WHITE PAPER

Curing the Clutter

Centralized computing offers a way for health care facilities to cut costs, improve patient satisfaction and increase the security of patient information.

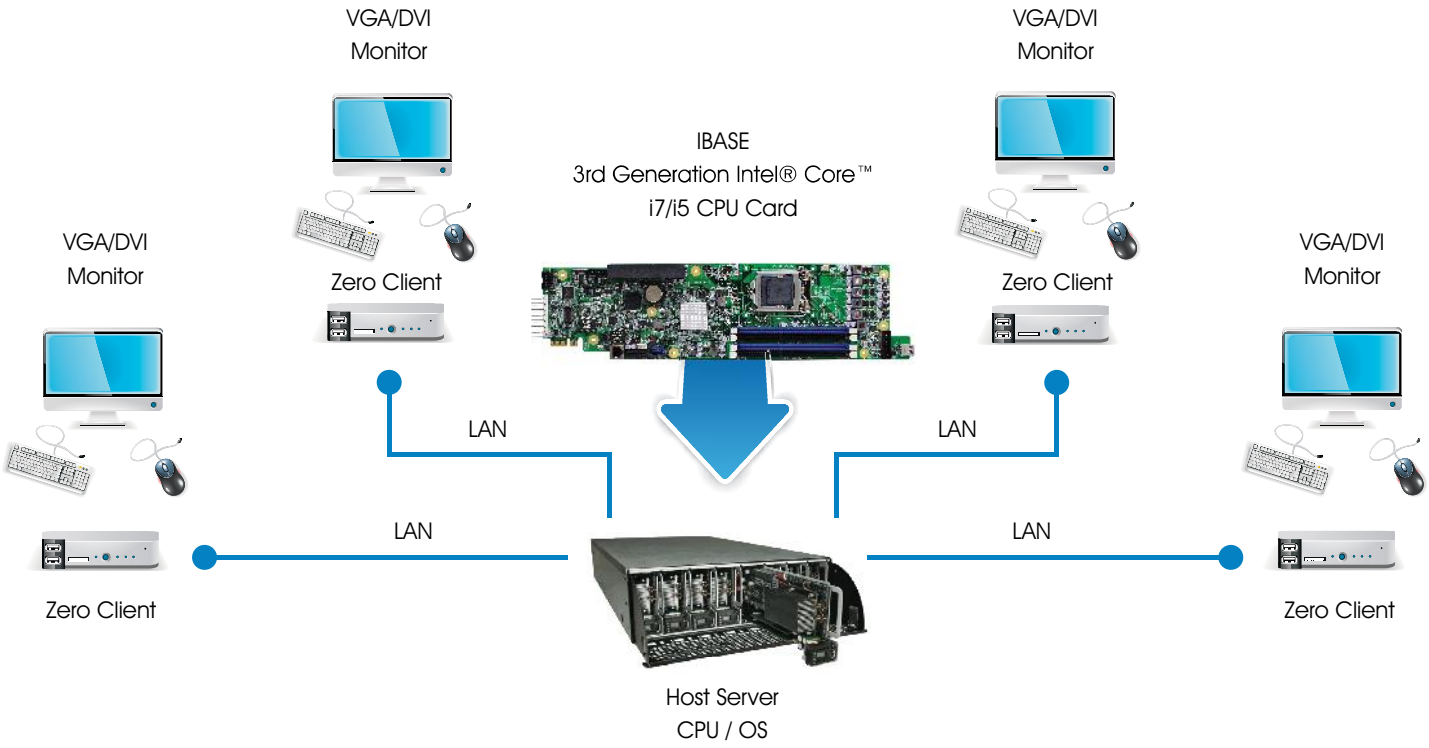
SPONSORED BY: iBASE

By Richard Slawsky
Networld Media Group

There's no doubt that technology is reshaping the way health care is delivered. Hospitals and other health care facilities use a variety of electronic devices to accomplish tasks ranging from filling out patient information forms to measuring a patient's blood pressure and other vital statistics. Nearly every office, nurses station and examination room in a typical health care facility is likely to feature a desktop computer.

And with the 2010 Affordable Care Act mandating that facilities adopt an electronic records management system, paper-based record keeping will soon be a thing of the past.

CENTRALIZED COMPUTING NETWORK



Typical computer workstation with tangled knots of cables could cut down productivity.

While health care operations are under increasing pressure to reduce costs, the security of patient information is of paramount importance. Under the Health Insurance Portability and Accountability Act of 1996, facilities can face fines totaling thousands or hundreds of thousands of dollars for improperly handling patient information.

Centralized computing, however, offers a way for facilities to lower costs while improving the security of patient information.

Curing the Clutter

Look under the desk in most hospital offices, cubicles and nurses stations and you're likely to see a similar scene: a box containing the CPU nestled in a rat's nest of cords and cables.

Most of those systems are likely to require a regular visit from someone in the IT department, either to upgrade software, replace failed or broken components or simply clean out the dust that invariably clogs the system. The expense of maintaining desktop computers throughout a health-care facility can add costs far beyond the initial purchase price of those systems.

In addition, the heat generated by those systems coupled with the dark interior of the CPU case can serve as a breeding ground for germs.

With centralized computing, however, those issues can be virtually eliminated.

IBASE Technology has developed a 3rd Generation Intel® Core™ i7/i5 processor-based CPU card that when driving a blade server can function as the heart of a system that takes the CPU from under the worker's desk and moves it to a central location in another part of the facility.

Monitors, keyboards and other devices connect to the server via a small box called a zero client, not much larger than a DVD case.

The expense of maintaining desktop computers throughout a health-care facility can add costs far beyond the initial purchase price of those systems.

The user can access a dedicated CPU on a one-to-one basis or a virtual machine in a many-to-one mapping via a small device on their desk called the zero client. Zero clients have a small footprint, consume small amounts of power and are very secure as they neither have a traditional CPU nor an OS.

About the sponsor:

Focused on the design and manufacturing of industrial PC products, IBASE Technology Inc. was created by engineers with experience in industrial PCs. The company produces single-board computers, industrial motherboards, CPU modules, embedded systems and network appliances for different applications in the gaming, entertainment, automation, medical, military, networking and security markets.

IBASE is an Associate member of the Intel® Intelligent Systems Alliance, a global ecosystem of 250-plus member companies that provide the performance, connectivity, manageability and security that developers need to create smart, connected systems. Learn more at intel.com/go/intelligentsystems-alliance. Intel® and Intel® Core™ are registered trademarks of Intel® Corporation in the United States and other countries.

The data center can be wired for maximum power efficiency, reducing power consumption and eliminating the maze of cables under workers' desks. In addition, the data center can be designed to meet cooling needs rather than leaving that task to a noisy CPU fan in a system under a worker's desk.

And because there is no fan, no moving parts and no OS, there will hardly be any trips from the IT administrator to the user's desk to make repairs. IT staff can solve many issues from their own terminals, minimizing the need to disrupt hospital operations. All of these factors combine to reduce the total cost of ownership.

Ensuring security

One of the biggest concerns with the computerization of patient information is data security, and the cost of being lax in that area can be tremendous. In April 2012, for example, a five-physician practice in Phoenix was hit with a $100,000 fine simply for storing patient information in an unsecure manner even though there was no evidence that the information was ever used improperly.

A centralized computing system removes the hard drives from under workers' desks, where they could be subject to theft or misuse, and moves that data to the central facility.

Administrators can lock down the client to prevent users from plugging in a peripheral storage device, such as a flash drive. Not only does that give the administrator control over the data, it prevents users from accidentally or intentionally introducing a virus or malware onto the facility's network via that storage device.

And because no user data is stored on the zero client, that information is now under lock and key, secure in a datacenter.