Education

Helping students and researchers achieve their goals

Instituto Politécnico de Setúbal

Boosting performance to support a growing number of students and research projects with Lenovo ThinkAgile MX for Azure Stack HCI.

Lenovo

1

Who is Instituto Politécnico de Setúbal?

The Instituto Politécnico de Setúbal (IPS) is a public higher education institution with a strong focus on practical training and vocational skills. Spread across two campuses in the towns of Setúbal and Barreiro—both in the Greater Lisbon Metropolitan Area—in Portugal, the IPS community comprises 9,373 students and 783 teachers. The institute offers more than 85 degrees and diplomas in engineering and technology, science, nursing, education, and business administration.

POLITÉCNICO SETÚBAL

POLYTECHNIC UNIVERSITY

2

The
Challenge

IPS is expanding, with 20% annual growth in student numbers in recent years. In addition to welcoming new students, the institute is working to establish itself as a center of excellence for research. It recently joined E³UDRES², a network of European higher education institutions collaborating on research and teaching. IPS aims to support more research projects, innovation, and entrepreneurship.

But with both the number of students and research projects growing, pressure was building on the institute's IT infrastructure.

Rui Borralho, IT Specialist at IPS, elaborates: "We were struggling to deliver sufficient performance to support our current workloads, let alone the future needs of our researchers. We wanted more compute and storage resources, but we didn't want to drive up the cost and complexity of infrastructure management. We already had a mix of servers and storage systems spread across two sites, and managing contracts and warranties from different vendors was a real headache for our small team."

Simplifying
IT with HCI

IPS chose to move away from its multi-vendor, three-tier data center architecture to a unified hyperconverged infrastructure (HCI) solution.

A long-term user of Lenovo and Microsoft technologies, IPS selected Lenovo ThinkAgile MX for Microsoft Azure Stack HCI. The institute deployed three nodes at each campus, which will be configured as a single stretched cluster for seamless data replication between sites. The ability to connect on-premises infrastructure with Azure cloud services will help to further reduce recovery time objectives (RTO) and recovery point objectives (RPO).

Hardware
Lenovo ThinkAgile MX
Certified Nodes

Software
Lenovo XClarity Integrator for
Microsoft Windows Admin Center
Microsoft Azure Stack HCI
Microsoft Windows Admin Center

Services
Lenovo Premier Support
Lenovo YourDrive YourData Service

Making the move

IPS is currently migrating its workloads to the Lenovo ThinkAgile MX cluster and decommissioning the old hardware. "The installation of the nodes went very smoothly," recalls Luís Alpendre, IT Specialist at IPS. "We're in the process of migrating around 120 virtualized servers from multiple hypervisors to Microsoft Hyper-V, and then over to the ThinkAgile MX cluster."

Rui Borralho adds: "We have a lot of experience with both Microsoft and Lenovo solutions, so getting everything set up is straightforward. Having a single warranty and maintenance contract from a single vendor will make life easier, too. In our experience, Lenovo systems are extremely reliable. On the rare occasion that we have needed support, the Lenovo team has always been very responsive and eager to help."

IPS will take advantage of Lenovo's YourDrive YourData service, which will allow the institute to retain possession and dispose of failed drives itself—rather than returning them to the manufacturer. "We must meet strict guidelines around data retention and destruction," says Rui Borralho. "The Lenovo YourDrive YourData service helps us to ensure compliance with national and European regulations. This is an added bonus, as not all hardware vendors offer such a service."

"Lenovo ThinkAgile MX for Azure Stack HCI offered the simplicity and ease of management that we wanted, with resiliency and high availability built into the hyperconverged stack."

Luís Alpendre
IT Specialist, Instituto Politécnico de Setúbal

3

Results

By moving to Lenovo ThinkAgile MX for Azure Stack HCI, IPS will consolidate and simplify its IT landscape. Crucially, the move will deliver increases in both capacity and performance, helping the institute to serve students and researchers better.

"We sized the solution to have 40% more capacity than our current needs, so we have plenty of headroom for growth," says Rui Borralho. "We've measured a 47% increase in performance for the migrated workloads, which has given both day-to-day operations and academic research a huge boost. Applications and analytics workloads will run faster, so students and researchers can work more efficiently."

And with less physical hardware in its data centers, IPS saves 17% in energy costs thanks to lower power and cooling requirements.

✓ 47% performance increase

✓ 40% extra capacity built in

✓ 17% energy saving

With one platform from one vendor, IPS also expects to free up valuable time for its small IT team. "Management and maintenance will be so much easier," confirms Luís Alpendre.

Integration between Lenovo XClarity Administrator and Microsoft Windows Admin Center will give IPS a central point of control, enabling the IT team to manage servers via a single pane of glass.

Rui Borralho states: "For us, Lenovo ThinkAgile MX Series for Azure Stack HCI ticks all the boxes. It delivers high performance in a compact footprint that is simple to manage and highly available. And replication of data and workloads between sites means that we can recover quickly in the event of disaster."

Why Lenovo?

The partnership between IPS and Lenovo has truly stood the test of time.

"I've known our Lenovo sales rep for more than 20 years," says Rui Borralho. "The Lenovo team know us and our infrastructure, and we trust them to deliver the right solutions for our needs."

How do you support more students and more research?

Boosting performance for both day-to-day operations and academic research.

Explore Lenovo ThinkAgile MX Series