Mott Community College Increases Storage Performance with High-Availability Solution

Avago Technologies and DataON deliver affordable shared DAS for demanding VMware VMFS environment

The Challenge

Mott Community College wanted to replace 100TB of existing SAN storage, but needed a fast, affordable, high-availability solution that supported ESOS.

The Solution

Standard commodity servers with Avago Syncro CS 9286-8e controllers configured in active-active clusters connected to eight 2U, 24-bay DataON DNS-1640 SAS enclosures.

The Result

Mott Community College replaced its entire 100TB storage environment with an affordable, high-availability shared storage system that met its performance requirements and provided substantial savings in both hardware and support costs.

Like many organizations, Mott Community College was challenged with a growing number of production VMware servers and the realization that their existing SAN storage was simply not able to deliver the performance their users required. They needed a solution that could deliver faster access, maintain high availability and stay within their limited budget. Fortunately, the unique combination of Avago Syncro CS controllers and DataON storage enclosures was able to meet these requirements.

Initially, Mott Community College wanted to add a solid state drive (SSD) array to their storage environment, but they quickly discovered that replacing the current vendor's disk array would be too expensive. Instead they chose to build their own SAN array using standard servers and the Enterprise Storage OS (ESOS), which is open source software that allows a server to appear as a storage appliance. While this solved some of their challenges, availability and scalability were still concerns.

To address these, they used the Syncro and DataON HA Cluster solution. The solution is the industry's only high-performance shared storage cluster option for DAS. Built on standard MegaRAID technology, Syncro solutions allow two servers in an active-active cluster to directly connect to shared high-performance, scalable and reliable 2.5" HDD and SSD DataON DNS-1640 (JBOD) enclosures.

With fast access and affordability also as key goals, Mott Community College opted for a combination of 10K SAS drives and SSDs configured in RAID 10 arrays. This implementation enabled them to achieve over 346,000 1KB read IOPS. Not only did this give them the performance they needed at about half the cost of a comparable SAN disk array, they also saved over $50,000 a year in support costs over their old SAN solution.

> "Now that Avago Syncro CS controllers are available, this is really THE solution for a dual-head ESOS storage server."
>
> **Marc Smith**
> Mott Community College

"We've been using ESOS, Avago and DataON products for our VMware VMFS datastores on Fiber Channel SANs for quite a while now. It's been rock-solid and that has driven us to replace all our storage with an open storage solution."

Marc Smith
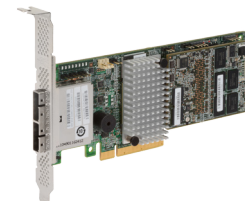Mott Community College

The Solution Components

DataOn DNS-1640D enclosures

- 2U 24-bay 2.5" 6Gb/s SAS & SATA HDDs or SSDs
- Single or Dual I/O Controller for Redundant and Max Availability
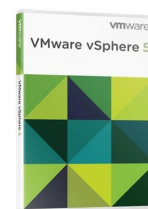- Redundant Hot Swap Drive Bays, Power & Cooling Module

Avago Syncro CS 9286-8e

- The only shared storage controllers for DAS environments with industry leading RAID data protection
- High capacity solution with support for up to 120 drives in the HA storage domain
- Optional caching to solid state storage designed to accelerate performance

VMware vSphere

- Delivers enhanced availability and performance for business-critical applications and next-gen applications
- Leverage server-side caching for enhanced performance of applications
- Support the largest workloads possible by doubling configuration maximums in several key areas

By using the combination of Syncro CS controllers and DataON enclosures, the college was able to provide both the fast throughput and the high availability that their VMFS datastores needed. Together, this unique configuration delivered an affordable, scalable, high performance alternative to expensive SAN storage that Mott Community College can use to grow their datacenter.

For more information and sales office locations, please visit the LSI website at: lsi.com