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Mazda Partners with Trace3 and NetApp to Drive Long-Term Success

KEY HIGHLIGHTS

Industry
Automotive

The challenge
Isolated storage islands were difficult to manage. Wanted to simplify fragmented backup processes and reduce risk to mission-critical data.

The solution
Replace all networked storage, direct-attached storage, and tape backup systems with NetApp® FAS for primary storage. Create new DR solution using SnapVault® and a NearStore system.

Benefits
- Improved performance, flexibility
- Achieved comprehensive data protection
- Implemented rapid backup and reliable recovery
- Achieved significant TCO improvements
- Streamlined management

CUSTOMER PROFILE

Mazda North American Operations is responsible for sales and marketing, parts and service operations, and research and development in the United States for Japan-based Mazda Motor Corporation. Its customers include some 700 dealerships throughout the United States that buy or lease its line of cars, trucks, minivans, and SUVs. Given its size, Mazda requires a powerful, flexible, scalable, and easily managed IT infrastructure that can give it the capabilities to gain a competitive advantage in the automotive marketplace.

THE CHALLENGE

Support rapid data growth and overhaul fragmented backup processes

Mazda has been exploring a variety of new, data-intensive initiatives designed to improve efficiency and strengthen dealer relationships. Storage performance and availability are critical to the success of these projects, but Mazda's complex and distributed direct-attached storage environment was unable to keep pace. The Mazda IT team was challenged with managing a growing number of Windows® servers, including multiple servers in each remote office. Scalability was a major concern from both a cost and a management perspective, because capacity had to be added to each server individually and resulted in pockets of unused storage throughout the organization.

Mazda also recognized that an unexpected catastrophe could result in irreversible data loss. Regional offices relied on local storage servers that were backed up to tape and physically carried off site. "We had secretaries doing tape backups," recalls Mark Williams, a project lead consultant for Mazda, "and they would do so at different times, so we were never exactly sure what data had been backed up. We estimated that in the event of a major disaster, it would take three days to complete a failover with the tapes."

THE SOLUTION

Trace3 Professional Services and NetApp unified storage

To upgrade its infrastructure, Mazda turned to IT solutions provider Trace3. Instead of addressing a single tactical issue, Trace3 designed a complete infrastructure solution to cost-effectively address Mazda's long-term IT requirements. "Trace3 really stood out because it offered a comprehensive

> # "Our NetApp unified storage deployment paid for itself in just 10 months while providing immediate, identifiable cost savings."

Kai Sookwongse
System Manager for LAN Services, Mazda North American Operations

solution," explains Kai Sookwongse, system manager for LAN services, Mazda North American Operations. "Our account team presented a detailed business plan outlining 10 critical goals we had to meet to realize our strategic objectives. Trace3 thought through our situation in detail and provided a full solution, including switches, unified storage, software, and tape."

"Our goal is to help Mazda build an infra-structure that addresses its immediate issues and is flexible enough to grow with its business and operational requirements," explains Hayes Drumwright, senior account manager, Trace3. "Based on years of experi-ence with multiple client environments, we proposed a solution that involved replacing Mazda's networked storage, direct-attached storage, and tape backup systems with a cost-effective three-tiered storage infrastruc-ture based on NetApp and ADIC technology."

At Mazda's U.S. headquarters, high-performance NetApp Data ONTAP®-based-FAS systems support mission-critical production Microsoft® SQL Server® data-bases using iSCSI while simultaneously supporting Exchange and an Epiphany marketing program using NAS protocols.

NetApp SnapMirror® software replicates data on the FAS storage system to a NetApp NearStore system, which provides disk-based backup for online disaster recovery.

In each of seven regional offices, Windows storage was consolidated on affordable, entry-level NetApp storage systems. NetApp Snapshot™ technology enables Mazda to create copies of incremental data on an hourly basis, and NetApp SnapVault soft-ware copies a daily Snapshot copy to the NearStore system at headquarters. The backup copies stored on the centralized NearStore system are sent to tape for off-site archival.

BUSINESS BENEFITS

High availability and performance provide the ability to launch new services
High availability and performance have helped Mazda deliver competitive services and improve the level of support provided to its customers. "One of our major initiatives involves a next-generation parts distribution system that runs off our SQL Server data-base and interfaces with FedEx, UPS, and other carriers," explains Sookwongse. "This parts logistics application package will help ensure rapid response to parts requests,

centralize and rationalize billing, enhance inventory management, and more. We couldn't deploy such a system until we were sure we'd be able to support our application performance requirements and ensure 100% availability. Trace3 helped us migrate our SQL Server databases to the NetApp iSCSI solution, which provides the necessary performance plus enables us to take advan-tage of robust backup and recovery capabili-ties. Our success with this project has given us confidence to pursue other ambitious initiatives, such as a state-of-the-art cus-tomer relationship management system."

Robust data protection plus improved scalability and flexibility
Centralizing information from headquarters and remote sites on NetApp storage has vastly improved data availability and protec-tion. "Relying on regional offices to perform their own tape backups at irregular times and under uncertain conditions was unac-ceptable," says Sookwongse. "NetApp gives us complete control of the backup process for all of our remote sites and enables us to determine when and how often backup copies are created. We can instantly restore any of multiple Snapshot copies on an individual NetApp system or
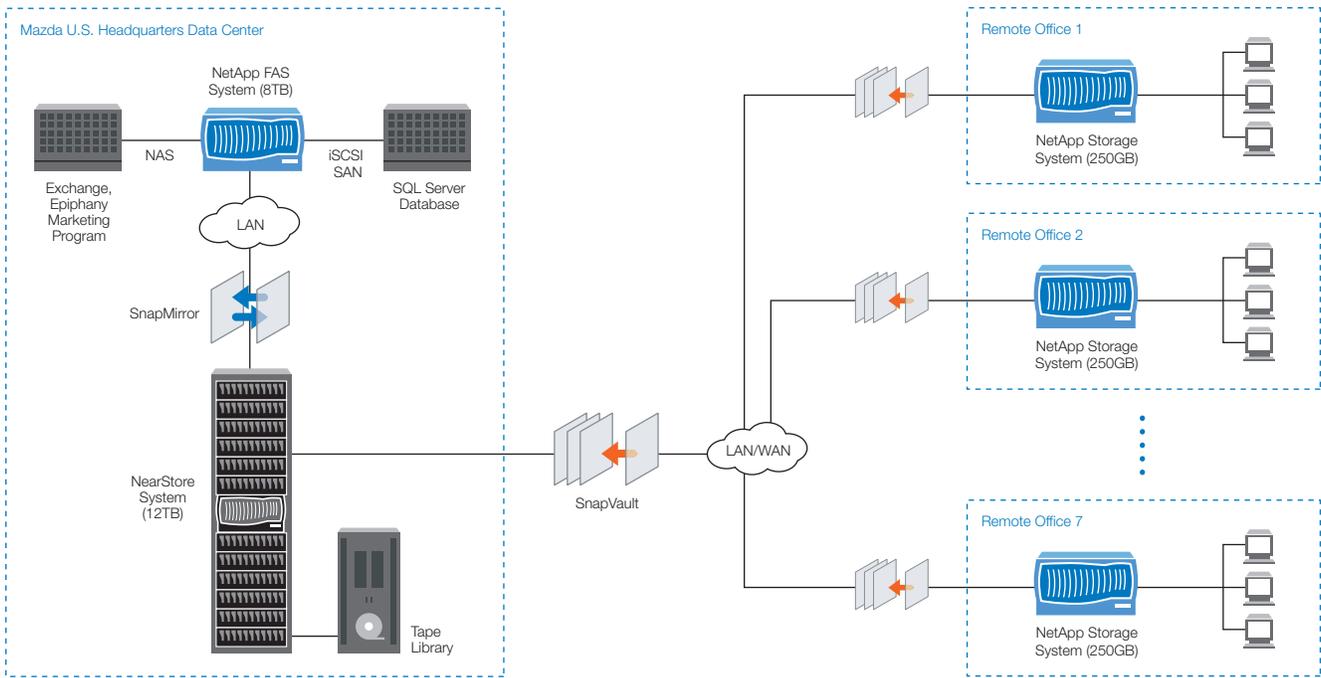
Figure 1) Mazda North American Operations storage infrastructure.

from the NearStore system. And, instead of being vulnerable to corrupted tapes, our data is recovered from a NetApp system that constantly monitors data quality. We are working toward a goal of full failover in minutes—as opposed to three days with the old system."

As for adding capacity to the system, Williams notes, "Over the past year our storage requirements exploded from a half terabyte to more than 5TB. Thanks to NetApp, it hasn't been a problem. When we want to develop new applications, it's simply a matter of adding disks as they're needed. There are no server configuration issues and no required downtime."

Providing support for a broad range of protocols
The highly flexible NetApp unified storage architecture enables Mazda to concurrently support multiple operating systems and storage protocols, streamlining management and maximizing the utilization of existing storage capacity. NetApp simultaneously supports a broad range of protocols—CIFS, NFS, FCP, iSCSI, and so on—allowing Mazda to support applications requiring both block and file data on a single storage infrastructure.

"NetApp doesn't care where the data comes from," notes Williams. "This has made long-term planning much simpler and gives us much greater flexibility to quickly support new applications or unexpected growth. For example, our developers were initially skeptical of iSCSI and the performance claims we felt we could achieve. But when it took us only three hours to get the NetApp iSCSI solution up and running—versus three days for similar service from other vendors—they began to come around. Now they can't imagine being without it, in terms of not only its performance capabilities but their own quality of life as well, because it's so easy to manage."

Improved total cost of ownership
By leveraging Trace3's expertise and NetApp technology, the Mazda IT team not only addressed its business requirements but also significantly improved the cost-effectiveness of its IT infrastructure. "Our NetApp solution paid for itself in 10 months," notes Sookwongse. "Reducing Mazda's reliance on tape libraries and eliminating third-party off-site storage alone saved several hundred thousand dollars. These savings enable us to continue upgrading our infrastructure to support the new and ongoing projects that are critical to Mazda's success."

Mazda enjoys significant savings compared to what it would have spent with alternative solutions. NetApp leverages a single operating system across its entire product line, creating an "any-to-any" architecture that allows any NetApp system—whether it is a small, remote office system or a high-performance, high-capacity system—to replicate data to any other NetApp system. Alternative solutions required that Mazda purchase high-capacity storage systems for even the smallest regional office. The Near-Store near-line storage system also enables Mazda to economically store backup copies and references. "We have been able to closely map our NetApp investment to support exactly the capacity and performance our applications require," comments Williams.

Adds Sookwongse, "Despite tenfold growth in our data and applications requirements, we have not had to add any IT headcount since our initial NetApp deployment. In fact, storage is so easy to manage now that end users can do their own data restores. This reduces the number of helpdesk calls and provides yet another cost savings."

"Overall, we view Trace3 as a strategic partner rather than just another IT vendor. We have been thoroughly impressed with

"Working with Trace3 and NetApp to upgrade our IT infrastructure has helped us effectively compete with major automakers that have considerably greater resources. Despite tenfold growth in our data and applications requirements, we have not had to add any IT headcount since our initial NetApp deployment."

Kai Sookwongse
System Manager for LAN Services, Mazda North American Operations

how Trace3 and NetApp have addressed all of the challenges we've thrown at them," concludes Williams. "As our business and IT requirements evolve, we are confident that our relationships with Trace3 and NetApp will enable us to address them."

SOLUTION COMPONENTS

NetApp products
NetApp FAS storage systems

NetApp NearStore system

NetApp SnapMirror software

NetApp SnapVault software

Protocols
CIFS, NFS, FCP, iSCSI

Environment
Applications: Microsoft SQL Server databases, Microsoft Exchange, Epiphany marketing program

Operating Systems: Microsoft Windows

TRACE|3

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