

Providing high-performance storage for a university's key missions

Universitat Autònoma de Barcelona relies on Dell Unity XT HFAs for a 21st century learning environment to meet student needs.



Business needs

The university needed a modern storage platform that would accommodate shifting styles and methods of teaching and learning, as well as address the requirements of a highly regarded research community. Any solution would have to be flexible, fully interconnected and cost-effective to make the best use of taxpayer funds.

Business results



Enables the creation of a modern, interconnected learning environment.



Delivers exceptional levels of performance for various workloads.



Offers efficiency and a highly competitive cost-per-terabyte.



Reliably encrypts data at rest and replicates it across data centers.



Ensures superior availability and data protection.

Solutions at a glance

- [Dell Unity XT](#)
- [Dell CloudIQ](#)
- [Dell PowerProtect DD series appliances](#)



Dell solutions provide continuous improvement over time, with no disruption.

Located 20 km northwest of Barcelona, Spain, Universitat Autònoma de Barcelona provides a quality education to approximately 27,000 undergraduates and 7,000 master's and PhD candidates. In world rankings, it's listed among the leading Spanish universities, and is also highly regarded for its vibrant research environment — which takes place in more than 50 centers on campus.

A major challenge for Universitat Autònoma de Barcelona is keeping pace with higher education's changes. 'Liquid learning,' which merges the physical and virtual worlds, and 'flipped classrooms,' where students begin lessons remotely and then use classroom time to actively participate in discussions and higher-order thinking, have created significant technology demands.

Recently, Universitat Autònoma de Barcelona modernized its technology infrastructure in innovative ways — to deliver seamless, interconnected experiences for students, faculty and staff. The university chose Dell Unity XT Hybrid Flash Arrays (HFAs) as its primary storage.

"Unity XT HFAs support critical workloads such as our learning management systems, research information systems and the business systems we use to run our university," says Gonçal Badenes, CIO and ICT director at Universitat Autònoma de Barcelona.

Accessing large volumes of information.

The university relies on Unity XT HFAs to efficiently store and access massive amounts of information, such as scientific databases and library repositories. The hybrid arrays are ideal for simultaneously running general-purpose workloads that don't require the highest speeds or lowest latencies, while also offering Fast Cache for performance management and optimum read access on more demanding workloads.

"Unity XT HFAs deliver needed performance and enable us to store a large volume of unified data at a very competitive cost-per-terabyte," Badenes remarks. "As a public institution, we're required to reliably encrypt our data at rest. Unity XT HFAs let us do this and keep our data synchronously replicated between our two campus data centers."

Although Universitat Autònoma de Barcelona currently runs most of its systems on-premises, the goal of modernization was to build a flexible IT infrastructure capable of handling numerous data sources and increasing volumes — whether the university ultimately moves to the cloud or not.

"We're investing in ways to improve the interconnection of data across campus," explains Badenes. "With Unity XT HFAs, our researchers can run their experiments and access and share data — locally or remotely."

Providing superior data protection.

Badenes and his IT team use Unity XT snapshots extensively for both block and file storage to be able to roll back to a previous point in time to recover data if needed. In addition, Dell CloudIQ machine learning and predictive analytics allow for proactive monitoring of the Dell Unity XT HFA storage systems and Dell PowerProtect DD series appliances for enhanced availability and data protection. With CloudIQ, the university leverages these intelligent insights to identify potential problems and take quick action before issues arise.

Evolving over time.

Universitat Autònoma de Barcelona storage solutions have evolved over the years, supported by Dell Technologies performance improvements.

"Being able to build upon the same Dell Technologies storage frameworks has been an advantage for us in terms of acquired knowledge and experience," relates Badenes. "Our IT team can easily and flexibly move from one generation to the next, because the systems and tools improve continuously with no disruption."

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CIO and ICT Director,
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Badenes concludes, “Although we are largely on premises today, cloud is a path that has clear use cases. And because Unity XT HFAs support multiclouds, we can move to cloud seamlessly. This will give us efficient, cost-effective solutions, which is important for us as a taxpayer-supported institution.”

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