High-speed link sets new rail college on right track

How Jisc’s ExpressRoute service helps a brand new rail college fulfil a cloud-based digital vision

The challenge: creating the digital college of the future
As the first new FE college in more than 20 years, the National College for High Speed Rail (nchsr.ac.uk) has bold ambitions. From a digital point of view, the college plans to deliver learning on a national scale – allowing apprentices anywhere in the country to access college services as they gain workplace experience.

Yet at the same time, it aims to offer access to high-end design and engineering software to staff and students on campus.

“We wanted to be a cutting-edge, disruptive college,” says head of ICT and facilities, Daryl Unitt. “And we also had a tight timeline: it was only three years from our inception to welcoming new learners in 2017–18.”

Benefits to staff and students
Thanks to the high-quality, high-speed ExpressRoute service, staff and students are already making use of Microsoft Office 365 on campus.

And the college also plans to deliver cloud-based access to high-end CAD/CAM (computer-assisted design and manufacturing) software from suppliers such as Autodesk, Bentley Systems and Trimble in the coming year.

“Jisc looked after the logistics of delivering these connections to two brand new campuses in Birmingham and Doncaster.”

The solution: Jisc and Microsoft ExpressRoute
In order to achieve its goals, the college decided to create a cloud-based model for essential business and educational services, using Microsoft Azure.

To ensure cloud-based services were delivered as reliably as possible on campus, it commissioned our Microsoft Azure Express-Route service (jisc.ac.uk/microsoft-azure-expressroute) – offering access to Azure via a virtual private circuit over the college’s Janet Network connections.

This also meant having a resilient network infrastructure. “We’ve got strong, robust, reliable links to our campuses – each campus is connected to the Janet Network using a high-speed managed circuit supplied by Jisc,” says Daryl. “If one connection goes down, the other campus is also directly linked. So we’ve got in-built resilience that gives us the high availability which Microsoft recommends for ExpressRoute.”
The highly available infrastructure means campus-based learners have the ability to carry on working even if there is a failure on a managed circuit – although in college year 2017–18 there was 100% uptime, with “no issues at all,” according to Daryl.

More widely, the ExpressRoute service helps to enable the college’s cloud-based vision for IT – which means staff and students are able to access essential services such as learning management systems or student records from anywhere in the country.

Benefits to the organisation

The speed and reliability of our ExpressRoute service means the college does not need to invest in capital expenditure on large numbers of studio-quality computers, as it plans its high-end design and engineering software. Instead, it can rely on ‘thin client’ PCs, linked via high-speed connections to Azure data centres.

And the cloud-based blueprint means the college can also de-risk in other ways. “There’s reduced IT support in the buildings: we don’t need local server experts. And there’s less worrying about physical security and running costs such as cooling and backup.”

Further information: advantages of Jisc and the Janet Network

Dealing with Jisc offers wider benefits – including both excellent support and, of course, access to the world-class Janet Network.

“The account manager has been responsive, and there are also little helpful things, like knowing my network is proactively monitored at all times. When you rely on your connections to the internet you need to have someone who understands how important they are to you.”

Dealing with Jisc also means access to a range of services including distributed denial of service (DDoS) protection, the federated roaming service eduroam, and access to the .ac.uk domain.

“There’s a maturity with Jisc that made us feel confident,” says Daryl. “And I haven’t had to deal with corporates who don’t understand the nuances of FE. In the educational environment, it’s a no-brainer.”

“We will use low-end compute to deliver the same experience, enabling learners to access high-end technology,” says Daryl. “It’s a big game-changer.”

Scalability is another plus, says Daryl. “As our learner numbers increase, we know it will be an easy process to increase bandwidth for both the ExpressRoute circuit and the Janet connection.”