



Abilene Christian University Believes in Tintri Storage

Tintri Systems Provide Higher Performance and Crystal Clear Visibility into Virtual Environment

Abilene Christian University

Abilene Christian University (ACU) is a private educational institution affiliated with Churches of Christ. Founded in 1906 in Abilene, Texas, the University enrolls 4,500 undergraduate and graduate students. Jonathan Gray is one of the system administrators at ACU, who is responsible for the university's virtualization and storage environments.

IT Challenges

Starting in 2007, ACU began virtualizing its IT environment to reduce physical footprint and gain more operational savings. Later in 2014, "We were looking to replace one of our aging legacy arrays for our virtual environment," Gray explained. "Not only were we getting tired of all of the complexity of the traditional storage systems, we were having difficulty getting accurate metrics on how much capacity we were using. We couldn't easily see how many IOPS we were getting through the systems or determine the utilization percentage of our Fibre Channel infrastructure. We were also unable to understand how any single VM was affecting the rest of the infrastructure. Whenever we had a 'noisy neighbor' problem, detecting and remediating the source of problem was very difficult. Since one of our existing arrays was reaching end of life, we decided it was time to try out some of the newer, more capable integrated solutions in the storage market."

Looking for a New Storage Solution

The ACU IT team started searching for a storage solution that was faster and easier to administer than the existing arrays. "Working with our storage distributor, we started with a laundry list of vendors we had seen or heard of through various channels," noted Gray. "Through an open and productive dialog, we narrowed that list, which included Tintri. While our distributor did not have a formal relationship with Tintri, they were willing to perform a storage assessment, and the Tintri product performed extremely well."

Fast Deployment with a Smaller Footprint

ACU purchased a Tintri T850 array. The Tintri deployment went very quickly, according to Gray. "We were able to rack up and configure the Tintri system in less than 30 minutes," he reported. "Our deployment was a bit more complicated because we have two VMware vSphere instances, one for VDI and one for our production load. But even with the two environments, it was amazingly fast and simple to deploy. In addition, the smaller footprint of the Tintri systems gives us more flexibility in the future as we grow. I also like the fact that it uses less power and enables us to consolidate our data center more effectively."

"Typically our challenges are more IT-related rather than business-related," says Arthur Brant, Director of Enterprise Infrastructure. "We rely on Gray and the other system administrators to deliver the necessary performance to our end users. One of the things we pride ourselves on is a willingness to try new solutions that enable us to provide the best performance to the faculty staff and students. That's why we chose Tintri."

Industry

- Higher Education

Geography

- Abilene, Texas

Website

- www.acu.edu

Virtualization environment

- VMware vSphere
- Traditional storage: EMC

VM profile

- Oracle, MySQL, MongoDB, MSSQL
- IIS, Apache, Tomcat, WebSphere
- Banner, CSGold, Cognos, Xythos, Talisma, Adobe Digital Asset Management, Active Directory, JASIG CAS
- VMware Horizon (with View)

Key challenges

- Needed a new storage solution that was fast, reliable, and easy to administer

Tintri solution

- Tintri VMstore™ systems

Primary use case

- Tintri systems now power the entire university virtual desktop environment as well the non-capacity virtual server virtualization

Business benefits

- Gained more visibility into the storage environment
- Achieved fast deployment
- Enabled accurate and early capacity planning

Increased Visibility

"With Tintri, we have far better visibility into our storage environment than ever before," noted Gray. "We are now able to understand what is going on from a per-VM or even a per-VMDK level of a given system. It's very refreshing not having to deal with all of the 'black magic' that goes on behind the curtain with traditional storage systems anymore."

"Tintri also helps us perform more accurate forecasting, because we don't have to deal with different RAID group levels, different storage pool arrangements, or maintain separate safety margins for storage growth across each of the multiple LUNs and data stores," Gray said. "With Tintri, I only have one safety margin to maintain for thin provisioning. It's extremely easy to get a clear perspective on how much capacity we have used and how much we have left with the Tintri systems."

Accurate Capacity Planning

Another challenge ACU's IT team faced with the old legacy systems was determining how much storage to purchase with any upgrade or capacity increase. "With traditional storage platforms, you buy a certain number of terabytes of storage -- but that's just the 'marketing number' for what one of those drives should hold," Gray explained. "By the time you get through drive size ambiguities, formatting the drives, RAID levels, hot-sparing, and array metadata you have consumed about 40% of what you purchased conservatively. It doesn't look good when you tell management that you're only getting 12TB from the 20TB you just bought. With Tintri, they told us exactly how many TB were in the box and also the average number used for compression. We knew exactly how many usable TB we could expect from the array. In our case, it turned out even better than what the marketing estimates were for our current load."

Cost-Effective Storage Enables Networking Upgrade

"The decision to go with Tintri was a pretty significant departure for us," revealed Gray. "It was our first step away from the Fibre Channel infrastructure we had been using for a very long time to a 10 GbE network converged infrastructure. Because the Tintri units are so cost-effective, we were able to get a storage upgrade along with our critical network infrastructure upgrade in the same budgetary cycle."

Excellent Tintri Support

"Another area that I have been very impressed with is Tintri Support," noted Gray. "It's easy to get access to a knowledgeable person that can answer my questions immediately. With our previous vendor, the support process always took several days making it difficult to resolve issues with any expediency. In contrast, the Tintri support experience is a breath of fresh air. Granted, I haven't had to contact Tintri support all that much yet, but that's a good sign!"

Well-Positioned for the Future

"The reduced complexity of the Tintri environment is enabling us to explore new ways of doing things," explained Brant. "Tintri's interconnection between the compute, storage, and networking infrastructure reduces the complexity of our storage environment. We have a lean IT shop, so it gives us more time to do our 'other day jobs'. It provides the opportunity to do more research on system design, and to find better ways to deliver a high performance solution set to our faculty, staff, and students. I'm eager to see all of the additional functionality the Tintri systems will enable as we start evaluating a software-defined networking architecture for our datacenter."

A Long History of Innovation

"We have some autonomy with our IT decisions given our size and culture," added Brant. "Obviously, we can't just purchase whatever infrastructure we want, but we have a lot of flexibility to try out new things and work with innovative vendors. ACU has a rich history of innovation when it comes to integrating technology with the teaching and learning environment. In 2007, we were one of the first institutions to provide Google email and calendaring services, as well as the Google Apps for Higher Education suite for our students, faculty, and staff. In 2008, we were among the first universities to equip our students with mobile devices, as we launched a mobile learning initiative. Working with new vendors and applications is not something we shy away from. We do our due diligence to make sure we assess the efficacy of the technologies as well as the vendors, and we are able to achieve impressive results by working with the best, promising new technologies. Tintri is truly one of the innovators in the market that is enabling us to maintain our stance as a technology leader in higher education."

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