# Cirrity Chooses the "Just Right" Storage Solution

## Tintri Provides the Ideal Balance of Usable Storage Capacity, Performance, and Cost for Desktop, DR, and Infrastructure as a Service Offerings

### Company Information

Cirrity is a leading channel-only cloud services provider that offers a full suite of secure, compliant cloud-based solutions. The Cirrity solution platform enables managed service providers and value-added resellers to provide fully integrated compliant cloud services to their end customers, without the high costs and overhead of building and supporting their own cloud infrastructure.

### IT Challenges

Cirrity had been leveraging traditional storage arrays with SAS drives for their cloud services. "We were preparing to scale a new desktop service using VMware Horizon DaaS, but we quickly realized that our existing storage environment would not support the expected growth of the new DaaS service," said Dan Timko, CTO of Cirrity. "With virtual desktops, latency issues are immediately perceptible to end users. We knew it wasn't feasible to scale our new VDI service on the existing storage platform."

### Searching for the Right Storage Option

Timko and his team made a list of hard requirements for the company's new storage solution. The chosen platform must provide the ability to scale to tens of thousands of desktops and sustain an average desktop load of 40 IOPS at 65% write. The solution must be compatible with Cirrity's existing infrastructure and enable high availability with less than 5ms latencies. And finally, the storage arrays must be cost effective and easy to install and manage. "Once we determined which systems could deliver the performance we needed, we calculated our cost per desktop," Timko said. "As a cloud services provider, it is important to price effectively to provide a good value for our clients."

The Cirrity team identified five different storage solutions to test, including a Tintri T650 system and an all-flash array from the incumbent storage vendor. "We wanted to compare the solutions side by side, not just look at all of the vendors' white papers and performance statistics," Timko explained.

### Applying the "Goldilocks Principle"

"Hardware evaluations are always a balancing act," Timko explained. "The three factors we considered for this project included usable storage capacity, performance, and cost. The solution that provided the best balance between all three criteria would be chosen. We refer to that perfect balance as the 'Goldilocks Principle', which states that all factors must fall within certain margins, as opposed to reaching extremes on any measure."

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**Industry**
- Cloud Services Provider

**Geography**
- Atlanta, Georgia and Phoenix, Arizona

**Website**
- www.cirrity.com

**Virtualization environment**
- VMware vCloud Director 5.5
- VMware vSphere 5.5.
- VMware Horizon DaaS Platform 6.1

**VM profile**
Applications:
- Microsoft SQL Server
- Microsoft Exchange Server
- Microsoft IIS
- Microsoft SharePoint Server
- Microsoft Terminal Services

**Key challenges**
- Existing legacy storage environment provided inadequate performance for Cirrity's new virtual desktop deployment.

**Tintri solution**
- Tintri VMstore™ T650 systems

**Primary use case**
- Tintri storage systems are being used for Cirrity's desktop, infrastructure, and disaster recovery as a service offerings.

**Business benefits**
- Simplified storage management and eliminated the need for specialized training
- Delivered significant performance improvements to end users
- Provided linear scalability of capacity with predictable building blocks
- Gained the ability to deploy new capacity into production in 85% less time than previous storage
- Obtained storage at a 35% lower cost per desktop than the previous storage platform and other identified vendors

"Tintri provides the best combination of storage capacity, performance, and cost in the industry," according to Timko. "Some of the other vendors' solutions could provide plenty of capacity, but their controllers couldn't keep up. Others had the opposite problem. If we chose one of those solutions, we would either run out of disk before we ever used all of the IOPS, or vice versa. Neither situation would work for our VDI deployment."

"On average, Tintri outperforms the alternatives at a 35% lower cost per desktop due to its perfect balancing act," Timko reported. "It doesn't provide too much or too little of anything—placing it in the 'just right' position for value per desktop. The Tintri design team did an excellent job in terms of balancing resources between processor RAM, SSD, and SATA on the box. That combination delivers exactly what we were looking for our VDI deployment."

## Enabling Linear Scale-Out

"Tintri enables us to add capacity in a building-block fashion," Timko explained. "This capability is very important to us as a service provider. With traditional storage, we had to pay a lot upfront. That 'day-one' price was really painful due to the high price of the controllers. With Tintri, our costs are much better aligned to our actual consumption of storage – which is a great advantage for a business like ours that relies on monthly operating revenue. The ability to align our growth costs to the actual consumption of hardware pays extreme dividends for us."

## Simpler Management

"We have a very technical workforce here at Cirrity, so ease of management wasn't the most important criteria in our initial purchasing decision," Timko acknowledged. "But Tintri's simplicity has paid off handsomely. In terms of soft value, Tintri was 'ridiculously easy' to install. It only took an hour to deploy. It always took at least two to three days to get our legacy arrays into production, with all of the steps need for configuring, racking, installing the power and cabling, etc. We can now deploy new capacity into production in 85% less time than with our previous storage platform."

Cirrity's storage admins previously had to attend specialized training to manage the legacy systems. "Tintri is a much more user-friendly system, virtually frustration-free. We no longer need to hire storage specialists to manage the Tintri environment," Timko said.

## Using Tintri for DR and Infrastructure as a Service

Cirrity provides several different service offerings to its clients, including infrastructure as a service (IaaS), desktop as a service (DaaS), and disaster recovery as a service (DRaaS). "We originally purchased Tintri just for our new desktop service offering," Timko explained. "Once we saw how well the Tintri systems performed for that environment, we started to question why we were continuing to use the legacy storage for our two other services. Tintri meets all of the requirements for those services much better than our legacy solution."

Timko is now in the process of moving Cirrity's disaster recovery environment from the legacy storage platform over to Tintri. "Moving DR to Tintri was the next logical choice, because it's the perfect use case for the Tintri systems. With our DRaaS offering, customers replicate their production systems to Cirrity in an offline state, and we can balance the workloads when those customers choose to run testing or need to fail over in the event of a disaster. Tintri offers great overall capacity coupled with high performance from the SSDs."

Timko is now planning to move the company's infrastructure as a service offering over to Tintri as well. "Our goal is to standardize our IT infrastructure where it makes sense," noted Timko. "We've done that with our compute environments using Cisco UCS exclusively, now we're looking to do the same thing with our storage. Our goal is to standardize on Tintri systems for our core offerings going forward."



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