Thin Clients Heal Healthcare IT Woes

While healthcare organizations today face increased pressure to rein in costs from stockholders, board members, insurers, managed care providers, and the government, they also face a growing security challenge. As more data being stored in digital format and electronic health records are being more widely deployed, patient information is increasingly targeted by hackers looking to commit fraud and identity theft.

And while other businesses seek similar solutions, healthcare IT teams must find solutions that address a number of challenges that are unique to their industry.

First, there are healthcare security issues. Patient data must be protected and kept private, as mandated by HIPAA regulations. Complicating compliance is the growing need to provide more access to patient information to more people within an organization and in more locations such as at the bedside, in nurses' stations, on mobile carts, in operating rooms, and in clinical diagnosis areas. And unlike an office setting, many of these locations are open to the public, thus compounding access control issues.

At the same time, medical identity theft is on the rise. There were more than 275,000 cases in the U.S. last year of medical information theft, twice the number in 2008, according to a 2010 *Bloomberg* news article.[1] Further, medical identity theft is about 2.5 times more costly than other types of ID frauds, according to the article.

If data is stored locally on a computer's drive, that introduces risk insofar as devices or drives can be stolen and data can be copied to USB drives. In fact, in many cases where patient data is lost or compromised, a computer containing medical records has been stolen. For example, in May, a Midwest medical center reported that a laptop containing more than 61,000 patient records was stolen.[2]

Second, there are issues having to do with the peculiarities of placing a computer in a healthcare setting. Devices must fit into whatever space is available, be it a nurses' station, on a cart, or in a patient's room, lab, or operating room. This means the form factor and size of the computer must be small so as to be unobtrusive. Additionally, some sections of a hospital (operating rooms, white rooms, etc.) must limit the circulation of air. This constrains the choice of systems to computers without cooling fans.

And third, there are accessibility issues. A wide variety of people need access to different applications and data sets, so a solution must be easy to use and sharable, yet it must offer robust (multi-factor authentication) security to ensure data privacy.

What's Needed?

One way to address all of these issues is to adopt a thin client approach that makes use of a virtual computing infrastructure.

In fact, thin clients are gaining popularity, thanks to the rising adoption of server virtualization and promise of cloud computing. Organizations are already discovering the benefits of hosting numerous virtual servers on single hardware units—or on service-provider infrastructure in the 'cloud'—and reaping benefits like reduced hardware costs, lower energy consumption, and increased flexibility. The same concept applies to applications and end-user desktops. In a thin client environment, workers do their computing

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[1] "Patient Is Billed for Liposuction She Never Had as Medical ID Theft Rises," *Bloomberg*, March 23, 2010

[2] "Stolen laptop had patient data; families offered identity theft protection," Cincinnati Children's Hospital Medical Center press release, May 28, 2010

on a 'virtual desktop' residing on a central server. Users access the environment from a thin client—a simple, easy-to-manage computing device with no hard drive or other moving parts that relies on the server for all computing resources.

This architecture provides a number of benefits.

Computing is centrally managed, making end-user computing easier to deploy, provision, and update. Troubleshooting problems can be done in the data center and does not require a visit to the physical desktop. All of these factors cut the time IT staff must dedicate to such tasks, and thus help to lower operating costs. This also means that IT staffers are better able to focus on mission-critical objectives and new strategic initiatives instead of desk-side support.

In addition to lowering desktop management costs, **thin client solutions offer improved security** since data is stored centrally. This helps an IT organization in several ways. For example, if a thin client is stolen, no data is stored locally. And the systems are less prone to hacker attacks since the centralized control afforded through a thin client approach prevents unauthorized downloads, loading of compromising applications, and file sharing.

Benefits of Using HP Thin Clients in Healthcare

HP thin clients provide myriad benefits to healthcare organizations.

HP thin client solutions can help empower an IT staff by allowing IT to deliver best-in-class support and provide high availability to data.

Their very small footprint can support a wide variety of user needs. They are compact and quiet, making them suitable for installation in exam rooms and even at the bedside. And the absence of fans in HP thin clients means they can be installed in a hospital setting without increasing the risk of spreading airborne infectious disease or dust. This makes them suitable for installation in all areas of a hospital, allowing IT to standardize on a single platform for both purchasing and management efficiencies.

The systems have no fan or any other moving parts that generate heat. This means they have a longer lifecycle alongside lower maintenance and cooling costs. According to Forrester,[3] thin clients last an average of seven years compared to three to four years for a typical PC. In addition, they draw between six and 20 watts per hour compared to 150 to 350 watts for a typical desktop PC.

To further reduce costs, HP thin clients can be part of an HP MultiSeat Computing solution. This allows up to 10 users in close-proximity spaces like reception desks or nurses stations to connect and share

a single system at the same time, while working on independent applications. Such sharing can greatly reduce the number of devices that need to be deployed, managed, and powered throughout a healthcare organization.

HP thin clients can also be used to improve clinical workflow, enabling centralized access to patient records and helping healthcare providers increase productivity, reduce medical errors, and make the most of their time with patients. HP mobile thin clients and hot desk support allow doctors and nurses to get the information they need while moving throughout the hospital in their daily work. By giving doctors more reliable access to accurate information, HP thin clients can help reduce errors and provide a better overall patient experience.

On the security front, HP thin clients can be used to secure sensitive data. They include innovative features like hidden, locking USB ports and support for multi-factor authentication with smart cards to ensure only the people you designate get access to your patient and organization information. Plus, HP is also the only thin client vendor that currently includes Symantec Endpoint Protection Agent, a licensed, enterprise-class firewall providing stateful packet inspection of inbound and outbound packets, to mitigate worm and Trojan attacks on every thin client.

HP as Your Technology Partner

With many years of proven experience in healthcare IT, HP is the world leader in thin clients. HP is your one-stop provider for a complete thin client solution. It offers hardware, software, management solutions, services, and a variety of thin clients that meet a healthcare organization's unique requirements.

When you partner with HP, its experts can provide a portfolio of services from assessment and planning to pilot programs. Whether you opt for a VMware, Citrix or Microsoft Remote Desktop Services (RDS), HP is the only thin client provider that can deliver a tested and proven data center reference architecture designed to support the number of workers and the style of computing at your company. From that baseline, they customize the solution to meet your company's needs today and tomorrow.

Most importantly, HP thin clients can help solve the budget and security issues that healthcare organizations face today.

Find out how your own healthcare organization can benefit from HP thin client solutions.

For more information, visit
www.hp.com/go/thincomputing

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[3] "HP Eco Solutions and Client Virtualization," HP, May 2009