SCALE COMPUTING

HC3 Success Story

Triton School Corporation

Fast Facts

Triton School Corporation is based in Bourbon, IN with approximately 1,000 students and 71 employees all of whom are IT users. The school district operates under the philosophy of continuous quality improvement, ensuring the continuous improvement of processes and outcomes throughout the district for both the students and faculty. To this end, the IT department of 2 looked to implement high availability in their virtualized infrastructure as they expanded their storage footprint.

Introduction

Triton School Corporation had already virtualized their environment using VMware and looked to expand that implementation by introducing shared storage and increasing their licensing with VMware to allow for high availability. This functionality was at the heart of their purchasing decision. As Ted Fisher, Director of Technology at Triton said, "Schools need the same High Availability that every small business does." Triton needed a solution that would keep their virtual machines up and available for the faculty and students to stay productive throughout the school year.

With only two employees in IT to support the entire organization, Triton also required a system that was easy to implement and manage. The solution would need to be easily supported with existing staff without extensive training. Continuing on with a VMware implementation seemed to meet this criterion to a certain extent, but the shared storage required for high availability introduced an unknown variable.

In addition to the requirements of High Availability and Simplicity, Triton required a system that was affordable enough to stay within budget. "In the K-12 world, price is always a big part of everything you do," said Fisher.

Virtualization Environment

- Highly Available VMs
- Simple-to-use system
- Affordable End-to-End Solution

Challenge: Implementing High Availability With Limited IT Resources

With mainly HP servers currently implemented, Triton set out to research competitive bids for implementing an HP shared storage solution coupled with VMware. The problems they quickly discovered were two-fold:

- The complexity introduced to maintain high availability for the virtual machines would have been overwhelming for the limited staff to implement and manage. This would require intimate knowledge of VMware as well as the shared storage (either a SAN or NAS) required for features like vMotion and failover.
- Support for such a complex product required several vendors that could create logistical problems in the event of an issue in the environment.

Having had some experience with VMware, Ted Fisher recalled, "With VMware, even if there were an issue with the Hypervisor, someone on the phone support could always blame the 3rd party." Triton feared implementing such a complex environment without a single vendor responsible for support.

Solution: Simple, Automated Platform That Delivered Business Class High Availability

Triton School Corporation was first introduced to Scale Computing's HC3 system – a complete 'datacenter-in-a-box' – through their trusted advisor and Scale Platinum Partner, SmartIT. They were immediately drawn to the simplicity and elegance of the virtualization platform, believing it would deliver on their key criteria: high availability, simplicity and affordability.

HC3 is a hyper-converged solution that combines servers, storage, and virtualization into a single, highly available, easy-to-use and scalable platform that removes the complexity of a typical virtualization deployment.

Simple: The simplicity inherent in the HC3 system is evident in the setup through to the day-to-day management of the system. By converging the infrastructure in the virtualized environment, Triton is now able to manage their entire stack from a single user interface accessible through any standard browser that supports HTML 5. Having been created specifically for the IT generalist of a small to midsize IT shop, ease-of-use is a core tenant of the HC3 design.

"HC3 is just so easy," said Ted Fisher, Director of Technology. "I was creating new VMs in no time...all without any specialized training."

Available: Every virtual machine created on an HC3 system is automatically configured for high availability meaning that in the event of hardware failure, the VMs running on the failed node will failover to the remaining nodes in the cluster without manual intervention from the user. Compared to their existing virtual environment where a failure meant extended downtime for critical applications due to a lack of failover, Triton could now rest assured that their applications are available for their students and faculty.

"HC3 watches itself so that you don't have to!" Fisher continued.

Triton happened to experience a drive failure in the first 6 months after implementation (all covered under the HC3 ScaleCare support and warranty included in the overall price). This experience demonstrated the availability inherent in HC3 as the system and virtual machines running in the environment remained operational. The system automatically, restriped and remirrored the data from that down drive to the available space in the cluster and a notification was sent to Ted Fisher who was able to replace the drive at his leisure.

Affordable End-to-End Solution: HC3 allowed Triton to pay for what they needed on day one, knowing that the system would grow alongside their virtual environment and district's needs in the future. With HC3, there are no upfront costs or licensing complexities. If they need to grow, they simply add more nodes. No rip and replace, no expensive complex systems, no headaches.

With no virtualization software to license, no external storage to buy and the hypervisor built in to the system, HC3 radically simplifies the infrastructure needed to keep critical applications running. The architecture and user interface of HC3 makes the deployment and management of a highly available and scalable infrastructure as easy to manage as a single server.

"HC3 was the perfect solution for the price," said Fisher.

The pricing of HC3 was so affordable that Triton was able to implement a secondary site of HC3 nodes for disaster recovery purposes. Triton plans to use the native replication built into ICOS (Scale's Intelligent Clustered Operating System) to replicate the data from the primary site to a secondary site.

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