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Success Stories

Southcentral Foundation Builds Exemplary Health Care Structure on NetApp IP SAN



KEY HIGHLIGHTS

Industry
Health care

The challenge

Upgrade to a storage solution that can support high data growth, the integration of multiple facilities, and a new disaster recovery (DR) initiative.

The solution

Implement NetApp's NAS/IP SAN solution to deliver data protection and seamless disaster recovery for all critical applications, including the foundation's paperless dental records and imaging system.

Benefits

- Capital and administrative cost savings
- High-speed, disk-based backups
- <1.5-hour DR for any application
- Fast turn-on of new services

CUSTOMER PROFILE

Southcentral Foundation is an Alaska native nonprofit health care organization that employs more than 1,200 people in some 65 programs. The organization serves 46,800 people in the Anchorage Service Unit, an area as large as Colorado, covering 107,413 square miles. Services include dentistry, optometry, community health representatives, injury control services, and substance abuse treatment.

THE CHALLENGE

Enable on-demand expansion, achieve recovery goals, reduce costs

"Quality, adaptability, availability" and "Do all of today's work today" represent the philosophy of Southcentral Foundation. Robert Carver, manager of IT Systems at Southcentral Foundation, says that the foundation's storage system fell short in every dimension. "We had been using a SAN provided by one of our systems vendors. The structure was increasingly plagued with performance and reliability problems. And it did not allow on-demand drive expansion. That made it difficult to support our expected data growth, integrate other campuses and facilities, and turn up new services."

As for "doing all of today's work today," Carver says that lengthy backup and recovery processes also made the system unworkable. "We couldn't complete backups of our critical dental system within available time frames. Recovering data could easily take half a day if we had to retrieve tapes from off-site storage. The existing system clearly would not have allowed us to achieve the time-to-recovery goals outlined in our disaster recovery initiative. It also would have been prohibitively expensive to deploy and support a high-availability configuration with our existing systems."

THE SOLUTION

Standardize on a unified storage solution from NetApp with IP SAN technology

After comparing alternatives, the Southcentral Foundation standardized on NetApp's unified storage. "NetApp, hands down, was the best solution," says Carver. "We tried our original supplier's iSCSI solution, but it just never worked properly. Backing up our dental application—usually a 15GB copy—would frequently blue-screen the host server.

“Our infrastructure, based on NetApp, lets us deliver better, more responsive community health care services. Southcentral Foundation serves as an industry flagship and role model, proving that the quality and availability of services can continually be enhanced without causing skyrocketing costs.”

Chuck Clement

CIO and Vice President, Southcentral Foundation

“Those and other problems led us to evaluate a NetApp IP SAN. We ran a variety of tests on a NetApp FAS250 system, and it easily handled the heavy data loads of our critical applications. And the NetApp Snapshot™ technology solved our backup problems, allowing us to make fast backup copies of application data. At the time of that evaluation, we were just beginning to consider implementing a virtual server environment, so we tried using the Snapshot functionality to make a copy of a VMware® server. It worked great.”

Today, a NetApp storage infrastructure (clustered NetApp FAS3020HA systems and FAS3050 systems with the NearStore® option deployed with iSCSI and CIFS protocols) supports a demanding application environment for multiple campuses. The storage architecture supports a 1,600-mailbox Microsoft® Exchange structure; two Microsoft SQL Server™ systems with 75 databases each for in-house applications, HP OpenView, and other commercial programs; a 90GB Sybase database for the organization’s dental system; a FundWare accounting system; a dozen blade servers running VMware GSX 3.1; and departmental data and user home directories.

Southcentral Foundation utilizes additional NetApp technologies, including NetApp Data ONTAP® 7G software with NetApp FlexVol® technology to maximize capacity utilization, NetApp SnapMirror® and Open Systems SnapVault® software to protect and manage data (including archiving data to a NetApp R200 system at a second data center), and NetApp SnapManager® for Exchange with Single Mailbox Restore software for rapid recovery of Exchange data. SnapMirror technology mirrors every volume on clustered NetApp FAS3020HA storage appliances to a NetApp FAS3050 with the NearStore option across campus.

BUSINESS BENEFITS

Cost savings, simplicity

Southcentral Foundation has achieved considerable cost savings in both maintenance and capital expenditures with NetApp. “The old storage system would have presented both budget and functionality issues,” Carver explains. “And, overall, administration would have been much more cumbersome and complex.”

“Everybody knows that SANs provide value,” adds Chris Smith, IT director at Southcentral Foundation. “The costs saved by consolidating allow you to invest in high-availability systems or added capacity. We took it one

step further, recognizing that deploying an IP-based SAN would give us the greatest return and would enable the most straightforward implementation of redundant data centers. Because we are transitioning to IP telephony, we had already implemented an extremely resilient, robust, and fault-tolerant IP infrastructure. It only made sense to take advantage of that for our storage solution. The NetApp IP SAN required no modifications to our existing Cisco infrastructure.”

NetApp’s technology has also enabled implementation of a virtualized server environment (blade servers running VMware) that provides multiple layers of protection and rapid recovery from both server- and data-related failures.

Daily backups are now completed within minutes or hours, rather than taking up to a week as previous tape backup systems did. “We utilize NetApp technology for backing up all of our critical systems, including our virtual servers,” says Carver. “For CIFS data, we keep 60 nightly backups and 15 hourlies online. Taken all together, our NetApp infrastructure lets us guarantee recovery of any application within 1.5 hours.

“We’ve had occasion to use every level of recovery, from individual e-mails to files, entire databases, and even systems after

failed upgrade processes. It's all fast and seamless. Our users benefit from immediate data recovery, and our administrators have been able to significantly reduce the time spent on recovery processes."

Chuck Clement, chief information officer at Southcentral Foundation, says that a dependable, high-performance infrastructure is critical. "Our business requires 24x7 access to information and applications. Patient records, financial systems, communications—everything depends on fast and reliable data access. NetApp gives us that and allows us to grow and expand programs without interrupting any ongoing services."

NetApp's highly scalable infrastructure not only meets current needs, it provides a foundation for adding new services and transitioning to a paperless environment. Clement summarizes, "Southcentral Foundation serves as a flagship and role model in the industry, proving that the quality and availability of health care services can continually be enhanced without causing skyrocketing costs. Our technology-enabled service model based on NetApp's unified storage directly benefits the Anchorage community as well as the multiple health care organizations that look to the Southcentral Foundation for IT expertise, guidance, and services."

SOLUTION COMPONENTS

NetApp Products

NetApp clustered FAS3020HA systems

NetApp FAS3050 systems with the NearStore option

NetApp SnapVault

NetApp SnapMirror

NetApp SnapDrive®

NetApp SnapManager for Exchange with Single Mailbox Recovery software

Data ONTAP 7G

NetApp FlexVol

NetApp Operations Manager (formerly DataFabric® Manager)

Symantec® Enterprise Vault™

BakBone NetVault: Backup and SnapVault Manager Plug-in module



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