

CASE STUDY

Cross Country Healthcare Improves Data Protection, Disaster Recovery with Tintri VMstore™

VMstore



Cross Country Healthcare (CCH) is a national leader of primary healthcare staffing and workforce solutions. Since its founding in 1975, it has placed thousands of highly qualified nurses and physicians, allied health, advanced practice, clinical research, and case management professionals into thousands of healthcare facilities across the United States and Caribbean.

The Challenge: Standard Infrastructure is Difficult to Manage and Scale

CCH had been relying on a mix of aging NetApp, EMC VNX, and XtremIO all-flash systems before moving to VMstore. "We were using those storage systems for a lot of different workloads, including block-level storage, backup to disk, as a CIFS target, and then as a VM target," explained Jason Bourque, Vice President of Infrastructure at Cross Country Healthcare. "Unfortunately, the NetApp systems didn't scale very well and we were always struggling to keep up with the virtual infrastructure demands. Ongoing management was also a challenge because we didn't have any in-house VNX experience. The XtremIO systems provided much higher performance than NetApp, but they were far too expensive and difficult to manage."

The Solution: Tintri VMstore

Bourque and his team evaluated several different infrastructure options, including legacy storage solutions, all-flash platforms, and VMstore hybrid flash storage. "I must admit, I was a bit biased going into the evaluation, since I had used VMstore at previous company," Bourque said. "I already knew what VMstore could do—I just had to convince my team that it was the right choice for us going forward. After running a proof of concept on some of our real-life use cases, my team agreed that VMstore could provide all of the performance, flexibility, and stability we were looking for. We could solve all our existing issues and position ourselves for the future at the same time."

CCH purchased its first VMstore systems in 2015. All production workloads were moved over to the new VMstore systems, enabling them to consolidate their IT infrastructure from five data centers to one. "We now have more than 400 different systems running on the VMstore systems, including our largest SQL databases and front office applications," noted Bourque. "All of the disparate workloads are running harmoniously together on the same storage system, thanks to VMstore."

CCH bought an additional VMstore system in March 2017. "One of our larger business applications was still running on a NetApp storage system," said Bourque. "That environment took up several terabytes of capacity, so we purchased an additional VMstore system for that application and a few other mounted systems. Now all of our production workloads are running on VMstore."

The Results: Higher Performance at a Lower Price

The difference between standard infrastructure and Intelligent Infrastructure became very apparent to Bourque and his team as they were very impressed with VMstore's management efficiency. "We used to have to hire dedicated storage engineers and cross-train everyone to provision LUNs and volumes on the NetApp and EMC systems," Bourque reported. "With VMstore, our storage environment can be easily supported by our vSphere engineers, since they don't have to know anything about storage to operate VMstore."

"The VMstore systems can easily handle the high I/O needs of our most demanding apps," noted Bourque. "Even with our mixed workloads, we aren't even close to exceeding the performance limits of VMstore—at a much lower cost than the all-flash alternatives. In addition

Challenges

- Legacy NetApp systems were difficult to manage and scale
- Data protection and disaster recovery capabilities were insufficient
- XtremIO systems performed adequately, but systems were expensive and lacked features

Solution

- Tintri VMstore

Results

- Simplified storage management
- Eliminated the need for multiple management tools
- Improved storage performance
- Reduced recovery points from over two weeks to less than twenty-four hours



to the 2x reduction in CAPEX, there are several usability features that VMstore has that are not available with the XtremIO platform. The VM integration alone greatly simplifies the management of our growing infrastructure.”

After migrating all their production workloads over to VMstore, CCH embarked on a data protection and disaster recovery improvement project in 2017. All of CCH’s production workloads are running in an Equinix hosted co-location facility in Miami, Florida, and the company’s privately-owned data center in Atlanta, Georgia is being used for disaster recovery.

“We built our DR environment using VMware and Cisco blade servers,” noted Bourque. “We originally went with traditional software-based replication, using Veeam with ExaGrid as the underlying hardware, as opposed to storage-based replication. But since we have over fifty systems with very large data sets, there was a tremendous amount of lag in the system due to all of the changed data that had to be copied to the other site.”

The large, software-based backup jobs were also consuming far too much bandwidth, according to Bourque. “Due to the bandwidth limitations, we were usually two weeks behind in sending our backup data to the DR facility. Obviously, that’s not an ideal situation for security purposes.”

In order to improve DR, CCH moved one of its existing VMstore systems over to its backup center in Atlanta, and purchased a new VMstore system for its primary data center in Miami. “By moving to VMstore, we were able to shorten our RPOs from two weeks to less than twenty-four hours. This removed a major business risk if we ever had to recover data in a critical situation,” said Bourque.

“We are protecting all of our data with VMstore snapshots,” Bourque reported. “We keep local copies of all workloads, and then replicate our production-critical systems nightly to our DR site in Atlanta. With VMstore replication, we can complete all of the snapshotting within just a few hours.”

Bourque knew he could either increase bandwidth to fix the DR lag problem—or invest in VMstore. “Bandwidth is a lot more expensive than storage in the long run,” noted Bourque. “Storage block-based replication is much more efficient than software-based replication, where you are moving full data sets across the network. We’re saving a lot of money by using VMstore replication. On network bandwidth alone, it’s a 2x savings. But the OPEX and manpower efficiencies we gained by not having to manage bandwidth every day are very significant. Choosing VMstore was a very simple and smart decision for our organization.”

“The ability to easily clone and recover systems using the VMstore interface has enabled us to eliminate a lot of other management tools, including VMware’s SRM for disaster recovery,” noted Bourque. “The VMstore interface plugs right into VMware, so I just need someone who understands those two consoles to run our DR strategy. With IT infrastructure, I believe that ‘less is always more.’ The fewer systems I have to deal with, the easier it is to support the environment.”

“When I first started working here two years ago, the infrastructure wasn’t very reliable,” Bourque recalled. “I spent the first year stabilizing the environment, and making it simpler by standardizing on VMstore. Last year, I focused on improving DR. This year, I’m focused on business continuity. By using VMstore, we can ensure that we’re an enterprise-ready organization going forward.”

“Generally speaking, I am at ease by having all of my systems on VMstore—not just DR, but also our production systems,” said Bourque. “I’ve used VMstore for long enough that I am very comfortable with the high availability, recoverability, and management capabilities within the systems. I am a big believer in VMstore—it delivers all of the performance we need, in a much simpler and more cost-effective solution. We plan to run everything on the VMstore platform from now on.”

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*Jason Bourque, Vice President of Infrastructure,
Cross Country Healthcare*

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