Contact: Computer Lab International, Inc.
580 South Melrose Street
Placentia, California 92870
T: 1.800.727.5250
T: 1.714.572.8000
E: info@computerlab.com

How CLI Thin Client Products Can Be Used In Healthcare and Social Assistance

Healthcare organizations face many IT challenges in today's marketplace. System selection and implementation is often determined by compliance to strict standards and processes such as HIPAA (The Health Insurance and Portability and Accountability Act of 1996) and CPOE (Computer Physician Order Entry Systems). Organizations are under increased pressure to deliver more data in a very secure environment, while providing quality patient care within a limited budget. Using CLI Thin Clients in a server-based computing environment can make it easier for healthcare organizations to satisfy these requirements while still providing a reliable, secure, and cost-effective IT infrastructure. To fully understand these benefits, it is important to understand what server-based computing is and what products CLI has to offer.

Server-Based Computing
Server-based computing is sometimes referred to as server-centric, centralized, or application-server computing. In server-based computing, all applications are deployed, supported, and executed (run) at the server, not at the user desktop. All data is stored on the server. All applications are displayed on the desktop device. This desktop device can be a CLI text terminal, a PC running CLI terminal emulation software, or a CLI thin client.

In the 1970s and 1980s, healthcare organizations started to recognize the benefits of integrating HIS (Hospital Information System) and DSS (Decision Support Systems) in a server-based environment using propriety software running on mainframes with "dumb terminals" at the client desktops. In the 1990s, as more healthcare applications were being developed for Windows, PCs provided a flexible alternative that allowed healthcare providers to take advantage of PC-based software applications and access mainframes through terminal emulation. But these organizations soon learned that this de-centralized approach came with increased administrative costs, security flaws, and virus and corruption risks. In the last decade, tremendous improvements have been made to modernize legacy applications with the use of thin client desktop devices providing the benefits of server-based computing and the graphical interface of the PC.

CLI Thin Clients
CLI thin clients are simple devices that are used to display text information and graphics. CLI thin clients do not run applications, but can display any application running on legacy servers, Windows or Citrix servers, and the Internet. Applications look the same as the original. CLI thin clients have no fans or other moving parts. Their use brings many benefits, including high security, easy administration, high reliability, long useful life, and low power consumption. The use of CLI thin clients can bring advantages that help healthcare providers overcome the IT issues they face.

Improved Security and HIPAA Compliance
The Administrative Simplification provision of HIPAA requires the Department of Health and Human Services to establish national standards for electronic health care transactions and national identifiers for providers, health plans, and employers. It also addresses the security and privacy of health data. Adopting these standards will improve the efficiency and effectiveness of the nation's health care system by encouraging the widespread use of electronic data interchange in health care.

CLI Thin Clients can help organizations to comply with HIPAA provisions by simplifying application upgrades. As EDI formats, code sets, and identifiers are created, implemented and revised, departmental and enterprise application software will require upgrades to reflect the new information. Using CLI thin clients, it is quick and easy to deploy the changes throughout the organization, since a single upgrade on a central server immediately works for all thin client users.

Additionally, the very nature of thin client architecture makes compliance with HIPAA requirements for security much easier than other desktop options. HIPAA security provisions include administrative procedures, physical safeguards, technical security services, and mechanisms to protect data integrity, confidentiality and availability. CLI thin clients can help minimize the cost and time in meeting HIPAA compliance in each of these areas.

Administrative Procedures
The time that it takes to document formal practices and procedures to manage the selection and execution of security measures is lessened because there are fewer variables in a thin client environment. Contingency plans, access control policies, internal audits, security configuration and management practices are all managed at the server-level and within the control of the IT administrator.

Physical Safeguards
With all data being managed from a single central location, IT administrators have complete control over the backup, storage, and disposal of data and have clear lines of accountability through these controls.

Since CLI thin clients have no local drives, it is impossible to use them to remove confidential information and data. For the same reason, new client software cannot be added directly to the device, reducing the number of virus entry points into the organization.

Technical Security Services
Through centralized management, IT administrators can put audit controls in place to ensure that data is only provided to those that are authorized. Inappropriate data removal by unauthorized employees is prevented.

Technical Security Mechanisms
By limiting the number of entry points, thin clients protect data integrity from intruders, virus, loss, and corruption.

Additionally, improved security and identification processes can be implemented using external devices connected to the thin clients' multiple ports, such as a smart card or fingerprint readers. CLI thin clients are compatible with most laser scanners for wristband identification. Employees or patients can be quickly and easily added or removed to ensure the most current information is available throughout the organization.

Access at the Point-of-Care
Having access at the point-of-care is a must for healthcare professionals. Whether it's to look for patient information, order a test or prescription, or check test results, information needs to be available when it's needed, where it's needed. To make this possible, it is important to start with a device that can be counted on. CLI thin clients are extremely reliable. Unlike a PC, there are no moving parts, leaving little that can break, making device failure rates extremely low. If a problem should occur, it can be quickly diagnosed and repaired remotely, or simply swapped out for a new unit within minutes. Workflow can be quickly resumed with virtually zero downtime.

Devices need to be accessible in multiple locations. With a CLI thin client, electronic health records (EHR) can be accessed from across the room or across the country, all managed through a remote

server. Electronic charting allows nurses to record data only once as care is delivered. Individual care plans, flow sheets, and MDS (Minimum Data Set) documentation can be easily managed and made available to multiple shifts or to other departments as needed. Bar coding provides easy tracking of equipment and other assets, allowing staff to focus on their patients rather than wasting time looking for supplies and information. By having access at the point-of-care, health care providers will experience a significant decrease in redundant data entry and obtain better tracking of medical information, resulting in less lost tests results, and medication errors.

The small footprint of the CLI thin client provides the flexibility for use on a mobile cart, within a duty station, or in a small examination room where space is a premium. Additionally, some models offer a PCMCIA slot for support of 802.11 wireless Ethernet. Measuring only 2" wide, CLI thin clients comply with the Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities that restrict the size of obstructions in public areas such as hallways. Because CLI thin clients have no moving parts, their silent operation will not interfere with the patient-doctor interactions, and are less prone to maintenance problems.

CLI thin clients are perfect for use within a kiosk. Due to their rugged case and small footprint, they are great for high-traffic areas such as a lobby or nurse station. With no moving parts, they are less prone to maintenance problems, minimizing downtime. Theft is discouraged since the units have limited usability when discontinued from the network.

Cost-Savings

As HMO popularity grows and insurance premiums continue to soar, healthcare providers are under extreme pressure to keep costs lows while still providing quality care. Many industry analysts have shown that implementing a thin client environment can provide total cost of ownership (TCO) savings of up to 75% or more over the life of the product.

For healthcare organizations to maintain a tight budget, efficiency among staff is a key concern. Saving valuable time can save the organization's money that can be better allocated to other priorities. The following are ways in which CLI thin clients can save healthcare organizations time and money:

Remote administrative decreases help desk demands by lessening deployment and configuration time, application updates, and problem resolution, lowering staff needs.

Restricting access and creating personalized portals for workers limits training and keeps employees focused on the task at hand.

Self-serve kiosks can provide staff, patients, and visitors with helpful information reducing administrative staffing demands.

Back-ups and audits can be controlled remotely by IT administrators rather than relaying on client back-ups.

Assets and inventory can be better managed through a bar-code scanner connected to a CLI thin client.

All workers – doctors, nurses, receptionists, and more – will benefit from the accessibility of information allowing more efficient and effective work habits, tighter scheduling of patients, shorter examination times, and increases in the patient-doctor ratio.

Other cost-saving measures include:

No moving parts means less ongoing maintenance problems

CLI thin clients consume less energy than other desktop options

Decreases in theft and device replacement costs

Using smart cards, biometrics, and other PPID (Positive Patient Identification) devices can lower CNST (Clinical Negligence Insurance) contributions and lessen the time that workers spend logging on and off various devices throughout the day.

In many cases, initial acquisition costs for a CLI thin client are less than other desktop options.

Additional ways to lower Total Cost of Ownership with CLI Thin Clients can be found in the CLI white paper titled “How CLI Thin Clients Can Reduce Total Cost of Ownership vs. PCs and Other Devices.”

Patient Satisfaction
Aside from all of the other benefits of server-based computing, the goal of any successful organization is to make the consumer happy. Thin clients provide healthcare workers with a “well-oiled machine” to make patients happy. Giving healthcare workers the ability to access current information quickly and easily allows them to make better diagnoses, treatment plans, and maintain good patient-provider relationships. By having a secure and centralized environment, confidentiality and privacy can be maintained and lost records become less frequent. Self-service kiosks can provide access for patients and visitors in areas where they are used to waiting for answers.

In conclusion, CLI Thin Clients are an excellent consideration for task-based workers within any health care organization. Health care organizations can ease the pains of HIPAA compliance, security and confidentiality concerns, cost-savings, and patient satisfaction through the use of CLI thin clients.

For more information, visit the Computer Lab International web site at www.computerlab.com, or send email to info@computerlab.com, or call 1.800.727.5250 in the US, 1.714.572.8000 elsewhere.

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