



Tintri Provides Competitive Edge for PTS Data Center Solutions' Hosted Cloud Service

Tintri Multi-Tenancy Storage Delivers High Performance, Management Simplicity, and Comprehensive Visibility for VDI and DR-as-a-Service Offerings

PTS Data Center Solutions

With a proven process for understanding and fulfilling client needs, PTS Data Center Solutions has a unique vantage point for executing data center, computer room, and network operations center projects. In every customer engagement, PTS applies a disciplined, consultative approach to systematically survey and assess the situation, and then develops effective plans for seizing opportunities and overcoming obstacles. Founded in 1998, PTS now offers a full complement of client services, including business strategy and planning through facilities, IT, audio/visual, and data cabling engineering, construction, and operations.

IT Challenges

PTS is now one of the largest integrated IT/facility/cabling service providers on the East Coast, having serviced more than 3,500 customers in the 17 years it has been in operation. "50% of our employees are in IT," stated Pete Sacco, president and founder of PTS Data Center Solutions. "Our IT team is responsible for managing two different environments, each with its own unique challenges and requirements. The first is our corporate PTS datacenter infrastructure, where we need to provide the best solutions for our own organization's growing data, backup, and virtual data backup needs. The second environment is our hosted cloud services infrastructure and applications. We currently have an ever-expanding amount of stored data and hundreds of customer applications in that environment."

PTS currently stores about 10 TB of data for its corporate operations, ranging from very large CAD files for development, to a mix of graphics files for marketing collateral, and video files for the company's security operations. Both the internal PTS IT environment and the company's hosted infrastructure are now 100% virtualized using VMware vSphere 5.5. In addition, we are currently running a POC of VMware Horizon View 6.0 and Microsoft Windows 8 desktops.

Moving to the Cloud

PTS launched its first cloud service offerings in 2014, based on its own data center architecture which is branded as P-POD. "We built out our reference architectures with Juniper Q fabric as the fabric-based switching core, Dell stateless compute blade servers, and NetApp FAS 10GB-enabled block level storage," Sacco explained. "Our first SAN environment utilized Dell EqualLogic storage, because we had a small IT budget. As we acquired a bit more capital, we upgraded our storage environment to meet growing demands."

Industry

- Cloud services provider

Geography

- Oakland, New Jersey

Website

- www.ptsdcs.com

Virtualization environment

- VMware® vSphere™ 5. 5
- VMware Horizon 6.0
- Traditional storage: Dell EqualLogic and NetApp FAS arrays

VM profile

- SQL Server 2008
- Application Servers 2008r2
 - Veeam Backup
 - SharePoint
- Web Servers 2008r2
- Active Directory
- Virtual Desktop Server 2012 with MS Windows v8.1 Desktops (POC)

Key challenges

- Experiencing inadequate performance in hosted desktop environment
- Existing storage platform was difficult to manage
- Lacked visibility into storage arrays at the VM level for troubleshooting and optimization

Tintri solution

- Tintri VMstore™ T650

Primary use case

- Cloud-based, hosted desktop virtualization and Disaster Recovery -as-a-service.

Business benefits

- Obtained higher performance for VDI and DR
- Increased management simplicity and visibility
- Provided multi-tenancy, enabling PTS to offer cost-effective DR-as-a-service

Storage Becomes the Bottleneck

While the NetApp arrays performed adequately at first, the company's fast growth rate was beginning to strain the storage environment. "We were experiencing issues in both our corporate infrastructure and our hosted environments," Sacco explained. "We knew it was time for an upgrade, so we created a 'wish list' for our new storage solution. First, IOPS had to be much faster than we were getting on the NetApp arrays. And secondly, we needed better visibility into storage performance so we could troubleshoot issues faster and optimize both of our IT environments."

Too Much Complexity in Existing Environment

"One of the largest growth areas we are now seeing is in the VDI market," Sacco reported. "While VMware Horizon is an impressive virtual desktop software offering, performance was lacking in our environment, mostly because of the added complexity of our underlying storage platform. To serve that market with NetApp, we had to use a very complex array of SSDs, flashcards and flash drives, and a myriad of different methodologies in order to get enough performance. Managing the NetApp environment was also overwhelming, which basically made VDI 'far less sexy' from a business perspective."

Sacco briefly considered the purchase of more powerful NetApp arrays, but decided instead to look at other storage options from both Dell and Tintri. "I first heard about Tintri from one of my colleagues," Sacco shared. "His company had already migrated its virtual environment from traditional storage to Tintri to solve some high IOPS VDI challenges. My friend was quite pleased with the benefits his company was receiving and suggested we give Tintri a try."

Moving to Tintri

PTS Data systems purchased Tintri VMstore™ T650 in March of 2014. "Our new Tintri array is providing much higher IOPS than the NetApp devices, enabling us to bring VDI to our customers much more easily and cost effectively," Sacco stated.

The Tintri deployment was also very fast, according to the PTS IT team. "Our first test was just getting the Tintri array up and running," reported Tom Niessen, director of IT services and solutions at PTS. "Tintri was faster than any storage system we had ever deployed. It took just one and a half hours, but we probably could have done it in just 20 minutes if we had all of our 'ducks in a row'. Our previous storage system was far more complex, it always took several weeks to get it launched and fully configured. The second part of our POC was to prove that we could push data to the Tintri and off of it, and see all of the VM instances. We started a small number of VMs operating on the array. The test has been so successful, that we quickly made the decision to push most of our critical data to the Tintri arrays."

Simpler Management

"Tintri is a much easier storage environment to manage," Niessen said. "It is so brilliant in its operations, doing everything on the backend. It provides a very simple interface, with a simple connection, and it presents the data in a very intuitive way. Basically, the Tintri array says, 'Here's the VM, here's the amount of space it takes up, and here's how fast it comes in and out across its connectivity.' This is vastly different than our old NetApp environment."

"Tintri's simplicity is its greatest benefit," Sacco agreed. "There are many solutions in the market that can make VDI run faster, but none can make it simpler. The other vendors' solutions are also far more expensive and difficult to manage from a network standpoint, because they require us to use cards on the servers, buffers, and caches, and all kinds of layers of complexity."

“One of the hardest parts of working with block-level storage is to diagnose where storage problems exist,” Niessen explained. “Being able to see data down to the VM level is absolutely critical. Today, all of our stored data is virtualized. Seeing the VM on the storage array gives us an understanding of its time component, which is absolutely critical when diagnosing problems. Only Tintri allows us to see a profile of all of our data on the storage platform, according to the VM that it is on. You just can’t do that with any other storage product. That’s a huge advantage of the Tintri solution.”

Offering Multi-Tenancy

Tintri has just released new software that will enable multi-tenancy – the ability to carve up a single array to serve multiple clients. “At PTS, we have a history of being early adopters, jumping on the curve ahead of the competition,” Sacco stated. “We are now ready to include Tintri in our multi-tenancy play, for our clients that want to have a cost-effective VDI environment.”

Summary

“I love the visibility and the IOPS we get with Tintri, but what sold me was the ability to do that in a multi-tenancy environment,” concluded Sacco. “Tintri’s approach to VM- and application-aware storage is a game changer. It’s giving me a distinct advantage over all of the other cloud providers, and there are a myriad of them out there. With Tintri, we will be one of the first cloud providers with the ability to do multi-tenancy for VDI and DR, with a virtually optimized high IOPS array. We are very excited to have an OEM partner like Tintri because we think it’s the perfect marriage.”

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