



North Kansas City Hospital delivers secure, point-of-care computer access – anytime, anywhere

“With PCoIP Zero Clients and ‘tap-in, tap-out’ badge access, doctors, nurses and clinicians can roam from location to location without the hassle of closing down electronic medical record applications or logging in and out.”

ART FISK
CHIEF INFORMATION OFFICER
NORTH KANSAS CITY HOSPITAL

AT A GLANCE

Challenge

- Giving doctors, nurses and clinicians quick, convenient access to information at the point of care
- Securing data in compliance with industry best practices and regulations
- Maximizing computing resources for optimal PC usage and reduced idle time

Solution

- Server support for VMware® Horizon View™ virtual desktop infrastructure
- 700 zero clients, with integrated Teradici PCoIP® technology
- Imprivata OneSign® Single Sign-On and PC Proxy readers for tap-in and tap-out badge access

Results

- **True mobility:** with tap-in, tap-out badge access and sessions that resume rapidly
- **Streamlined workflows:** giving clinicians anytime, anywhere access to their desktops
- **Easy installation and management:** replacing PCs with zero clients
- **Security:** data remains in the data center
- **Superior viewing:** high-fidelity PCoIP imaging, with improved image quality compared to previously deployed PCs
- **Affordability:** extended lifespan for low-maintenance endpoints
- **Scalability:** easy to add endpoints; easily scaled server session hosting



North Kansas City Hospital is an acute-care facility with 451 licensed beds and six centers of excellence in cardiac care, cancer care, women’s health, orthopedics, emergency services and minimally invasive surgery. The Hospital has achieved national recognition, most recently in the *US News & World Report’s* 2013-14 ranking of the best hospitals in the metro area, a prestigious list showcasing only 15 percent of the nation’s approximately 4,800 hospitals.



“When it comes to availability, flexibility, and security – all the things we hold near and dear as an IT entity – PCoIP Zero Clients make sense.”

GEOFF SCHILLARE
IT MANAGER
NORTH KANSAS CITY HOSPITAL

As North Kansas City Hospital has grown, the IT team has been challenged to give nurses, physicians and clinicians efficient access to computing resources at the point of care. The conversion to an Electronic Medical Record (EMR) system pointed out several inefficiencies with the previously deployed PCs. When Art Fisk was promoted to CIO, he immediately noticed that PCs were taking up too much space and restricting the staff to inefficient workflows.

“Each nurse was claiming a PC at the beginning of their shift and would then have to come back to that device to do their work,” explained Fisk. “Everyone avoided using a system that someone else was already using, even if that person had stepped away.” The CIO asked IT to initiate a search for a point-of-care solution that would offer:

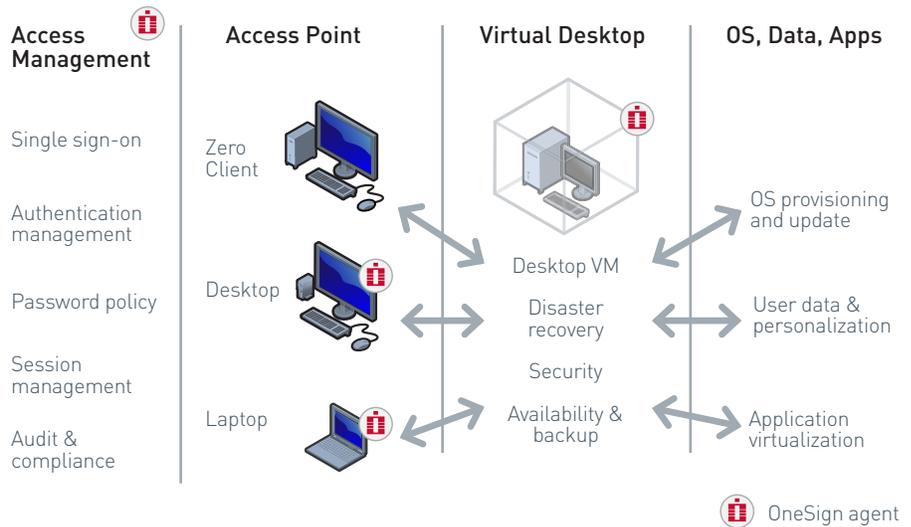
- Improved productivity, allowing staff members to use any nearby PC on the hospital floor throughout the day
- Better allocation and utilization of computing resources, optimizing PC usage and reducing idle time
- Easy-to-use, high performance user experience for hospital personnel to streamline the transition to a new virtual computing environment, freeing them up to focus on delivery of the highest quality patient care

An ideal solution emerged over the last couple of years. The technology team at the Hospital had been keeping up with virtualization advancements. Besides virtualizing servers many years ago, thin clients were also tested in some clinical areas – although trial implementations didn’t prove satisfactory to users. “With the first thin clients we tried – if they moved to another client, they had to go through the login and authentication processes again. They were not used to this. It made it difficult for us to take advantage of VDI at the time.” said Artie Horn, systems engineer at the Hospital, and the IT project lead for the desktop virtualization.

In 2012, a combination of technology advances resulted in a broadly deployed point-of-care endpoint solution that has exceeded the expectations of physicians and nurses, as well as the CIO:

- VMware Horizon View virtual desktop infrastructure
- Zero Client endpoints, with integrated Teradici PCoIP technology
- Imprivata OneSign Single Sign-On authentication
- Badge readers, for tap-in/tap-out initiation of sessions

“With PCoIP Zero Clients and ‘tap-in, tap-out’ badge access, doctors, nurses and clinicians can roam from location to location without the hassle of closing down electronic medical record applications or logging in and out,” explained Fisk.



Deployment of more than 700 PCoIP Zero Clients in a virtual desktop environment has enabled more efficient use and sharing of computing resources.

The new zero clients also make it practical to introduce session time-outs. When a user walks away, the session can be closed out automatically after a specified amount of time to protect patient data from unauthorized access. Caregivers are not slowed down; a simple tap of their badge restarts their session.

Horn explained, "For most of our doctors, time-outs have been cut in half. But we have found that they are now accustomed to badging out when they leave the screen – it's a reflex now. They're very good about protecting their sessions and releasing machines to someone else, because it is so easy now."

The benefits have been far-reaching.

The Teradici-powered zero clients and Imprivata OneSign authentication and single sign-on software create an integrated, interoperable healthcare solution with strong authentication and easy-to-maintain endpoints. Zero clients are quieter, cooler, and consume less power. "When it comes to availability, flexibility, and security – all the things we hold near and dear

as an IT entity – PCoIP Zero Clients make sense," said Geoff Schillare, IT Manager, North Kansas City Hospital.

With integrated Teradici PCoIP technology and the latest VMware Horizon View release, the solution also gives the Hospital superior viewing experiences, with high-fidelity imaging that benefits radiology and other areas.

"Today, zero clients give us a smoother viewing experience," said Fisk. "This has been a benefit for our doctors, and the performance of the PCoIP protocol was one of the reasons that we upgraded to the latest release of VMware Horizon View so quickly."

The system engineer that deployed the solution is impressed with the results. "I have the utmost respect for Teradici and the benefits of its technology," said Horn. "Teradici's partnership with Imprivata to enable OneSign Single Sign-On on PCoIP Zero Clients has been absolutely amazing – a huge win for us at North Kansas City Hospital."

With one-touch desktop roaming, physicians and care providers can conveniently access vital information anytime and anywhere. The new level of mobility helps improve quality of care and ultimately saves lives.

“Teradici’s partnership with Imprivata to enable OneSign Single Sign-On on PCoIP Zero Clients has been absolutely amazing – a huge win for us at North Kansas City Hospital.”

ARTIE HORN
SYSTEMS ENGINEER
NORTH KANSAS CITY HOSPITAL



“You’ve converged on a secure, efficient solution that enhances our quality of patient care,” said Fisk.

For IT, PCoIP Zero Clients save time for the life of the endpoint. Horn explained, “As the Hospital’s IT administrator, I’ve appreciated how quick and easy it is to manage and deploy new PCoIP devices across the enterprise using the Teradici PCoIP Management Console.”

His manager, Schillare, concurs. “We spend much less time deploying and configuring zero clients, compared to physical machines, and we can build out extra capacity very easily now. Plus, instead of our usual three-year leases, we are now purchasing endpoints because we’re confident that we can get five or even six years of life out of our zero clients. I don’t see any disadvantages with the approach. When you combine Teradici zero clients with Imprivata single sign-on authentication, our badge readers, and VMware Horizon View desktop infrastructure, it makes for a pretty good solution! I recommend all of the key components we use.”

Hospital personnel are just as happy with the zero clients as the CIO and his IT team. The support team especially appreciates the reliability improvements and fewer support calls. Fisk added, “Now with ‘follow-me’ desktop, physicians just badge out and their session moves with them. We’ve had IT managers from other regional hospitals call and tell us that they’re getting complaints from their physicians who have heard about our zero clients and want them at their sites.”

Horn said, “Our deployment of PCoIP Zero Clients has gone great – it’s been awesome.”

In fact, the Hospital was recognized in the 2013 Most Wired Survey, sponsored by Hospitals & Health Networks magazine, of U.S. hospitals who are making big strides in laying the foundation for robust clinical information systems. As a “Most Wired” hospital, North Kansas City Hospital is at the forefront of successful adoption of health information technology that protects patient data and optimizes patient flow and communications.

“This award is the culmination of all of the various and diverse IT functions working together. IT has made real strides to function as a team and this award is indicative of that effort and sweet reward for everyone involved,” said Fisk.



Products used

PCoIP Zero Clients



In the quest to deliver an even more robust computing experience at the Hospital, the CIO's team is committed to keeping pace with technology advancements. For example, they're eager to evaluate the newly introduced Teradici PCoIP Hardware Accelerator for HP ProLiant Generation 8 Servers, a cost-effective solution for maximizing the number of virtual machines placed on HP blade servers with VMware Horizon View. By reducing CPU utilization – in combination with a PCoIP Zero Client on an unconstrained network – the PCoIP Hardware Accelerator improves frame rates for medical imaging by up to 2X. This enables IT to deliver a consistent, high-performance computing experience across all users, at all times and regardless of task or activity level.

"One of the reasons we chose PCoIP Zero Clients is the ability to easily deploy and refresh endpoints," said Fisk. "We recently started introducing the new Teradici Tera2 zero clients, and we proved that we can easily leverage new technology. The new clients resulted in no changes for IT. Now, we definitely plan to look at the PCoIP Hardware Accelerator as another simple and impactful enhancement to our VDI infrastructure."

