



Community Health Network

Powering an Integrated Delivery Network
at Community Health Partners

CHALLENGES

Downtime not tolerable; CHN must have the system up and running 24x7. System outages can result in patients not receiving timely medical care.

SOLUTION

Highly available infrastructure based on software-defined storage and server clusters.

- Software-defined storage: DataCore SANsymphony
- Host-based clusters: MSCS and VMware
- Metro FC loop
- Storage: HDS AMS & UPS-V, 450TB mirrored between two data centers 20 miles apart

RESULTS

- Elimination of storage related downtime due hardware failure, maintenance and data migration
- Improved application availability
- Enabled seamless data migration between storage heterogeneous arrays
- Improved storage utilization

CHALLENGE: DOWNTIME AND DATA AVAILABILITY

Community Health Network (CHN) is one of the nation's largest healthcare providers and the first all-digital hospital. It's imperative that its system be up and running continuously because outages can cause patients to not receive the medical care they need in a timely fashion. CHN does not have the option of long maintenance windows during weekends, which are often their busiest times. As a result, CHN wanted to be able to manage its storage, migrate data and implement new storage with no downtime.

Like many hospitals, the data storage requirements of CHN continue to climb. Whereas ten years ago Magnetic Resonance Imaging (MRI) and Computer Tomography (CT-scan) images may have been several megabytes, today's images are appreciably larger, ranging into the gigabytes. Every X-ray and sonogram must be stored on a disk, along with medical records which combine to create an enormously expanding data pool. To better manage these types of digital images and patient records created by HIPAA regulations, CHN needed a way to scale their storage capacity significantly.

SOLUTION: MULTI-SITE DATA PROTECTION AND FAILOVER

DataCore SANsymphony™ software-defined storage has enabled the healthcare organization to increase availability of its data by synchronously mirroring between the Carmel campus and the Lifeline data center, 20 miles away. DataCore software runs at each location, synchronously mirroring data between the two, on different power grids, on different flight paths, and on different flood plains to ensure that data is continuously available even in the event of site-specific outages. The server at either of these installations can automatically fail-over to the other.

Over the past few years, SANsymphony has enabled CHN to migrate data from IBM ESS to IBM FastT, to IBM DS8100 and finally to HDS USP-V and AMS. Each migration was done with no application downtime. In addition to seamless migration and high availability, CHN realized increased performance from the SANsymphony cache and improved utilization from SANsymphony thin provisioning.

IT LANDSCAPE

The metro-mirrored IT infrastructure at the two data centers (metro clusters) ensures business continuity with DataCore software-defined storage at the center of it (as shown in the graphic below).

In this deployment, critical applications run on clustered servers, which means the nodes of each cluster are split between data centers. The data for each cluster is mirrored between data centers by SANsymphony. If the system goes down at one data center, the applications can failover to the other to provide the user community continuous access to their applications.

CHN runs SANsymphony on Dell R910 servers with Qlogic fibre channel cards. The combination is known as a DataCore storage virtualization node. Each node at the main data center is paired with a node at Lifeline (20 miles away) in a metro mirror. DataCore nodes manage CHN's HDS USP-V and AMS storage arrays. In total, SANsymphony software virtualizes and manages over 450TBs (collectively) for the various departments in the Community Health Network. The environment supports a community of 14,000+ users.

RESULTS

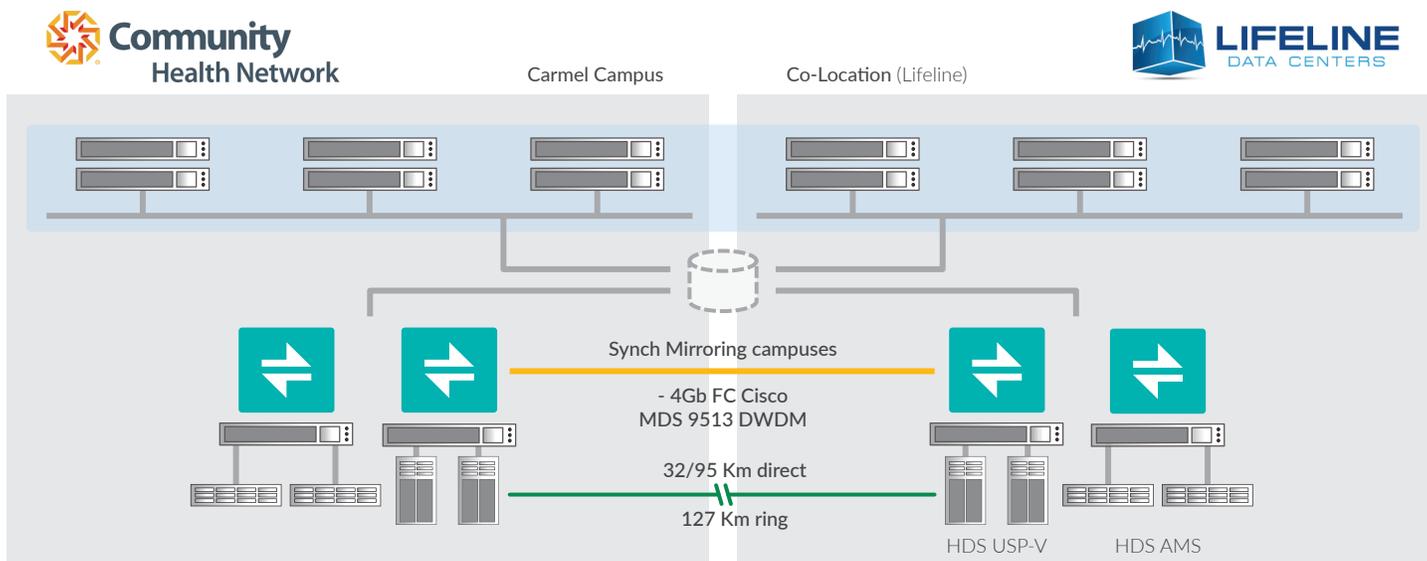
The compelling benefit of this implementation has been the unprecedented availability. CHN has effectively eliminated the need to do traditional disaster recovery in the case of a catastrophic event. Whereas many IT organizations normally go through a painful process of assembling resources to recover data following a site-wide outage, the metro clusters at Community Health Partners allow them to take over operations from their hot site uninterrupted. System maintenance can now be done without any interruption to the users. The business result? Better patient care and a more efficient healthcare organization.

ABOUT THE CUSTOMER

One of the largest healthcare providers in the U.S.

Ranked among the nation's most integrated healthcare systems, Community Health Network is Central Indiana's leader in providing convenient access to exceptional healthcare services, where and when patients need them—in hospitals, health pavilions and doctor's offices, as well as workplaces, schools and homes. As a nonprofit health system with over 200 sites of care and affiliates throughout Central Indiana, Community's full continuum of care integrates hundreds of physicians, specialty and acute care hospitals, surgery centers, home care services, MedChecks, behavioral health and employer health services.

www.ecommunity.com



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