



SUCCESS STORIES

WILLIAM BEAUMONT HOSPITALS BOOST STORAGE UTILIZATION >50% WITH NETAPP DATA ONTAP® 7G TECHNOLOGIES



“We need to respond quickly to user needs. With NetApp Data ONTAP 7G and FlexVol™ technology, we can expand in seconds. We utilize more of our storage because we don’t have so much of it in reserve, waiting for things to happen.”

JESS CARRUTHERS Project Manager, William Beaumont Hospitals

KEY HIGHLIGHTS

Location Royal Oak, Michigan

Industry Healthcare

Customer Profile

Beaumont is a two-hospital regional medical center with a staff of 15,000, including more than 2,400 physicians representing some 91 medical and surgical specialties. For 11 years, the Royal Oak hospital has been listed on U.S. News & World Report “Best Hospitals” lists. (Source: www.beaumonthospitals.com.)

The Challenge

Consolidate and simplify the Beaumont storage infrastructure to support explosive data growth and to allow the hospital to focus budget resources on patient care.

The Solution

Consolidate storage on NetApp clustered FAS and R200 systems with Data ONTAP 7G technology. The Oracle on NetApp solution increases site availability, performance, and scalability.

Benefits

- >50% increase in storage utilization
- Database recoveries in minutes
- Reduced support costs
- Fast storage allocation

THE CUSTOMER

William Beaumont Hospitals is a two-hospital regional medical center with a staff of 15,000 people. Medical staff includes 2,400 private-practice physicians representing more than 91 medical and surgical specialties. Beaumont’s 1,061-bed hospital in Royal Oak is a major teaching and referral center with Level 1 trauma designation. William Beaumont Hospital in Royal Oak is ranked in 11 of 17 categories in the prestigious 2005 U.S. News & World Report “Best Hospitals” list (source: www.beaumonthospitals.com).

THE CHALLENGE

Accommodate Explosive Data Growth without Compromising Existing Infrastructure

William Beaumont Hospitals faced explosive growth of data across its two hospitals, seven medical buildings, a rehabilitation center, primary care clinics, four extended-care centers, a research institute, and a hospice center. While the hospital used networked storage in many areas, each division and group had dedicated storage systems. The hospital needed to quickly and effectively scale its data center to accommodate this data explosion without compromising the existing infrastructure.

Jess Carruthers, project manager, and Larry Smith, assistant director at William Beaumont Hospitals, believed that storage

consolidation with open protocols and new flexible-volume technology was the answer. Rather than continue to add dedicated storage services or replace the entire infrastructure with new hardware, a simple software upgrade enabled Beaumont to significantly improve the performance, utilization, availability, and cost management of the hospital’s storage network.

With more than 25 production Oracle® Databases servicing everything from patient tracking systems, surgical databases, and human resources data to storing medical images, test results, and local CIFS-accessed departmental files, Beaumont Hospitals needed to meet a wide range of requirements to best fit the needs of each unique application.

THE SOLUTION

Leverage NetApp Data ONTAP 7G Technologies to Consolidate Storage and Improve Efficiency

Beaumont’s IT team pulled all its applications off dedicated NetApp systems and put them onto a high-performance NetApp storage cluster. Carruthers and the team deployed NetApp Data ONTAP 7G software with FlexVol technology, which offered the type of dynamic provisioning, flexibility, and data-management granularity that was needed for Beaumont Hospitals’ new and improved IT infrastructure. As a result of the software update, Beaumont con-

solidated its storage from nine NetApp systems to three NetApp storage clusters and one NetApp NearStore® system.

BUSINESS BENEFITS

>50% Increase in Utilization, Rapid Backup/Recovery, Reduced Costs

NetApp FlexVol technology provides a flexible infrastructure that allows Beaumont Hospitals to improve their operational efficiencies by enabling database administrators to grow and shrink data volumes on-the-fly across groups—without any downtime or disruption to users.

Administrators can quickly react to changing needs of the hospital while maintaining a higher utilization of the infrastructure. Prior to the software migration, Beaumont's storage utilization was between 43% and 50%. After the upgrade to Data ONTAP 7G, utilization rose to 76%, reflecting a more than 50% increase in overall utilization.¹

¹ Based upon customer-managed testing conducted by NetApp technical engineering. Outputs of the df command captured in the NetApp Autosupport feature from pre-migration systems were compared to post-migration df outputs on current systems. (The df "disk free" command is commonly utilized to determine free disk space, including blocks and inodes.)

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NetApp Snapshot™ technology, embedded in Data ONTAP 7G software, allows for entire databases to be backed up within minutes instead of hours. For example, if an end-user file is deleted or corrupted, it takes less than five minutes to recover from a recent Snapshot copy.

Beaumont was able to recover entire Oracle and SQL Server databases in five to 15 minutes—operations that previously took a whole day. "With Snapshot technology," comments Carruthers, "we can do a SnapRestore® recovery of a volume if there is an issue during a patch upgrade. It used to take four hours to put to tape, and then it would take four hours or more to bring it back up. Now it's minutes or, at the absolute most, an hour."

Test-database support and quick backups of the Beaumont storage grid were accomplished with a NetApp NearStore ATA disk subsystem. By using NetApp SnapVault® technology, daily database

changes are quickly vaulted over to the R200, freeing up the production storage clusters of backup tasks. The R200 then writes the SnapVault data to an array of tapes housed in a StorageTek tape silo for off-site storage. An added benefit of the SnapVault software is that two weeks of data can be quickly accessed locally on the R200 ATA volumes.

Beaumont has significantly reduced support costs, particularly in terms of the time spent on backups, allowing the hospital to focus costs on its core business—patient care. The data center overhaul provides Beaumont:

Software simplicity that aids system administration and delivers positive financial benefits

Significantly improved uptime and performance

A storage grid where pools of storage can be reallocated in minutes

The combined Oracle-on-NetApp solution directly and positively impacted revenues by increasing site availability, improving database performance, enhancing the user experience, and ensuring virtually limitless scalability.

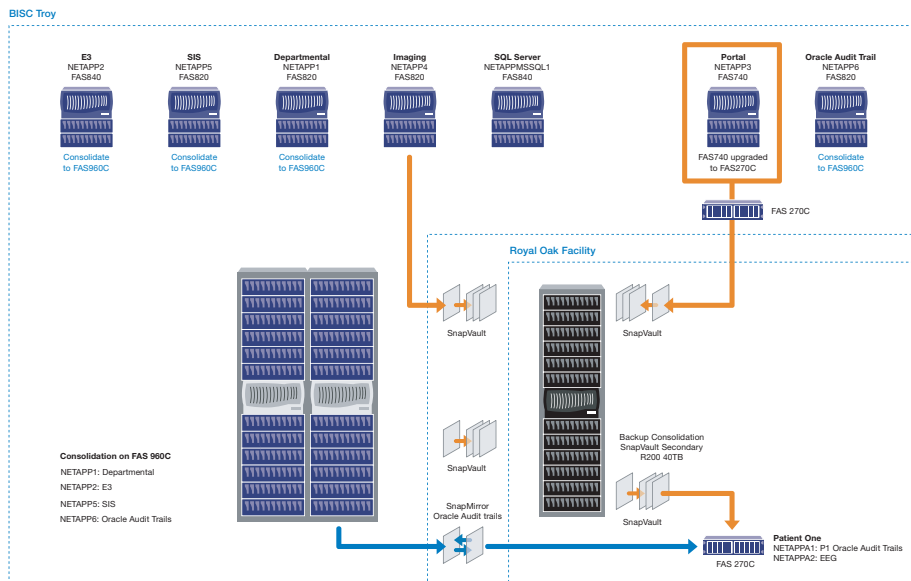


Figure 1) Consolidating applications data on a NetApp storage cluster helps Beaumont achieve unmatched data center performance, reliability, and scalability. NetApp DataONTAP 7G with FlexVol technology enables fast and seamless provisioning. A NetApp NearStore system and NetApp SnapVault software streamline backup processes.

SOLUTION COMPONENTS

- NetApp clustered FAS and R200 systems
- NetApp Data ONTAP 7G with FlexVol technology
- NetApp SnapMirror®, SnapRestore, and SnapVault software

