![Tintri logo]

Life-Science Innovations Improves Disaster Recovery with Tintri

![Life-SCIENCE Innovations logo]

Industry
- Life Sciences, Biotechnology

Geography
- Willmar, Minnesota

Virtualization environment
- Microsoft Hyper-V
- Traditional storage: NetApp

Key challenges
- NetApp storage systems could not keep up with all of the I/O from the deduplication and replication processes
- Replication jobs that started at night, did not finish until well into the next day

Tintri solution
- Tintri VMstore hybrid flash systems

Primary use case
- All virtual workloads for production and disaster recovery

Business benefits
- Reduced backup times from over a day to a just few hours
- Decreased storage management from 20 hours to 2 hours per week
- Obtained excellent technical support

IT Challenges

Life-Science Innovations (LSI) provides strategic guidance, administrative support, and capital funding to grow, develop, and sustain its current and future affiliate companies as leaders in the life sciences and engineering. LSI's affiliate companies are in the biotechnology, engineering, genetics, and agricultural industries.

LSI had been relying on two aging NetApp storage systems, one at its main datacenter in Willmar, Minnesota with 80 VMs, and the other at a secondary datacenter with 4 VMs. LSI's IT environment is 100% virtualized using Hyper-V, running everything from MS SQL and Exchange, to file serving, web serving, and a wide range of enterprise applications. "We tried to set up deduplication and replication between our two data center sites, but the NetApp arrays couldn't keep up," explained Tim Starkenburg, systems administrator at Life-Science Innovations. "There was so much disk I/O that we couldn't run backups during the day since it would take out our production servers. As a result, our backups were running at least one week behind. The entire DR environment was nearly worthless to us, since we were never able to catch up. Being a week behind on backups was not a risk we could continue to take."

One of Starkenburg's first projects when he joined LSI in 2014 was updating and patching all of the company servers. "I started the patches every night at 10 p.m., hoping they'd finish by morning. But the NetApp storage was so slow that patches didn't finish installing until midway through the next day. As a result, all of our servers would randomly start rebooting during the day as they finished their patches. It was a complete disaster for us."

Solution

LSI worked with NetApp and several consultants to try and improve storage performance, create faster backups, and get replication running. "After working with NetApp for several months, they told us we needed to upgrade all of our existing storage systems," Starkenburg reported. "They wanted us to do a complete forklift upgrade of the environment, and the cost was well into six-figures at that point. We didn't want to spend that much money on the refresh, so we started looking around at different technologies. After reviewing the options, we bought our first Tintri hybrid flash system in 2014. Not only was it a better solution than we had previously, we obtained the two systems for a third of the cost of the proposed NetApp upgrade."

Results

Faster Backups

The first Tintri system worked so well, that LSI bought three more systems a few months later. The IT team placed three units at the company's main datacenter for its production workloads and an additional hybrid system at the remote site for disaster recovery. LSI is now replicating 100% of its servers between both sites each night, keeping 14 days of snapshots on the production systems and two snapshots remotely. "By moving to Tintri, we are now able to keep our backups current," Starkenburg reported. "Since we have full copies of all of our data at the remote site from the night before, we don't worry about disasters anymore."

Before moving to Tintri, LSI had to start all backups at night to avoid impacting the production servers. "We are now able to back up all of our servers during the middle of the day," noted Starkenburg. "We don't have to worry about 'noisy neighbors' or any high I/O workloads affecting our production systems, because Tintri's performance is so great. With NetApp, our servers were running 24x7—so there was never a point when we were finished backing things up. With the Tintri snapshots, it only takes an hour or two for the backups to run."

Reduced Management Time

Before moving to Tintri, LSI's storage admin was spending more than half of his time just creating backups. Backups and ongoing management are much faster and easier with Tintri, according to Starkenburg. "I only spend a couple of hours each week working on storage management now. On most days, I don't even login to look at the Tintri console at all. Since I'm not spending all of my time doing backups, I can now focus on new and more useful IT projects."

Great Tintri Support

"Tintri support has always been very willing to help, even when it isn't a Tintri issue," Starkenburg explained. "An example is when I was trying to optimize our Cisco UCS server for Tintri. Other vendors would've told me to call Cisco and deal with them, which isn't always a great experience. But even though it wasn't specifically a storage issue, Tintri walked me through all of the steps on how to configure everything for Cisco—they always go the extra mile. Plus, the Tintri support reps always check back with me to make sure all of my questions or problems are fully resolved before they close the support ticket. Great support has definitely been one of the biggest advantages of working with Tintri."

Future Plans

"We're in really great shape in terms of storage right now," concluded Starkenburg. "By moving to Tintri, I can spend the majority of my time working on other projects, including implementing Microsoft's System Center Configuration Manager (SCCM) and closely managing the productivity of our workstations. Moving to Tintri has been an excellent decision for our company."