INDUSTRY
Heathcare

LOCATION
Providence, Rhode Island

KEY CHALLENGES
- Supporting desktop systems was labor-intensive, costly.
- End users wanted to access desktops from devices they could choose.
- End users wanted "anytime, anywhere" desktop access.

SOLUTION
CharterCARE implemented a VMware View virtualized desktop environment, which enables users to access their virtual desktops flexibly from any device. An EMC Unified Storage platform provides data storage scalability and supports high I/O scenarios such as boot storms, ensuring optimal desktop performance.

BUSINESS BENEFITS
- Reduced power and cooling costs by reducing physical servers
- Enhanced desktop security to better protect patient privacy
- Boosted employee productivity by providing "anywhere, anytime" access to clinical files and applications

vmware®   **EMC²**®

CharterCARE
HEALTH PARTNERS

With VMware View and EMC Storage, CharterCARE Achieves Desktop IT as a Service

To achieve its strategic vision of offering IT-as-a-service, CharterCARE Health Partners implemented a VMware® View® virtualized desktop environment. Today, that environment provides employees with device-independent access to medical, administrative and IT applications any time, from anywhere.

CharterCARE Health Partners, based in Providence, Rhode Island, is a community-based, 579-bed hospital health system. Its IT organization supports two hospitals—Roger Williams Medical Center and Our Lady of Fatima Hospital—as well as a number of affiliated outpatient clinics, nursing homes, home health services, and specialty care centers.

The Challenge

CharterCARE Health Partners first implemented VMware virtualization technology for tactical reasons. The healthcare provider wanted to reduce its server footprint, improve its disaster-recovery capabilities and enable more-nimble scaling. Today, over 97 percent of the company's applications are virtualized—including its MEDITECH electronic medical records system; Synapse picture archiving and communication system (PACS); and Microsoft® SQL Server, Exchange and SharePoint software. CharterCARE also leverages VMware vCenter™ Site Recovery Manager™ to protect critical applications and test its disaster-recovery procedures.

After virtualizing its servers, CharterCARE turned its attention to its desktop infrastructure. There it faced a new set of challenges.

CharterCARE's desktop systems are physically dispersed across its hospitals and clinics. Supporting them with onsite, in-person resources was labor-intensive and costly, and CharterCARE wanted to bring those costs under control. Another ongoing challenge is device security. CharterCARE needs to ensure

that its desktop devices are managed in compliance with patient privacy regulations.

CharterCARE's thorniest problem, however, is that today's end users want to access desktop applications from a wide variety of devices, including mobile devices they choose themselves. CharterCARE wants to accommodate these emerging user preferences. However, doing so requires abandoning any hope of standardizing its desktop hardware—and managing a heterogeneous desktop environment inevitably leads to unsustainable support costs.

CharterCARE decided to take a bold new step and transform its IT organization. "We decided to move to an IT-as-a-service model," notes Andrew Fuss, director of technology and engineering, CharterCARE.

The Solution

To enable desktop IT-as-a-service, CharterCARE first needed to extend virtualization from its servers to the desktop infrastructure.

The IT organization was already comfortable with the concept of desktop virtualization. It had experimented

VMWARE FOOTPRINT

• VMware View®
• VMware vSphere®
• VMware vCenter™ Site Recovery Manager™

APPLICATIONS VIRTUALIZED

• MEDITECH electronic medical records system
• Synapse PACS
• Microsoft SQL Server
• Microsoft Exchange
• Microsoft SharePoint
• Microsoft Office

PLATFORM

• Wyse zero clients
• EMC CLARiiON CX
• EMC Data Domain
• EMC NetWorker
• EMC FAST Suite
• EMC RecoverPoint
• HP servers

PARTNER

• EMC

with using Microsoft Remote Desktop Protocol (RDP) to create virtual instances of Windows XP systems. Later, CharterCARE implemented a small fleet of Citrix virtual systems. As a thin-client solution, however, the Citrix implementation was still too labor-intensive to support. "We were investing hours and hours in keeping the devices current," says Fuss. "The technology looked good on paper but just didn't work like we needed it to."

So CharterCARE switched to VMware View technology, deploying an initial 400 View desktops for use by IT, administrative and clinical staff. Along with the View rollout, CharterCARE also began replacing its existing desktop hardware with Wyse zero clients. Authorized users can also access their virtual desktops from their devices of choice—whether that's a laptop, a home PC, an iPad or a smartphone.

To optimize the performance and availability of its View systems, CharterCARE paid particular attention to its storage architecture.

When it first virtualized its servers, the provider owned an HP storage area network (SAN). Later it switched to EMC CLARiiON CX Series storage combined with EMC Data Domain deduplication storage, and EMC NetWorker software for backup and recovery of its systems. "EMC and VMware are very tightly integrated," Fuss notes. "EMC lets us manage our virtual environment from a single dashboard, rather than jumping from console to console. And EMC RecoverPoint is hands-down better than any other data restore solution."

The ultimate payoff for switching to EMC, however, came when CharterCARE implemented VMware View. "Our EMC CX is highly scalable, which is a requirement for both virtualized desktops and IT-as-a-Service," Fuss notes. Additionally, CLARiiON with FAST Cache supports the I/O generated by virtual desktop environments and can mitigate the impact of boot storms. "The performance of our VMware View desktops is outstanding," says Fuss, "and we know our array(s) with the FAST Suite is one reason for that."

Business Benefits

When CharterCARE implemented VMware VSphere®, it reduced its physical server count from 250 to 9 machines. This improved datacenter manageability and reduced power and cooling costs. Implementing View resulted in comparable gains within the desktop environment. Because View desktops are easier to manage and support, CharterCARE was able to add 250 new endpoints to its desktop infrastructure—an increase of more than 10 percent—without requiring new support resources. Security is enhanced as well, because data is no longer stored on local PC drives—an important consideration in CharterCARE's hospitals, where patient privacy is a key priority.

Virtualizing its desktop environment also delivered benefits that are more transformational and therefore have a more profound effect on the provider. Users can seamlessly connect to their View desktops from any location, using any device. This is useful not only for CharterCARE's IT and administrative staff, but also for its physicians; they can access the files and applications they need for managing their clinical cases from anywhere, at any time. The virtualized desktop service is also device-independent—an improvement that is particularly welcome to younger staff members, who are accustomed to working with devices such as the iPad. "Our goal was to make IT easier," Fuss says. "VMware View helped us achieve that goal."

Looking Ahead

Today, approximately 25 percent of CharterCARE's desktop environment is virtualized. Over time, that will be expanded to at least 70 percent. CharterCARE also plans to implement VMware vCenter Operations, which will help it better manage infrastructure capacity and enable more proactive management.

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