SUCCESS STORY
Healthcare

UMC
UNIVERSITY
MEDICAL CENTER
NEW ORLEANS

UMC NEW ORLEANS | PROBLEM SOLVED

UMC New Orleans, the academic medical center of LCMC Health, delivers industry-leading performance for electronic medical records by hosting application and virtual desktop images on FlexPod® with All Flash FAS.

Delivering Quality Healthcare Services on FlexPod with All Flash FAS

Ten years after Hurricane Katrina decimated two of Louisiana's major teaching hospitals, the State of Louisiana with LCMC Health unveiled a new academic medical center—the state's largest teaching hospital—University Medical Center (UMC) New Orleans. Because of a tight launch schedule, the LCMC IT team had only three months to deploy and test the infrastructure for its state-of-the-art facility. The technology team sought to give UMC physicians, clinicians, and radiologists rapid access to patient information through Epic electronic medical records (EMR) and GE Centricity PACS applications. The team wanted to do so using virtual desktops accessed from shared thin-client terminals.

Another NetApp
solution delivered by:

CMA
Technology Solutions

FlexPod®
A Cisco and NetApp Solution

Reduced Epic deployment time by

80%

Reduced average CPU use from

41 ▶ 17%

▶ **WATCH THE VIDEO**

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> "We've exceeded all expectations of the best possible patient care scenarios by running Epic EMR on our FlexPod with All Flash FAS infrastructure."

Austin Park
Epic Infrastructure Team Leader, LCMC Health

"We wanted to use technology to reinforce our commitment to innovation in patient care," says Tanya Townsend, CIO at LCMC Health. "We also saw an opportunity to significantly reduce operational costs. The best decision for our needs was to modernize delivery of Epic EMR through our own data centers at UMC New Orleans."

EXCEEDING DATA ACCESS EXPECTATIONS
To deliver patient information to caregivers as quickly as possible, UMC's Epic software and VMware virtual desktops had to respond in microseconds to let hospital staff respond quickly and efficiently to patients' needs. To accomplish this, the LCMC IT team engaged Sapphire Health, a healthcare-focused IT consultancy, to design and deploy an Epic EMR infrastructure that could be easily rolled out to other hospitals within the LCMC network.

Growth was a challenge as well. Beyond the expected organic growth and increase in patient data, LCMC wanted to ensure that the infrastructure model it created to support its UMC facility would be ready to absorb the data impact of

new hospitals at any time—without compromising EMR performance.

"We have about 200 applications that we have to support, and there's only so much you can squeeze out of spinning drives from a performance standpoint," says Austin Park, Epic infrastructure team leader for LCMC and principal consultant with Sapphire Health. "We knew we needed an infrastructure that would enable us to deploy all of our server systems as quickly as possible. After looking at several solutions, we chose FlexPod with All Flash FAS because it delivered excellent performance at a great value."

With assistance from NetApp partner CMA Technology Solutions, LCMC deployed FlexPod Datacenters with All Flash FAS to host Epic EMR and 3,000 virtual desktops. "CMA Technology Solutions simplified the delivery of the core Epic infrastructure and helped us meet our very tight deadlines," says Park.
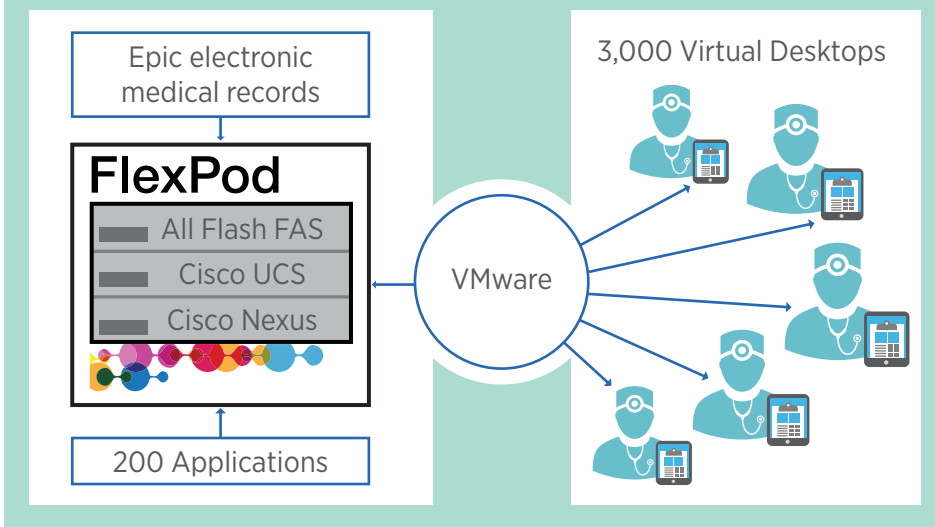
The FlexPod solution reduced Epic deployment time by 80% at UMC New Orleans by simplifying configuration and enabling faster copies

BUSINESS BENEFITS

- Enhances quality of healthcare with rapid, secure access to patient data

- Improves resiliency and recovery time for electronic patient records

- Reduced response time exceptions within Epic by 81%

- Reduced average CPU use from 41% to 17%

- Increased application performance by two to four times

- Reduced Epic deployment time by 80%

- Reduced time to copy production database from 8–16 hours to less than 20 minutes

of legacy data to the new system. "The Epic project plan recommends setting aside four months for storage configuration and I/O testing," says Park. "With our new infrastructure

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LCMC RESTRUCTURED ITS DATA CENTERS ON FLEXPOD WITH ALL FLASH FAS

Epic electronic medical records

FlexPod
- All Flash FAS
- Cisco UCS
- Cisco Nexus

200 Applications

VMware

3,000 Virtual Desktops

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solution we completed that portion in just three weeks."

Moreover, because the NetApp solution cohesively integrated VMware vCenter with the Cisco UCS architecture, the solution reduced the number of people required to manage the environment. According to Park, "In many ways, the FlexPod solution allowed us to facilitate the restructuring we were trying to accomplish."

Performance testing with GenIO, Epic's benchmarking tool, confirmed

that there were no storage bottlenecks, allowing the Epic application servers to work to their full potential. "Our tests exceeded Epic's I/O performance requirements by 20 times," says Park. "Normally we would run tests for weeks, but we stopped after a few days. There was no point in continuing since the system was running so quickly."

In addition to the performance benefits, the FlexPod with All Flash FAS solution provided the LCMC IT team with flexibility. "One of the

most important things for us is to be able to quickly make adjustments to the architecture, and we have a lot of requests to make a copy of our production database," notes Park. "This process, which used to take us anywhere from 8 hours to 16 hours to accomplish, now takes less than 20 minutes." 🐦

RAISING THE BAR FOR PATIENT CARE
By deploying a new Epic EMR instance and virtual desktops on a FlexPod with All Flash FAS infrastructure, the LCMC IT team was able to provide high performance for UMC's electronic medical records, which can enhance patient outcomes. Latency for virtual servers and virtual desktops is consistently submillisecond, and clustered storage improves resiliency and recovery time for electronic patient records.

"We've surpassed our expectations of the best possible patient care scenarios by running Epic EMR on a FlexPod with All Flash FAS infrastructure," says Park. "With rapid, secure access to patient data, our UMC caregivers can respond to patients' needs quickly, armed with the right information."

MORE EFFICIENT IT OPERATIONS
The new infrastructure is making it easier for UMC doctors, nurses, and clinicians to deliver responsive and integrated patient care. Medical and nursing students alongside residents can now train using fast, responsive systems. This change is improving the quality of education

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"It's heartwarming to see how deploying FlexPod with All Flash FAS behind our Epic EMR system really impacts the day-to-day operations of the hospitals."

Austin Park
Epic Infrastructure Team Leader, LCMC Health

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and ultimately enhancing healthcare across Louisiana.

"It's heartwarming to see how deploying FlexPod with All Flash FAS behind our Epic EMR system really impacts the day-to-day operations of the hospitals," says Park. "Doctors are thanking us for providing a pinnacle technology experience and using IT as a catalyst to improve patient care."

SUPPORTING YEARS OF HEALTHY GROWTH

With Epic EMR on FlexPod with All Flash FAS, LCMC anticipates that it will be able to support the next five years of aggressive growth across its network of hospitals. As caregivers' requirements evolve, LCMC will be able to quickly roll out new features and services for Epic and adapt to an accelerating pace of change.

"We can now deliver Epic to thousands of clinical users across UMC with the fastest response times possible, enabling a better experience for doctors and patients," says Townsend. "The results thus far have been outstanding."

SOLUTION COMPONENTS

FLEXPOD DATACENTER COMPONENTS

NetApp AFF8080 and AFF8040 systems with FlexPod
NetApp clustered Data ONTAP® 8.3 software
NetApp Snapshot® and SnapRestore® technologies
NetApp SnapMirror® software
NetApp deduplication

PARTNERS

CMA Technology Solutions
Sapphire Health

ENVIRONMENT

Applications: Epic EMR
Databases: Epic Caché, Microsoft SQL Server
Server Platform: Cisco UCS
Server Virtualization: VMware vSphere
Desktop Virtualization: VMware Horizon View

PROTOCOL

FC-SAN

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