Clark Memorial Hospital

Centralized Blades Deliver Simplified Management for Remote and Mobile Computing

Clark Memorial
Hospital

Clark Memorial Hospital is a premier healthcare provider that delivers advanced services to southern Indiana. The hospital includes four remote clinics and provides services ranging from pediatrics to brain surgery.

The Challenge

As a state-of-the-art medical facility, Clark Memorial Hospital strives to give its medical staff the tools necessary to deliver superior patient care. The hospital was especially interested in mobile computing technology and wanted to implement computing tools that would allow its medical staff to access data anywhere, including their remote clinic locations.

"The first thing we wanted to do was install mobile carts for ED registration," says Jere Roché, Network Services Team Leader. "In an emergency situation, the medical staff needs to be able to register patients wherever they are taken. We considered just putting a laptop on a cart, but that would have caused too many problems. Due to the way our network is set up, any sort of wireless disconnection would force the user log back into the network and then log back into the program. They also might have to call helpdesk to kill the old session before starting the new one. The downtime involved would make the carts more trouble than they're worth."

Clark Memorial also wanted to outfit a newly constructed remote clinic in Charlestown, Indiana with an IT system that did not present the management, availability and security issues of traditional computing technology. "We had box PCs everywhere, which was our biggest problem," says James Caldwell, Network Engineer. "Having box PCs in so many places made it harder to manage them all. If we had to

perform maintenance on a computer at one of our remote clinics, we had to physically drive over there."

"The security measures we have in place to comply with HIPAA can also be counterproductive for the medical staff," says Roché. "For example, we log nurses off their workstations after about five minutes of idleness. If they have a 15-second entry to make on a patient later on, the nurses have to take at least two minutes to log back on. That's real frustrating."

The Solution

Clark Memorial Hospital knew it wanted to implement a centralized computing solution but was unsure which system would meet its needs most effectively. "We considered a terminal services solution but weren't thrilled by the downtime potential," says Caldwell. "If we had a hardware failure, forty to fifty end users would lose their connections. In a hospital environment where the computers are being used 24/7, that's unacceptable."

> "With the ClearCube solution, there's very little interference with the users."
>
> — James Cardwell
> Network Engineer
> Clark Memorial Hospital

Upon further research, Clark Memorial decided to deploy the ClearCube solution for remote and mobile computing. ClearCube removes the PC from the user's work area, condenses it into an Intel®-based blade form-factor, and rack-mounts it in a central location. All that faces the user are the

OVERVIEW

▶ **The Challenge**

Outfit remote clinics and new mobile computing devices with an IT system that delivers high uptime levels and simple manageability while complying with HIPAA regulations

▶ **The Solution**

Connect mobile computing devices and remote clinics to a centralized deployment of ClearCube blades via small Ethernet-connected User Ports

▶ **The Benefit**

Small, secure, 99.9% available mobile computing devices and remote clinics that can be supported from the main campus

peripherals (mouse, monitor, keyboard) and a small access device called a ClearCube User Port that connects back to the allocated blade via cable, fiber or Ethernet. Utilizing the ClearCube management and allocation software, IT personnel can remotely manage users and deployments located anywhere in the world.

"The solution is great wherever we deploy it," says Roché. "In the hospital alone we're using it in the cardiology area, the labor & delivery area, an IT classroom, the HR department, and for outpatient registration and centralized scheduling."

Clark Memorial Hospital also uses the centralized deployment to support its mobile computing devices and four remote clinics. "We used them first in our new Charlestown clinic. Once we saw how well the solution was working, we decided to deploy it at the rest of our remote locations." says Roché.

The hospital uses mobile carts for patient registration in Emergency Rooms. These are equipped with Ethernet-connected User Ports that are wirelessly bridged to the network. The physicians in the remote clinics utilize lightweight Motion Computing tablet clients for point-of-care computing. Using this combined solution, the physicians can access data that is stored on the Blades through a wireless tablet client.

"The ClearCube solution is great for mobile devices because if a user loses their wireless connection, it's just a matter of reconnecting to the blade. The user can get back into the program, exactly where they left off, in about five to six seconds," says Caldwell.

The Benefit

The ClearCube solution has provided Clark Memorial Hospital with improved levels of uptime, security and manageability. In the event of a system failure, the hospital's IT administrators can use the ClearCube management software to reallocate the affected user to a spare blade in minutes. "Not only is it fast, it's so much more cost-effective in regards to redundancy," says Roché.

When the administrator is ready to repair the blade, he or she can do so directly in the data center without disrupting the nurse or doctor. "There's very little interference with the users," says Caldwell. "Even when we need to do maintenance, we can just rotate the users onto the spare blades while we work on theirs. The other good thing is that hardware failures only affect a limited number of users instead of a huge portion of the hospital."

The solution's remote management capabilities are also beneficial to managing the hospital's remote clinics. "For IT, it's a tremendous advantage to have all the blades here in the hospital. I used to have to drive 20-30 minutes to get to a remote facility, but now I can just go into the next room and do what I need to do," says Roché.

In addition to delivering higher uptime and simpler manageability, the ClearCube solution is inherently HIPAA compliant. Only authorized personnel have access to the centrally located blades, and IT can "lock out" users from attaching mass storage devices such as disk drives to their User Ports. Unauthorized users cannot download sensitive patient data onto removable devices or upload unwanted software onto the system.

Furthermore, the small footprint of the solution has raised levels of satisfaction among the end users. "Getting rid of the box PCs and installing the User Ports has really cleared up the desktops," says Caldwell. "The users like that."

From mobile computing to remote computing, Clark Memorial Hospital has been able to satisfy a wide range of needs by utilizing the ClearCube solution. "We really appreciate the ease and efficiency of the ClearCube solution," says Roché.

"The ClearCube solution has been great wherever we have deployed it."

— Jere Roché
Network Services Team Leader
Clark Memorial Hospital

8834 Capital of Texas Highway North   Austin, Texas 78759   **Voice** 512.652.3500   **Fax** 512.652.3501   **Toll Free** 866.652.3500

www.clearcube.com