

University of Cambridge emphasizes private cloud, improves service delivery



NetApp data flexibility
helps students and faculty
advance knowledge
from anywhere.

University of Cambridge was founded in the year 1209, making it the second oldest English-language university in the world. It's reputation as a leading research institution is stellar.

University research in the 21st Century is heavily dependent on data-intensive applications. Supporting this research — and the back office functions and productivity applications used throughout — demands a flexible, scalable IT infrastructure.

University Information Services (UIS) is contributing to a long tradition of innovation — one that includes Sir Isaac Newton and Stephen Hawking — by bringing a service-oriented, customer-centric approach to supporting the colleges, departments and projects that make up the school.

NetApp provides the data storage platform necessary to support research, and innovation, in any field, to advance the ideals of the University of Cambridge.

2,000 virtual desktops

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Head of Frontline Services, University of Cambridge

Changing with the times

Academia is often slow to adopt new technology strategies, creating data silos and isolated fiefdoms of IT infrastructure. For Stephen Hoensch, head of frontline services at the University of Cambridge, a slow, steady effort to create centralized delivery of IT was jolted forward by COVID-19.

According to Hoensch, in his 20 years at the university, the intersection of critical research, remote academic work, and demand for scalable IT is unprecedented.

“Within the past 12 months, the delivery of new services has accelerated more than anything in the past 10 years,” Hoensch said. “IT is being taken seriously and so is the money that it requires. We can show that IT can deliver a transformation for the University.”

Recent investments in NetApp® hardware and software enabled Hoensch and his team to quickly deploy 2,000 virtual desktops in the first months of the pandemic. The team can easily support these desktops now and can scale up in the future. Important work can continue while keeping people safe at home. It’s a great example of UIS managing the “boring” commodity services at the center and supporting the “exciting” IT innovations that happen at the edge.

Lessons learned

A university setting presents unique challenges for IT. Students and faculty are constantly coming and going, and they expect to work remotely and to collaborate easily. Some university systems, like enrollment, are used intensely for short periods and then are idle at other times.

Research is increasingly competitive, and grant applications now include data sovereignty, protection of intellectual property, and regulatory compliance. To

receive grant funding, researchers must demonstrate that they are spending funds wisely. The University of Cambridge also has a specific challenge: Many of its historic listed buildings can’t be altered, creating problems with networking, in-person workspaces, and data center build-outs.

A customer-service approach and centralized services overcome all these challenges, says Hoensch.

Traditional university, modern IT

“Three big things that NetApp needed to deliver were infrastructure as a service, desktop as a service on the same platform, and a way to easily scale workloads to any cloud hyperscaler,” Hoensch said.

After a comprehensive evaluation of 10 vendors over many months to replace aging SAN investments, Cambridge selected NetApp technology. A project to deploy virtual desktop infrastructure for 2,000 users was the starting point. For Hoensch, the ease of creating private cloud services and improving quality of service (QoS) earned high marks.

“QoS allows us to ring-fence a research resource on the same box for, say, desktop as a service. I can guarantee that my Citrix users have an ‘X’ amount of resource that isn’t going to go away,” Hoensch said. “Other vendors talk about it, but they don’t actually deliver the granularity that the NetApp system can.”

Integration with Cisco and Citrix technology contributed to the ease of setup for self-service and chargebacks to departments. The centralized IT resource creates economies of scale that are more cost-efficient than one-off investments are.

“We deliver the ‘boring’ commodity central services for the university and allow other departments at the edge to focus on the exciting IT challenges we face in higher education,” said Hoensch.

COVID-19 changed everything

With the onset of the COVID-19 pandemic, the campus shut down, and new opportunities to demonstrate the value of centralized IT were revealed. Desktop as a service was accelerated and now focuses on delivery of a managed desktop for administrators, researchers, and students.

“The biggest response from end users was that they felt they got better performance working remotely at home than from their office desktop,” Hoensch said. “And that is factoring in all of the variables of different kinds of personal devices, different broadband networks, and aging local hardware.”

Management of the desktops is easier for Hoensch’s teams as well. When users log in, they get a nonpersistent desktop, updates are pushed automatically, and their user experience is enhanced because they have a reliable tool to do their work.

The University today is still very much on-premises and capital expense focused. Progress is sometimes slow, but cloud is in the future. The private cloud foundations that a NetApp powered data fabric is creating today—and ease of integration with any hyperscaler—bring that future closer. The University of Cambridge doesn’t have to choose one cloud provider over another. Again, flexibility and scalability are key.

Graduating with honors

“I think I am going to see the university not build new data centers going forward,” said Hoensch. “I am going to see them start to shrink those data centers and move more things into the cloud to help with their environmental strategy as well.”

When a professor asks a student to solve a problem, the answer often must be justified: “Show your work.” For UIS, the work that they have to show means performance, value, and ease of use.

The cloud has benefits for everyone, and UIS is proving them. The “easy” workloads will come first.

“It’s a hearts-and-minds thing, you’ve got to prove that you’ve got a service,” Hoensch said. “But we’re seeing the momentum now. We’re going to improve on that. And then I think, over the next few years, we will see those final researchers move their data and their workloads over to us.”

Hoensch said that the challenges he faces in delivering services require constant vigilance and help from a broad range of partners. NetApp’s proven technologies and options for both on-premises and cloud management of data are why the university continues to invest in NetApp technology.

Hoensch looks forward to a continued relationship: “It’s a partnership with NetApp that’s going to grow. And it’s quite an exciting one for the university.”



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About NetApp

In a world full of generalists, NetApp is a specialist. We’re focused on one thing, helping your business get the most out of your data. NetApp brings the enterprise-grade data services you rely on into the cloud, and the simple flexibility of cloud into the data center. Our industry-leading solutions work across diverse customer environments and the world’s biggest public clouds.

As a cloud-led, data-centric software company, only NetApp can help build your unique data fabric, simplify and connect your cloud, and securely deliver the right data, services and applications to the right people—anytime, anywhere. To learn more, visit www.netapp.com



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