

Hay Group Selects ETERNUS4000 for Company's First-Ever SAN



Deploying a Storage Area Network as part of a consolidation effort, the Hay Group relied on the Fujitsu ETERNUS4000 for its high availability, high-performance and scalability.

Challenge:

As the first SAN ever deployed at Hay Group, the company needed a highly reliable and scalable storage solution that would be easy to manage, improve system performance, and reduce space and power requirements.

Solution:

ETERNUS[®]4000 Model 300 stores 4 TB of data from 47 of Hay Group's Windows[®]-based servers running SQL Server[™] for Microsoft Exchange and Microsoft SharePoint[®], in addition to internal applications for pay scale and benefits modeling and analysis. The ETERNUS4000 SAN also stores data from clients' employee attitude surveys.

Benefits:

The ETERNUS4000 delivers optimal performance, ultimate redundancy and 100 percent system availability. Users have seen a 100 percent improvement in application performance, and the company can easily expand the system to meet growing storage needs. In addition, Hay Group has reduced space requirements by 66 percent. The excellent support provided by the Fujitsu team has also proven to be a major advantage.

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– Robert Butler, Director of Information Technology at Hay Group



The ETERNUS® storage system from Fujitsu.

Hay Group, a global human resources management consultancy, was founded in 1943 by visionary Edward Hay to help World War II veterans successfully transition back into the regular workforce. Guided by the principles introduced by Hay himself, the company continues to find new and better ways to help its 7,000 clients around the world manage their staff and resources to achieve success. In this pursuit, Hay Group is consolidating its data center to provide its 3,000 employees with fast, reliable, and 24 x 7 access to critical business information. As part of its consolidation effort, Hay Group deployed a Storage Area Network (SAN) based on the Fujitsu ETERNUS4000 Model 300 for highly available, high-performance, and scalable storage.

First SAN for Hay Group

Before installing the Fujitsu ETERNUS4000 SAN, Hay Group had a direct-attach storage infrastructure in which each of its 550 servers had its own disk drives either within the primary cabinet or in an expansion cabinet for data storage. Not only was this infrastructure difficult to manage, it also consumed a lot of space and power, and was comparatively unreliable. “We had several goals for our new SAN infrastructure: facilitate management, improve system performance and reliability, and save space and power,” explains Robert Butler, director of information technology at Hay Group. By deploying the ETERNUS4000, Hay Group has been able to achieve its goals. “With the ETERNUS4000 SAN, we can easily and centrally manage our storage from Philadelphia to ensure optimal performance and reliability, saving us time, money, and headache.”

Butler added, “At Hay Group, our goal is to develop talent, organize people to be more effective, and motivate them to perform at their best. Our clients are global, from the public and private sector, across every major industry, and represent diverse business challenges. We feel that having a system like this in place will make that job easier for our consultants to develop solutions for clients.”

Installed in early 2007, the ETERNUS4000 Model 300 is the company’s first SAN, currently storing 4 TB of data from 47 of its Windows-based servers. The ETERNUS4000 SAN stores the company’s SQL Server database that supports Microsoft Exchange and Microsoft SharePoint, in addition to internal applications for pay scale and benefits modeling and analysis. The ETERNUS4000 SAN also stores data from clients’ employee attitude surveys. In a rack mount form factor with three trays, the ETERNUS4000 can be easily expanded to meet future storage needs.

As a critical first step in the company’s consolidation plan, Hay Group deployed VMware® virtualization software to make virtual copies of the 47 servers residing at head office and transfer approximately

2 TB of data to the ETERNUS4000. “The virtualization process has been so smooth on both the software and storage side that we are going to make virtual copies of another 200 servers in the United States and transfer that data to the ETERNUS4000 SAN,” notes Butler.

Hay Group compared storage solutions from four top vendors, but chose the ETERNUS4000 Model 300 because Fujitsu offered the best performance, tools, service, and price. “For every question asked, ranging from configuration and installation to support and management, Fujitsu provided a better answer than the other three vendors,” notes Butler. “Fujitsu came in with more tools and better service at a lower price, making them the right choice for us.”

Simple Management Tools

The company needed a solution that would be above all, easy to manage. “We selected the ETERNUS4000 because it comes with simple management tools that facilitate ongoing system administration and help deliver excellent performance and reliability,” says Butler. “The ETERNUS4000 is the only storage solution we looked at that includes these features at no extra cost.”

The Logical Unit Number (LUN) expansion features that come with the ETERNUS4000 Model 300 were a key selling feature for Hay Group. With limited SAN experience, Hay Group anticipated changes after the ETERNUS4000 was in production. As it turned out, the team did have to make significant modifications. “In our overzealousness to get the ETERNUS4000 into production, we initially over-allocated our LUNs,” explains Butler. “With Fujitsu’s assistance, we were able to dynamically adjust LUNs remotely for improved performance, without impacting operations.” Hay Group can also easily add LUNs for true on-the-fly, on-demand capacity growth.

With its previous direct-attach storage system, moving data and adding new storage was extremely difficult, sometimes taking weeks to procure and install the hardware required. Using ETERNUSmgr software, Hay Group can easily and remotely manage the SAN, co-located several blocks away. “We use the ETERNUSmgr software to change system configurations as our business requirements dictate, with virtually no impact on performance,” notes Butler. “The ETERNUSmgr software also automatically monitors system status and issues alerts if failures are detected, helping solve potential problems faster.”

Fibre Channel Disks Deliver Speed

Butler credits the SAN’s impressive performance to the high-speed, dual-channel, and full-duplex high performance fibre channel drives that come with the ETERNUS4000. “My network administrator showed a group of executives, who were all logged into applications connected to the SAN, that he could move their applications from one resource to another with no visible change in performance,” explains Butler. “This level of performance and availability can be attributed in part to the 4 GB fibre channel drives on the ETERNUS4000 SAN.”

Performance gains have been substantial, with some staff noting a 100 percent improvement in application performance since virtualizing the servers and installing the ETERNUS4000 SAN. “We have launched many IT projects that have generated complaints from our users,” comments Butler. “The ETERNUS4000 deployment, on the other hand, has resulted in nothing but positive feedback.”

Superior Reliability and Scalability

To date, the ETERNUS SAN has delivered 100 percent availability and exceptional reliability. With the ETERNUS4000, Hay Group can write to the SAN in two places at once, delivering simultaneous mirrored backup and therefore, ultimate redundancy. “We are relieved to know that our SQL Server database is automatically being copied to two places at once,” comments Butler. The ETERNUS4000 SAN is critical to the company’s disaster recovery plan. “Previously, all our applications sat on their own servers, which meant that data was extremely vulnerable in the face of disaster,” says Butler. With its cache mirroring functionality, the ETERNUS4000 delivers the assurance that data will be available even under the most catastrophic circumstances.

The ETERNUS4000 can grow to meet Hay Group’s needs as the company expands into new regions like South America, India, and Asia. With the direct-attach model, expanding storage capacity meant buying new hardware. “It used to take weeks to add storage because





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we had submit a purchasing request, wait for the server to be delivered, and then configure it to meet our needs,” says Butler. “Now, we can easily and cost-effectively expand the system with just a few clicks of the mouse.” Hay Group has purchased another two trays and 30 more 300 GB disk drives for an additional 8 TB of storage to accommodate its plans to virtualize 200 more servers. “It will take less than a day for the Fujitsu engineer to come out, slide the new trays into the rack and hook them up, providing immediate access to new storage,” Butler adds.

Space and Power Savings

Hay Group has dramatically reduced the space requirements and energy costs associated with its previous direct-attach storage solution. At just three feet tall and 24 inches wide, the ETERNUS4000, which now stores the 2 TB of data that previously resided on 47 servers, only takes up half a standard rack. “By virtualizing our servers and storing data on the ETERNUS4000, we have reduced our space requirements by 66 percent,” says Butler. “As a result, I now only have to rent one third the space that we previously required to house the data center—a substantial cost and energy savings.”

Premium Service

Hay Group has been impressed with the quality of service Fujitsu has delivered from the onset. With an experienced engineer onsite to lead the team and answer questions, installation was simple. “Fujitsu was able to get the ETERNUS4000 up and running quickly and efficiently,” says Butler. “The Fujitsu engineer even took the time to walk my staff—who had never managed a SAN before—through system configuration and management.” With the ETERNUS4000 SAN offsite, installation had to be well coordinated and efficient—Fujitsu handled the process with professionalism.

With the Fujitsu Premium Care Service Program, Hay Group received immediate response the one and only time the company had a technical issue. “We over-allocated the LUNs early in the process, and even though it was not a Fujitsu problem, support staff delivered an immediate and workable solution,” explains Butler. “Together, the Fujitsu and our system administrator were able to remotely diagnose the problem, find the best solution and reconfigure the system on the fly—and no one was the wiser.”

Turning Vision into Reality

With the ultimate goal to increase employee effectiveness and overall performance, Hay Group’s mission is to help organizations succeed by turning their strategies into reality. Driven by the same philosophy, Hay Group itself has turned vision into reality by consolidating its data center and deploying a SAN for fast and reliable access to critical business information. “Based on our successful first experience with Fujitsu, we have decided to standardize on the ETERNUS4000 for all our storage needs as we roll out our consolidation plan across the globe in an ongoing effort to improve efficiencies and enhance customer service,” concludes Butler.