A New Course and a Higher Grade: The University of York Modernises IT by Jettisoning Legacy Systems and Embracing Nutanix HCI

About University of York

Industry: Education and research

Employees: 5,000

Revenue: n/a

Geo: UK with international links

Website: www.york.ac.uk

Applications

- Authentication infrastructure (Active Directory, MIT Kerberos, HPE Aruba Clearpass)
- Web/App Servers (Apache Tomcat, Microsoft IIS)
- Database (Oracle, SQL Server, PostgreSQL and MySQL)
- Line of business applications (Finance, HR, Business Intelligence, Timetabling, Student Records)

Products

- Nutanix Cloud Infrastructure

Ready to get Hands-On?

Take a Test Drive

The University of York, a research-intensive member of the UK's prestigious Russell Group of Universities, refreshed its IT infrastructure to bring new levels of performance and resilience to its ageing estate

Business Need

A new, more modern approach to IT operations that would both accelerate performance and future-proof the University. The desired result was a generally more flexible, intelligent architecture with a relatively low maintenance overhead, strong levels of resilience, demonstrable value and the flexibility to serve a range of use cases and changing needs.

Key Results

A replacement for end-of-life IT

Nutanix helped the University of York create a more sustainable, long-term approach to its server estate, meaning that it could move away from the inflexibility of older, outmoded approaches that were slower, offered limited room to manoeuvre, and were more expensive.

Dense integration of core IT resources

A tightly coupled architecture bringing together compute, storage, networking, management tools and a range of attractive add-ons without the performance lag of non-converged architectures.

Low maintenance and flexibility for different workloads

Reduced need for specialist knowledge with the ability to select between public cloud, private cloud and on-premises resources as current and future workloads dictate.

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After significant organic growth in demands, our existing datacentre approach was coming under pressure. We decided we needed to move away from legacy three-tier architecture-based approaches. Nutanix became our off-ramp and route to a more elegant solution that delivered superior performance, resilience and organisational agility. Today, whatever happens, we have true flexibility and a partner we know we can call on and trust.

Mike Donley,
Senior Infrastructure Engineer, University of York

Challenge

Founded in 1963, the University of York is a member of the Russell Group of 24

UK universities that emphasise research, teaching excellence, community integration and links to local business and public-sector organisations.

It is based in the north of England in one of Europe's most historic cathedral cities, made distinctive by its resplendent minster church, castle and city walls. An ecclesiastical centre in the Middle Ages, it grew to be a prosperous centre of wool trading and then a key location for the first railways and gained the name of 'Chocolate city' because of its Rowntree and Terry's chocolate factories. Today, it's a major tourist destination where visitors flock to its intact mediaeval streets and it remains a much-loved destination and a desirable place to call home.

The University has grown from an original intake of 230 students to today's over 20,000-strong student cohort and 5,000 staff. It celebrates itself as a University for Public Good, with tight connections to the city and an openness to welcome students from all backgrounds and locations.

The University has an open, participative and collaborative culture that sees it partner with like minded bodies all over the world such as Maastricht University and it has its own Europe Campus, CITY College in Thessaloniki, Greece. Closer to home, it works with the University of Hull to encourage local children in areas with high levels of domestic poverty to join learning centres, stay on track at school and explore their educational futures. Entrepreneurialism is also encouraged and the Enterprise Works Business Hub supports connections between business, students and researchers.

However, with government funding cuts meaning funding was tight, York had over time struggled to continue with an ageing datacentre environment. Standalone NetApp file servers were expensive to run and expand and were proving suboptimal for what York needed.

"We had performance and scaling challenges, and because of our mixed workloads on our NetApp servers, we'd regularly see slowdowns and some service disruption," recalls Mike Donley, senior infrastructure engineer at York. "Performance of the NetApp filers themselves was ok day-to-day but they

couldn't easily be expanded, and they were coming to end-of-life stage, so we started looking at HCI (hyper-converged infrastructure). We saw big brands coming to validate the market, which was clearly beginning to mature."

Solution

"We wanted something we could feel more in control of with granular capacity management, diagnostics, performance analysis and more," Donley says.

One option that loomed large was the very company that pioneered the HCI model.

"We had heard of Nutanix through a contact with the local city council, so we asked for evaluation kit and essentially tried to break it by throwing everything conceivable at it – and we didn't break it. The data was never at risk and recovery was always straightforward."

York is very demanding of its hardware and determined to get a strong return on its investment.

"We take the view that if they're not glowing white-hot, we're not pushing them hard enough," Donley quips. "We run our servers very 'dense' and get good value."

In short, York's IT estate was in need of a refresh and a new approach was required, especially as core and research IT requirements were growing.

Multiple features of the Nutanix product set were deemed appealing. These included a choice of hardware brands and the option to run an integrated virtualisation hypervisor. Also, there was the freedom to integrate with multiple public cloud providers and just as exciting was the range of self-service options and one-click-simplicity for low maintenance overheads. Add the ability to integrate third-party wares via an open API and York felt that the Nutanix solution was well above those of rivals.

Donley and colleague Rob Westerby, Windows and Virtualisation team lead, also discovered the tight-knit Nutanix user community was always happy to share knowledge and best practices.

In 2019, York began the two- to three-year process of migrating to Nutanix for its varied workloads that extend from line-of-business apps to student records, finance, timetabling, research project support, physical security systems and the campus CCTV service. Despite this, it only needed to call on Nutanix services for a total of five days.

Customer Outcome

Immediate post-implementation feedback from users was that the new setup was "blisteringly fast". More than this, Nutanix continued to offer a direct line to its product engineering team, helping to iron out any issues swiftly. Donley and team are particularly fans of Nutanix's architecture technical documentation, praising its depth and openness to reveal internal workings.

"Support was one of the key USPs in favour of Nutanix as we're a really small team and desperately need second-level support," Donley said. "With some vendors you feel you have their attention for a little while the sale is going through, but we still maintain strong links which helps with any bug tracking or gaining news about upcoming features. You don't get that with other places unless you're spending a million pounds a year."

Donley and co. feel that Nutanix's hybrid cloud neutrality on deployment options puts them in a good position, whatever future needs dictate.

"We hedge our bets," Donley says. "We tend to use a number of publics based on best fit for the given workload or service, but we've taken a strategic view that we don't do VMs in the cloud except for Azure desktop-as-a-service. That's because running VMs in the cloud can be expensive and you don't gain a lot of the benefits of public cloud services. Almost all cloud-based development is from the ground up in a cloud-native way in AWS and we make extensive use of SaaS solutions. Thankfully, we have some good on-

prem datacentres, so we can take our time in where we go next."

Next Steps

York values its freedom and wants to avoid lock-in to any vendor. It is keeping its future IT options open and believes that Nutanix NC2 cloud clustering could appeal if the University were ever to relax its dependence on internal datacentres for any reason.

Similarly, Nutanix AHV is an option should VMware change its hypervisor pricing in the light of its recent acquisition by Broadcom.

The mission to jettison legacy continues and modernising database workloads that still run on legacy servers is yet another potential change that appeals.

Partner

Epaton

As a Nutanix Champion Reseller, Partner of the Year 2023 and a Top 5 UK Nutanix partner, Epaton have established themselves as trusted thought-leaders within the IT industry over the past 10 years. Supported by in-house Nutanix specialists, Epaton are dedicated to helping all organisations do more, for less, better, by aligning bespoke solutions with the people and culture of your business. As a valued group of experts, Nutanix and Epaton's partnership is pivotal in our growth journey, together and independently.

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