

Modernizing IT to drive greater research innovation and address student needs

The University of Texas at San Antonio relies on VMware Cloud Foundation on Dell VxRail, plus VDI using Dell OptiPlex thin clients to give students, faculty and staff needed tools and reduce costs.

Business needs

UTSA wanted to support students and researchers without the siloed systems sitting under desks that had often been used in the past. Its goal was to build a flexible, scalable and highly modern IT solution leveraging next-generation technology to enhance student learning and enable researchers to focus on research and innovation.

Business results



Provided students, faculty and staff with ready access to the information they need.



Enabled researchers to build their own environments and boosted productivity, provisioning resources 3x faster.



Created an environment enabling students to learn and work from anywhere, using high-performance VDI solutions.



Reduced the total cost of ownership for UTSA by three-fold.



Decreased ongoing expenses for space, power, heating and cooling by 70%.



Positioned UTSA at the forefront of research innovation and learning with an agile hybrid cloud solution.

Solutions at a glance

- [Dell VxRail Hyperconverged Infrastructure](#)
- [VMware Cloud Foundation on VxRail](#)
- [Dell Technologies VDI solutions](#)
- [Dell OptiPlex desktop computers](#)
- [Dell OptiPlex thin clients](#)



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Kendra Ketchum,
Vice President for Information
Management and Technology, UTSA

The University of Texas at San Antonio (UTSA) is redefining higher education as a next-generation, Hispanic-serving university where students from all backgrounds can excel. The university focuses on student success that leads to social and economic mobility. In addition, UTSA drives an entrepreneurial ecosystem that accelerates research and economic development through creative innovation and discovery.

Enabling students to learn and reach their potential as well as helping researchers reduce their ‘time to science’ requires the latest and most sophisticated IT technology. Kendra Ketchum, UTSA vice president for information management and technology, has set what she describes as “wildly important goals” focused on IT modernization and innovation.

“Many of our students are first-generation, and that means a lot to me because I was also a first-gen student,” Ketchum says. “I want each of our students to have the same kinds of opportunities I’ve had. For our researchers, my goal is to provide the technology to solve the grand challenges that no one else has tackled.”

Eliminating IT sprawl

Like most universities, UTSA has been faced with IT sprawl. Individual researchers had large systems sitting under their desks. These might not be the best fit, and in many cases, security wasn’t adequate — exposing the intellectual property stored on them.

Plus, the time and money invested took away from what was needed to give all students, researchers, faculty and staff access to essential information.

“VMware Cloud Foundation on Dell VxRail provides a hybrid cloud solution for the multitenant capabilities we need,” explains Ketchum. “Researchers can build something new and then immediately move it to the cloud. VxRail is a hyperconverged infrastructure that can scale fast.”

With VxRail and VMware Cloud Foundation (VCF), UTSA has built a modern high performance computing solution that enhances the university’s ability to innovate. More faculty and researchers

— including postdoctoral candidates and other students — have information at their fingertips just like UTSA’s top-tier researchers, meeting another of Ketchum’s ‘wildly important goals.’

“Our hybrid cloud solution using VCF on VxRail ensures that researchers and students can access critical resources, without wasting funds on all those siloed systems,” Ketchum remarks.

At the same time, UTSA has been able to scale to meet growing needs while consolidating from five data centers down to two — reducing its total cost of ownership three-fold. “I can get the compute, memory, storage and whatever I need to ramp up quickly and accommodate any workload,” relates Ketchum. “We’ve seen a huge economic benefit. I no longer have to invest in all these individual systems for researchers. Plus, we’ve decreased our ongoing expenses for space, power, heating and cooling by about 70%.”

Learning and working from anywhere

With the help of Dell Technologies’ next-generation virtual desktop infrastructure (VDI) optimized for productivity, security and a better experience, UTSA students can learn, and faculty and staff can work from anywhere.

The university relies on a complete VDI solution including Dell OptiPlex 3000 Thin Clients and Dell OptiPlex All-in-One devices with Dell ThinOS. Many of the students who attend UTSA don’t have the economic means to invest in the latest computing hardware.

“Our Dell Technologies VDI solution ensures that any student can do the same lab on their personal device that they could in the classroom,” says Raymond Piller, UTSA associate director of endpoint solutions engineering. “Centralized management ensures that each student, faculty and staff member gets the hardware and performance they need to work or learn efficiently and effectively.”



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Performance, sustainability and ease of use

UTSA has established some key performance indicators (KPIs), and VCF on VxRail checks every box. More researchers are continually being onboarded as the ecosystem is built out, and students have tools they never had before.

“This was a huge win for us in our modernization effort,” Ketchum declares. The economic benefits and planned development lifecycle have also reduced the need for future funding, enhanced sustainability and optimized the value students receive from their technology fees.

“The scalability, ease of use and ability to very simply rack, stack and mount modules all contributed to our choice of VxRail,” notes Ketchum. “We can leverage our knowledge of the ecosystem and how the elements interoperate to reduce our time and effort deploying and supporting solutions.”

Expanding from the edge to the cloud

Going forward, UTSA plans to use VCF on VxRail to shift more resources from the edge to the cloud – brokering workloads out to Microsoft Azure as needed.

“The biggest impact operationally will be to continue to speed up the work environment for researchers,” remarks Ketchum. “We’re providing tools for researchers to log into an environment, select their resources and start right away – without having to submit a ticket. VCF on VxRail has reduced the time it takes to provision from six weeks down to two, automating and orchestrating the required resources. That’s a big win.”

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