



“Citrix is a foundation partner in almost everything we do. We must have a secure, reliable, robust and flexible infrastructure so our clinicians can access information anywhere and on any device. Citrix plays a huge role in making that happen.”

Dee Cantrell,
CIO, Emory Healthcare

Emory Healthcare makes Citrix virtualization the cure-all for clinician access

Emory Healthcare is the clinical arm of the Robert W. Woodruff Health Sciences Center at Emory University in Atlanta, Georgia. It is the largest health system in the state, with four hospitals, a 1,000-physician practice, 28 satellite clinics and 10,000 employees.

The challenge: Pursuing IT innovation to enhance patient care

For years, Emory Healthcare has relied on Citrix® XenApp™ to deliver a virtual desktop of clinical applications, including Cerner Millennium®, to caregivers and other staff. Application virtualization has been far more efficient than deploying and maintaining large, complex software solutions on 10,000 devices spread across multiple campuses. Importantly, the Citrix SmoothRoaming™ technology in XenApp allows doctors and nurses to move from one workstation to another and pick up their sessions where they left off simply by entering their credentials. SmoothRoaming supports Emory Healthcare’s goal of making the electronic medical record available wherever the patient is cared for.

As the organization grew, the IT team identified the need to scale up the virtual desktop environment on demand. “With the ultimate goal of providing better and safer patient care, we were tasked with making IT more innovative, efficient and cost-effective,” said Dee Cantrell, CIO. Added Mike Thomason, chief technical architect, “Specifically, we needed to reduce the cost of desktop delivery by 50 percent, streamline clinician mobility even more and resolve issues faster. We chose to address all these challenges by strengthening our relationship with Citrix and leveraging additional Citrix virtualization solutions.”

Adding new Citrix virtualization solutions

Emory Healthcare began expanding its XenApp environment by implementing Citrix® XenDesktop™. Provisioning services allow the IT team to quickly stream a tested and consistent workload image to hundreds of servers in minutes, instead of having to build each new server individually.

Key benefits

- Enhances patient care and safety with virtual desktop delivery to clinicians anywhere
- Reduces IT hardware, overhead and administration costs
- Enables IT innovation to support organizational goals
- Increases IT efficiency and responsiveness



Applications delivered

- Cerner Millennium clinical system
- Microsoft® Office Suite
- Siemens® Picture Archiving & Communications System (PACS)

Thomason uses XenDesktop to deliver a centrally managed virtual desktop to power users with full personalization and functionality anywhere the information is needed. The IT team also uses the desktop streaming feature of XenDesktop to stream its picture archiving and communications system (PACS) to workstations in diagnostic departments such as radiology, instead of deploying the software to each device.

To facilitate application performance monitoring, enable policy-based control and add single sign-on capability, the IT team upgraded to Citrix® XenApp™, Platinum Edition with Microsoft® Windows Server® 2003. The Platinum Edition integrates functionality from Citrix® EdgeSight®, Citrix® Access Gateway™, Enterprise Edition and Citrix Password Manager™.

To reduce hardware costs and support disaster recovery planning, Emory Healthcare selected Citrix® XenServer™ for server virtualization in conjunction with Egenera® BladeFrame® and PAN Manager®, and EMC™ virtual storage.

Streamlining information access for clinicians

The ultimate goal of Emory Healthcare's IT strategy is to enable exceptional patient care by streamlining delivery of healthcare information to caregivers anywhere, on any device. Citrix virtualization solutions support this goal in a number of ways.

One is providing faster access to the virtual desktop. Thomason explained, "Citrix SmoothRoaming is a huge benefit for doctors and nurses, but to make roaming even easier, they wanted to eliminate the need to enter their passwords over and over again. With Hot Desktop functionality from Citrix Password Manager, they can log on and off in seconds, freeing up more time for patient care."

Another is improving IT's ability to monitor, troubleshoot and resolve issues that might interfere with clinician access. "In the past, if a doctor or nurse called helpdesk with a problem, we didn't track that data," he said. "Now, with EdgeSight functionality, we can identify who, what, when, where and why. For example, we had a challenge where a particular screen caused the electronic medical record (EMR) to hang for up to a full minute. We had everyone—vendors and our own team—trying to find the problem. Then, using EdgeSight, in just a couple of minutes we were able to identify it as a back-end problem. Before, we were just guessing."

Cantrell added, "Being able to isolate and resolve the problem quickly with EdgeSight is critical because any disruption to the EMR affects patient care."

XenDesktop enables the IT team to address users' requests to maintain the familiar experience of their desktops—important for productivity and satisfaction. "While XenApp is great, and people can work anywhere, some of them were missing the feel of their desktop—such as creating shortcuts. With XenDesktop we complete the virtualization circle," said Thomason.

Increasing IT efficiency and cost savings

Citrix virtualization technologies have increased IT efficiency and cost-effectiveness, primarily due to centralized management. Now, a single IT employee is able to oversee the maintenance of 350 desktops or manage about 150 virtual servers. Each Citrix technology integrates with the others and contributes to the overall reduction in time and labor.

Networking environment

- Citrix XenApp, Platinum Edition running on 450 IBM® blade servers
- Citrix® XenDesktop™, Platinum Edition
- Citrix® XenServer™, Platinum Edition
- Microsoft Windows Server® 2003

Cantrell said, “Our virtual desktop environment, delivered with XenApp and XenDesktop, is running on XenServer virtual machines with Egenera and EMC virtual solutions. With this complete virtualized architecture, we’re able to maintain a lean IT staff while reducing hardware, power consumption and other overhead in our datacenter.” For example, XenServer enables up to 15 virtual servers to run on a single blade, compared to the previous one-to-one ratio.

A key solution for IT efficiency and cost control is server provisioning. Thomason noted, “We chose provisioning services to reduce the costs of installing, configuring and testing individual server workloads, but it has given us much more. It’s much easier to scale up our virtual desktop environment now. If we need 10 or 15 additional servers, Citrix ensures a fast, consistent build process. This gives us greater agility in meeting organizational needs, including disaster recovery planning.”

He added, “And when we upgrade to the next version of XenApp, I will literally be able to simply reboot our servers with the new software using provisioning services instead of having to push the upgrade out to each box. This is an example of the extreme power of Citrix.”

A strategic partner for virtualization

As Emory Healthcare expanded its virtualization environment, the IT team made a point of strengthening its relationship with Citrix, including engaging a Citrix technical account manager to assist with piloting and rolling out new products.

“To reduce complexity and cost, our goal is to use as few vendors as possible and develop a strategic relationship with each,” said Thomason. “Citrix is the most strategic partner for virtualization because it provides a one-stop shop. No other vendor has a full-circle suite of virtualization products.”

“Citrix is a foundation partner in almost everything we do,” Cantrell concluded. “We must have a secure, reliable, robust and flexible infrastructure so our clinicians can access information anywhere and on any device. Citrix plays a huge role in making that happen.”



Worldwide Headquarters

Citrix Systems, Inc.
851 West Cypress Creek Road
Fort Lauderdale, FL 33309, USA
T +1 800 393 1888
T +1 954 267 3000

www.citrix.com

Americas

Citrix Silicon Valley
4988 Great America Parkway
Santa Clara, CA 95054, USA
T +1 408 790 8000

Europe

Citrix Systems International GmbH
Rheinweg 9
8200 Schaffhausen, Switzerland
T +41 52 635 7700

Asia Pacific

Citrix Systems Hong Kong Ltd.
Suite 3201, 32nd Floor
One International Finance Centre
1 Harbour View Street
Central, Hong Kong
T +852 2100 5000

Citrix Online Division

6500 Hollister Avenue
Goleta, CA 93117, USA
T +1 805 690 6400

About the Citrix solution

XenApp is the de facto standard for delivering Windows® applications at the lowest cost to any user, anywhere. XenDesktop allows customers to virtualize Windows desktops in the datacenter and deliver them on demand to office workers in any location. XenServer is an enterprise-class solution for virtualizing application workloads across any number of servers in the datacenter as a flexible aggregated pool of computing resources. All are members of the Citrix Delivery Center™ product family. Citrix Provisioning Server enables IT organizations to dynamically stream datacenter and desktop operating systems and workloads to both virtual and physical machines from a central location.

©2009 Citrix Systems, Inc. All rights reserved. Citrix®, EdgeSight®, Citrix Delivery Center™, XenDesktop™, XenApp™, XenServer™, Access Gateway™, Citrix Password Manager™ and Citrix SmoothRoaming™ are trademarks or registered trademarks of Citrix Systems, Inc. and/or one or more of its subsidiaries and may be registered in the United States Patent and Trademark Office and in other countries. Microsoft®, Windows® and Windows Server® are registered trademarks of Microsoft Corporation in the U.S. and/or other countries. All other trademarks and registered trademarks are property of their respective owners.