

StarWind iSCSI SAN Frees Semel Institute from Failures and Downtime and Saves Its Budget



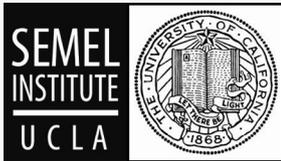
“With StarWind, cost savings evolve in various forms, including hardware, space, energy, and administration efficiency.”

Jason Liu,
System Administrator at Semel Institute

INDUSTRY:

Education & Science

ORGANIZATION:



Semel Institute for Neuroscience and Human Behavior. The Jane and Terry Semel Institute for Neuroscience and Human Behavior is an interdisciplinary research and education institute devoted to the understanding of complex human behavior, including the genetic, biological, behavioral, and sociocultural underpinnings of normal behavior, and the causes and consequences of neuropsychiatric disorders. The Institute conducts fundamental research to develop effective strategies for the prevention and treatment of neurological, psychiatric, and behavioral disorders.

Learn more by visiting:
www.semel.ucla.edu

ENVIRONMENT:

VMware and Hyper-V infrastructures

CHALLENGE:

To reduce storage costs and create an active-active failover configuration.

The Business Challenge

As one of the leaders in education, Semel Institute highly depends on a reliable, safe, scalable, and easy-to-use IT infrastructure. When the Institute’s IT department started to deploy Microsoft Server Cluster, they were using the traditional Fibre Channel SAN.

However, their satisfaction with the FC solution was diminishing as time passed and their data exploded, thereby demanding increasingly more physical machines. Traditionally, such a situation inevitably leads to the physical server sprawl, which became apparent pretty soon when the number of physical servers exceeded 50. Eventually, the institute faced the necessity to expand their storage, so that it could cover the demand of about 3000 employees. This promised to be a pretty costly initiative with Fibre Channel. In addition, the yearly maintenance charge of FC storage was overwhelming.

Burdensome IT management, power and cooling expenses, poor efficiency, and the growing data center footprint led the IT management to search for an alternative storage solution that would support both Hyper-V and VMware virtualization.

“We started to look for an inexpensive way to expand our storage and get all the benefits of virtualization at the same time,” says Jason Liu, System Administrator at Semel Institute. The IT team focused its attention on cutting down storage management costs and complexity.

The StarWind Solution

Jason and his team were considering products from different storage vendors. *“Finally, we picked StarWind iSCSI SAN. It was an easy choice because the solution was truly cost-effective, provided the easy-to-use interface, and was strongly supported by the StarWind technical engineers.”* The IT staff was especially impressed by the advanced technologies integrated into StarWind SAN software, its high performance, and absolute reliability.

On the one hand, StarWind was selected as an alternative to the Institution’s existing FC SAN as it promised simplified storage management and the reduction of the overall storage cost. On the other hand, it was a perfect fit for the organization because of its deep integration with VMware and Hyper-V that were both applied as virtualization platforms at Semel Institute.

Today, the cutting-edge technologies of StarWind iSCSI SAN help to effectively manage heavy I/O loads and ensure the complete safety of stored data. Asynchronous Replication guards the data by saving the copy to the distantly located disaster recovery site.

CDP & Snapshots technologies ensure the uninterrupted protection of data locally by the creation of incremental copies of the stored data assets. Snapshots are caught every few hours creating an unlimited number of roll back points that could be used for disaster recovery, if required.

The StarWind powerful Deduplication engine has reduced disk space requirements by 80% so far. High Speed Caching prioritizes workloads and thereby drives a considerable increase of the overall system performance and reduction of the storage costs.

SOLUTION:

StarWind iSCSI SAN

RESULTS:

- Creation of highly available storage cluster
- Considerable money savings
- Freedom to use industry-standard hardware
- Creation of a SAN that can be scaled and extended on demand

ABOUT STARWIND SOFTWARE

StarWind Software is a global leader in storage management and SAN software for small and medium-sized companies. It delivers innovative, feature-rich iSCSI SAN solutions for use as networked storage and has been qualified to support VMware, Microsoft, and Hyper-V environments, Linux & Unix. Among the most recent solutions developed by the company is the StarWind Hyper-V/VMware Backup Plug-in designed specifically for virtualized infrastructures. It provides fast and reliable VM backup and replication. StarWind Software is focused on providing cutting-edge, advanced features and technologies at an affordable price.

Learn more by visiting:
www.starwindsoftware.com

CERTIFIED BY:



The Results

CREATION OF HIGHLY AVAILABLE STORAGE CLUSTER

"In order to achieve complete disaster recovery, we deployed the StarWind's High Availability technology. We built an Active-Active failover cluster that provided us with the redundant mirroring configuration. Not only our SAN is now safe and secure, but it also provides for constant synchronization between the two storage nodes. In the event of failure at one side, I always know that my service won't be interrupted and my data is safe. StarWind eliminates a single point of failure and provides a highly available and resilient SAN environment," comments Jaison Liu.

StarWind SAN provides substantial functionality that enabled the creation of a robust disaster recovery plan. Now, the Semel IT team is sure: should any natural or human-made disaster occur, their data will be intact and safe.

MONEY SAVINGS

With StarWind, the cost savings evolve in various forms, including hardware, space, energy, and administration efficiency. By using this software, the Semel's IT staff created a SAN based on their existing servers. *"Thus, we managed to save money on the purchase of additional boxes, which is a sheer advantage for organizations with limited budgets."*

Jason Liu continues: *"Properly done server consolidation reduced the hardware footprint, freed up a lot of physical space in our server room, and decreased power consumption. Intuitive interface of StarWind made the storage management easy and trivial, if not enjoyable."*

FREEDOM TO USE THE INDUSTRY-STANDARD HARDWARE

With StarWind, Semel Institute avoided the hardware lock-in that is traditionally imposed by most of the competing solutions. Jason Liu says, *"StarWind turned out to be a hardware-agnostic solution that can be installed on any server available at the local store. With a traditional SAN, the hardware is maintained by the vendor company. But with StarWind, I have the freedom to design my own storage and maintain my own hardware. I know my system inside out, which highly simplifies administration and maintenance."*

A SAN WITH A PROMISING PERSPECTIVE

"When you deploy a SAN, you intend to keep it for years. Therefore, the solution should be scalable and flexible as well as have a potential to evolve with your individual needs and technological requirements." StarWind SAN perfectly fits to the concept as it is ultimately a scalable storage that gives us the establishment and flexibility to add more disks of our choice in the future," says Jason Liu.

Today, Semel Institute uses StarWind for their Hyper-V and VMware environments. They have virtualized 60% of their current servers into StarWind shared storage, including PHP, MYSQL, IIS webserver, Windows steaming server, helpdesk software, and patch server.

ABOUT STARWIND

Since 2003, StarWind has been a pioneer in the iSCSI storage industry and has been the solution of choice for thousands of global customers in over 50 countries, from SMBs, to governments, and to Fortune 1000 clients.