LCMC HEALTH PLANS FOR A NEW ERA OF PATIENT CARE WITH VMWARE

LCMC HEALTH

INDUSTRY
HEALTHCARE

LOCATION
NEW ORLEANS, LOUISIANA

KEY CHALLENGES
- New hospital built from the ground up following Hurricane Katrina
- Needed lower OpEx, with a system to roll out applications quickly while providing world-class patient care
- Staff had only seven months to deploy a complete hospital IT infrastructure

SOLUTION
- Implemented VMware Horizon 6.0 with VMware App Volumes for faster desktop deployment and application delivery
- Partnered with VMware and Epic to support 5,000 thin clients, desktops and wireless devices
- Single sign-on makes patient information more easily accessible from various devices

BUSINESS BENEFITS
- Staff login times to hospital computers cut by 87.5 percent, resulting in 35 more minutes per shift to spend with patients
- Significant cost savings from replacing PCs with virtual desktops
- Simple to deliver vital desktop software at any time and in any place

LCMC Health manages University Medical Center (UMC) New Orleans, a state-of-the-art academic medical center with the region's only Level 1 Trauma Center, built after Hurricane Katrina devastated Charity Hospital. LCMC's IT staff decided to take advantage of the new facility to deliver services beyond what was possible before the storm. LCMC deployed a virtual desktop infrastructure solution from VMware, including VMware Horizon® 6 and VMware App Volumes™, to create unmatched experiences for clinicians, staff and patients. VMware solutions provide LCMC with the flexibility, security and power to support current service demands and scale for future growth.

LCMC Health is a not-for-profit healthcare system based in New Orleans, serving the greater New Orleans metropolitan area, Louisiana and the Gulf South. Established in 2009, LCMC Health has more than 8,200 employees and provides a wide range of services including a children's hospital, acute care, ambulatory services, home health and the only Level 1 Trauma Center in southern Louisiana. Five facilities make up LCMC Health: Children's Hospital, Touro Infirmary, New Orleans East Hospital, UMC New Orleans and West Jefferson Medical Center.

The Challenge

After Hurricane Katrina destroyed Charity Hospital, a major academic and trauma facility in New Orleans built in 1937, the state of Louisiana decided to build a modern leading-edge facility to serve the community. UMC New Orleans opened in 2015, after the hospital's IT infrastructure was deployed on an accelerated 7-month schedule. "As the state's largest teaching hospital and training facility for many of the state's physicians, nurses and allied health professionals, UMC New Orleans plays an integral role in shaping the future of healthcare for the region," said Tanya Townsend, Senior Vice President and Chief Information Officer for LCMC Health. "With this new facility, we had a rare opportunity to start essentially from square one with our IT program. We wanted a leading-edge, highly virtualized infrastructure to deliver best-of-breed medical applications, including Epic," a widely used system for electronic medical records.

LCMC wanted the new virtualized infrastructure to scale to meet the needs of not only UMC New Orleans but the other four facilities as well. Townsend noted that LCMC had several key needs as they modernized their IT infrastructure. LCMC wanted faster, comprehensive access to patients' medical records. They wanted an always-on, always ready environment that could respond quickly to medical professionals' needs around the clock. And equally important, said Townsend, was

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"VMware offered us the greatest balance of performance, cost, as well as management tools for our technical teams to be able to manage the entire environment. When we looked at some of the new technology like App Volumes and the overall integration that it has with the ecosystem of other applications and providers out there, it presented the best value overall."

AUSTIN PARK
PRINCIPAL CONSULTANT
LCMC HEALTH

VMWARE FOOTPRINT

• VMware Horizon 6.0

• VMware App Volumes

• VMware User Environment Manager

• VMware vCenter™

• VMware vSphere®

"trusted technology partners with significant healthcare industry experience to deliver, implement and support new systems within a short timetable … providers that could take effectiveness, cost, and user experience into account."

The Solution

LCMC worked with VMware to support 5,000 devices at UMC New Orleans, including thin clients, desktop computers and wireless devices. The hospital deployed VMware Horizon 6.0 with Horizon View™ and VMware App Volumes. With their VMware solution, UMC New Orleans can deliver a wide variety of enterprise and desktop applications, from web browsers to specialized medical software. Using virtual desktops reduces system requirements, allowing the use of less expensive hardware while maintaining quality end user experiences.

App Volumes enables IT staff to streamline application delivery and provide a number of specialized medical applications that they could not support before. Remote management also eliminates the need for systems to be shut down for maintenance and service interruptions, helping the hospital focus on patient care instead of IT issues. Automation within the new platform helps IT staff identify issues such as viruses faster, pushes updates without service outages, improves compliance and reduces strain on IT staff.

LCMC uses VMware User Environment Manager™, a Horizon component that simplifies end-user profile management and maintains personalized settings across multiple devices, to control and optimize the virtual desktop startup process. Horizon supports single sign on (SSO) across multiple devices at UMC New Orleans. Clinicians use a number of computing devices around the hospital, including workstations on wheels. Hospital staff log in to these devices by tapping their badge on a hospital computer. When their work on that computer is done, they use their badge to tap out. When they move to another area of the hospital, they simply tap in again and pick up where they left off. This saves critical time that can be spent on patient care.

In addition to its own products, VMware recommended several third-party products, including Imprivata Authentication Management and AppSense User Environment Management. "The flexibility of VMware to step outside of its own solutions built confidence among LCMC stakeholders and executives in the final platform, as well as helped to ensure the project was completed on time and on budget," said Townsend.

Business Results & Benefits

Centralized management with VMware Horizon has enhanced security and governance through improved visibility into desktops, applications, and the virtual infrastructure as a whole. "We use this platform to deliver all of our clinical applications, including our EMR application from Epic, and graphics-intensive applications like our radiology application. Our users really like the high image quality that they are able to get through the virtual system," said Austin Park, principal consultant with LCMC Health.

App Volumes "is actually one of the cooler technologies we employ here at the hospital," said Park. In a traditional virtual desktop image, making any changes to an application requires opening the image, installing the software, testing and then recomposing the whole pool — which takes a lot of time. This process could also cause down time for end users, which is a problem in a healthcare setting where minutes matter. With App Volumes, said Park, "We are able to separate the

OS image from the application images. If there is a change in any application, you can make that change and present it to the user exactly when they want it." Park also noted that this allows the IT department to easily deliver any application that hospital staff might need. "Even if only one person wants it, it allows us to install that application and use App Volumes to present that application to just that user, and make them happy. From an IT perspective, we want to say yes more than no. App Volumes makes it possible for us to say yes."

In addition to IT working more efficiently, clinicians can spend more time working with patients. Logins to virtual desktops for staff have been cut from two minutes to 15 seconds, a nearly 87.5% improvement. If a clinician on an eight-hour shift logs into the system between two and three times per hour on average, that provider would have an additional 35 minutes per shift to spend with patients. "If you talk to any doctor, they'll tell you they don't want to have to spend time logging into the system. Even a small reduction in time is pretty big for us. That's been the best feedback that we've received from the clinicians," said Park. LCMC expects this to boost both patient and employee satisfaction with the hospital, further supporting strategic initiatives for employee productivity and retention.

The solution created significant cost savings by enabling the company to implement less expensive thin clients instead of PCs for up to 90 percent of its fleet without sacrificing end-user experiences. Specifically, leveraging virtual desktops enabled the hospital to deliver vital desktop software to end users without incurring associated hardware deployment and maintenance costs. Now IT can provide support and software updates to end users remotely, as well as resolve help desk tickets faster.

Looking Ahead

Dr. Alan Marr, vice chair of informatics at LSU Health New Orleans and a clinical professor of surgery, remembered that all records were kept on paper and X-rays were developed on film 30 years ago when he began his medical residency. "Residents would hoard the films in their lockers, so that some other service wouldn't take the films. Finding films, finding labs, finding anything in the record was challenging, to say the least." Now hospitals are moving toward innovations such as sensors that monitor patients intelligently in their own homes, or mining data to find patterns that point to new thinking about diseases and medicines. "Those are the sort of patient safety and decision support issues that are the future of medicine," says Marr.

LCMC plans to offer new services on different devices, such as self-serve kiosks in lobbies, to help accelerate patient check-ins and improve hospital experiences. "We're moving more and more into the world of bring your own device. A few years ago, we had to dictate what kind of device each clinician had to use. Now it's more of a preference. We need to be able to provide IT solutions for them to share, to support their preferences," said Townsend.

LCMC also plans to continue its work toward integrating the IT systems of all five hospitals. Townsend says that "We want to standardize our infrastructure, leverage our tools, and use best practices over time to reduce our overall operating and capital expenditures, and improve that patient experience and improve our clinicians' experience. VMware is definitely helping us look at exactly what we need to be able to do that."

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