COMMSCOPE®

New data centre at the University of Southampton supports 23,000 students from 130 countries

Client company

University of Southampton

Country

United Kingdom

Industry

Education

Challenges

To replace the legacy data centre as the university's primary data centre, providing a future-ready facility capable of supporting 23,000 students.

CommScope solutions

Category 6A copper, MPO fiber trunks, quick-fit MPO cassettes and FiberGuide®

Customer advantages

The UoS data centre is already considered an excellent reference site for other higher education establishments, underlining the outstanding success of the project.

The University of Southampton (UoS) is the largest higher education establishment in the southeast of England, serving 23,000 students including 5,000 overseas students, from more than 130 countries. Spread across six campuses—four in and around Southampton, one in Winchester and the recently opened international facility in Malaysia—the university comprises eight faculties offering over 200 courses covering 70 subject areas.

With five libraries containing three million books, journals and reports together with a further 50,000 e-books, Southampton's internationally acclaimed seat of learning relies on a robust data centre to store a wealth of intellectual information and huge amounts of data to facilitate the smooth running of the university.

The UoS IT Professional Service (iSolutions) team is responsible for designing, building and operating an extensive ICT infrastructure based on a single data centre located on the university's Highfield campus. The new data centre, which went live in 2013, was constructed with the help of CommScope and supports all internet, voice and WAN connectivity, corporate business systems, staff and student desktop computing resources, the managed learning environment and research computing.

The previous data centre was reaching the end of its life, set in an unsuitable building and containing a large quantity

Mike Powell, Data Centre Manager, iSolutions in the new data centre

of unmanaged cabling that resulted in frequent IT service failures. The time had come to invest in a totally new, end-to-end ICT, mechanical and electrical infrastructure to support the growing quantity and complexity of IT estate, improve the resilience of IT services required to support the university's operations and lower energy consumption. Of paramount importance was a high-capacity data centre, guaranteeing 99.74 percent availability to support a growing student population now and in the foreseeable future.

When the University of Southampton took the decision in 2010 to build a new data centre, flexibility, longevity and quality were key design requirements for the mission-critical educational environment and it turned to CommScope, a long-standing technology partner of the university, for assistance. UoS trusted CommScope to deliver a single, totally integrated data centre that would meet the university's services requirements from day one and offer the modularity of design necessary to nimbly scale up to future needs with minimum effort.

After working with UoS to design the new data centre, installation of fiber and Category 6A products began in September 2012. The products chosen are capable of delivering the latest high-speed, bandwidth-hungry applications whenever and wherever they are required—perfectly suited to the university's business.

Being 100 percent pre-terminated, these solutions are designed for quick, easy and reliable operation in data centres with components that are fully compliant with internationally recognized data centre standards. In addition, CommScope's pre-terminated fibre solutions were deployed.

Again, the plug-and-play nature of the MPO fiber trunks resulted in a fast installation time, and the use of MPO cassettes provided a high-density, space-saving solution. An additional benefit lies in the precision manufacturing process that guarantees highly reliable but modular equipment that can nimbly scale up to accommodate future expansion.

To lower power consumption and improve the aesthetic appearance of the new data centre, CommScope added its market-leading FiberGuide® raceway product to create clearly defined cable routing paths and keep the cables organised. This approach uses less space and avoids the tangled mess of cables that can potentially restrict airflow and subsequently require more power for cooling purposes.

Just five months after the first product shipment, the University of Southampton has a state-of-the-art data centre that is fit for purpose today and in the future. It contains and manages over 2,000 servers and numerous storage devices. This includes around 100 physical servers and 710 virtual servers to deliver a robust and effective development and test environment necessary to host the university's corporate ICT requirements.

> "We have enjoyed a long-standing relationship with CommScope and our trust in their ability to deliver outstanding support and high-quality, scalable products is highlighted by the success of this latest project. We are exceedingly proud of our new data centre. It has the power to provide new services quickly and cost-effectively and accommodate future expansion. Quite simply, its excellence reflects our first-class teaching status and ranking in the top 1 percent of all universities worldwide."
>
> **Mike Powell**
> **Data Centre Manager**
> **iSolutions**

It also encompasses a substantial research computing environment consisting of approximately 1,100 physical and 50 virtual servers. What is more, CommScope has designed the data centre so it is physically separated from the backup facility. This reduces the risk of losing data in the event of major incidents such as fire or flood, crucial in a mission-critical organisation where mitigation of risk is essential. The

University of Southampton is impressed by the final results of the project, which has fast become a showcase for the rest of the educational sector. The innovative new data centre—a masterpiece in creating a single ICT, mechanical and electrical infrastructure based on best-in-breed solutions—is already considered an excellent reference site for other higher educational establishments, underlining the outstanding success of the project.

Throughout the three-year project, CommScope has demonstrated exceptional levels of support and the ability to provide innovative technology that delivers new services quickly and cost-effectively. In short, the new data centre at the University of Southampton reflects the institution's well-deserved status as a premier teaching, learning and research facility, capable of attracting the best and brightest academic talent at home and abroad.

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