

## How technology can power higher education

Texas A&M University-San Antonio implements a hyperconverged infrastructure to deliver excellent student and instructor experiences bolstered by responsive IT services



Higher Education

United States

## Organization needs

Texas A&M University-San Antonio operated on a technology foundation that had come to the end of its useful life providing an opportunity to redesign systems and data centers to enable higher quality IT services with better performance and uncompromised system availability.

## Solutions at a glance

- [Dell EMC VxRail P570F appliances](#)
- [Dell EMC Data Domain 6300 data protection storage](#)
- [Dell EMC Isilon scale out, network-attached storage](#)

## Organization results

- Empowers students, faculty and administrators to expand their educational and professional horizons
- Ensures high availability with 99.9999 percent or above system uptime
- Provides excellent system performance and improved user experiences
- Enables time savings and efficiencies in IT management
- Scales to accommodate data-volume growth and new use cases
- Opens a path for continuous technology evolution

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William Griffenberg  
CIO, Texas A&M University–San Antonio

Established as a standalone institution in 2009, Texas A&M University-San Antonio (A&M-SA) is the newest campus in the A&M system. More than 12,000 alumni have already received one of the university's 46 undergraduate or graduate degrees.

A&M-SA relies on technology to provide students with an outstanding learning experience. William Griffenberg, the CIO at A&M-SA, says, "I want to ensure that the university runs state-of-the-art technology to enable the best possible learning and instruction. All our computers, network, servers and technology infrastructure have to help the students."

When the university's technology infrastructure approached its end-of-life, that was also an opportunity to improve data-center operations and IT services. "We had many single points of failure," says Griffenberg. "Managing our legacy systems could be inefficient and required too many manual steps. Even more important, they did not give us the performance to deliver top-quality IT services to the university."

## Hyperconverged infrastructure for a high-availability architecture

A new architecture for the A&M-SA data center provided for two redundant locations to keep systems running in case of a failure at one of them. The IT organization invited five technology companies to discuss how their solutions would function in this architecture to enable optimal performance, manageability and service levels. Griffenberg says, "Our entire team was very comfortable with the presentation from Dell Technologies. Their representatives did a great job of explaining how they were going to help us reach our goals, and their cost fit well within our budget."

A&M-SA decided on three Dell Technologies solutions:

- At each data-center location, five Dell EMC VxRail P570F appliances deployed in a stretched cluster enable a hyperconverged infrastructure—which combines server and storage technology in one device—managed with VMware.
- Three Dell EMC Data Domain 6300 data protection storage arrays, each with 65 TB capacity, facilitate backup data replication and disaster recovery.
- Two three-node clusters of Dell EMC Isilon scale-out, network-attached storage, each with 60 TB capacity, enable archiving with file system and metadata replication and file snapshots.

## Partner services ensure fast deployment and interoperable technologies

A&M-SA completed the deployment in less than one month. Dell Technologies service consultants helped streamline the effort and ensure the most advantageous use of automations and other solution capabilities. Griffenberg says, "During the implementation, we relied on extensive support from Dell Technologies. Their team has done nothing but great things for us and with us."

The Dell Technologies solutions run well with Cisco routers, switches and firewalls. Griffenberg says, "We've had no issues whatsoever in deploying Dell Technologies and Cisco together. Dell Technologies services team worked hand in hand with us and our other vendors to accomplish this. We couldn't have asked for it to go any better."

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## Extremely reliable, efficient technology foundation

VxRail provides a solid foundation to satisfy the university's extensive computing needs. The solution's dependability exceeds Griffenberg's challenging criteria. He says, "In my strategic plan, I specified 99.9999 percent uptime availability. Ever since the implementation, VxRail runs at 100 percent in everyday use and during our upgrade and maintenance activities." The solution provides the scalability that allows IT to plan future workloads and services. "We have already doubled our virtual environment from 107 to 243 virtual machines in a year," Griffenberg explains. "We can scale to take on large projects and will be able to confidently accommodate future growth with VxRail."

The technology has proven to be extremely efficient. Griffenberg says, "We installed a 10-node memory and storage upgrade and spun up 60 new servers, all on the same day. What would have been days of hands-on labor on firmware and operating system updates has become an automated overnight job with Dell EMC VxRail, and I can use my time for other projects."

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## More powerful IT support for more user groups

The technical advantages of VxRail result in service improvements that benefit students, instructors and administrators. Griffenberg notes, "Students and faculty can review grades, turn in assignments, manage research, and complete any of their tasks in complete confidence and very quickly. And, we now can do things we weren't able to accomplish before we implemented the Dell Technologies solutions—for example, meeting the IT needs of the university's police department."

The IT team transitioned the applications used by campus police and Banner, the university's student information and business management software, from the cloud to its own data centers. "We can act faster and be more responsive to our internal customers because of the strong VxRail performance," explains Griffenberg. "That allowed us to move several large systems back on-premises, with zero complaints or interruptions. On our own infrastructure, we can make requested adjustments immediately and accountabilities are never in question."

The other Dell Technologies solutions complement the infrastructural transformation with VxRail. With Data Domain, A&M-SA can rely on backups of all data and applications. Griffenberg says, "It was a night-and-day difference between our past backup tools and what we have with Data Domain, which is a very good system. Today, we have complete backups and can recover promptly from a disaster." Isilon storage augments the availability of data and applications. "For our rapidly expanding storage-archiving needs, Isilon is a great solution that is also easy to manage," Griffenberg says.

## IT free to bolster higher education with new programs and initiatives

Feedback from A&M-SA clients supports the new technology direction. Griffenberg says, "Enrollment managers and other administrators are delighted with the major improvements in the performance of their applications since we deployed VxRail." Advancements in the user experience have led to a smaller support demands on IT. "We hardly ever get any calls anymore because applications stall or because people can't access certain data," Griffenberg adds.

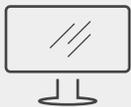
Current and prospective students as well as university leadership experience the wider impact of A&M-SA's IT transformation. "Serving students is our ultimate goal," Griffenberg emphasizes. "We can retain and attract talented students because we rearchitected our infrastructure on Dell Technologies. Our president and cabinet have expressed their confidence in our direction and support it wholeheartedly."

A&M-SA moves ahead with several efforts that will take the university's systems to a higher level yet in supporting learning and teaching. They include a virtual desktop initiative (VDI) and an e-sports program. Griffenberg comments, "In the past, we could not have embarked on VDI and e-sports, but we can do so with Dell Technologies."

As A&M-SA pursues its technology strategy, Dell Technologies will remain a vital contributor. Griffenberg says, "I was not looking for a vendor, but for a partner. That's what we got in Dell Technologies. Whenever we have questions, they are available to offer guidance and expertise. It's a great relationship."

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