Success Story

# LCMC Health: Accelerating the Delivery of Patient Care

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## KEY HIGHLIGHTS

**Industry**
Healthcare

**The Challenge**
Speed healthcare provider access to patient information from electronic medical records and radiology imaging systems.

**The Solution**
Enable high performance of healthcare applications by hosting desktop images and virtual servers on NetApp® All Flash FAS (AFF) in a SAN environment.

**Benefits**
- Enhances quality of healthcare with rapid, secure access to patient data
- Accelerates the rollout of new features and services for EMR and PACS systems, adapting quickly to staff needs
- Improves virtual server performance for apps, sustaining submillisecond latency for 300+ virtual machines

### Compassionate, community-based healthcare

Delivering exceptional, compassionate healthcare to the people of Louisiana and the Gulf South is the mission of LCMC Health, a not-for-profit healthcare system with more than 8,000 employees. LCMC Health hospitals are cornerstones of their communities, providing convenient and high-quality healthcare for thousands of people and playing vital roles in economic development, research, teaching, and clinical excellence initiatives.

### The Challenge

**Enabling state-of-the-art healthcare delivery**

The damage wrought by Hurricane Katrina continues to resonate in the collective consciousness of New Orleans. In 2005, the storm decimated the city's two major teaching hospitals, University Hospital and Charity Hospital, with the evacuation of patients making national headlines.

Ten years later, LCMC Health achieved an important milestone by replacing both hospitals with a new facility: University Medical Center (UMC) New Orleans, a 2.3-million-square-foot, level I trauma center and the largest teaching hospital in the state. As the anchor institution of the New Orleans BioDistrict, UMC New Orleans represents the evolution of New Orleans into a regional provider of healthcare research and services.

Adhering to a tight launch schedule, LCMC had only three months to deploy and test a state-of-the-art IT infrastructure before the hospital opened. LCMC sought to give physicians, clinicians, and radiologists rapid access to patient information through Epic electronic medical records (hosted off site in a state data center) and GE Centricity PACS applications, using virtual desktops accessed from shared thin-client terminals.

"UMC New Orleans is large and we needed a virtual desktop infrastructure to centralize delivery, support, and maintenance of critical healthcare applications," says Jason Kennedy, senior consultant for LCMC Health. "However, accessing critical data on the virtual desktops had to be fast, because clinicians don't have the time to wait around for desktops to become available."

"NetApp All Flash FAS is the reason they're getting such rapid access to patient data."

Jason Kennedy
Senior Consultant for LCMC Health

## The Solution

### All-flash storage for clinical VDI

LCMC's commitment to providing the best patient care led it to deploy VMware virtual desktops and virtual servers on a NetApp AFF8040, which is in a SAN environment powered by clustered Data ONTAP®. With assistance from NetApp partner CMA Technology Solutions, LCMC deployed 1,500 clinical desktops to deliver Epic EMR and 300 radiology desktops to deliver GE Centricity PACS, all within two weeks.

"CMA Technology Solutions was instrumental in integrating our NetApp All Flash FAS systems," says Kennedy. "They did a great job configuring a mission-critical, clinical VDI environment and helped us meet our nonnegotiable deadline for opening the facility."

In addition to predictable performance and low latency for the virtual desktops, the hospital benefits from storage efficiency tools such as NetApp deduplication, which is helping it get the most value from its SSD storage capacity. NetApp SnapMirror® automatically replicates changed data to a disaster recovery site, while NetApp Virtual Storage Console for VMware vSphere integrates with Veeam to protect virtual machines (VMs), giving unprecedented management capabilities to administrators.

As UMC New Orleans prepared for opening day, Kennedy was pleased by how quickly his virtualization team could recompose the large pools of virtual desktops to accommodate change requests from clinical staff. "With NetApp All Flash FAS, we recomposed the entire pool of 1,500 virtual desktops supporting Epic EMR in just a few hours," he says. "On spinning drives, that would have taken days to complete."

With the NetApp SAN, LCMC can now scale desktops easily, even during peak times, without compromising performance. LCMC is now well positioned to consolidate multiple applications and offer new services to users.

## Business Benefits

### Providing superior application performance

UMC New Orleans has the best of both worlds: the speed of solid state drives combined with clustered storage controllers for high availability and nondisruptive operations. In addition to enabling superb virtual desktop performance, NetApp All Flash FAS is improving I/O for critical applications such as GE Centricity PACS and Varian oncology software, sustaining submillisecond storage latency for more than 300 VMs.

"We're providing an excellent working environment for physicians, clinicians, and radiologists, making it easier for them to deliver responsive and integrated patient care," says Kennedy. "Our caregivers don't always know that NetApp All Flash FAS is the reason they're getting such rapid access to patient data. However, they've told us that our solution outperforms any clinical environment they have experienced."

### Adapting quickly to caregiver needs

Staff requirements are constantly evolving, and the ability to recompose large pools of virtual desktops on the fly accelerates the rolling out of new features and services for clinical and radiology systems. This approach enables IT to respond quickly to staff requests for capabilities that enhance patient care.

"By giving us an extremely efficient SAN environment for virtual desktops, NetApp All Flash FAS enables us to be more responsive to user requests," says Kennedy. "It also reduces IT management requirements by about one full-time equivalent. If we had used spinning disk, we would have had to set up multiple small pools of virtual desktops, which would have been more complex and time consuming to manage."

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**Providing a healthy future for New Orleans**

By delivering Epic EMR, GE Centricity PACS, and other critical applications with virtual desktops hosted on NetApp All Flash FAS systems, LCMC Health can offer a wider array of critical services to New Orleans communities.

"We know we're doing well when a radiologist tells us, 'I've never seen GE Centricity PACS run so fast'," says Kennedy. "We're very proud of having state-of-the-art healthcare delivery systems at UMC New Orleans to provide the best possible care to the communities that we serve."

## SOLUTION COMPONENTS

**NetApp Products**

NetApp AFF8040 systems

NetApp FAS8020 systems

NetApp clustered Data ONTAP 8.3

NetApp Snapshot® and SnapRestore® technologies

NetApp SnapMirror

NetApp Virtual Storage Console for VMware vSphere

NetApp deduplication

**Environment**

Applications: Epic EMR, GE Centricity PACS, Varian oncology software

Databases: Microsoft SQL Server

Server platform: Cisco UCS

Server virtualization: VMware vSphere 6.0

Desktop virtualization: VMware Horizon View 6.0

**Protocol**

FC-SAN

**Partner**

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