



“With VMware View, I can honestly say that there are months that go by where I don’t have to think about the infrastructure because it just works. The scalability and the performance are really there, and I am very grateful not to have to worry about it.”

— Chris House
Senior Network Analyst,
Metro Health

KEY HIGHLIGHTS

Challenge

Medical staff requires anywhere-anytime access to applications and data to provide superior healthcare.

Solution

VMware creates a virtual desktop infrastructure where desktops follow the user, regardless of device or location.

Metro Health

Serving the Grand Rapids and Western Michigan area, Metro Health is an integrated group of health care organizations, including physician groups, neighborhood outpatient centers, managed care services, a philanthropic foundation and more.

When Metro Health’s flagship property, the Metro Health Hospital, moved into new, state-of-the-art facilities in September, 2007, it provided the organization an opportunity to shift to a more efficient desktop infrastructure. “The doctors and nursing staff used to have to walk up to a PC, wait for the PC to startup, log into their application, and then locate the information they needed,” says Chris House, senior network analyst at Metro Health.

Using VMware to virtualize clinical and office desktops provided a more appealing option. Virtual desktops are secure within the datacenter and can be immediately accessed from any terminal in the organization making it easy for doctors and nurses to quickly retrieve the information and access the applications necessary to treat patients.

Metro Health uses nearly 1500 virtual desktops for its employees, and one of the biggest gains has been the instant access to information: “Our medical staff can freely move throughout the hospital and the outpatient sites,” says House. “Anywhere there’s a thin client, they can access their desktop.”

Deployment Environment

Metro Health uses HP c-Class blade servers to host the virtual desktops. Thirty eight dedicated VMware Virtual Infrastructure clustered hosts are used to run approximately 1,500 virtual desktops, with each server hosting about 45 virtual desktops. The clusters reside in two geographically separated datacenters. Each datacenter hosts 750 desktops.

Metro Health provides its users with a Microsoft Windows XP (SP2) image, with 512MB memory. The desktop image size is approximately 10GB with some essential applications such as “Hyperspace,” the Epic EMR client and OnBase for document imaging, installed within the master image. User profiles are stored locally within the desktop, but the user-generated data is stored on network drives mapped to the desktop.

Virtual desktops are dedicated to each user and they are allowed to install other applications as needed. The virtual desktop is rebooted every two weeks helping to ensure that the user always has a high performing desktop environment. Applications are delivered via Novell ZENworks, and are assigned using Active Directory groups.

Metro Health users have access to a variety of office and medical applications in their virtual desktop including medical record, document management, and regular office applications from Microsoft and Adobe.

VMWARE AT WORK

VMware Virtual Desktop Infrastructure

Thin clients from HP and Wyse are used to provide access to the user's virtual desktop from within the hospital and outpatient plazas. Custom solutions have been developed in-house to install local printers in the virtual desktop depending on the user's physical location.

The data center backbone is a 10Gb Ethernet implementation with 100 Mbps ports to the clients. About 10 percent of Metro Health users connect remotely. The branch office outpatient centers use gigabit Ethernet connections back to the datacenter.

Storage is provided by a pair of HP StorageWorks XP1024 disk arrays hosting close to 32TB of storage for the virtual desktops, split in to datastores of 263GB, each hosting 25 virtual desktops.

The Results

- **Save Money.**

"Using VMware to virtualize our desktops allowed us to replace our PCs with thin clients," says House. "Thin clients do not need to be replaced as often and with a lot less PCs to purchase and maintain, those savings add up."

- **Fast Desktop Provisioning.**

"We no longer have to make site visits to repair faulty PC's, replace PC's, or set up new users," says House.

- **Flexible, Convenient Access.**

Clinicians are able to access their virtual desktops while on campus at the main facility using thin clients or at different outpatient sites using laptops or PCs securely over the Internet.

- **Support HIPPA compliance.**

"We have to guarantee the safety and privacy of our information," says House. "VMware View™ makes sure that data stays within the datacenter—information can't just be toted off campus on a laptop or PC."

