



Helping a growing university earn top marks

With rapidly expanding student and business needs—from juggling class schedules to hosting its website—Lancaster University needed a modern IT infrastructure that was fast, flexible and always on



Higher Education

U.K.

Business needs

International University of the Year, according to The Times, Lancaster operates in three distinct areas: teaching, research and managing its business side. The university required a better way to deliver first-rate student services such as registration and recordkeeping, while supporting vital research activities and ensuring its operations and administration run smoothly.

Solutions at a glance

- Dell EMC PowerEdge MX7000 modular chassis
- Dell EMC PowerEdge MX740c compute sleds
- Dell EMC PowerEdge MX5016s storage sleds
- Dell EMC Networking MX9116n fabric switching engine
- Dell EMC Networking MX7116n fabric expander module
- Dell EMC Networking MXG610s Fibre Channel switch
- Dell EMC OpenManage Integration for VMware vCenter
- VMware vSphere and VMware vSAN

Business results

- Consolidates server resources by 75% campus-wide
- Significantly reduces power and cooling costs
- Accommodates growth and development with no disruption
- Nearly 3,000 VMs migrated in less than three weeks
- Enables public cloud responsiveness in a private cloud environment
- Ensures rapid deployment and simplified management

Consolidated server racks by
75%



Reduced footprint drives data center



Migrated
3K VMs
in less than
3 weeks
with no downtime



Located in northwest England, Lancaster is an internationally recognized leader in higher education and research with 13,000 students, 2,900 faculty and professional staff members and research partnerships in 60 countries worldwide. The university was facing numerous IT challenges:

- Rapid growth on both the teaching and administrative side
- Shadow IT sprawl in the form of closet or under-desk servers across campus
- The need to deliver services faster and expand IT environments seamlessly
- Support for everything from student databases and financials to the university's web presence

To modernize its data center, Lancaster selected the Dell EMC PowerEdge MX kinetic infrastructure. This enables the university to easily upgrade IT without affecting workloads, simplify networking, reduce its data center footprint and power costs, and virtualize its environment for a robust and secure user experience.

“Dell EMC PowerEdge MX gives us a leading edge, highly responsive way to serve users and deliver needed environments in a secure and robust way.”

Matthew Storey

Head of Storage and Virtualization
Lancaster University

Powering Lancaster's business side

While Lancaster was satisfied with its existing Dell EMC PowerEdge M1000e infrastructure, increasing business demands required moving to a next-generation solution. The university replaced its existing data center network and integrated legacy server and storage with a new data center core powered by the Dell EMC PowerEdge MX modular infrastructure.

PowerEdge MX drives Lancaster's VMware vSAN environment with nearly 3,000 virtual machines. This virtualized IT infrastructure supports an array of Microsoft SQL databases and operating systems handling functions ranging from student records to corporate web services, relationship management and the university's financial and administrative services. We're also looking at new technologies such as containerization to support our developers and help them deliver new services faster, flexibly and more efficiently.

“We think of ourselves as ‘Lancaster PLC’,” says Matthew Storey, head of storage and virtualization for the university. “Dell EMC PowerEdge MX gives us a leading edge, highly responsive way to serve users and deliver needed environments in a secure and robust way.”

The university conducted a thorough review of other infrastructure options before choosing PowerEdge MX. “We were looking for a next-generation solution,” Storey remarks. “PowerEdge MX provides high-performance interconnects, integrated networking and the ability to seamlessly expand and extend its use to support teaching and research in the coming years.”

The kinetic architecture of the PowerEdge MX features a no-midplane design, which enables Lancaster to upgrade storage and networking fabric without impacting workloads or bringing down the chassis for midplane replacement.

“With PowerEdge MX, our power usage is much more efficient. Combining the savings from our compute chassis and SAN, we're spending substantially less. And the space savings give us plenty of room to grow.”

Matthew Storey

Head of Storage and Virtualization
Lancaster University

Public cloud experience in a private cloud environment

Lancaster has built relationships with a number of cloud providers to deliver the iLancaster mobile app as well as other student services. PowerEdge MX runs critical technology in the background and brings together all of the data for these services—ensuring a responsive public cloud experience within a secure private cloud environment.

“Everything’s been a very positive experience. PowerEdge MX lets us get more projects done rather than merely keeping our data center up and running.”

Matthew Storey

Head of Storage and Virtualization
Lancaster University

Reduced real estate and costs

With the help of PowerEdge MX, Lancaster has shrunk its data center footprint from four racks to one and significantly decreased the university’s power and cooling costs.

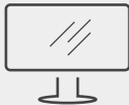
“With PowerEdge MX, our power usage is much more efficient,” Storey notes. “Combining the savings from our compute chassis and SAN, we’re spending substantially less. And the space savings give us plenty of room to grow.”

Timely deployment and simplified management

Dell EMC OpenManage Integration for VMware vCenter systems management, Ansible and the Integrated Dell Remote Access Controller (iDRAC), allowed the university to quickly deploy its virtualized environment and migrate workloads—while providing alarms and alerts about events and required updates.

“The PowerEdge MX environment is quite intuitive and easy to work with,” states Storey. “We migrated our nearly 3,000 VMware instances in less than three weeks with no downtime. That’s a real credit to the technology as well as the team.”

Lancaster has also made good use of the Dell EMC ProSupport Suite. “Everything’s been a very positive experience,” Storey relates. “PowerEdge MX lets us get more projects done rather than merely keeping our data center up and running.”



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