HALTON HEALTHCARE MODERNIZES DATA CENTERS AND EXPANDS WITH NEW HOSPITAL

INDUSTRY
HEALTHCARE

LOCATION
CANADA

KEY CHALLENGES
- Old IT systems could not adequately serve a patient population expected to double by 2031
- Building a completely new hospital and expanding other facilities provided opportunities for a fresh start with truly integrated IT systems

SOLUTION
Halton Healthcare chose VMware Horizon, Vblock systems from EMC and technology expertise from VMware partner Teknicor for a VDI and disaster recovery solution.

BUSINESS BENEFITS
- Halton Healthcare now has the largest VDI implementation in Canadian healthcare, serving as a model for hospitals across Canada
- From an IT perspective, clinician experiences are truly seamless
- Standardizing IT across all hospital sites helps Halton Healthcare optimize operations, saving time and providing clinicians with easy access to the systems they need to provide the best patient care

Halton Healthcare partnered with VMware and service provider Teknicor to build a world-class virtualized healthcare solution, one of the first and largest in Canada. With the construction of a new hospital and expansions of other facilities, Halton Healthcare wanted to modernize their data centers and implement technologies to enable staff, physicians and volunteers to provide exemplary patient experiences. With Teknicor's guidance, Halton Healthcare implemented one of the first and largest virtual desktop infrastructure (VDI) footprints in Canadian healthcare, which now serves as a model for other healthcare providers in the region. Halton chose VMware Horizon®, VMware App Volumes™ and VCE Vblock System 340 appliances from EMC (now Dell EMC) for seamless disaster recovery and VDI solutions.

Award-winning Halton Healthcare operates three community hospitals in the Region of Halton in southern Ontario, Canada. Oakville Trafalgar Memorial Hospital and Milton District Hospital amalgamated in 1998 and Georgetown Hospital joined in 2006. Together, these three hospitals provide care to more than 350,000 residents in the communities of Oakville, Milton and Halton Hills. The hospital system enjoys the support of more than 1,500 volunteers, 300 physicians, and 3,500 staff.

The Challenge

Halton Healthcare is expanding to meet the needs of the growing area it serves. In December 2015 they opened a new hospital to replace the old Oakville Trafalgar Memorial Hospital site. Halton Healthcare had previously expanded its emergency department and diagnostic imaging areas at Georgetown Hospital. They are also currently planning a major expansion of the Milton District Hospital to support a population that's expected to double by 2031. With these expansions, Halton Healthcare decided to take the opportunity to move forward with innovations in IT to support their innovative health care delivery.

Sandy Saggar, Chief Information Officer for Halton Healthcare, noted that the organization's technology investments were made to enable the hospital's vision of transforming the community hospital experience and providing exemplary patient experiences. "As we planned for larger and more patient-centered facilities, we knew we had an opportunity to choose the best technologies and make them a core part of our planning. Our goal was to work with our staff and physicians and embed the technology where it makes sense, to help enable better patient outcomes."

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"These VMware systems are part of the central nervous system of our hospital sites. Without them, we wouldn't be able to help enable clinicians to provide the care they do today."

SANDY SAGGAR
CHIEF INFORMATION OFFICER
HALTON HEALTHCARE

VMWARE FOOTPRINT
• VMware Horizon Enterprise
• VMware App Volumes
• VMware User Environment Manager
• VCE Vblock System 340

The Solution

Halton Healthcare chose VMware Horizon Enterprise to manage their VDI solution. After a successful pilot program with clinicians at the legacy Oakville Trafalgar Memorial hospital, Halton now has 600 Horizon virtual desktops. This is one of the largest VDI implementations in Canadian healthcare. Halton Healthcare has hosted numerous demonstrations of Horizon and Vblock for hospitals across Canada.

As part of their Horizon 7 implementation, Halton is using VMware User Environment Manager™ and Instant Clones. User Environment Manager provides a consistent user experience across virtual (and physical) desktops, including dynamic client policy settings, app personalization and configuration, and the ability for administrators to block or authorize apps based on a rich set of conditions. The Instant Clones feature spins up virtual non-persistent desktops in seconds. Users always have a fresh desktop with the latest patches and updates, enhancing security and easing IT management.

VMware App Volumes is an integral part of Halton Healthcare's VMware footprint. App Volumes allows applications to be deployed quickly to virtual desktops and support a multitude of healthcare applications without touching end users' devices for installations and updates. "Within the hospital environment, we run so many niche applications," said Saggar. "Even biomedical devices such as patient monitors, pumps and ventilators now all have IT solutions built into them. This raises compatibility issues and keeps hospitals from being able to effectively support the numerous applications a hospital operates. With App Volumes, because the operating system and the apps are decoupled, we can provide quick turnarounds and standardize on the VMware platform."

Halton purchased two VCE Vblock™ System 340 appliances. Halton Healthcare is hosting one Vblock System 340 at the new Oakville Trafalgar Memorial Hospital, and the other one for disaster recovery will be hosted at the expanded Milton District Hospital when it opens this year. These converged infrastructure appliances are built around VMware software, Cisco® network technology, and EMC® XtremIO™ all-flash storage. They integrate compute, network, storage, virtualization, and management into a single solution. The Vblock 340 systems speed rollout while still allowing customization for Halton Healthcare's needs.

For technology and integration expertise, Halton Healthcare partnered with IT services provider Teknicor. Teknicor helped Halton Healthcare assess their environment, architect the solution and analyze value for money. Teknicor is also an authorized Meditech solution integrator, important for Halton Healthcare as they sought to bring those existing systems in line with new solutions. Said Saggar, "Working with Teknicor and their best-of-breed partners, including VMware, has been fundamental to realizing our vision. We've successfully increased the availability, scalability and standardization of our technologies to support continued growth and an improved stakeholder experience—for patients and their families, physicians, staff and volunteers."

Business Results & Patient Care Benefits

In December 2015, after months of transition planning, Halton Healthcare safely moved more than 270 patients to the new Oakville Trafalgar Memorial Hospital site. They also were able to move all their IT systems, including over 400 servers, without any downtime and impact to current hospital operations at all 3 sites. Halton Healthcare replicated its applications to their secondary Vblock system over the course of three months before the move to the new Oakville hospital so

that there would be no service interruption. "There was no system downtime which would impact existing patient care operations at all three hospital sites. We were able to set up hundreds of servers and numerous applications at the new hospital site weeks before we opened the new facility. This was an enormous accomplishment and a large risk that the hospital avoided," said Saggar.

Physicians and staff use Imprivata single sign-on to access patient charts and numerous other applications. They are able to work seamlessly from unit to unit and continue their work where they left off no matter where they are or what kind of device they use. They simply use their badges to tap in and out of hospital computers. Halton estimates that this is saving 5 to 10 minutes per day per clinician. That may not sound like a lot of time, but in fact frees up hundreds of hours annually for patient care instead of wrestling with logins and passwords. "The clinical train of thought is also an important consideration," said Saggar. "Clinicians can focus on patients instead of interrupting their train of thought to remember their password or trying to recall which application they were using for a specific patient earlier in the day." Halton Healthcare supports a bring-your-own-device program, so clinicians and administrators can use the devices of their choice to access a VDI desktop through Horizon at any time and in any place.

Saggar noted that another goal of their buildout with Teknicor and VMware was a unified experience for staff and physicians, no matter the type of device or location. "This was our vision, a seamless solution across technologies, no interruption of service to our clinicians or patients. These VMware systems are part of the central nervous system of our hospital sites. Without them, we wouldn't be able to help enable clinicians to provide the care they do today."

Looking Ahead

"I really think the unified experience will be more embraced as time goes on," said Saggar. "We'll come to expect that we're able to, at a click of a button, launch our previous working session with whatever device we are on, wherever we are in the world, and continue our work, whatever work that is." Saggar also made the point that as digitization continues to gain importance in healthcare, it's critical to choose solutions that are easy to manage. "The ability to standardize is really key as patient volumes go up and demands at the front line go up. We won't be able to provide cost effective care if we can't standardize, unify and operate at that level."

"That's where the VMware, EMC, Cisco and Teknicor expertise came into play," Saggar continued. "These organizations really helped us successfully increase the availability, scalability and standardization of our technologies to support our continued growth in patient volumes and an improved stakeholder experience— for patients and their families, physicians, staff and volunteers."

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