

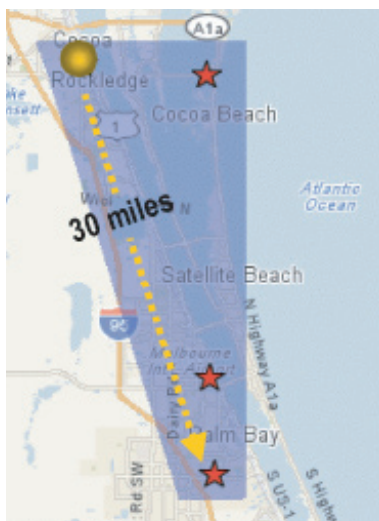
Hurricane-Proofing Hospital Operations at Health First with SAN Mirroring and Instantaneous Data Recovery.

C A S E S T U D Y

The Customer

Health First, the largest healthcare provider in Brevard County Florida, is located on the east coast of the state in hurricane country, operating three hospitals with 800 beds that are served by 6,000 employees. Health First also manages outpatient centers and services, including: the county's only trauma center; home care; specialized programs for cancer, diabetes, heart, stroke, and rehabilitative services.

To promote internal efficiency, Health First depends heavily on automation and thus needs IT systems availability to ensure operational continuity. In 2002, Health First had approximately 16 terabytes of stored data. To protect this data, Health First had implemented a traditional disaster recovery methods using tape backup. Backups were made and sent daily to a media vaulting facility in Orlando Florida. During a disaster, the vaulted tapes in Orlando would be sent to a third party disaster recovery facility 1,200 miles away in New Jersey, where duplicate servers, configured with key applications resided. In the event of a



disaster, Health First IT specialists would be flown to New Jersey to recover data from the backup tapes, bring up standby servers and applications, and connect the new site to the Health First facilities using a T1 link.

Although this widely accepted, traditional form of disaster recovery had met their needs, it became clear that in the future it would not. Within the last 3 years, Health First data had grown a staggering 300 percent. Health First determined that the exponential growth of data that they had witnessed was going to dramatically increase, and that scaling the present recovery system would be too difficult and too expensive.

The Challenge

Hurricane logistics revealed that Health First would have difficulties in deploying its IT staff during a disaster to restore operations. Even if staff deployment was successful, the minimum recovery time was expected to be 12-24 hours, based on time for travel and restoring data from tape. Moreover, under the best of condi-



"Being able to mirror across different storage systems is huge, not only for disaster recovery, but also for peace of mind."

Joel Otero, Systems Engineer
Health First

Location

Brevard County, Florida.

Profile

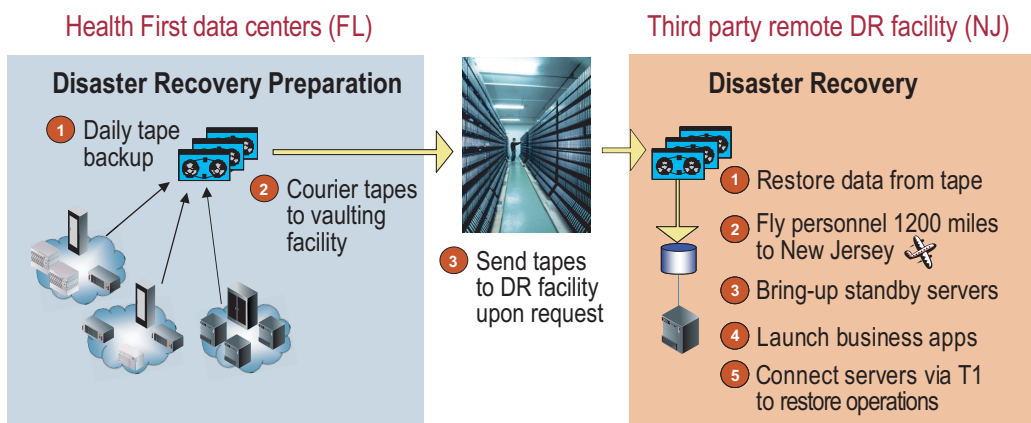
Largest health care provider in Brevard County, Florida, operating three hospitals with 800 beds and over 6000 employees. Health First is dedicated to integrating quality healthcare services with state-of-the-art technology.

Key Business Challenges

Reduce potential downtime risk of hurricanes on hospital operations. Existing disaster recovery methods take at least 12-24 hours to effect recovery using stale data. Health First seeks order-of-magnitude improvement in recovery time along with up-to-date data.

Key Benefits

Using Vicom SAN Mirroring, Health First achieves instantaneous data protection and instantaneous disaster recovery with assured availability to all data centers within a 30-mile radius. SAN Mirroring also transparently protects and restores data for any and all servers, switches, and storage connected to the SAN.



tions, the restored data would be one day old, which would impair patient diagnosis, clinical documentation systems, medical imaging stations, and physician order management.

In addition, only a few applications could be brought up within the needed recovery time. Using a T1 link to connect client stations to the new data center, was also unacceptably slow. Steve Shim, manager of Health First's new disaster recovery strategy explained, "The T1 line connecting our client stations to the disaster recovery site simply doesn't have the bandwidth to address our needs, so we were forced to look for a new type of local or regional disaster recovery strategy."

The Solution

In searching for a new solution, Health First developed new disaster recovery goals in the event of a hurricane-type disaster. These were: 2 hours for 1-2 hospital failover; 2 days for multi-hospital recovery; "best effort" for a 4-site disaster.

The new recovery strategy required delivery of continuous IT services for three hospitals and one business center. Central to this strategy was the idea of mirroring data regionally among data center sites in real-time using a DWDM link, thereby reducing recovery time from days to hours. Health First initially evaluated array-based replica-

tion options, but soon found them economically infeasible because all required duplicate sets of high-cost arrays and software. Array-based replication was found to be neither instantaneous nor automatic. Other solutions such as copy services and NAS also fell short. Host-based mirroring, the final alternative, was eliminated because of the difficulty

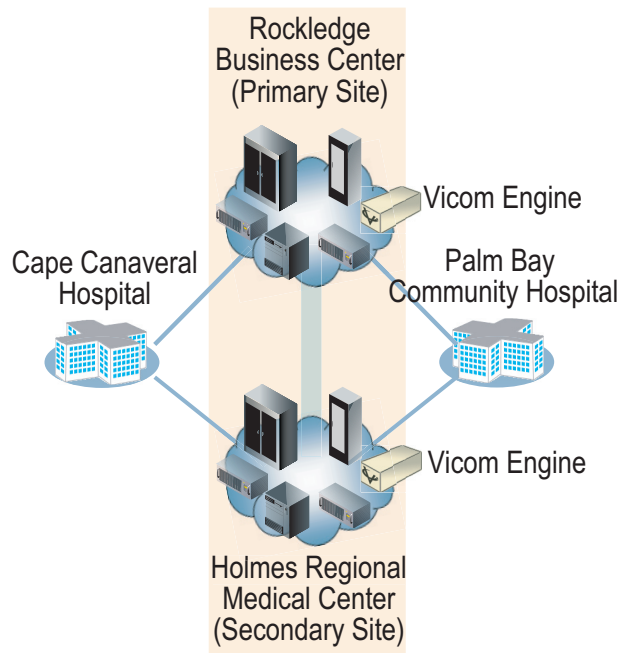
that Vicom might also have a SAN mirroring capability. He said: "Our assumption proved right: Vicom has a superior and unique product that solves a big problem for Health First."

Using a purpose-built appliance, Vicom SAN Mirroring provides identical copies of data at all times and "instantaneous data recovery" in the event of a disaster. The solution encapsulates two logical units from different storage systems (or SANs) and presents them to the host as a virtual, "unbreakable" disk. Data written from the host is automatically and synchronously sent to logical units via the Vicom Engine. With mirroring, any failure to one of the units is shielded from the host, and the Vicom Engine performs failover instantly and transparently.

The Result

Using Vicom SAN Mirroring across a 30-mile DWDM connection, Health First is able to implement cost-effective mirroring, failover, and instantaneous disaster recovery for all of Health First's critical applications. Equally significant, Vicom SAN Mirroring delivers transparent services among heterogeneous storage, servers, and switches—without need for host software or agents. With Vicom, Health First has met its business continuity objectives while also reducing management and costs associated with protecting multiple SANs across a wide geography.

Vicom SAN-SAN Mirroring



of managing mirroring on multiple hosts, lack of scalability, and impact on server performance.

Fortunately, Health First's Steve Shim had heard of Vicom's SAN data migration solution, and he correctly guessed



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