

Metro Health gets a better prognosis with HP server blades, Integrity servers, and StorageWorks

Metro Health



“I really wanted to have my technology vendors aligned with me in this new [health] campus. When I researched the various options, HP was the one that really came through to help us achieve our vision and provide the kind of cutting-edge technology we need to make this health village very innovative.”

– William J. Lewkowski, CIO, Metro Health

Executive summary:

For Metropolitan Hospital (Metro Health) of Grand Rapids, Michigan, it all began with a rather ordinary requirement for additional space. In 2001, the community hospital had outgrown its landlocked 13-acre campus and was searching for a new location. Seizing the moment as an opportunity for change, the hospital's key stakeholders developed a vision for the future, thus giving birth to the concept of Metro Health Village — a digital village that promises to do much more than simply treat patients.

Situated on 170 acres in the southwest Grand Rapids suburb of Wyoming, the Metro Health Village is expected to be highly visible and accessible. Surrounding the eight-story, 238-bed hospital (slated for completion in 2007) will be physician offices, restaurants, commercial stores, a hotel and convention area, a fitness club, a daycare center, parks and green space — everything you might envision in a village. But it's what's going on behind the scenes, in the area of information technology (IT), that's really helping to make the dream a reality.

The challenge: a responsive IT ecosystem

Healthcare is a very information-intensive industry. And although healthcare providers primarily care for patients, most recently there has also been a focus on caring for the health of a hospital's IT ecosystem. Healthcare providers are all too familiar with the fact that caring for patients requires access to as much medical history about the patient as possible, as well as the ability to collaborate with other care providers. Therefore, information is constantly evaluated, collected, facilitated and shared for a common goal — to enable a better flow of healthcare.

Metro Health's relocation gave Chief Information Officer (CIO) William J. Lewkowski and his team an opportunity to evaluate various technology vendors and applications for a newer IT infrastructure. To support the ever-growing number of medical technologies that require exceptional availability, Metro Health needed to make the new healthcare village's IT ecosystem more “accurate, secure and cost-effective.”

- **“We have a constant process of improving and upgrading our technology. In the midst of that, we also had a strategy, even before we talked about the move, of consolidating our servers and our infrastructure to make it much more efficient and cost-effective... Because of the large change and move to a new campus, we stepped back and didn't automatically just follow the technology path that we had traveled in the past. We asked HP what they would be willing to do for us and how they could help us achieve our technology vision above and beyond the constant upgrading of technology?”** Lewkowski and his IT team expected that the infrastructure on which they chose to standardize would ultimately support the embryonic digital organization—Metro Health Village. As the health organization moved away from pushing paperwork, its vision focused on rigorous solutions for core clinical systems, including electronic medical records, patient scheduling and registration, clinical documentation and billing, Picture Archiving and Communication System (PACS) images, and anything related to patient-critical information. Metro Health was becoming reliant on real-time access to patient information and for that reason Lewkowski's technology strategy was to build an infrastructure that was highly reliable, efficient and had a continuous computing capability.



- **“This project has given me the opportunity to step back and evaluate my technology providers. It’s a green field situation where we’re creating a new data center; we’re putting in a new infrastructure... but in reality, the technology keeps on getting smaller and more consolidated. The data center size doesn’t even matter that much anymore. Technology is really moving more towards server blades and other types of consolidated infrastructures that make better use of space.”** Lewkowski and his team had approximately 150 IBM servers in their previous 1,500-square-foot environment. They wanted to begin a process of consolidating servers onto server blades and virtualized Itanium® 2-based servers. But beyond consolidating hardware and data center space, what mattered most to Metro Health was how it could implement an infrastructure that would effectively help its critical business functions and patient processes. Metro Health sought a solution that was truly capable of carrying out these strategies.

“Our technology strategy was to build an infrastructure that was highly reliable, efficient and had a continuous computing capability. Now, most vendors can do that, but HP took a more aggressive approach to help us design the high availability and continuous computing that matched our particular needs, at price-points that would allow us to bring in the kind of innovative technology that will make a difference in our core patient process.”

– CIO William J. Lewkowski,
Metro Health

**The solution and success:
progress on a durable IT ecosystem**

After its technology provider evaluation, Metro Health decided to standardize on HP hardware in the Metro Health Village, consolidating its infrastructure on HP server blades and HP Integrity servers with Intel® Itanium® 2 processors—simplifying management while delivering the high service levels physicians, nurses, and administrators require. The health organization also implemented a storage-area network (SAN) based on the HP StorageWorks XP platform to support the massive amounts of digital information it generates, and will generate for the Village, daily. And staff are equipped with HP laptops and wireless devices to maximize their ability to deliver high-quality patient care through the Village.

In addition to HP, Metro Health is working closely with Open Systems Technologies (OST) of Grand Rapids, an HP Gold Certified solutions provider and systems integrator whose highly skilled team of consultants has earned the status of HP Enterprise Storage and Server Elite (ESSE) Certification. Specifically, Metro Health is using OST services to transition from an IBM storage subsystem with 3.5 terabytes to an XP environment that offers six to seven times that capacity.



- **“The solution is much more than hardware; it’s the other aspects of HP that really sold it for us. HP, along with our HP channel partner, really stepped up to the plate on this deal. We weren’t looking for technology for technology’s sake. It was really who was more capable of helping us achieve the implementation and vision of our core clinical system strategies.”** Metro Health’s “center of truth for patient information”—the core clinical system running the business—has all been migrated onto HP server blades (ProLiant BL45p and BL20p) featuring Dual-Core Intel® Xeon™ processors and a family of HP Integrity servers (rx8620, rx4640, rx2620), with Intel Itanium processors. In addition, the hospital’s storage was moved onto a pair of HP StorageWorks xp1024 arrays. To date, Metro Health has consolidated its server environment to under 100 units with further reductions to come. HP ProLiant server blades not only help Metro Health save on space, but also provide IT staff with efficient flexibility to meet changing demands while ensuring high availability. Most important, Metro Health uses the adaptable HP server blades to quickly search its massive databases and return life-critical information to healthcare providers. HP Integrity servers provide Metro Health with balanced performance, integrated high availability, and continuous security protection to support the hospital’s critical health information management applications, with virtualization and scale-out expansion to handle rapid growth smoothly and cost-effectively.

- **“Because everything we’re doing as a business and healthcare organization relies on the technology we implement, and since more of what we’re doing becomes electronic and digitized daily, the infrastructure is constantly being tested. It’s getting much more volume and therefore increased expectations of performance by the users. The solution has got to be one that is fast and won’t go down. But probably the most important thing is that we are now relying on this infrastructure for life-critical applications.”** Most businesses don’t think about IT hardware unless servers go down, but when servers go down in healthcare organizations patient’s lives can be at risk. Therefore, Metro Health needed to have the highest reliability, speed and fault tolerance in a trusted server environment.

While it will be several years before the Metro Health Village is fully populated, Metro Health CIO Lewkowski is confident the groundwork is being laid for a radical change in the way healthcare services are provided. The osteopathic hospital is expected to continue to operate as it always has, with a focus on delivering primary/secondary care, but its digital infrastructure is anticipated to support integrated services and applications designed to facilitate overall wellness and fitness, he stresses.

As capacities grow and as Metro Health adds additional affiliate physicians on the system, Lewkowski and the Metro Health IT team are confident that the HP hardware won’t need to be replaced any time soon and can be optimally expanded. Lewkowski adds, “We also don’t want to be on the dead-end of the information architecture growth curve...with HP server blades and Integrity servers—we’re on the beginning of its lifecycle and can grow with it.”

About Metro Health

Formed in 1942 as Grand Rapids Osteopathic Hospital, Metro Health of Grand Rapids, Michigan, is a general acute care osteopathic hospital serving Kent and surrounding West Michigan counties. Affiliated with Michigan State University, the hospital remains a major osteopathic teaching hospital and specializes in primary and secondary care, offering a full range of services including most other services usually associated with a community hospital. Construction is currently underway to build a new hospital in Wyoming, Michigan, as part of the 170-acre Metro Health Village. The new hospital is scheduled to open in late 2007. Metro Health staffs over 1,500 employees and is a non-profit, independent, locally controlled hospital and health system that exists solely for the betterment of West Michigan. More information about Metro Health is available at www.metrohealth.net.

Challenge

- Consolidate, streamline and standardize IT infrastructure
- Improve availability
- Improve server performance and utilization
- Raise service levels
- Maintain technical-support requirements
- Reduce IT costs

Solution

- Hardware:
 - 4 HP ProLiant BL45p server blades
 - 2 HP ProLiant BL20p server blades
 - 2 HP Integrity rx2620 servers
 - 2 HP Integrity rx4640 servers
 - 2 HP Integrity rx8620 servers
 - 2 StorageWorks Disk Array xp1024 (28 TB)
 - Implementing HP bc1500 PC blades
- Software:
 - VMware ESX server 2.5 running Windows
 - Windows running on HP ProLiant servers and HP-UX OS running on Integrity servers
 - HP Serviceguard running on HP Integrity servers
 - OpenView—Virtual Machine integration
 - Evaluating HP ProLiant Essentials Rapid Deployment Pack (RDP) and Systems Insight Manager (SIM) for HP BladeSystem
 - Implementing HP Identity Suite
- HP Services:
 - HP Critical System Support
 - HP Consulting & Integration services
 - IT Infrastructure for implementation and ongoing project management

Results

- Simplicity
 - Displaced previous server vendor
 - Developed a consistent infrastructure model
 - Reduced costs through fewer required servers to make better use of space
 - Simplified management and real-time availability of electronic medical records
 - Agility
 - Increased flexibility
 - Increased availability
 - Maintained existing staff levels to support new applications
 - Value
 - Virtualization and clustering on HP server blades and Integrity servers
 - Breadth of support with HP systems and storage
 - Increased service levels to core patient processes
 - Reduced application downtime via SANs
 - Consolidating a standards-based healthcare IT infrastructure
 - Efficient processes and lower operating costs allow hospital to focus on providing quality patient care
- * This customer's results depend upon its unique business and IT environment, the way it used HP products and services and other factors. These results may not be typical; your results may vary.*

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