, Cranfield's IT needs are intensive and the expectations of users are understandably high. What we have delivered, working closely with both Nutanix, VMware and the university's own team, is a hyperconverged infrastructure platform that not only meets today's pressing requirements but creates scope for changes in the future."

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For more information or to discuss your requirements, speak to CDW:

Telephone: 020 7791 6000
or enquire online
Email: CustomerReference@uk.cdw.com
Website: uk.cdw.com
Twitter: @CDW_UK

