

Equipping students with in-demand skills using virtual desktop infrastructure from Lenovo and VMware.

How **The University of Baltimore** used a hyperconverged infrastructure solution from Lenovo to support a VMware Horizon® virtual desktop environment, enabling the university to deliver degree programs remotely while keeping costs under control.

Lenovo Infrastructure Solutions
for The Data-Centered

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Background

Founded in 1925 in Baltimore, Maryland, The University of Baltimore (UBalt) offers career-focused education for aspiring and current professionals, providing the region with highly educated and capable leaders. With a total undergraduate enrollment of around 1,900 students, the university aims to be the premier regional university for career advancement, where leaders grow, thrive, and learn to apply their skills to solve local and global challenges.

As part of its mission to foster a new generation of academic, business, and political leaders, the university aims to attract top candidates to its postgraduate and undergraduate programs available in three of UBalt's schools: Merrick School of Business, College of Public Affairs, and Yale Gordon College of Arts and Sciences. These programs include computing and graphics-intensive courses such as Simulation and Game Design—one of the oldest and largest game design degrees in Maryland, with over 150 students spanning two campuses.


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Challenge

Many UBalt programs relied on on-premise specialized computer labs. When the COVID-19 pandemic hit, the university had to suddenly move to a full remote learning and working environment to comply with restrictions and keep the community safe.

In response, UBalt rolled out a virtual desktop infrastructure (VDI) powered by VMware Horizon® that enabled students, faculty, and staff to work remotely. Initially, this VDI environment ran in the public cloud. While this allowed the university to quickly ramp up remote learning, UBalt targeted a more cost-effective approach for the long term.

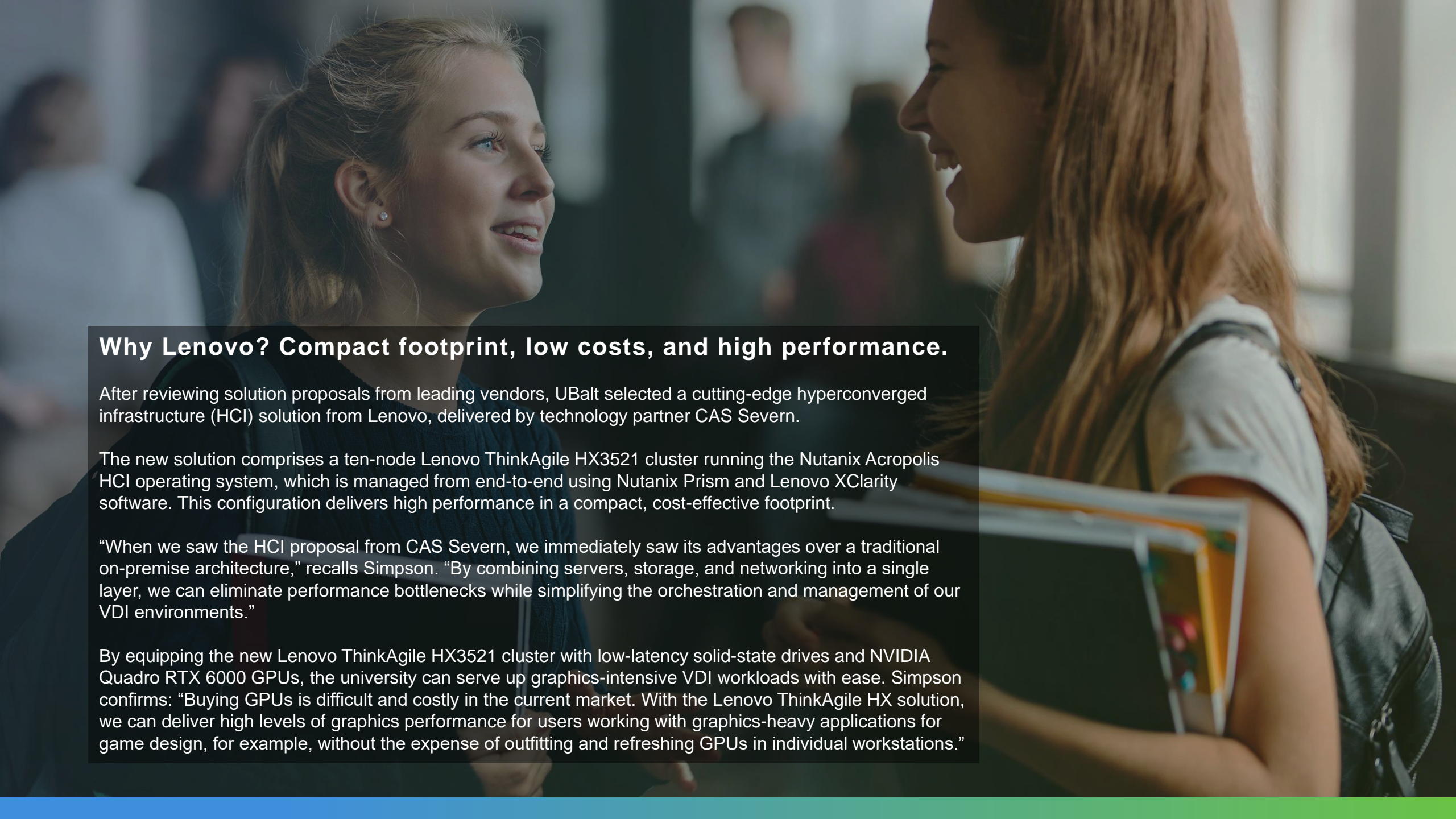
Jeremy Simpson, System Administrator at UBalt, explains, “Running VDI workloads in the cloud was becoming a significant cost driver, so we decided to move all VDI services to a new on-premises platform.”



“We have a lean server administration team, so it was also crucial to find an infrastructure that would deliver on our high performance requirements without driving up management complexity.”

Jeremy Simpson

System Administrator, The University of Baltimore

A photograph of two young women in a hallway, smiling and talking. The woman on the left has blonde hair and is wearing a dark top. The woman on the right has long brown hair and is wearing a white t-shirt with a black backpack. They are both looking towards each other. The background is slightly blurred, showing other people in the hallway.

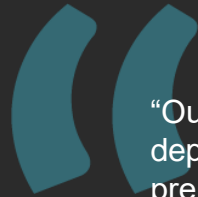
Why Lenovo? Compact footprint, low costs, and high performance.

After reviewing solution proposals from leading vendors, UBalt selected a cutting-edge hyperconverged infrastructure (HCI) solution from Lenovo, delivered by technology partner CAS Severn.

The new solution comprises a ten-node Lenovo ThinkAgile HX3521 cluster running the Nutanix Acropolis HCI operating system, which is managed from end-to-end using Nutanix Prism and Lenovo XClarity software. This configuration delivers high performance in a compact, cost-effective footprint.

“When we saw the HCI proposal from CAS Severn, we immediately saw its advantages over a traditional on-premise architecture,” recalls Simpson. “By combining servers, storage, and networking into a single layer, we can eliminate performance bottlenecks while simplifying the orchestration and management of our VDI environments.”

By equipping the new Lenovo ThinkAgile HX3521 cluster with low-latency solid-state drives and NVIDIA Quadro RTX 6000 GPUs, the university can serve up graphics-intensive VDI workloads with ease. Simpson confirms: “Buying GPUs is difficult and costly in the current market. With the Lenovo ThinkAgile HX solution, we can deliver high levels of graphics performance for users working with graphics-heavy applications for game design, for example, without the expense of outfitting and refreshing GPUs in individual workstations.”



“Our students and staff depend on VDI, so we were under pressure to complete the deployment before the beginning of the next semester. The Lenovo team came fully prepared and got us up and running in just two days during the vacation period.”

Jeremy Simpson

System Administrator, The University of Baltimore

Supercharging VDI performance.

Working with Lenovo Professional Services and CAS Severn, UBalt deployed the new HCI platform in time for the start of the new semester. Lenovo Professional Services implemented the Lenovo ThinkAgile HX3521 nodes before setting up and configuring the Nutanix software, as well as providing post-deployment documentation and knowledge transfer.

“The support we get from Lenovo and CAS Severn is great,” comments Simpson. “The team listened carefully to our needs and came up with a solution that’s a perfect fit for UBalt. Lenovo and CAS Severn worked hard to get us the VDI platform we were looking for, on time and within budget.”



“Since moving to VMware Horizon running on Lenovo ThinkAgile HX3521 nodes, we’ve significantly improved VDI performance—and our end users are delighted.”

Jeremy Simpson

System Administrator, The University of Baltimore

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Results

Today, the Lenovo and VMware solution is supporting more than 500 VDI desktops across UBalt.

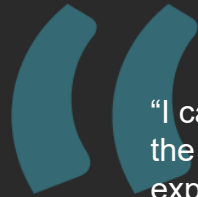
“Some of our students’ graphics workloads are extremely heavy, but the Lenovo and VMware solution can handle the demands of these degree programs with ease,” explains Simpson. “Our lab manager is very impressed with the performance of the new VDI environments, which are equivalent to high-spec physical workstations.”

Since deploying the Lenovo ThinkAgile HX solution, UBalt has established a new virtual, digital forensics lab. Using the Nutanix Prism tool, the IT team was able to deploy hundreds of new virtual desktops in a few clicks.

Simpson elaborates: “In the past, we’d have needed to write scripts to clone the virtual desktops, but Nutanix Prism automated that process. It took just three minutes to provision and activate hundreds of new virtual desktops, which impressed us greatly.”



- ✓ Replaces public cloud services with cost-effective on-premise solution
- ✓ Boosts end-user performance of VDI environments
- ✓ Delivers headroom for future VDI growth



“I can’t recommend HCI highly enough to other universities. Since we went live with the Lenovo and VMware solution, it’s been working flawlessly: we can deliver VDI experiences to more than 500 desktops, all with just two system administrators.”

Jeremy Simpson

System Administrator, The University of Baltimore

What will you do with Lenovo software-defined infrastructure solutions?

The Data-Centered help students build in-demand digital skills with Lenovo smarter infrastructure solutions, powered by VMware.

[Explore Lenovo Software-Defined Infrastructure Solutions](#)

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