# Utility Computing *Brings Efficiency to* Health Care

Utility computing provides flexible, on-demand computing power that helps health care professionals reap the benefits of technology while avoiding system management headaches.

By Roger Guerrero

Information technology (IT) has become an integral component of the health care industry. Yet, while IT simplifies and streamlines daily tasks, its usage is still typically underutilized. Major difficulties arise from the increasing complexity of IT, and ever-growing recordkeeping and patient privacy government regulations.

This has made the job of most medical office managers increasingly difficult, causing many to outsource the IT function to experts. The solution that many health care providers have found most effective is the utility computing model, which provides flexible, on-demand computing power much the same way a power company delivers electricity to its customers. This model helps health care professionals reap the benefits of technology without the headaches associated with system management.

One office manager ("Linda") of a medical practice in Houston is now getting a host of benefits every day by moving from the office's patchwork IT adoption platform to an affordable, comprehensive technology office solution.

## Installing a dehumidifier

Linda's health care practice was severely space-limited, and her first concern was where to locate her server. Unfortunately, the practice's only available space was in the restroom. Following the server's placement in the restroom, the network experienced numerous server-related problems resulting in office downtime. The practice's computer consultant determined that high humidity in the restroom was causing those problems and instructed Linda to install a dehumidifier next to the server.

Unfortunately, this was the least of Linda's technology concerns. While her practice management software program offered some resolution, the practice barely tapped the Web's potential for informational or communication purposes. Neither Linda nor her staff had Internet access, a necessity for managing today's health care practices.

Security, however, was the practice's biggest problem. Backups were performed every Friday, and at each month's end. The practice recycled its backup tapes each month, which made information searches time-consuming and cumbersome. Employees would routinely take these disks home to store backups, leaving patients' medical records open to the public -- an invasion of patient privacy and a grave concern for the practice's physicians.

## Security danger zone

Linda's software vendors had set up firewalls, but only for specific applications, leaving their hardware and software vulnerable to outside hackers. Vendors and consultants failed to successfully contribute to a solution, never seeming to satisfactorily solve problems but only to point fingers at each other.

Within this unstable environment, the practice experienced computer and system crashes, which typically lasted for 2-3 hours. Many times, Linda's IT consultant offered to install new software (costing as much as $12,000 for an upgrade), which only resulted in additional downtime. During downtime, callers' names and phone numbers had to be manually recorded for callbacks and appointment scheduling. Consequently, the practice continually lost new patients due to the inordinate downtime.

## Utility computing

Stuck in a medical practice with one foot in technology and the other in manual drudgery, Linda turned to utility computing. Not long after, the entire office environment took a major step forward at a cost that made her wonder "Why didn't we do this before?"

The practice noted the following results:

- Internet access delivers major efficiencies. All staff and physicians are online, able to quickly correspond with patients, send e-mail alerts and interact electronically with everyone, from patients to vendors. Patients are able to fill out pre-appointment medical history and insurance forms online.
- Backup problems eliminated. All backups are automatically performed daily in a secure, HIPAA-compliant data center.
- Office management more flexible. Linda and all authorized office personnel can access the office system securely from any Internet connected computer.
- Security tighter than ever. With the utility computing provider's firewalls in place, the practice has experienced no external security problems. Internally, the office manager can control each employee's access to specific information.
- Off-site data center simplifies processes. Software is now transparently updated and upgraded. This is especially helpful for Linda, who felt that exploring, pricing, buying and installing new programs took too much time...and when not done properly, crashed the system. Adding a new employee or even opening a new office is no longer a concern; utility computing has made it as simple as making a phone call or sending an e-mail to the help desk.
- Routine tasks expedited. Linda sends the physicians information directly to their cell phones. Physicians can e-mail recordings from their dictation machines to their staff or an off-site transcribing facility.
- Looking ahead. Prior to utility computing, Linda believed that implementing electronic medical records (EMRs) would not be practical because of risks related to overloading the server, and because server costs were excessive. Now, with utility computing, those limitations have vanished and EMR is more likely to be integrated into the practice.

## Reaching a new level

In office environments throughout the health care industry, many organizations are still not leveraging the real power of IT to deliver greater efficiencies to their offices.

Typically the investment in buying the "right" hardware and software -- and keeping it maintained and secure -- appears to be beyond most organizations' reach. In reality, utility computing has rapidly become the affordable solution for organizations that want a Fortune 500 technology edge for their small-to-midsize needs. They're taking the server out of the restroom and bringing on a powerful, off-site data center.

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