With an aging infrastructure and a need for greater operational efficiencies, Interwoven turned to Symantec and Network Appliance to increase its application availability and consolidate infrastructure administration. Working with InterVision Technologies, a Symantec and Network Appliance business partner, Interwoven has shrunk application downtime due to backup by 99.7 percent, speeding time to market for new products.

With 700 employees located in 15 countries, Interwoven must provide a robust and reliable complement of productivity and communication tools to support its global operations. The company makes extensive use of Microsoft software, with Microsoft Office and Microsoft Outlook installed on all user machines, Microsoft Exchange Server for email, Microsoft SQL Server for its database, and Microsoft Great Plains for financial applications. Interwoven also uses Peoplesoft HRMS for human resource management. Its hardware environment features 200 Dell PowerEdge servers and a mixture of IBM, Hewlett-Packard, and Dell laptops and desktops.

Replacing Legato with NetBackup software

Interwoven had been using EMC Legato for data protection, a legacy from the company’s foundation. When Interwoven outgrew Legato, they went shopping for a new backup solution. The top criteria were centralized administration, reliability, and scalability. Interwoven’s IT group was also looking for ways to consolidate and simplify operations as its infrastructure changed and grew.

With these guidelines in mind, the IT group chose VERITAS NetBackup™ software. “VERITAS NetBackup™ software offers a level of centralized administration that we couldn’t find in any other product,” says Alex Sagers, senior director of corporate IT. “And NetBackup has robust NDMP (Network Data Management Protocol) support, vital for integration.” Sagers is also pleased with the reliability and scalability of NetBackup software, which has easily accommodated Interwoven’s 10 percent annual growth in backup data. In addition to daily incrementals, NetBackup is currently backing up eight terabytes of data in weekly full backups.
Global operations demand around-the-clock availability

With global operations and a competitive marketplace demanding 24/7 responsiveness, Interwoven must ensure high levels of availability of critical applications. When Interwoven was smaller and more localized, backing up the company’s data required shutting down applications during off-hours, which could take up to three hours for the weekly full backup. However, this amount of unavailability for key applications is unacceptable today. Also, Interwoven’s previous infrastructure had no built-in storage redundancy, so a disk drive failure could cause hours of downtime. Sagers’ group sought a solution that would prevent both planned and unplanned outages.
With help from InterVision Technologies, Inc., a partner of both Symantec (formerly VERITAS Software) and Network Appliance, Interwoven designed an architecture featuring a two-node cluster of Network Appliance FAS820c Storage Systems to ensure survivability in case of disk failure and Network Appliance Snapshot™ software to dramatically reduce backup windows. Interwoven also chose SpectraLogic 64K tape drives for backup to AIT tapes. Network Appliance’s Data ONTAP™ operating system provides automatic failover. The results have been impressive. “Our high availability solution using clustered Network Appliance FAS storage systems has eliminated over twenty hours of unplanned downtime a year,” says Sagers. “It has allowed us to increase our availability to 99.99 percent, which certainly pleases our users, not to mention our management.

Field supports needs latest information

Network Appliance helped Sagers solve another data management problem: ensuring that each of Interwoven’s 25 remote offices has up-to-date technical support information. “Our excellent field support is a key differentiator for us, so we have to ensure that the field always has the latest information,” Sagers explains. “The data is fairly large, about 700 megabytes, and we were copying it to each office every few hours. It was becoming an administrative burden for my staff, requiring six hours a week to manage the updates. And transmitting such a large file so often was eating up network bandwidth at inopportune times.”

InterVision looked at the requirements and suggested Network Appliance SnapMirror® software as a possible solution. Sagers liked the proposal right away. “SnapMirror is ideal for a geographically dispersed operation like ours,” he quips. It automatically mirrors the master tech support data on the Network Appliance FAS250 in the data center to Network Appliance FAS270s in each remote office. Since SnapMirror only transmits the changed blocks, it greatly reduces the network loading, thereby allowing Interwoven to schedule updates every 60 minutes; this helps ensure that new information reaches the field more quickly. “The updates are so automatic with SnapMirror that we’ve virtually eliminated the need for my staff to spend time managing them,” Sagers reports.

Extending product life for extra savings

Choosing quality is a way of life at Interwoven, according to Sagers: “Interwoven makes it a policy to choose vendors that will be with us for the long term and invest in best-of-breed products. We firmly believe that it pays off in the end.” As an example, he points to the company’s experience with Network Appliance Snapshot™ and VERITAS NetBackup™, Interwoven has cut application downtime for data backup from three hours to thirty seconds, a 99.7 percent reduction.

“Interwoven’s high availability solution using clustered Network Appliance FAS storage systems has eliminated over 20 hours of unplanned downtime a year.”

Alex Sagers
Senior Director of Corporate IT
Interwoven, Inc.
storage systems. When Interwoven installed the Network Appliance FAS800 series storage systems, the IT group planned for a useful life of three years. “They lasted four,” exclaims Sagers. “That’s like getting an additional 33 percent off the cost of a new storage system. We recently upgraded to the Network Appliance FAS900 series and fully expect to achieve the same kind of results.”

**Plans to ease regulatory compliance**

Another area Sagers is targeting cost savings is email archiving for regulatory compliance. Consider Interwoven’s recent experience with Sarbanes-Oxley. “We got a clean bill of health on compliance, but it came at a price,” Sagers recalls. “My staff spent an enormous amount of time retrieving the documents needed by the auditors. Email was especially problematical, so we decided to look for a better way to handle e-mail archiving.” Beyond helping with compliance, Sagers’ group requires an archiving solution to enable them to offload data from their Microsoft Exchange servers. This would reduce the amount of local storage needed as well as improve performance and shorten backup windows for Microsoft Exchange data.

After reviewing the available solutions, Interwoven selected VERITAS Enterprise Vault™ software based on its tight integration with Microsoft Exchange Server as well as its powerful content searching capabilities. Sagers’ group has a pilot program underway for a select group of internal users in the corporate legal department to determine the possible savings related to reducing email box size and assessing Enterprise Vault’s ability to aid compliance with Sarbanes-Oxley and other regulations. Upon successful completion of the pilot program, Interwoven plans to roll out Enterprise Vault to all users to ensure consistent, enterprise-wide management of email archiving.

**A solid team with which to grow**

While his group works hard to keep the current Interwoven infrastructure running smoothly, Sagers knows that the future will require continual changes and upgrades. Consequently, he turned to VERITAS Consulting for Interwoven’s next big project, application server clustering. “Clustering the Network Appliance storage systems has worked so well, we want to extend the concept of clustering to ensure the availability of applications against other kinds of failures,” Sagers explains. “We are working with VERITAS Consulting to implement a clustering solution for our key [Microsoft] SQL [Server] database, and we plan to extend this to a Microsoft Exchange clustering solution as well.”
InterVision has proven itself to be another important part of Interwoven's team. "I have found a lot of value in having one value-added reseller that has a depth of knowledge in both Symantec and Network Appliance technologies and how they complement one another," Sagers remarks. InterVision supports Network Appliance products for Interwoven, while Symantec provides its own support directly under a VERITAS Extended Support contract.

Sagers believes in the value of teamwork, so he is pleased with the combination of Network Appliance and Symantec at Interwoven. "Network Appliance and [Symantec] have worked out the integration between their products, so we don't have to spend our time on integration, which frees up my staff to focus on adding value to Interwoven in other strategic ways," says Sagers. "And because they have a coordinated roadmap for future development, we expect to see the benefits of their close cooperation for years to come."

### BUSINESS VALUE AND TECHNICAL BENEFITS

- **Availability**
  - 99.99% availability for applications handling 1,000 users a day
  - 99.7% reduction in application downtime for backup
- **Cost Avoidance**
  - 33% savings in capital expenditures by extending use of Network Appliance systems to four years instead of projected three years
- **Lower Costs**
  - Up to 33% reduction in administrative costs for storage environment
- **Scalability**
  - Support 10% annual growth in backup data with existing staff
- **Productivity**
  - 6 hours per week by automating updates of tech support data to field offices
- **Time to Market**
  - Faster time to market due to more reliable development environment