

Healthcare Provider Streamlines Workflow with Virtual Desktops



Executive Summary

Customer Name: Metro Health

Industry: Healthcare

Location: Grand Rapids, Michigan

Number of Employees: 2400

Challenge:

- Improve desktop environment
- Support thousands of point-of-care desktops in simple, most efficient way
- Help ensure safe, reliable access to patient data and virtual desktops for physicians and nurses

Solution:

- Cisco Virtual Experience Infrastructure (VXI) with VMware View has capacity to deliver healthcare applications to a multitude of devices at any location
- Cisco VXI Data Center built on Cisco Unified Computing System (UCS) optimizes virtualized clinician workspaces
- FlexPod offering, based on Cisco, VMware, and NetApp, offers pre-validated, scalable infrastructure for private cloud

Results:

- Reduced capital expenses by 30 percent
- Improved graphics acceleration rate by more than 300 percent with PC over IP protocol (PCoIP)
- Streamlined clinical workflows

Metro Health delivers next-generation workspace thanks to Cisco VXI with VMware, built on FlexPod.

Challenge

Serving Grand Rapids and the West Michigan area, Metro Health is an integrated health system that includes a new state-of-the-art hospital, the Metro Health Medical Group, other affiliated physicians, neighborhood outpatient centers, a philanthropic foundation, the Metro Health Village and campus, and more.

To continually enhance its services, Metro Health decided early on that electronic medical records (EMR) were essential, choosing Epic as its EMR vendor. Yet the Metro Health team realized that simply implementing EMR was not enough. The system needed to be taken one step further by providing a highly available, efficient, and flexible desktop environment that would deliver EMR to caregivers and administrators whenever and wherever they needed it.

“We wanted to extend our systems out to a variety of form factors and locations to really advance our anytime, anywhere access to patient information,” says Bill Lewkowski, CIO and executive vice president at Metro Health. “When healthcare moves beyond the patient to a situation involving different partner organizations, it’s especially critical to be able to easily collaborate in various care settings.”

Seeing desktop virtualization as the answer, Metro Health partnered with VMware to deploy VMware View, the industry-leading virtual desktop infrastructure. This solution allows caregivers to roam from thin client to thin client, or PC to tablet, and have their Epic application follow them throughout the hospital.

Metro Health did not stop there, however. The provider realized that choosing the right servers and storage for their virtual desktop environment was also a critical consideration, because managing a highly mobile environment can be a significant challenge. “It was very challenging to stay current with the constant changes and additional technologies coming in, especially the mobile devices,” says Lewkowski.

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- **Bill Lewkowski**
CIO and
Executive Vice President
Metro Health

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Solution

A longtime Cisco customer, Metro Health had until that point relied on Cisco voice, video, and data solutions. With this new virtualization strategy and EMR infrastructure, the team decided to turn to Cisco for help in enhancing its server and desktop virtualization environment as well.

Unlike traditional desktops that require users to repetitively log in to their workstation throughout the day, Metro Health deployed Cisco® VXI with VMware View to deliver next-generation virtual workspaces for clinicians that could be accessed at any time, in any location, and on any device, in a secure manner. The solution is being used to address three critical workflows for physicians and nurses: remote image access, “follow-me” clinical desktops for nurses, and ubiquitous dictation for physicians.

The foundation for enabling the optimization of these workflows is the Cisco VXI Data Center, built on FlexPod. A scalable, high-performance infrastructure optimized for hosting virtual desktop workloads, Cisco VXI immediately appealed to the Metro Health team. Designed for large-scale virtualization, Cisco Unified Computing System™ (UCS™) and NetApp storage provided the ideal infrastructure for secure, reliable virtual desktops based on VMware View.



“We tested the solution against our requirements, including how fast you can actually start up a thousand desktops virtually, because that was particularly a problem in our old environment,” says Aivars Apsite, technology manager at Metro Health. “We also need to ensure our environment is Microsoft Windows 7 ready. We were very impressed with the metrics that proof-of-concept testing demonstrated with the Cisco, Net App, and VMware solution.” The solution also takes advantage of the PC over IP protocol (PCoIP), which significantly improves performance for viewing video among other multimedia functions. Metro Health experiences similar performance benchmarks for graphics acceleration, with scores of 83 percent for PCoIP, compared to 19.5 percent for Remote Desktop Protocol (RDP).

Before and After: Follow-Me-Desktops

Old Workflow:

- 50+ logins a day
- 2+ minutes to log in, launch app, and view patient data
- Restricted remote access capabilities

New Workflow:

- Access virtual desktop from any endpoint
- Instantly resume all apps and data
- Robust remote access capabilities

Results:

- Login times reduced by 50 percent
- Productivity gain = 33 percent
- Access via many diverse endpoints

The fact that the Cisco, VMware, and NetApp solutions come tightly integrated on a single, unified platform especially resonated with the team. “Not only is the Cisco UCS server integration and virtual management phenomenal, NetApp’s unique storage capabilities provide great cash savings,” says Lewkowski. “Those factors coupled with VMware integration, a technology we were already reaping the benefits of for many years, fully convinced us that this was the way to go.”

With a FlexPod solution now firmly in place, Metro Health has an agile and easily manageable data center environment that supports both its desktop virtualization and ultimate goal of moving to a private cloud. “We’re now able to bring a very dynamic solution to each user experience that we never could before, and we’re very excited about this opportunity,” says Apsite.

Results

The benefits of Metro Health’s Cisco-VMware-NetApp architecture have had a ripple effect throughout the entire organization, starting with a 30 percent reduction in the organization’s capital expenses.¹

For Metro Health’s IT and compliance teams, one of the notable results of the deployment is enhanced security. “With virtual desktops, we don’t have people taking data home or sending it to themselves, so all our shared drives and corporate information is more secure,” says Privacy and Security Officer Arthur King. “Desktop virtualization keeps the data where it’s properly controlled and protected. There’s no longer a security hole we have to worry about.”

With doctors, nurses, and administrators now able to perform their duties anytime, anywhere, Metro Health also benefits from more efficient workflows. “We do our charting at the bedside, so it’s critical that our remote roaming capabilities support it,” says Apsite. “Now caregivers can log into a follow-me-desktop twice as quickly as before, and graphics acceleration rates have improved by more than 300 percent.”

Adds Dr. Brad Clegg, chief medical information officer, “One of the single biggest issues with outcomes in healthcare is patient compliance. Now I can share data in real time, right in front of the patient in the exam room and confirm whether my patients are compliant to the care plans I’ve provided them. By sharing images or showing graphs of trended outcomes data, the patient can see exactly what’s going on relative to set goals. So it enhances the dialogue between the patient and the provider. And it can all be done in real time.”

Improved communication leads to a better experience for everyone. “From quicker turnaround times to accuracy of troubleshooting, we’ve received very positive feedback regarding our support services,” says Lisa Kaywood, director of IT at Metro Health. “Not only does that make patients happier, but our staff as well. With all of the information at hand, staff are now much more engaged and can continue to improve patient care.”

1. [“Optimizing Clinical Workflows with VMware View and Cisco VXi”](#) white paper, 2011.

Product List

Data Center Solutions

- Cisco VXI with VMware, deployed on FlexPod
 - Cisco Unified Computing System (UCS) B-Series Blade Servers
 - VMware View 5, ThinApp, and vSphere
 - NetApp FAS3240 Storage

Applications

- Epic EpiCare EMR
- Windows 7

Next Steps

Looking ahead, Metro Health hopes to increase collaboration and information sharing not only among a greater number of patients and physicians, but also across greater distances. "Cisco VXI and the FlexPod solution will help us achieve that vision," says Lewkowski. "We're looking to take advantage of the next generation of virtualization. And this partnership will enable that with a private cloud that we can extend across our health system and our collaborative partners."

For More Information

To find out more about Cisco VXI and Desktop Virtualization, visit:

<http://www.cisco.com/go/vdi>.

To find out more about VMware Healthcare, visit: www.vmware.com/go/healthcare.

To find out more about FlexPod, visit: www.imaginevirtuallyanything.com.

This customer story is based on information provided by Metro Health and describes how that particular organization benefits from the deployment of Cisco products. Many factors may have contributed to the results and benefits described; Cisco does not guarantee comparable results elsewhere.

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