



NetApp™
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Success Story

NetApp Helps Concord Servicing Keep Cash Flowing for Clients



CONCORD®
Servicing Corporation

KEY HIGHLIGHTS

Industry
Financial services

The challenge

- Provide uninterrupted access to customer data
- Furnish loan details and reports to corporate clients
- Deliver up-to-the-second contract details, 24x7

The solution

NetApp® MetroCluster synchronizes data between storage units for uninterrupted service and zero data loss. Performance Acceleration Modules (PAMs) reduce response time.

Benefits

- Cut RPO from 24 hours to 90 seconds to eliminate data loss
- Enabled nearly continuous operations
- Improved Web response time by 50%

CUSTOMER PROFILE

Developers of time-share resorts and retail land provide loans to help buyers purchase their properties. However, loan processing is not their area of expertise, so many turn to companies like Concord Servicing Corporation.

Founded in 1988, Concord Servicing provides technology and loan servicing solutions for dozens of clients with more than 600,000 consumer accounts, representing a portfolio in excess of \$2 billion. The company specializes in servicing and collecting installment loan receivables and maintenance fees, handling everything from sending out loan payment coupon books to processing payments as they come in and reporting on loan performance. Concord Servicing can even run the call centers that support borrowers, although many clients keep that role in-house, with their call center staff accessing Concord's proprietary Web-based application to get the information they need.

Concord's services help its clients identify and resolve loan payment delays promptly by providing immediate access to loan status information. In addition, the company helps developers secure financing for new projects by giving them the information they need—extensive analysis and details on the loans within each bundle, including

loan value compared to property value, borrower payment history, and more—to persuade lenders to buy their loan portfolios. This helps Concord's clients sell their loan portfolios, moving them off their balance sheets and bringing in cash to continue development projects.

THE CHALLENGE

For Concord's customers, business continuity is paramount, with speed of access to data a close second. "If our systems were down for a day or two, we wouldn't be able to identify overdue payments for collection or process payments. Our clients would be unable to get funding from lenders, which could lead to loan defaults of hundreds of millions of dollars," explains Randy Babcock, senior VP of IT at Concord. "Whether the person accessing our system is a customer service rep or an executive putting together a package of loans for potential investors, they need up-to-the-second data immediately, 24x7. They need to know we're protecting their data, and need to be able to access it quickly, in less than one second per query."

Seeking the perfect solution

Business continuity depends on having a well-designed, reliable system for storing and backing up data. Several years ago, Concord moved from DAS systems to a

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Randy Babcock
Senior VP of IT, Concord Servicing

NetApp SAN, implementing a NetApp FAS825 storage appliance and using NetApp SnapMirror® technology to copy data at regular intervals from its primary system to a FAS250 backup storage system. Concord made tapes of its data daily and stored it off site.

“Consolidating data from disparate DAS systems to NetApp systems and making tapes gave us a comprehensive master backup of our data to fall back on, so we could resume service in hours,” says Steve Cowden, network analyst at Concord. “But we set our standards higher. Even in the event of a major failure, we wanted the ability to fail over seamlessly to a synchronous copy of our data.”

Concord sought a technology that would meet its high standards for reliability and business continuity at a price that would be affordable. After researching its options, Concord purchased NetApp MetroCluster, which combines array-based clustering with synchronous mirroring to provide zero data loss and make recovery possible within minutes, rather than hours or days.

The need for speed

Clients from all over the world keep Concord's system busy at all times, accessing an AIX Universe database to check on payment status and customer history details through the company's Web application. The system gets about 300,000 hits a day, with a peak of 35,000 hits per hour. Inundated with read requests, the system sometimes slowed: Response times could climb as high as 500 milliseconds because of latency and disk I/O limitations.

Concord wanted to ensure clients a consistent response time of under 200 milliseconds, but was reluctant to invest in additional disk drives to speed throughput. NetApp Performance Acceleration Module, an intelligent read cache, helped the company optimize the performance of random read-intensive workloads without the expense of additional disk drives.

THE SOLUTION

Concord stores its data in a 140GB IBM AIX Universe database, accessed by a proprietary Web-based application built on SQL Server®. The company also relies on Microsoft® Exchange Server for e-mail, Microsoft Great Plains software for accounting, and GoldMine for CRM. Its NetApp SAN stores the data for all these databases and applications.

When it first implemented the MetroCluster solution, Concord had offices spread among three buildings. MetroCluster was on two FAS3020 storage systems in two buildings, mirroring data from the unit in the main server room to one in another building. Today, Concord offices are consolidated in just one building. MetroCluster runs on one controller on a NetApp FAS3140 storage unit in the data center on the third floor and on another controller on a FAS3140 on the ground floor. MetroCluster software constantly mirrors and synchronizes data between the two floors, so even if a controller or multiple disks go down, service continues seamlessly, often without any IT intervention.

Accelerating performance with PAM

When Concord upgraded to the NetApp FAS3140 storage platform, it also installed NetApp PAM cards in the machines, adding a dedicated read cache for faster, more consistent performance. Each PAM card is an intelligent caching module with 16GB of DRAM that resides in a PCI Express slot of the storage controller. Up to five PAM cards can be combined into a seamless, 80GB read cache. Because this cache can handle high volumes of incoming read requests, it reduces the need to access data on disk drives. This speeds response, because the PAM cache can return requested data more quickly than the disk can.

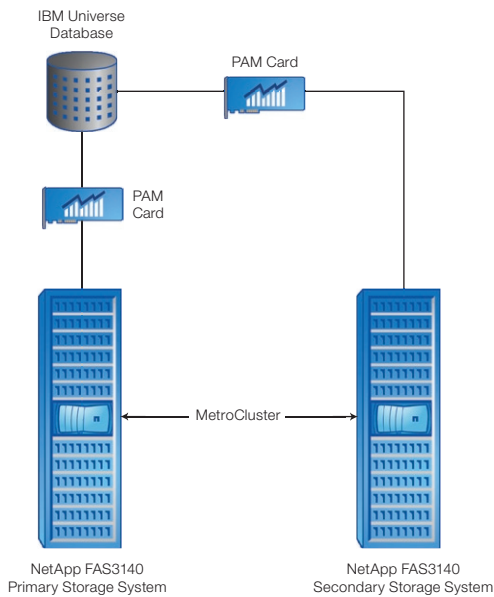


Figure 1) NetApp MetroCluster synchronizes data between storage units for uninterrupted service and zero data loss. Performance Acceleration Modules reduce response time.

BUSINESS BENEFITS

To meet its quality-of-service standards and remain competitive, Concord must provide its clients reliable data access. With the NetApp solution providing rapid access to critical financial information, Concord's clients receive consistently fast responses to their queries. What's even more important is what they don't see: no impact on speed or continuity of service, even when there are disk failures or other technical problems.

With NetApp products, reliability comes at the right price. Concord is able to offer its clients affordable, uninterrupted service and maintain its own profit margin. Compared to traditional host-based clustering solutions for availability, MetroCluster delivers savings of up to 50% on hardware, software licenses, and ongoing staff administration time for Concord.

"MetroCluster is fantastic—it automates so much of the administrative burden that it's a no-brainer to manage," says Cowden. "Plus, it only took us two maintenance windows to fully implement, minimizing disruption to our operations."

Uninterrupted service with MetroCluster

MetroCluster helps protect against interruption due to system problems. If a storage controller goes down, the surviving controller takes over its workload until the failed

controller can be brought online. "We can recover automatically, even if multiple storage components fail," explains Cowden. "Recovery can take from 0 to 90 seconds, whereas before it could easily have taken several hours."

The switch to MetroCluster has also virtually eliminated the risk of data loss. "Before, our recovery point objective (RPO) could have been as high as 24 hours, which meant, at times, we risked losing an entire day of transactions and other data," says Babcock. "Now, we can promise our clients zero data loss, even in the event of a major failure. Zero data loss is what keeps them—and us—in business."

Concord also uses MetroCluster as a fast and convenient way to upgrade Concord's systems without disrupting service to its clients. "We can fail over the secondary controller, update it, give back control, and then fail over the primary, update it, and then give back control," explains Cowden. "We can complete major maintenance without any interruption—all our customers see is seamless service."

Faster response time becomes cost effective with PAM cards

In the past, Concord handled huge numbers of queries by spreading the load among shelves and disks. "But with as many as

500 heavy users and several thousand consumer logins each day, we still found a few times of day when response times would creep above our target," explains Babcock. "No longer: With NetApp PAM cards, we're returning results to clients in less than 200 milliseconds, no matter how busy the system is."

Because PAM cards enabled Concord to reduce storage latency and increase I/O throughput without adding disk drives, it proved an extremely cost-effective way of increasing responsiveness to clients. Disk drives have to spin to access requested data, which takes time and energy. PAM cards now handle 40% to 60% of read requests, halving the workload for the disk drives, speeding response, and reducing Concord's electricity costs.

Building rock-solid disaster recovery on NetApp

Concord's success depends on its clients' confidence that it will always deliver up-to-the-second data, immediately. NetApp solutions helped Concord achieve this goal, and the company is planning its next steps. To provide protection against data loss even in the event of a major disaster, Concord is installing another storage array at a data center 10 miles away from its main data center, with NetApp SnapMirror transferring

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Network Analyst, Concord Servicing

data between the two controllers. Concord also plans to complete a VMware® implementation and use NetApp SnapManager® for Virtual Infrastructure to provide a fully consistent point-in-time copy of its virtual machines.

“We won’t settle for good enough, because our clients depend on the integrity and availability of our data,” explains Babcock. “With MetroCluster and PAM cards, we can continue to grow our client base by delivering dependability and responsiveness, all at a price that we—and our clients—can afford.”

SOLUTION COMPONENTS

NetApp products

NetApp SnapManager for Microsoft Exchange
NetApp SnapManager for SQL Server
NetApp Performance Acceleration Module
NetApp FAS3140
NetApp FAS3020
NetApp FAS2050
NetApp MetroCluster
NetApp SnapMirror
NetApp SyncMirror®

NetApp services

NetApp Professional Services

Protocol

CIFS, iSCSI, FTP, NFS, FCP

Third-party products

VMware

Environment

Applications: Microsoft Exchange Server 2003, proprietary Web applications, GoldMine CRM, Microsoft Great Plains software

Database: IBM Universe 11, Microsoft SQL Server 2005

Server platform: AIX on IBM Power6 and Windows® running on Dell servers

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

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