

Consolidating data to drive efficiency and innovation campus-wide.

Lancaster University chose Dell PowerScale to bring together and safeguard disparate data for students, faculty and staff.

Business needs

Lancaster needed to consolidate storage resources spread across campus into a centralized location – to more effectively manage and leverage data to achieve innovation, service efficiencies and sustainability. The university was also concerned with protecting its critical data against an increasing range of cyberthreats.

Business results



Consolidates data to improve access for teaching, research and business..



Significantly decreases latency for better responsiveness.



Relies on deduplication to shrink its storage footprint and help lower costs.



Significantly reduces management time and effort.



Enables sophisticated analytics to enhance sustainability.



Safeguards critical data using an airgap to recover from cyber attacks.

Solutions at a glance

- [Dell PowerScale](#)
- [Dell PowerEdge servers](#)
- [Dell PowerStore](#)
- [Dell CloudIQ](#)
- [Dell PowerScale Cyber Protection – powered by Superna](#)



Significantly reduces management time and effort.

Lancaster University is one of the most well regarded universities in the UK, ranked in the top 10 in England and among the upper 15% of universities in the QS World University Rankings. Lancaster has an enrollment of approximately 16,000, supported by a faculty and staff of around 4,800.

Investing in the right technology is critical to make the most of the university's funding and rapidly get up to speed. In recent years, Lancaster has also been challenged by having disparate IT resources spread across its 560-acre campus.

"Data was stored in a number of areas," says Dr. Matthew Storey, head of storage and virtualization at Lancaster University. "Dell PowerScale enabled us to bring our unstructured data together under one roof and provide a high-speed, highly resilient environment."

Driving Efficiency and Innovation

Lancaster also relies on PowerScale with its built-in data. Lancaster relies on Dell PowerScale, Dell PowerStore, Dell PowerEdge servers and Dell CloudIQ to consolidate, leverage and manage data for teaching and administration as well as world-class research – maximizing efficiency and innovation.

The university deployed PowerScale F600 all-flash NVMe storage nodes along with PowerScale A3000 nodes, significantly improving responsiveness and capacity over its previous storage. This includes storage for high performance computing to meet the most demanding research requirements as well as concurrent video sessions enabling students to watch lectures en masse.

"Our journey to PowerScale with all-flash NVMe has dramatically reduced our latency and allowed us to deliver more modern data sets," Dr. Storey recalls. "We haven't had any issues with implementation – it's been a very positive experience."

Lancaster counts on PowerScale and PowerEdge to support its VMware-based VDI estate of more than 1,200 desktops,

which has proven vital for students, faculty and staff when connecting remotely. High-speed GPUs facilitate some truly novel applications in both research and classwork – such as streamlining data-intensive analytics and handling complex modeling.

PowerScale also accommodates multiple protocols including NFS, Microsoft SMB and S3 assisting developers with new technologies – including a move toward containerization.

"This has been helpful not only for developers, but also for our researchers," explains Dr. Storey. "It lets us leverage alternative mechanisms to harness bulk storage. PowerScale also offers massive savings in deduplication to shrink our footprint and lower our costs."

He continues, "Under load, we were experiencing latencies in seconds. We're now seeing responses in milliseconds. We've also been able to consolidate multiple racks into a single rack with plenty of room to grow – saving on space and power. In addition, PowerScale's ability to be upgraded without downtime allows us to move to new technology and deliver benefits without impacting users."

Committed to Sustainability

Dell Technologies solutions are integral to achieve Lancaster's lofty sustainability goals.

The university is committed to becoming carbon neutral by 2035. It's exploring innovative ways to create a better and more sustainable world for everyone. This includes generating electricity with its own wind, solar and biomass facilities, and monitoring campus spaces – from lecture theaters to offices – using PowerEdge and PowerScale to conduct sophisticated analytics to decrease energy usage.

"PowerScale and PowerEdge give us the ability to quickly and efficiently spin up environments to analyze sustainability data and respond as needed," Dr. Storey remarks.

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Responding to Cyberthreats

Lancaster also relies on PowerScale with its built-in data protection and replication plus cybersecurity to safeguard data and deal with cyberthreats. Dell PowerScale Cyber Protection solution – powered by Superna – helps protect critical unstructured data by effectively isolating it using a smart AirGap to ensure that the university has a clean copy of data to recover from any cyber attack.

“We’re fortunate to have PowerScale to detect malicious activity while supporting those who need ready access to information,” comments Dr. Storey.

He concludes, “PowerScale gives us the ability to maintain and update our environment without any disruptions. Going forward, Dell Technologies will help us deploy innovative solutions, so we can deliver the right services at the right time.”

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