Envision Technology Advisors Steps up to Tintri VMstore™

VMstore

Envision Technology Advisors is a managed service provider that delivers best-in-class technology solutions. Its company-wide dedication to customer service has made it one of the most comprehensive, business-oriented technology companies in New England. Envision's specialties include cloud and managed services, desktop and data center virtualization, wireless infrastructure design and implementation, networking support, and website design and development.

The Challenge: Monolithic Arrays, Subpar Performance

Envision Technology Advisors had been running its internal and client workloads on NetApp storage primarily, as well as a specific customer workload on a dedicated Xiotech SAN. "We were getting frustrated with the management of our bulky, previous- generation storage systems," reported Jeff Wilhelm, Envision Technology Advisors' Chief Technology Officer. "The challenges fell into two primary categories. One was managing all of the LUNs, fiber channel switches, and all the things that come along with the monolithic storage systems of the past. And the second piece was dealing with sub-par performance. Where do I put this disk? How big are my LUNs? What type of RAID am I using? How am I handling the SATA vs SAS vs flash tiers? Those were the challenges we had with both the NetApp iSCSI and the Xiotech fibre channel attached arrays."

The Solution: Tintri VMstore T540, T650, T880, and T5060

"We wanted to find a new storage technology that was NFS-based, one that simplified the stack, had good reporting capabilities, and provided a single pane of management—one without all of the complexity of three-tier solutions," noted Wilhelm. "We were getting tired of all of the complexities that come with traditional storage systems." After reviewing the storage options, Envision purchased its first Tintri VMstore T540 hybrid system.

The Result: Faster Workloads, Decreased Runtime

Envision is now running all of its client and internal workloads on Tintri VMstore, including a broad mix of database applications and marketing data solutions. "We are running Red Point, SQL Server, and Pentaho's business intelligence tool on VMstore," noted Wilhelm.

"As soon as we moved everything over to VMstore, we saw significant improvements in performance. Jobs that were taking 5.5 minutes dropped to 1.5 minutes on the VMstore T540. Later, when we upgraded to the Tintri VMstore T650 and the T880 systems, we saw even greater improvements due to the amount of flash in those larger systems."

Envision Technology Advisors decided to compare the performance of its cloud offering on VMstore to several other cloud providers in 2014. "We compared the performance on the Tintri VMstore hybrid systems to Terremark, Amazon Web Services, Rackspace, and two or three other cloud providers," Wilhelm shared. "We used synthetic benchmarks, so we could measure performance equally across all platforms. Thanks to VMstore, our storage I/O performance was higher than every other co-location and service provider's platform that we tested."

Envision Technology Advisors purchased its first Tintri VMstore T5060 all-flash system in 2015. "We didn't test any other all-flash systems," Wilhelm admitted. "We've been so happy with the VMstore hybrid systems that we didn't want to change vendors. Tintri readily provides systems for evaluation and testing with the assumption that you're going to be so blown away you're going to want to buy it at the end. And that was the case with us. We decided to see if the all-flash system performed as well as advertised, and they sure did. Jobs that used to take several minutes ran in forty-eight seconds on the all-flash systems. Clearly, keeping all data in flash was really excelling with our large, data analytics-based workloads. When you're reading a large

Challenges

- Improve storage performance for key customer use cases

Solution

- Tintri VMstore T540, T650, T880, and T5060 all-flash systems

Results

- Decreased runtime for common reports by 70%
- Obtained all-flash performance for IO-intensive data analytic workloads
- Single pane of glass management across all systems
- Enabled the creation of differentiated service offerings

"The beauty of the VMstore's all-flash system is that they use the same management pane as all of the other VMstore systems. The Tintri Global Center interface makes system management easy, it enables us to make intelligent decisions based on VM placement. We were able to see that the VMs on our T650 would really benefit from being moved to the T5060. If we had disparate systems—a NetApp, a Xiotech, and a bunch of other things—there would be multiple interfaces to learn, there would be no single pane of management, and there'd be no single reporting capability."

Jeff Wilhelm, CTO, Envision Technology Advisors

Tintri
Intelligent Infrastructure

file from a traditional file server, it's frequently sequential I/O. That's something that even monolithic storage systems can excel at. But when you're talking about business intelligence, you're pulling data from many different places on the database—there's lots of random I/O. The Tintri VMstore T5060 system really blew the performance out of the water due to its all-flash architecture."

The Tintri VMstore all-flash system is now servicing many of Envision's internal workloads as well as some customer workloads. "Because of the way our environment is built, we can have full segregation between customer workloads with VMstore," Wilhelm explained. "We operate a software-defined data center, and enforce segregation at multiple layers. With VMstore, our customer workloads are running side-by-side with our internal production workloads on the same box with full segregation between them."

"Cost is always a concern when you start talking about storage," noted Wilhelm. "An all-flash system of course is going to be a bit more expensive than a hybrid flash system, or certainly more than a traditional non-hybrid flash system that's just spinning disks. But when you talk about cost per IOPS or performance, the all-flash system was actually a better deal than the other systems we looked at. You have to go into all-flash knowing what you're getting into. You are getting less disk space because you're getting much higher performance from the disk. So if you're going into it with a performance need—not a disk capacity need—then the cost per IOPS of the all-flash system can be highly beneficial for your workloads."

"Our customers like to throw challenges at us, and we always try to over-deliver on their expectations," noted Wilhelm. "One of our hosted customers is a very large data analytics provider. They have a file build that takes over two hours, since it churns through billions of records. It is an absolutely insane process. We didn't tell them we were moving their VMs to the all-flash system, we just told them that we were doing some maintenance over the weekend. So we asked them to run a traditional file build on Friday against their server instance on Pentaho, and then run the same job again on Monday. They sent me an email that said, 'I don't know what you did over the weekend, but the process ran 300% faster. The time to complete went from two hours down to twenty-eight minutes.' That time savings translates directly into significant business value for this customer."

"The beauty of the VMstore's all-flash system is that they use the same management pane as all of the other VMstore systems," Wilhelm said. "The Tintri Global Center interface makes system management easy, it enables us to make intelligent decisions based on VM placement. We were able to see that the VMs on our T650 would really benefit from being moved to the T5060. If we had disparate systems—a NetApp, a Xiotech, and a bunch of other things—there would be multiple interfaces to learn, there would be no single pane of management, and there'd be no single reporting capability. We had already made an investment in the VMstore ecosystem, and this just took it a giant step forward and gave us better performance without having to climb a new learning curve."

"We are an engineering-driven organization," explained Wilhelm. "They are always a bunch of people doing things in our data center, so there will always be times when an engineer will accidentally bump a power supply or purposely pull something out to see what happens. Just last week we were provisioning a VMstore in our lab and had a single PDU outage. It turns out we had plugged in one of the really big servers that we just finished building for a large customer VDI project, and it took out one of our power distribution units (PDUs) that also touched the VMstore. Of course nobody noticed, because everything is connected into multiple PDUs. So the system kept chugging along until we got an email from Tintri support that said, 'Hey guys, your power supply is unplugged again.' Tintri's Auto Support feature is great—they know when something is wrong in our staging environment even before we do."

The Tintri VMstore all-flash systems are enabling Envision to distinguish its offerings from other managed service providers. "Companies in our industry are always looking for the least expensive way to deliver a solution," noted Wilhelm. "A lot of our competitors buy inexpensive disks and hosts to get by with the best possible margins. But quite often, these margins come at the expense of customer satisfaction. We decided to take a different route, and leverage our investment in VMstore to provide higher quality services that extend far beyond what you can get with a typical managed service provider. We will continue to invest in VMstore because of its best-in-class performance, management, and reporting. Even though it does cost a little bit more to provide managed services on hybrid and all-flash platforms, it allows us to have a differentiated offering that we believe our customers are more satisfied with, and with Tintri Global Center, a single pane of management and visibility for us."

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

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