HP SAN helps athletic shoe maker finish first in race for new products

"We needed a storage platform to grow with our new product-lifecycle-management system. Scalability and reliability were critical requirements, and the HP StorageWorks XP disk array was the right choice."

– Business Systems Manager, Major Athletic Shoe Manufacturer

Athletic footwear manufacturers walk a fine line between fashion and functionality. Customers want footwear that looks great and performs well under a wide range of conditions. While made for sports and exercise, athletic footwear is a fashion item, subject to the fickle nature of consumer tastes.

A major U.S. athletic shoe manufacturer needed to find a way to increase the pace of new-shoe development and marketing. As one of the world's largest athletic footwear manufacturers, the company faces the heat of competitors seeking to overtake it – plus the internal desire to improve at every level. One of the critical ways that the manufacturer and other key players in the $14 billion athletic footwear market increase revenues and build market share is through product innovation and regular new-product introductions. To accelerate this process, the shoemaker needed a collaborative product-lifecycle-management (PLM) system and an adaptable IT infrastructure to match.

Setting a new pace for development

A key objective for the company is to reduce time to market for new shoes, increasing the number of new products introduced each year. From inception and design, through prototyping, testing, sales forecasting, manufacturing, and marketing, the process of developing new shoes is time consuming and labor intensive; it also involves hundreds of specialists from around the world at every stage of development.

In early 2002, the shoe manufacturer decided to invest in a comprehensive PLM solution to speed new shoe designs by 40 percent and to increase revenue. The manufacturer chose the HP StorageWorks Disk Array XP128, configured as a storage area network (SAN) using high-speed SAN switches and adapters, along with HP StorageWorks Auto Path XP software. This HP storage infrastructure is the foundation for the new PLM solution and enterprise-wide storage utility. The HP SAN solution offered the best innovation at the lowest total cost of ownership, including ease of management, scalability, reliability, and compatibility. HP Services implemented the solution, which supports a growing number of HP ProLiant servers, including models DL360 G2 and DL580 G2.

HP goes the extra mile

One of the main advantages of the PLM solution is centralized storage and ready access to all documents, data, communications, and other resources associated with each new shoe. Up to 500 users across the shoemaker's enterprise eventually will access the PLM solution to collaborate on product development and marketing for key brands. "With the HP StorageWorks

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SAN, we optimize our storage resources by establishing a storage utility to support our new collaborative product development system, plus many other mission-critical applications across the enterprise," emphasizes the company's Business Systems Manager.

The manufacturer's choice of the HP StorageWorks Disk Array XP128 for its SAN was not surprising, considering the company still uses a smaller HP SAN it bought three years ago for testing and development efforts. Even so, the company evaluated storage systems from three leading vendors before choosing the extensible StorageWorks Disk Array XP128 as its storage resource. While the three competing systems had similar initial pricing, the HP solution offered the best total cost of ownership (TCO).

"Scalability, automated management capabilities, and responsive HP sales and services support really won the day," explains the Business Systems Manager. "We know we will upgrade our HP SAN incrementally as we migrate more applications to it, so expandability and reliability were key factors we considered. StorageWorks XP disk arrays provide massive capacity in a single cabinet, with the ability to scale the drives online. Plus, they have high availability features and redundant components, which give us outstanding data protection."

The PLM solution occupies approximately 1 TB of the 4 TB currently available on the StorageWorks SAN. The Disk Array XP128 provides capacity for up to 18 TB (16 TB usable) and supports heterogeneous connectivity – including the HP-UX, Windows, Solaris, AIX, and Linux operating systems. The company's product-development teams use the PLM-SAN solution to store all documentation related to new-product development, such as CAD, Excel spreadsheets, Illustrator files, e-mail, and Microsoft Word documents. Numerous other applications share the StorageWorks SAN, including Microsoft SQL Server, Lotus Notes, data mining, demand forecasting, budgeting, and Veritas backup software.

"Stranded" disks jump on the SAN bandwagon

"Although our main reason for implementing the HP StorageWorks SAN was to support the PLM solution, we also use it for many other applications," the manager says. "The more storage we can migrate to the SAN, the more we reduce our IT workload, improve service, and enhance reliability. We also recovered and redeployed nearly a terabyte of previously direct-attached storage, which we call stranded storage. We're saving money that way, too, because we didn't have to purchase additional disks."

The PLM solution uses a traditional three-tiered architecture, running under the Microsoft Windows 2000 operating system, to provide highly secure Web-enabled access to users anywhere in the world. The PLM solution runs on a pair of clustered ProLiant DL580 G2 servers and represents the main application layer. Oracle 9*i* Real Application Cluster (RAC), running on two clustered ProLiant DL580 G2 servers, provides the database layer. IBM WebSphere, running on HP ProLiant DL360 G2 servers, powers the Web-server layer.

Smooth teamwork results in service win
"Implementation of the PLM solution and HP StorageWorks SAN went very smoothly," recalls the manager. A team of technicians and consultants from HP Services and a large HP reseller configured and tested the SAN.

"We sat down with our HP team and told them what our priorities were for storage management, and they configured and optimized the SAN to meet our needs," the manager points out. "This was a team effort, and we take great comfort in knowing that HP and its knowledgeable resellers are always available to assist us when we need them."

> "Our HP Adaptive Enterprise infrastructure provides an IT foundation that is flexible enough to meet the demands of our global manufacturing and marketing operations. Our deployment of a PLM system using the HP SAN will serve as a best-practices template for us going forward."
>
> - Business Systems Manager, Major Athletic Shoe Manufacturer

Storage gain without pain
To ensure continuous availability, the company uses HP StorageWorks Auto Path XP software to control its SAN switches and adapters. Auto Path XP provides I/O path failover and load balancing for XP disk arrays. The manufacturer uses StorageWorks Command View XP software for centralized Web-accessible management of its storage resources. In addition, the company relies on HP Insight Manager 7 server-management software to actively monitor and optimize server and network performance.

These intelligent-management tools and the StorageWorks Disk Array XP128-based SAN enabled the company to increase SAN storage capacity from 600 GB to 4 TB, and from 6 connected servers to nearly 20 – without increasing IT staff to manage and maintain the solution.

Additionally, the company will be able to capitalize further on the synchronization of its business processes with the IT infrastructure. In the future, the company will extend access to the PLM application to key suppliers and partners who are integral to product development, manufacturing, and distribution. "Our HP infrastructure and management tools are enabling the integration and cooperation we need to adapt quickly to our dynamic market conditions," the Business Systems Manager concludes. "Our IT infrastructure is now ready to support any moves the company chooses to make. Across the board, HP solutions deliver on the HP Adaptive Enterprise blueprint we must have to continue to lead the industry."

Major Athletic Shoe Manufacturer

Challenge

- Provide an adaptable, scalable storage management infrastructure to support a new product-lifecycle-management system as well as other mission-critical applications
- Increase return on disk investment by recovering "stranded" disk space with a centrally managed SAN resource
- Implement a globally accessible product-lifecycle-management system to speed time to market and increase revenues
- Provide centralized storage and management resources for mission-critical applications, such as e-mail, data mining, sales forecasting, demand planning, and workflow management

Solution

Hardware

- HP StorageWorks Disk Array XP128 configured as a SAN
- 40 HP ProLiant servers, including DL580 G2 and DL360 G2
- HP Remote Insight Lights-Out Edition boards
- Tape library

Software

- HP StorageWorks Auto Path XP
- HP StorageWorks Command View XP
- HP ProLiant Essentials Rapid Deployment Pack
- HP Insight Manager 7
- Microsoft Windows 2000 operating system, SQL Server, Internet Information Services (IIS)
- Oracle 9*i* Real Application Clusters (RAC), IBM WebSphere Application Server, Veritas NetBackup, Collaborative product-lifecycle-management (PLM) system

HP Services

- Design, implementation, training, and on-going support services
- SAN configuration and testing with a major HP reseller

Results

- Recovered up to 1 TB of "stranded" disk space by consolidating storage from multiple servers onto the HP StorageWorks Disk Array XP128
- Deployed a consistent infrastructure based on the HP Adaptive Enterprise vision to support collaborative product development and other mission-critical applications
- Increased SAN-based storage by 500 percent – without increasing staffing
- Reduced expected time-to-market cycle by 40 percent

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