

Education | Portugal

Modernizing a vital IT platform

University of Minho

To deliver digital capabilities to staff, faculty, and students, the University of Minho relies on its IT systems—but its server and storage landscape was complex and costly to maintain. The university modernized its environment with an HCI solution based on Lenovo ThinkAgile MX650 V3 servers.



Lenovo

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Customer background

Who is the University of Minho?

With five campuses across two cities in Portugal, the University of Minho is a higher education institution with more than 21,000 students. One of the country's most prestigious universities, the organization was founded in 1973 and employs more than 1,700 academic staff.

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The challenge

The University of Minho's digital systems are a cornerstone of its teaching and research, helping to support activities across 12 schools and institutions. When it comes to the day-to-day management of the organization, IT plays an equally important role.

The head of the data center team at the University of Minho says: "We serve many different communities of users across the university, including the hundreds of non-teaching staff who help keep the organization running smoothly. It's no exaggeration to say our IT platform is mission critical. If our systems were to stop, then the university would stop too."

2

The challenge

In the past, the University of Minho operated a heterogenous IT architecture with server and storage systems from multiple different vendors. Managing this environment was complex and labor-intensive, and as its systems aged, reliability and performance issues were becoming increasingly common.

“Internal demand for digital services has increased significantly,” comments the head of the data center team. “In a relatively short span of time, we’ve grown from a handful of virtual machines [VMs] to more than 600 today. But the more VMs we added to our previous environment, the more application response times suffered—causing challenges for university administrators and other user groups.”

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“To help ensure vital digital services are always available, we looked for a single-vendor solution to replace our existing systems. When we launched our international tender, the key requirements included **reliability**, **cost-effectiveness**, and **scalability**.”

Head of the data center team

University of Minho

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The
solution

Shifting to an HCI solution

After evaluating proposals from several leading technology vendors, the University of Minho selected Lenovo to deliver its new data center infrastructure. Implemented in partnership with Lenovo business partners ActiveSys and Acuutech, the new hyperconverged infrastructure (HCI) solution comprises two clusters of [Lenovo ThinkAgile MX650 V3 Certified Nodes](#).

Hardware

[Lenovo ThinkAgile MX650 V3 Certified Nodes](#)

Software

[Lenovo XClarity Administrator](#)
Microsoft Azure Local

Services

Lenovo Deployment Services
[Lenovo Premier Support for Data Centers](#)

3

The
solution

Building on Microsoft Azure Local

As well as providing reliable, high-performance hardware in a compact data center footprint, Lenovo offered the University of Minho its HCI technology platform of choice: Microsoft Azure Local.

“As a university, our Microsoft 365 Education licenses enable us to use Azure Local for a small incremental cost—and this approach was essential for the project to be commercially viable,” explains the head of the data center team. “Lenovo connected us with Microsoft Azure Local experts from Acutech to help ensure we could implement our preferred HCI architecture.”

3

The
solution

Seamless migration

The university worked with Lenovo, ActiveSys, and Acutech to deploy the new Lenovo ThinkAgile MX Series solution. To date, the organization has migrated 440 of its 600 virtual machines to the HCI environment.

“The switchover process is going very smoothly,” states the head of the data center team. “Typically, we migrate our VMs to the new environment using snapshot backups and then spin up the services on the HCI solution during non-working hours. There’s been practically zero impact on any of our users so far.”

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“We wanted a solution that will **stand the test of time**, and Lenovo was one of the few vendors we evaluated that offered the **assurance of long-term technology support**. Scaling out the Lenovo ThinkAgile MX Series solution is also **very straightforward**. ActiveSys and Acutech provided **hands-on training** in how to carry out this and other core management tasks using Lenovo XClarity.”

Head of the data center team

University of Minho

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The results

With the Lenovo HCI solution underpinning its administrative and learning management systems, the University of Minho is making application reliability issues a thing of the past.

“Whenever we move VMs to the Lenovo ThinkAgile MX Series platform, application performance shoots up,” says the head of the data center team. “Many of our users have told us that it’s like swapping an old car for a Ferrari!”

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The results

Increased performance is also contributing to the university's cyber resilience.

With 1.4 million IOPS, the new HCI environment enables the organization to accelerate backup processes from three days to less than 24 hours—helping to ensure that important data is always protected.



Eliminates application performance issues



66% faster data backups



66% reduction in data center footprint

4

The results

Platform for growth

The University of Minho is confident that its new HCI platform will grow with it. “Over the last three years, we’ve seen our annual data growth rate jump from around 5% to up to 20% year on year,” says the head of the data center team. “The Lenovo ThinkAgile MX Series platform will make it easy to accommodate rising volumes of data cost-effectively by purchasing additional nodes.

“Scaling out won’t be difficult from a rack space perspective, either. Our Lenovo ThinkAgile MX650 V3 solution has just a third of the physical footprint of our previous infrastructure. And when we decommission our old hardware, we predict we will see power and cooling savings too. We are empowering our users with digital capabilities to help them teach, study, and drive research for years to come.”

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“We definitely see Lenovo as a **strategic, long-term technology partner**. We are already in the early planning stages of a number of potential new projects, including the construction of a brand-new disaster recovery cluster.”

Head of the data center team

University of Minho

Why Lenovo?

As well as providing a reliable, high-quality infrastructure solution, Lenovo offered the University of Minho the peace of mind of responsive support services.

“We appreciate the close relationship that Lenovo has with ActiveSys and its other local partners,” says the head of the data center team. “While ActiveSys is our first point of contact for most support requests, it gives us great peace of mind to know that [Lenovo Premier Support for Data Centers](#) is also on hand if we should ever need additional assistance.”

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“Using Acutech’s **deep expertise and proven tooling**, we guided the University of Minho in configuring the optimal Azure Local environment to support their long-term growth. The university is now **well placed to deliver excellent service** to its faculty.”

Acutech[®]

Steve Chapman

Senior Account Manager, Acutech

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“This project has enabled the University of Minho to build an IT infrastructure that is **truly ready for the future**. We are delighted to have helped the organization take this important step on its **digital transformation journey**.”



Alvaro Santos

Consulting and Presales Manager, ActiveSys

How can universities ensure future-ready IT?

The University of Minho replaced aging systems with an HCI solution from Lenovo, boosting application performance and enabling seamless scalability.

[Explore Lenovo ThinkAgile Solutions](#)