StorMagic

CASE STUDY

BOSTON UNIVERSITY MEDICAL CAMPUS

LOCATION: UNITED STATES | **INDUSTRY:** EDUCATION

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Boston University Medical Campus eliminates downtime and simplifies data management with StorMagic SvSAN

BUSINESS CHALLENGE

Higher Education institutions must balance meeting budget requirements, while staying at the forefront of technology advancements, to remain competitive with universities around the globe. Boston University (BU) is no exception. With more than 33,000 undergraduate and graduate students from more than 130 countries, nearly 10,000 faculty and staff, 17 schools and colleges and 250 fields of study, BU's two campuses are always humming, and always in high gear.

BU employs approximately 400 IT staff members, and 50 of these employees oversee the Boston University Medical Campus (BUMC) approximately two miles south of the BU Charles River campus. Bryan Bettencourt manages the network services for BUMC, including operations, support, engineering and new project introductions.

The university was experiencing deficiencies that were severely affecting its business:

- A technology refresh was needed to replace aging servers installed a decade prior
- IT was forced to manually update one server at a time, which required downtime
- 10 servers would have been needed to support the previous environment to accommodate future growth

> *StorMagic SvSAN is a simple solution that we configured during the initial installation, and we haven't had to look back since.*

Bryan Bettencourt
Network Engineer III, Boston University Medical Campus

BUMC's objectives were to:

- Replace aging HP G4 Servers
- Transition to a VMWare server virtualization environment
- Introduce the ability to conduct updates during business hours
- Implement a consolidated, cost-effective virtual machine offering
- Meet tight budgets, including IT staff resources

SOLUTION

The University conducted a comprehensive review of market options and consulted with their trusted partner, Cisco, who recommended StorMagic SvSAN on Cisco C220-M4 servers. BUMC selected a two-server stretched cluster SvSAN solution for added resiliency. The servers are housed in two different buildings about one quarter of a mile apart. If there is a local outage in one of the buildings, all the virtual machines automatically migrate to the other server and production continues without a hitch. The SvSAN cluster on the Medical Campus is managed remotely from a datacenter on the BU Charles River campus. Day-to-day management of the environment is handled through VMware vCenter. SvSAN is integrated with vCenter to simplify management and not force IT teams to learn new tools. The remote witness server also operates in the main datacenter to prevent "split brain" issues if one of the stretch cluster servers were to fail.

Some of the applications running on the Cisco/StorMagic cluster are DNS, DHCP, authentication (Radius), and monitoring tools (Zenoss and Cisco Prime Infrastructure) - all of which are critical for keeping BUMC's network up and running.

WHY STORMAGIC

Since SvSAN has been introduced into their network environment, BUMC no longer has to update one server at a time. IT is able to conduct failover updates between the two servers automatically, during business hours.

In the time since deployment, the university has realized several benefits:

- **COST** - BUMC only had to purchase two Cisco servers with the move to virtualization, versus 10 that were required in the past. Also, StorMagic software licensing was 30 percent less expensive than VMware vSAN.

- **HIGH AVAILABILITY** - SvSAN stretch cluster mirroring provides excellent redundancy and automatic failover in case of any hardware failure. The IT team is able to conduct live server updates during production hours because SvSAN keeps VMs running even when one server is taken offline for maintenance.

- **FLEXIBILITY** - BUMC can easily test new applications on the production servers - no need to buy separate hardware any more.

- **EXCEPTIONAL SUPPORT** - When BUMC needs assistance, they've been impressed with StorMagic's support organization's response times.

Server Configuration *(Per Server)*

SvSAN License	SvSAN 6TB Platinum
Hardware	Cisco C220-M4
CPU	2 sockets and 10 cores
Memory	128GB per server
Storage	8x 600GB 10K disks, with Cisco 12G SAS Module RAID-6, double parity and hot spares
Networking	5 NICs per server – 2x 1GbE for Management, 2x 10GbE for VSAs, 1x 10GbE for VMs
Hypervisor	VMware vSphere ESXi 6.0 Update 3a
Applications	DNS, DHCP, authentication and network monitoring tools
Data Protection	EMC Networker