Jefferson County Vocational-Technical School Makes the Smart Move to Tintri

JEFF TECH

Management Simplicity and High Performing Storage Makes VDI Viable for Small Vocational School

Industry
- K-12 Education

Geography
- Reynoldsville, PA

Virtualization environment
- VMware vSphere 6.0
- VMware Horizon with View 6.2
- Traditional storage: Dell EqualLogic iSCSI SAN and JetStor Fibre Channel storage systems

VM profile
- Multiple SQL Servers
- Student Information System
- Alio Accounting System Server
- Multiple File Servers
- Active Directory Servers

Key challenges
- Inadequate performance with virtual desktop environment.
- Too much time spent managing infrastructure

Tintri solution
- Tintri VMstore™ T820

Primary use case
- All virtual desktops and workloads have been moved to the Tintri VM-aware storage systems

Business benefits
- Provided higher performance for virtual desktop environment
- Simplified storage deployment
- Reduced storage management to almost zero
- Achieved significant reduction in OpEx costs

Jeff Tech Background

The Jefferson County-DuBois Area Vocational-Technical School (Jeff Tech) is a comprehensive career and technical high school offering exceptional training in 14 specialties. The mission of Jeff Tech is to prepare its students to be successful citizens and life-long learners. Jeff Tech's students graduate with industry-recognized credentials, placing them in high demand for numerous technical occupations or advanced studies in their chosen fields.

Bob Wachob is the IT director at Jeff Tech. He is responsible for managing all IT systems and services for the school's 400 students and 70 staff and faculty members. "Our students come to us from four local school districts," he explained. "We provide a wide choice of career and technical education paths, including computer network engineering, digital media, and automotive repair, along with the traditional high school curriculum. Our role is to provide all of the IT tools and services that will make these educational opportunities possible."

IT Challenges

"We've gone through a number of storage systems over the last six or seven years," Wachob shared. "We started with a 1GB Dell EqualLogic iSCSI system. Within a year, we discovered that those systems were just too slow for our student and staff applications. Despite the fact that we are a small rural school with limited funding, we are running a complete VMware Horizon View virtual desktop environment. We now have 300 physical machines in the building, and over 98% of those are dumb workstations tied directly to the virtual desktop environment."

To obtain more performance for the VDI deployment, Jeff Tech migrated from its existing Dell EqualLogic systems to a 4GB JetStor fibre channel array. "The JetStor environment performed quite well, since it was a hybrid flash and spinning disk system," noted Wachob. "But it was very expensive and it didn't have the intelligence of some of the more advanced hybrid systems available today. It wasn't a bad system, but it had a lot of overhead. We had to keep the desktop replicas on flash, and store all of the changes to those base systems on spinning disks. Space was limited on the flash systems, so we were always constrained by the number of storage pools we could

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create. And whenever the drives would go bad, the rebuild times were ridiculously slow. When the JetStor systems reached the five-year point, we knew it was time to look for a better SAN platform for our VDI environment."

Looking for Storage Alternatives

"We started by looking at 100% flash solutions, since that was the 'hot topic' in the storage industry at the time," Wachob shared. "With virtual desktops, the faster the storage, the better. But the prices for the all-flash arrays were quite steep. You simply can't get a lot of storage for the price with those high-end systems."

Wachob also wanted to find a solution that would enable the school to consolidate everything onto one platform for management simplicity. "We started looking at some of the newer hybrid systems," noted Wachob. "JetStor was a hybrid platform, but it didn't provide any of the intelligence and functionality of a lot of the newer hybrids, like de-dupe or the compression."

Finding Tintri

"Our IT vendor, Virtix IT, suggested we look at Tintri," Wachob shared. "It was a very interesting solution, but I was a little nervous about not doing 100% flash. But when I saw the management interface on the Tintri, with visibility all of the way down into individual VMs, I was intrigued. It enabled us to see individual VM performance on the SAN host as well as the network and the hosts. And once I saw the speed of the platform, there was no turning back!"

Implementing Tintri

Jeff Tech immediately moved its entire virtual desktop environment over to the Tintri trial system. "We loved the Tintri so much that we just wanted to keep the trial box." Wachob admitted. "We told Tintri they couldn't have it back, it was working so well. They would have to get a new trial unit off the shelf for the next customer demo! Unfortunately, Tintri insisted we install a brand new box, but the installation and data migration from the trial box was breeze."

Jeff Tech has been very pleased with the decision to move to Tintri. "Tintri makes a lot of sense for us," Wachob explained. "We are a relatively small high school, so we don't have a staff of a lot of storage guys sitting around figuring out how many machines we should run on each data store. Tintri is a 'set it and forget it' platform. You put it in, you turn it on, you set it up, and you forget about it. It's essentially one gigantic disk array. You don't have to carve up storage LUNs, and mess with it all day long. When you don't have any extra people on your IT team, simplicity means a lot."

Implementing New Projects

The move to Tintri is enabling Jeff Tech to launch several new IT initiatives. "As an IT director, I'm not just responsible for the physical equipment, I'm responsible for how technology is used in education," Wachob explained. "We were falling a bit behind on our implementation of schoolwide learning management systems. We wanted to find an efficient way that our teachers could share resources and lesson plans, and enable our students to work from home or other remote locations. I never had time to address these projects before Tintri, I was too busy just keeping the infrastructure working. Tintri has given me a lot more time to concentrate on what's really important—using the technology and making it effective for education, not just keeping everything up and running."

Jeff Tech was originally planning on just using Tintri for its VDI deployment, but it is working so well that they will soon be replacing all virtual servers as well. "By migrating everything to Tintri, we will be able to completely move off all of our physical machines and reach 100% virtualization."

Cost-Effective, High-Performance Storage

"I meet with a lot of other IT directors on a regular basis, and they're all concerned with IT costs," Wachob shared. "I've been telling them about all of our OpEx savings with Tintri. We don't have to continually manage and tune the SAN to get the best performance out of the Tintri systems. IT's not always easy to measure soft costs, but you have to look at the bigger picture with storage. It's the same with virtual desktops. Many schools say they can't afford virtual desktops, since VMware is too expensive. But the benefits are just too great. When you visit other schools without virtual desktops, you'll see that 10% of their equipment is down on any given day. But when a kid sits down at a computer and logs on with VDI, the machine just works. How do you put a price on that? Without Tintri's VM-aware storage and virtual desktops, we wouldn't have this capability. Tintri is a very cost effective, high-performance storage solution for virtual environments—even for small rural schools with limited IT budgets. "

About Tintri

Tintri builds smart storage that sees, learns and adapts, enabling IT organizations to focus on virtualized applications and business services instead of managing storage infrastructure. Tintri VM-aware storage eliminates planning and complex troubleshooting by providing VM-level visibility, control, insight and agility. Tintri powers hundreds of thousands of virtual machines running business critical databases, enterprise apps, desktops and mobile apps, and private cloud deployments. Tintri helps global enterprises such as AMD, F5 Networks, GE, NEC, NTT, MillerCoors and Time Warner maximize their virtualization and cloud investments. For more information, visit www.tintri.com and follow us on Twitter: @Tintri.

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