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Success Stories

Blue Ridge Paper Wraps Up Storage Savings, Availability with NetApp Storage



KEY HIGHLIGHTS

Industry

Manufacturing

The challenge

Protect vital manufacturing application data; deploy networked storage architecture; optimize storage and administrative efficiency.

The solution

NetApp FAS series and NetApp NearStore® with SnapMirror® deliver superior data protection and availability, with low storage TCO.

Benefits

- Reduced database recovery times by 98%
- Saved up to \$300,000 annually in system administration
- Boosted database performance by as much as 40%
- Streamlined SOX compliance
- Saved \$150,000 in tape acquisition and deployment costs

CUSTOMER PROFILE

Blue Ridge Paper manufactures a variety of papers for envelopes, cups, and plates, as well as paper packaging, including coated, uncoated, and ovenable paperboard. The company is a leading producer of gable-top packaging for liquid and dry products such as juices and detergents.

THE CHALLENGE

Improve data availability and storage efficiency

To reduce operating costs and compete successfully in the price-sensitive market for paper products, Blue Ridge needed a cost-effective shared storage infrastructure to handle growing storage demands and to ensure that vital manufacturing processes operate without a glitch. At the same time, the company had to better manage critical application data to address regulatory requirements. For Blue Ridge, NetApp's solutions meet its business requirements today, while providing a reliable platform for growth.

"We operate day and night, 365 days a year. When our manufacturing systems are down, we cannot track products, enter orders, or handle logistics," says Jeff Trantham,

IT director at Blue Ridge Paper. "When we used a direct-attached storage model, we struggled to provide the availability that our critical business systems required." Like many manufacturers, Blue Ridge relies extensively on its customer relationship management (CRM) and manufacturing execution system software to keep its business running.

The company's goal was to update existing storage processes with a more effective, scalable approach. For example, Blue Ridge relied on tape backups for its databases and other systems. Unfortunately, restore times from tape were too long—it could take 4 hours or more to restore an Oracle® database from tape, putting critical applications out of commission and impairing business productivity.

Storage management was also a growing burden. Each Windows® and UNIX® system used direct-attached storage. The different RAID environments and management interfaces made administration complicated. Sharing data between platforms was difficult, and the small IT department struggled to provision the right amount of storage for optimal utilization and to add storage quickly when needed.

“NetApp helps us deliver superior levels of application availability while maintaining a very lean IT shop. We have grown our server and storage infrastructure in the past 3 years by 30% to 40%, without hiring additional administrators. This results in potential savings of up to \$300,000.”

Jeff Trantham
IT Director, Blue Ridge Paper

By 2004, the company was examining alternatives for networked storage, considering both initial expenses and ongoing operational costs. “We were looking for storage solutions that delivered scalability, reliability, and value,” says Trantham. “We didn’t have a Fibre Channel infrastructure and we needed storage connectivity for Windows and UNIX.”

THE SOLUTION

A strategic storage platform for changing needs

After evaluating networked storage alternatives, Blue Ridge found that NetApp offered the best combination of initial cost, low ongoing cost of ownership, and flexibility.

“Our CRM and manufacturing execution systems use Oracle databases, so the strength of the Oracle and NetApp relationship is important,” says Trantham. “NetApp also has the best support for iSCSI storage, enabling us to avoid costly Fibre Channel investments. Equally important in our decision to deploy NetApp is that the solutions give us the ability to manage storage for heterogeneous systems using a single interface.”

The company has two campus data centers in its Canton, North Carolina facility, with high-bandwidth connectivity between them. A NetApp FAS3020 storage system in the primary data center provides the networked storage for most of the company’s applications and file systems. A NearStore R200 in the second data center hosts replicated data as well as disk-based backups. SnapMirror replicates data between the systems, depending on the application requirements.

The NetApp solutions support multiple storage protocols, so UNIX and Windows systems can share storage. Administrators use a single storage management interface and can provision and share storage between systems. The environment also scales easily to accommodate growing storage requirements.

“NetApp’s storage systems have helped us protect the data and applications that are vital to our business, while optimizing operations for low overall costs,” says Trantham. At the same time, the storage environment is flexible enough to support Blue Ridge’s changing business needs. Since deploying NetApp, the company has added systems and storage, deployed virtual machines by using VMware, and created highly available application environments.

BUSINESS BENEFITS

Protection for essential applications with virtualization and replication

Blue Ridge protects its vital application data by using SnapMirror replication between NetApp storage systems, so that essential data is always available, even if one data center fails.

Today, most of the company’s critical applications run on virtual machines using VMware or IBM Virtualization Engine. Combining replication with server virtualization creates a highly available application environment. Administrators can proactively move systems between servers for maintenance purposes, eliminating planned downtime. And in case of unplanned outages, administrators can quickly restart virtual applications on alternate hardware, bringing systems online in minutes instead of hours or days.

Blue Ridge now has a highly resilient application environment that protects its business from potential losses in productivity and sales due to application failure. “Using our NetApp storage, we can start up an Oracle instance in less than 5 minutes on an alternate, standby device, without needing Oracle Real Application Clusters (RAC) or other clustering solutions,” says Trantham.

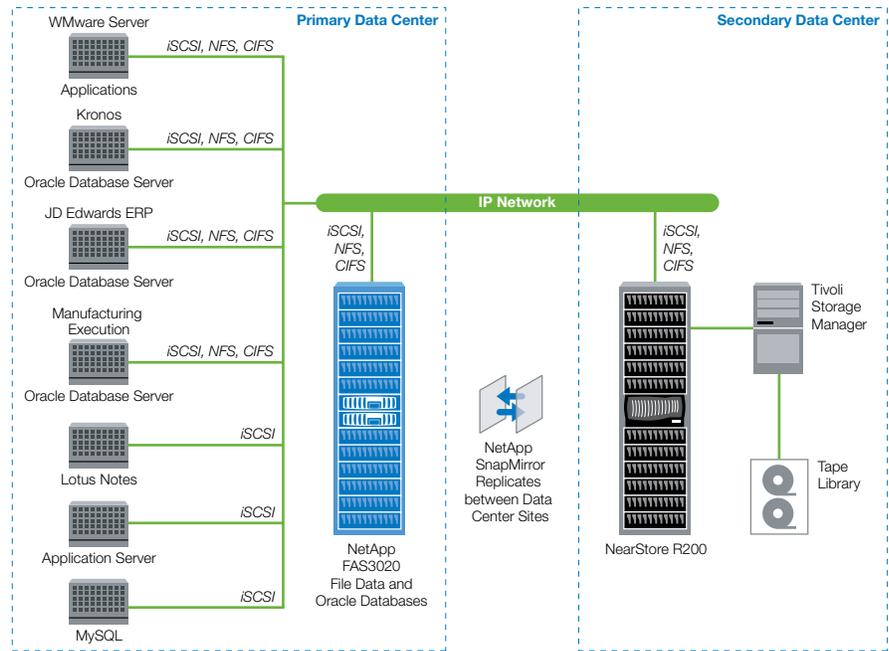


Figure 1) A NetApp FAS3020 storage system in the primary data center provides the networked storage for most of the company's applications and file systems. A NearStore R200 in the second data center hosts replicated data as well as disk-based backups. SnapMirror replicates data between the systems, depending on the application requirements.

The combined solution even helps Blue Ridge meet its Sarbanes-Oxley requirements with demonstrated disaster recovery for critical systems. The company tests the failover capabilities on a quarterly basis as part of ongoing Sarbanes-Oxley compliance.

Ongoing cost savings

NetApp's storage solutions reduce the total cost of ownership (TCO) of storage by enabling centralized, streamlined storage administration, better storage utilization, and simplified data protection.

"NetApp helps us deliver superior levels of application availability while maintaining a very lean IT shop," says Trantham. "We have grown our server and storage infrastructure in the past 3 years by 30% to 40%, without hiring additional administrators. This results in potential savings of up to \$300,000."

In addition, Blue Ridge has saved money on hardware and networking investments. For example, by using IP storage networking and iSCSI storage protocols, the company avoided investments in Fibre Channel network infrastructure. It has also reduced reliance on tape backups and eliminated the need for costly tape system upgrades.

Faster backups and recoveries

Regular backups are an essential part of doing business and meeting regulatory requirements. Before the NetApp deployment, Blue Ridge was running into the limitations of its tape-based backups. Trantham says, "Before moving to NetApp, we had an outage of an Oracle database and it took 4 hours simply to restore the data from tape. We were looking at upgrading the tape systems to get better performance and availability."

Today, the company writes backups to disk on the NetApp NearStore system. The company uses IBM Tivoli Storage Manager to back up data to cost-effective disk storage on the NearStore R200 system. The backups are then written nightly from the NearStore system to tape.

The rapid backups and recoveries are a definite boost to Blue Ridge's business. Recovering data from disk takes a fraction of the time of tape-based restores, eliminating time spent finding and loading the correct tape, looking for the files, and reading them. The restore that took 4 hours in the past can now take place in under 5 minutes—a recovery time reduction of 98%.

The company still uses tape for nightly backups from the NearStore system, to support long-term archiving and off-site storage. But tape performance is no longer a deciding factor in either backup or recovery performance. "Because we're using tape only for the second stage of the recovery system, we don't have to upgrade our existing tape system," says Trantham. "This saved us about \$150,000 in tape system acquisition and deployment costs."

Improved database query performance

Because Blue Ridge relies on Oracle databases for its essential applications, the strength of NetApp's and Oracle's partnership was an important consideration. "We were particularly interested in the relationship between NetApp and Oracle, and the joint testing, integration, and support," says Trantham.

Blue Ridge connected the storage from NetApp to its database servers by using NFS mounts and existing IP infrastructure. NetApp's storage delivered immediate performance improvements for the company's Oracle databases. "By moving our Oracle databases from direct-attached storage to NetApp NFS, we have improved

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Flexibility for change and growth

Once a midsized, employee-owned business, Blue Ridge Paper was recently acquired by Evergreen Packaging, a large company with more than 100 years of history in the paper packaging industry. NetApp’s unified storage infrastructure continues to pay off in this

expanded business environment. With facilities in Memphis connecting to data centers in North Carolina, Evergreen can now take advantage of long-distance replication to protect essential applications from site-wide disasters. And the easy scalability and flexibility of NetApp’s storage systems will support continued growth as business needs change.

NetApp creates innovative storage and data management solutions that help you accelerate business breakthroughs and achieve outstanding cost efficiency. Discover our passion for helping companies around the world go further, faster at NetApp.com.



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SOLUTION COMPONENTS

NetApp Products

NetApp FAS3020
NetApp NearStore R200
NetApp SnapMirror

Protocols

IP SAN (iSCSI)
NFS
CIFS

Environment

Applications: JD Edwards 7.3.3, OptiVISION 550 (production management), Lotus Notes 7.0

Databases: Oracle 8i, 9i, and 10g;
Microsoft® SQL Server™ 2000

Servers: IBM AIX 5.3, VMware® ESX,
Microsoft Windows 2000 and 2003

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