

Navitaire Selects Network Appliance and Datalink to Maximize the Availability of Key Airline Systems

NAVITAIRE

Technology that liberates

“Our customers rely on Navitaire for a wide variety of high-availability services to support their core business functions. To ensure that we can consistently deliver our service commitments, we store our mission-critical data on NetApp systems.”

GALEN SELZLER
Manager of IT
Navitaire

Key Highlights

- **INDUSTRY**
IT services
- **LOCATION**
Minneapolis, Minnesota
- **KEY BUSINESS CHALLENGES**
Ensure high availability
Implement robust DR plan
Ensure long-term flexibility
- **KEY BUSINESS SOLUTIONS**
NetApp storage systems
NetApp NearStore® systems
NetApp SnapMirror®,
SnapVault™, and
SnapManager® software
Datalink professional services
- **KEY BUSINESS BENEFITS**
Global reliability
High availability
Robust data protection
Rapid backup/recovery
Improved performance

The Customer: Navitaire® Inc.

Navitaire Inc. (www.navitaire.com), a pioneer in the application service provider industry, has been providing industry-leading hosted reservations, direct distribution, revenue protection, decision support, and passenger revenue accounting services to airlines since 1993. The company's worldwide customer base comprises more than 40 airlines, including six of the world's 10 largest airlines and a growing number of leading low-fare and midsize airlines. A wholly owned subsidiary of Accenture, Navitaire is headquartered in Minneapolis, with offices in Salt Lake City, Austin, Sydney, Manila, and Prague.

The Challenge: Maximize Availability and Support Long-Term Growth

Due to an aging direct-attached storage infrastructure, Navitaire was at risk for outages that could impair its ability to meet service-level agreements (SLAs) for certain applications. In addition to facing financial penalties, Navitaire was concerned that this architecture could impact mission-critical systems, resulting in business continuity risks for its clients. Navitaire further recognized that although its disaster recovery plan met industry common practice, it could result in prolonged recovery times and unavoidable data loss in the event of a catastrophe.

With a steadily growing global customer base, rapid growth in new applications, and increasing data demands, Navitaire needed a highly flexible yet economical approach to storage expansion. “Our goal was to build a long-term solution,” says Galen Selzler, manager of IT, Navitaire, “so we could put our focus back on providing and maintaining value-added services to our clients.”

The Solution: Highly Scalable NetApp Storage and Datalink Professional Services

To support a global environment of more than 420 servers, 1,125 workstations for its airline clients, five data centers, and more than 70TB of data, Navitaire relies on Network Appliance™ storage and expert consultative advice and professional services from Datalink, a trusted information storage architect. Explains Selzler, “Back in the fall of 2003, when we needed to deploy a block-based SAN solution, Datalink helped us understand the alternatives and the value of Network Appliance.” Tim Rasmussen, senior product manager at Datalink, adds, “We have a great deal of expertise designing and implementing customized storage systems plus a deep understanding of Navitaire's business requirements. NetApp solutions enabled us to cost-effectively align Navitaire's IT infrastructure with the company's business needs.”

To date, Navitaire has deployed 17 NetApp primary storage systems worldwide to support a variety of data, including Oracle®, Sybase, and SQL Server databases. To improve reliability, Navitaire is upgrading its mission-critical Oracle Database to Oracle9i™ RAC and today

CUSTOMER SUCCESS STORY

Network Appliance storage solutions offer customers seamless data management, simplified backup and recovery, and effortless remote office access to data at the lowest total cost of ownership.



supports 20 Oracle Database instances on clustered NetApp fabric-attached storage (FAS) systems. Data is mirrored between NetApp systems using NetApp SnapMirror software and backed up from the NetApp systems to NearStore systems at data centers in Australia and Minneapolis using NetApp SnapVault software. To complete its data protection strategy, the company backs up its NearStore systems to tape backup units.

Ongoing support is provided by Datalink's technical support team. Navitaire also engaged NetApp Professional Services to perform monthly System Availability Management (SAM) Plus audits to ensure its solution operates at peak efficiency.

Business Benefits: High Availability and Flexibility

"The increased system reliability of our NetApp storage architecture has helped us meet our goal of 'five nines' disk availability," says Selzler. "Since deploying NetApp storage, we have had near perfect database availability in our RMS revenue management product, which was the first application fully deployed on Oracle on NetApp. That is the reason we are comfortable moving our other mission-critical Oracle applications to this disk technology. If we had continued with a direct-attached infrastructure, the potential for additional penalties alone could have substantially increased our costs year over year."

Frequent nondisruptive backups and rapid recovery capabilities are key factors in Navitaire's improved ability to meet SLAs. "Tape backup used to be our only option; it was slow and unreliable and put an additional burden on the servers and the network. Overnight backups for 2TB of data were taking more than 12 hours," says Selzler. "With NetApp, we take Snapshot™ copies of data multiple times a day and use SnapVault to send the copies back to a NearStore system in minutes. Backups no longer encroach on user time, which eliminates one more penalty exposure point."

"We have done multiple production Oracle Database point-in-time recoveries using Snapshot technology and online Oracle backups. We simply restored the most recent Snapshot copy of our Oracle Database. It took about two seconds to restore compared to three to four hours for a 10-20GB restore before. We've also been able to meet the data requirements of a new reservation platform under development by keeping six hours (in 15-minute increments) of Snapshot copies online for immediate recovery. This ensures that if data is corrupted, we have multiple backup copies and can restore the most current version of uncorrupted data. NetApp offered the only solution that could meet that requirement," points out Selzler.

Economical Support for Long-Term Innovation and Growth

Relying on a global Network Appliance storage infrastructure provides the flexibility Navitaire needs to grow and innovate profitably.

NetApp systems facilitate rapid and economical storage expansion on-the-fly, enabling the IT team to simply add disks to the storage pool. "This is a stark contrast with the previous architecture, where we sometimes purchased servers with unneeded computing capacity to gain more storage," explains Selzler. "Even though our data storage requirements grew from 5TB to 70TB in just two years—nearly doubling every six months—we haven't had to add head count for administration.

"We need to easily and rapidly accommodate new clients and technologies," continues Selzler. "The NetApp solution lets us use NAS, SAN, NFS, CIFS, iSCSI—whatever we need to support current and future products."

For example, Navitaire needed to support the expansion of its international operations but found it cost-prohibitive to locally build an expensive Fibre Channel SAN infrastructure and hire on-site IT resources.

Instead, Navitaire deployed inexpensive entry-level FAS250 and FAS270 NetApp storage systems running the iSCSI protocol in London, Sydney, and Minneapolis to support Exchange and SQL Server database information.

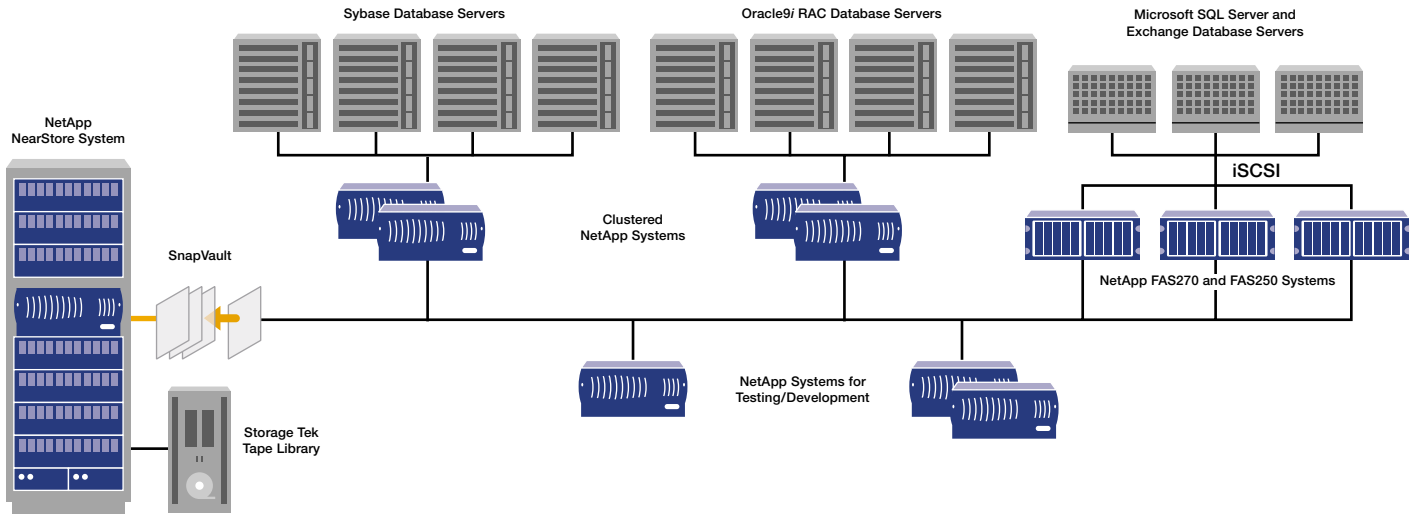
"Our familiarity with NetApp and Microsoft's support of iSCSI convinced us that a NetApp iSCSI SAN would address our requirements perfectly," explains Selzler. "We had the iSCSI deployment working within 15 minutes of calling NetApp and installing the Microsoft® software initiator driver. The entire process took less than two weeks and provided us with high-performance transmission speeds at a very affordable cost.

"The combination of a broad range of NetApp solutions with the expertise demonstrated by Datalink's professional services team gives us confidence in our ability to support the development of innovative new products," concludes Selzler. "Our ongoing relationships with NetApp and Datalink will help enable us to continue to meet our long-term challenges."

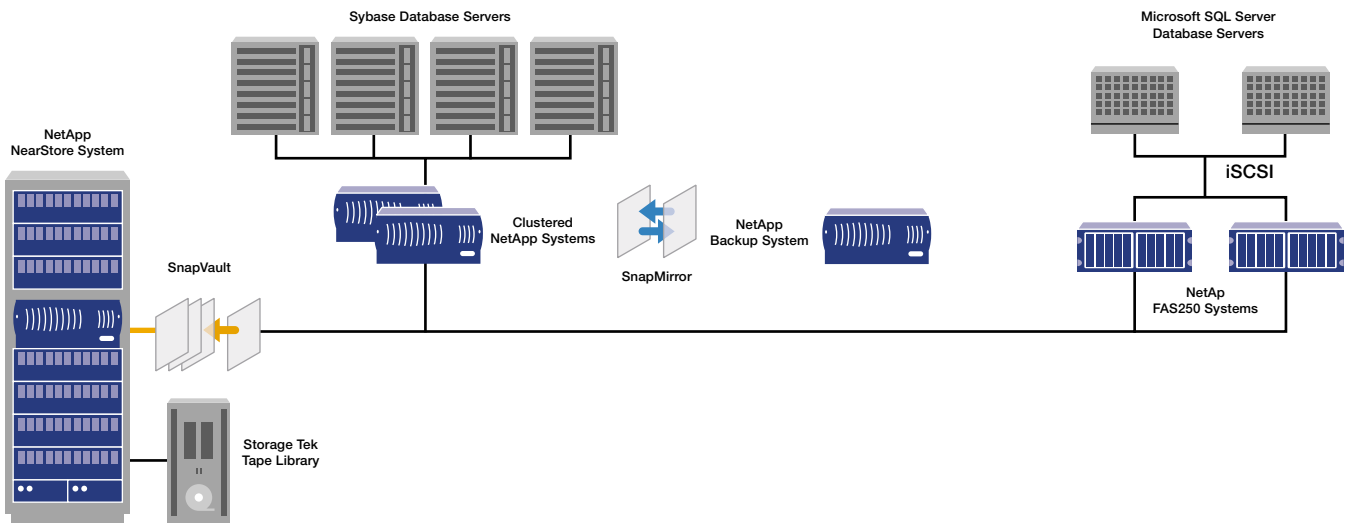
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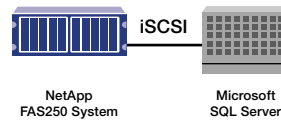


Figure 1) Navitaire global storage infrastructure.

Navitaire relies on 17 NetApp primary storage systems to support four offices in three countries. NetApp DFM software enables the IT team to manage the entire global infrastructure, while NetApp SnapManager for SQL Server and SnapManager for Microsoft Exchange software streamline administrative processes. Data is replicated to NearStore nearline storage systems, which store 31 daily backups, five weekly backups, and one monthly backup.



Network Appliance, Inc.
 495 East Java Drive
 Sunnyvale, CA 94089
 www.netapp.com

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