

## CASE STUDY

# Tintri VMstore™ Simplifies Storage Management and Boosts VDI Performance for ICC Chemical

# VMstore



ICC Chemical Corporation trades and distributes chemicals, plastics, and pharmaceuticals throughout the world from its headquarters in New York City and twenty-five global offices. Stephen Savard is the IT manager at ICC Chemical Corporation. He is responsible for all the servers, storage, networking, and virtual infrastructure at the company's primary datacenter.

## The Challenges: Insufficient Performance for VDI

ICC Chemical deployed virtual desktops for its internal users in 2012, using a NetApp storage system purchased during the company's initial virtualization initiative. "When we virtualized our environment a few years ago with vSphere, VMware gave us fifty licenses of VMware View," noted Savard. "We sized our storage before VDI was part of the picture. Performance was okay on the NetApp systems, but as soon we hit forty-five desktops, we started hitting the performance ceiling. We hired a consultant to help us fine-tune the environment, and he was able to boost performance by about 10%. But he told us to take a serious look at the VMstore all-flash systems when we were ready to upgrade our legacy storage."

## The Solution: Tintri VMstore T4050

Savard obtained quotes from nearly a dozen vendors for the infrastructure refresh, including Pure Storage, Fujitsu, Nimble, and HP 3PAR. The company also looked at the hyperconverged solutions from Nutanix and Simplivity. Savard indicated that the hyperconverged systems did not allow optimization for VDI and large data workloads at the same time.

Savard then checked customer references on the company's short list. "Tintri's references really stood out from the rest," he said. "The IT manager at a large healthcare company raved about the solution. In addition to the great performance and ease of management, he liked that his VMstore system would tell him when something needed attention long before any of his other IT solutions did. I have never heard such glowing references from anyone, on any technology product."

Ease of management became the deciding factor in Savard's purchasing decision. "I'm the only IT person here, so management simplicity is key," he said. "I could've gone with another vendor and saved a few dollars, but in the end, I would still be spending all of my time allocating disks, LUNs, and volumes. If a solution requires that much time and effort, it isn't worth a slightly lower price."

## The Results: Easy Deployment, Fast Migration, Reduced Latency

ICC Chemical made the decision to purchase a VMstore all-flash system for its on-premises deployment. "We noticed a tremendous increase in VDI performance when we moved from NetApp to VMstore," noted Savard. "The VMstore systems are 'wicked fast.' But the biggest impact of moving to VMstore for me has been the ease of setup and management."

"It took over a week to deploy the NetApp systems," according to Savard. "Our NetApp engineer spent an entire day with us setting up the systems, but it still wasn't working correctly when he left. We hired an independent consultant to help us optimize the system, but it still took far too much time to deploy and manage all of the LUNs and volumes with the traditional platform."

The VMstore deployment was much faster and easier. "We plugged in the VMstore all-flash system, gave it an IP address, enabled the share, mapped NFS to that share from our vSphere host, and we were done. It took less than an hour after we got the Cisco core switch used for our SAN to work properly... start to finish," Savard said.

## Challenges

- Storage systems provided insufficient performance for virtual desktop deployment
- NetApp platform was difficult to manage

## Solution

- Tintri VMstore T5040

## Results

- Reduced storage deployment time from one week to one hour
- Simplified storage management
- Enabled automatic performance tuning
- Increased VDI performance, enabling the launch of additional virtual desktops
- Reduced footprint from 7U to 2U



# Tintri

Intelligent Infrastructure

When the deployment was complete, Savard started moving data over to the VMstore all-flash system. "Our email server contains about 1.25TB of data," he reported. "I decided to vMotion everything to the new system over the weekend, because I figured it would take the better part of a day to move that much data. I was quite surprised that it only took forty-eight minutes to migrate everything over to VMstore, and our email system was running the entire time."

"The latency on our VMstore system is very low since it's rated for an 'obscure number' of IOPS," noted Savard. "When our email server performs its IO-intensive process every night, latency goes up above 2,000 IOPS. But the system is rated for at least 10,000 IOPS, so we aren't even nearing its performance limits."

"We moved our SQL environment to our VMstore system utilizing the Tintri "best practice" guide. Now, because databases have their own VMDK allocations, if I ever want a database in my SQL environment to perform better, all I have to do is go into the VMstore folder where my SQL database resides and set the QoS on either the folder (for everything) or the VMDK (for the individual database). I don't have to manually allocate data across disks, like I did with NetApp. Performance tuning is no longer my problem with VMstore; it just happens."

"VMstore's de-dupe and compression ratios have been incredible," noted Savard. "We started with our servers, and obtained a 2x reduction in space. Our VDI environment compressed even more, reaching nearly 6.4x (84%). All together, we achieved a 3.2x compression ratio, enabling us to save a lot on datacenter footprint and power costs going forward."

"Tintri Support has been very proactive," noted Savard. "When one of our controllers had an error the day before our interview, I got an email from Tintri that our system had already failed over to the secondary controller. When I came in the next morning, our Tintri support rep was waiting for me at my office to make sure everything was working correctly. It was actually a 'teach to fish' moment— instead of doing the work himself, at my request he showed me how to do it. We plugged the controller in, and ten minutes later—not only was it up and running—it had updated its own software and automatically rebuilt all of the degraded data stores."

With the higher performance of the VMstore system, ICC Chemical is now able to provide virtual desktops to more of its internal users. "There was an entire department that we had to hold off moving into VDI because we didn't have enough performance on the NetApp system," Savard said. "We had enough compute, but we never had enough storage performance for the virtual desktops. With VMstore, we have all of the performance, capacity, and agility we'll need for the next five to seven years."

"We decided to implement Veeam for backup and data recovery, because it's platform-agnostic," Savard explained. "We plan to replicate everything from our main data center to one of our sister companies at a different location, since they have the same NetApp array. When that system reaches end of life, we would love to get another VMstore system for their infrastructure and backups. Moving to VMstore has enabled us to obtain all of the flexibility and agility of the enterprise cloud for our on-premises infrastructure," concluded Savard.

Experience Different! For more information on how Tintri VMstore can turbo-charge your business success through a simple, Intelligent Infrastructure, visit [tintri.com/vmstore](http://tintri.com/vmstore).

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*Stephen Savard, Manager of Information Technologies, ICC Chemical Corporation*