

Texas University Enhances Reputation with New Data Center



West Texas A&M University installs Cisco virtual data center to improve distance education.

Executive Summary

West Texas A&M University

- **Industry:** Education
- **Location:** Canyon, Texas
- **Number of Employees:** 8000 students, 1200 faculty and staff, 40 full-time information technology staff and 25 student workers

CHALLENGE

- Need to support growing student enrollment while reducing costs
- Desire to refresh virtual data center to support distance learning

SOLUTION

- Update virtual data center to support online learning programs
- Integrate student and faculty service functions with consolidated communications

RESULTS

- Improved productivity and increased information technology efficiencies
- Reduced annual cost of personal computing replacement by 65 percent
- Enhanced and quickened disaster recovery abilities for servers

Challenge

West Texas A&M University (WTAMU) in Canyon, Texas is a pioneer. The school has been operating with a virtual data center since 2008 to achieve better operational efficiency. WTAMU's goal in installing a virtual data center was to consolidate and unify multiple operating systems in one location. This move was necessary because WTAMU boasts the largest student body (8000 undergraduates) in the history of the university. Coupled with 1200 faculty and adjunct staff, WTAMU supports 9200 educators and learners. Consolidating materials and aggregating network resources were critical in maintaining the university's growth.

In addition, the university needed to support more distance learners. Over the past few years, WTAMU witnessed a rise in demand for online learning, which now requires that the university deploy three additional web servers to handle the increase in server traffic. At a rapid rate, students are balancing their education needs with life needs and embracing the ability to learn at a distance.

After the installation of the virtual data center in 2008, James Webb, chief information officer at WTAMU, noticed complexities that continued to increase over time. The data center required aggregating multiple network connections together to achieve an acceptable amount of bandwidth, which was decreasing. The existing system was generating a large footprint due to several factors including a limited range of network connectivity, the energy requirements to power and cool the hardware, and the system's physical rack space. WTAMU's data center solution was not sufficiently supporting the growth of its student population and the expansion of distance learning content.

To operate efficiently, reach new learners, and make advances in distance education, WTAMU needed to improve the operation of its virtual data center with a leaner, simpler, and more effective product. The new solutions provider needed to use the network to transform teaching and learning.

Solution

Cisco was already engaged with WTAMU for voice over IP (VoIP) needs, and the relationship between Cisco and the university had grown into a trusted partnership. "Our relationship with Cisco flourished, because Cisco helped WTAMU to focus on more than information technology (IT)," says Webb. "Cisco pushed our university and our limited IT staff to evaluate how we could reduce operating expenses over the entire campus." Because WTAMU needed to evaluate other solutions in data center virtualization, reducing costs became a significant factor in its review of new systems.

Due to their positive relationship, Webb and the IT team invited Cisco to WTAMU

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James Webb
Chief Information Officer,
West Texas A&M University

to review virtual data center solutions. For its part, Cisco took additional measures, including bringing Webb to the Cisco campus in Richardson, Texas to attend a hands-on training seminar. While in Richardson, Webb spent time at the Cisco customer briefing center, evaluated virtual servers in the Cisco lab, and weighed the benefits of switching to a Cisco virtual data center environment. The in-depth approach and ability to assess the product convinced Webb that Cisco was the right solution for WTAMU’s data center needs.

“The main thing that attracted WTAMU to Cisco was a consolidated approach to data center design,” says Webb. “Cisco really pioneered Fibre Channel over Ethernet (FCoE), and the tangible, long-term benefits were evident immediately.” WTAMU made the switch to Cisco Unified Computing System™ (UCS®) to provide the university with smart, scalable, virtual infrastructure management.

When Webb and the IT department moved to Cisco® UCS in 2010, the economy in Texas had slowed down dramatically. WTAMU was abruptly forced to reduce its operating budget by US\$3.6M. The executive committee conducted a full program review of the university to identify academic and non-academic programs that could be eliminated. By switching to Cisco UCS, the IT department was able to offset costs from different departments across the entire campus and still provide increased levels of service.

That being said, the IT department itself experienced cuts. In 2011, WTAMU reduced Webb’s operating budget by \$200K, yet Webb and his staff were still able to provide data center service to the school and community at levels above and beyond efficiencies with their previous vendor. The university’s investment in Cisco UCS was able to streamline day-to-day management, allowing WTAMU to achieve its mission effectively despite the economic downturn.

Overall, the time between the decision to go with Cisco and the full deployment of the new virtual data center was less than a year. “Cisco instantly proved to be a dependable, full-service company that I could trust on for help throughout our deployment,” says Webb. “Cisco’s model of dependability ensures that our IT staff can reach someone for support 24/7, and I can’t say that’s been the case with other vendors.”

Results

The data center refresh has been a huge success for WTAMU. With its new virtual data center run on Cisco UCS, Webb and the IT team now host countless site visits for other schools that wish to evaluate WTAMU’s virtual data center deployment. “We truly are partners in integration,” says Webb. “With Cisco, we’ve set the standard in the A&M system for our work in the data center.”

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The chief benefit for WTAMU has been the upgrade of the distance education environment for online learning. Due to increased demand for these online programs, the IT department moved forward with deploying nine additional web servers. Those servers were installed on the Cisco UCS framework, enabling distance learning enhancements that otherwise would not have been possible.

“Distance education is a key initiative for WTAMU; we wrote the code for our first online class offering in 1997,” says Webb. “We’re the only regional distance education provider in the Texas Panhandle, and we continue to expect large enrollment gains. Cisco ensures that we are a reliable, 24/7 resource in online learning, which is how we retain our growing student body and maintain our university’s reputation.”

The deployment of Cisco UCS has also helped WTAMU enhance its disaster recovery efficiencies. Texas requires the university to include disaster recovery for mission-critical situations. WTAMU’s disaster recovery site is located at a campus in Amarillo, Texas. With Cisco UCS’ intelligent blade architecture, the IT team can bring up multiple servers in a disaster recovery scenario quickly with more processing capability and more memory. The old systems could take up to two days to rebuild and restore, whereas with Cisco UCS, the process has been reduced to approximately four hours.

Students, faculty, and staff across the WTAMU campus have experienced new synergies and competencies as a result of the university’s new virtual data center. To the end-user, the improvements are nearly transparent. The previous deployments could take up to two weeks, but now the computing science and computer information systems departments are now able to deploy a new virtual server in less than 24 hours. From an IT perspective, interoperability has soared. “We’re experiencing a blending of networking and personal computing (PC) support coming together to provide answers and solutions, which has spurred collaboration,” says Webb. “Help desk and support team members now have a better understanding of network storage and virtualization, which creates knowledge sharing and a tighter integration of IT units.”

Within the IT department, each staff member has been able to more fully focus on other strategic priorities. Webb has shifted lower-level operations to student workers, helping the larger community to be involved with deploying virtual clients for faculty and staff. Due to the power of Cisco UCS, IT staff members can now concentrate on software migrations and higher-level initiatives, which help to streamline operations across the institution.

Cisco UCS has allowed WTAMU to refresh its data center as well as expand into virtual desktops. In 2011, the IT team launched the Cisco Virtualization Experience Infrastructure (VXI) with VMware View across the campus to reduce costs associated with its annual PC replacement program. The Cisco solution for desktop virtualization, Cisco VXI, goes beyond traditional virtual desktops to deliver virtualized workspaces for education. Cisco VXI, built on Cisco UCS, is optimized for the

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Product List

ROUTING AND SWITCHING

- Cisco Catalyst 6500 Series 10 Gigabit Ethernet Modules

NETWORK MANAGEMENT

- Cisco Unified Computing System (UCS) 5108 B-Series Chassis
- Cisco Unified Computing System (UCS) 6120XP 20-Port Fabric Interconnect
- Cisco Unified Computing System (UCS) B200 M1 Blade Server
- Cisco Unified Computing System (UCS) B200 M2 Blade Server
- Cisco Unified Computing System (UCS) B250 M1 Blade Server
- Cisco Unified Computing System (UCS) B250 M2 Blade Server
- Cisco Virtualization Experience Infrastructure (VXI)
- Cisco Virtualization Experience Client 2212 (VXC)

unique demands of virtual desktop workloads, delivering the scalability, performance, streamlined operations, and uncompromised user experience not available with traditional approaches to desktop virtualization. Because of their constrained budget, Webb and his team can only refresh a limited number of units every year. With Cisco VXI, including Cisco Virtualization Experience Clients (VXC) as zero-client endpoints, WTAMU has been able to reduce the annual cost of PC replacement by 65 percent. With their previous vendor, the university reached budget capacity each year.

Next Steps

Throughout this year, WTAMU will introduce several new technology initiatives for faculty and staff. The IT team is already using Cisco UCS for Single-Sign-On systems, which is leveraged for distance education programs. These systems also host the university's new student mobile applications.

Webb and his team want to make sure the upgrades are a positive experience and will continue to build on the university's powerful reputation. "If we have problems in our data center, and we can't deliver performance to our community, our projects will lose momentum," says Webb. "Cisco UCS is a critical component of ensuring quality control and integrity for our deployments moving forward."

For More Information

To find out more about the Cisco Routing and Switching, go to: <http://www.cisco.com/go/catalyst>.

To find out more about the Cisco Unified Computing, go to: <http://www.cisco.com/go/ucs>.

To find out more about the Virtualization Experience Infrastructure, go to: <http://www.cisco.com/go/vxi>.

To find out more about the Virtualization Experience Client, go to: <http://www.cisco.com/go/vxc>.

