Hospital Enhances Patient Care through Improved IT Services

Executive Summary

- **Customer Name:** Lakeridge Health
- **Industry:** Healthcare
- **Location:** Oshawa, Ontario
- **Number of Employees:** 4000

Business Challenge
- Help ensure fast and reliable access to patient EHRs, other MEDITECH applications, and reports
- Simplify administration and enhance cost-effectiveness of MEDITECH platform
- Meet SLAs for Lakeridge and hosted clients, while improving scalability

Network Solution
- Built Cisco UCS server and switching platform to provide world-class performance for mission-critical MEDITECH application

Business Results
- Eliminated slowdowns and cut benchmark reporting time from hours to minutes
- Cut power and HVAC costs by virtualizing systems
- Reduced data center footprint for MEDITECH by more than two-thirds, freeing capacity for future expansion

Lakeridge Health switches MEDITECH to UCS to boost EHR availability and speed reporting.

Business Challenge

Electronic health records (EHRs) have become the norm in hospitals and doctors' offices throughout North America. State-of-the-art facilities everywhere, such as Lakeridge Health in Oshawa, Ontario, are continuing to depend more and more on EHRs to communicate patient information to everyone who needs it within seconds, whether the practitioner requesting the record is down the hall from the patient or across the campus. This easy, fast, and accurate sharing of information helps Lakeridge Health clinicians efficiently deliver topnotch care to patients.

When Lakeridge Health practitioners and IT staff began noticing slowdowns in its MEDITECH EHR application, the 550+ bed facility put a priority on upgrading the application's platform. Lakeridge Health's 4000 staff and physicians, and 1200 volunteers, serve a patient community of more than 700,000, which is expected to grow to more than a million in the next 20 years. The hospital needed a solid foundation for MEDITECH, one that could enable the application to securely deliver immediate access to medical records under today's demanding conditions, and scale up to handle projected growth.

"We're committed to completing the transition to EHRs, which means that we've got to have a systems architecture that supports the application with the highest available uptime, scalability, and performance," says Andrew Kelly, manager of technical services at Lakeridge Health. "The mission of Lakeridge Health is to create and deliver a seamless system of care embracing every patient. And the mission of IT is to support that by providing high-performance access to the information clinicians need to offer patients the best care."

MEDITECH is the most critical application that IT supports: it provides practitioners the EHRs to deliver better patient care, and provides hospital administrators HR management and financial capabilities.

> "We're delivering Lakeridge Health a world-class infrastructure that provides clinicians with the information they need, when they need it. And our success is getting noticed, with some healthcare organizations turning to us as a model, and others asking us to host applications for them. Cisco UCS is enabling us to do it all: improve the experience for patients and doctors, save the hospital money, and bring in new revenues."
>
> — **Andrew Kelly**
>   Manager of Technical
>   Services, Lakeridge Health

The Lakeridge Health MEDITECH virtualization supports other medical centers, including the Rouge Valley Health System and key applications, such as pharmacy and laboratory capabilities for Ross Memorial Hospital. To meet its service-level agreements (SLAs) for all organizations, the Lakeridge IT team wanted a platform that was both certified for MEDITECH and could help ensure availability, even if one or more hardware components failed.

Network Solution

Realizing that only a virtual infrastructure could cost-effectively deliver that kind of reliability and redundancy, the team began researching options that would support MEDITECH in a virtual environment as well as scale up to deliver high performance for an increasing number of users.

After evaluating several options, Lakeridge Health chose the Cisco Unified Computing Services™ (UCS®) platform for its server environment and to work with OnX and Teknicor to implement its hardware solution. The team chose Cisco UCS because they had researched it, understood its architecture, and liked the way that it helped enable centralized data center management with a single pane of glass, providing control over fibre channel connectivity, server connectivity, and the servers themselves

"We saw that Cisco UCS could provide the hospital the reliability that it needed, while giving our IT team the manageability we needed," says Kelly.

Today Lakeridge Health runs its mission-critical MEDITECH application on the Cisco® UCS 5108 chassis, with Cisco B200 M2 blade servers, Cisco UCS 6248UP 48-Port Fabric Interconnect, and Cisco MDS 9000 Series Switches, with 10G uplinks from the upstream cores to a Cisco Catalyst® 6509 Enhanced Vertical Chassis. This infrastructure hosts MEDITECH for Lakeridge Health, Rouge Valley Health System, and Ross Memorial Hospital.

Business Results

The UCS infrastructure has enabled Lakeridge Health to virtualize and consolidate its physical servers, resulting in a more than two-thirds reduction, from 25 servers to 8. The IT team estimates that the cost savings generated by reduced power and server support requirements would cover the capital outlay for its Cisco UCS environment within five years. In addition, once the old servers and SAN are fully decommissioned, more than 60 percent of data center space will be freed up. This achievement will open up options for Lakeridge Health to host servers and applications for other facilities, to run their production or disaster recovery systems.

This consistent availability of medical records is vital to the quality of patient care at Lakeridge Health, Ross Memorial, and Rouge Valley. It's also important to Lakeridge Health's revenue stream: the organization earns fees for hosting MEDITECH for the other organizations, and it must meet its SLAs for uptime and performance. Additionally, the greater reliability and stability of the new platform will help Lakeridge Health with its annual audit by the Ontario Ministry of Health by accelerating and simplifying the process.

Performance that offers peace of mind

The IT team has adopted the UCS infrastructure enthusiastically. "Once my team started working with the administrative console, they were impressed," says Kelly. "It provides a single console to manage every part of UCS, including the servers, interconnects, and more."

Greater ease of administration saves money, too. "With our previous system, there was not a single pane of glass to view the status of all hardware components; with UCS, we see everything from a single console," says Kelly. "Greater efficiencies in running our systems allow IT staff work on projects that add value to the hospital, instead of spending their time just keeping the systems running."

While clinicians have been less aware of platform changes than IT, they have noticed that the system is now more responsive. As their confidence in the UCS-hosted MEDITECH application has grown, they have shown greater willingness to abandon paper-based processes and wholeheartedly adopt electronic processes.

Lakeridge Health administrators, too, appreciate the improved performance of MEDITECH on Cisco UCS, especially when running detailed analytics and other reports. With the limitations of the previous system, staff sometimes had to wait hours, or overnight, for reports to be ready. With Cisco UCS, reports that used to take 4 to 6 hours now take just 8 to 12 minutes, enabling users to respond faster to information. The new system also allows users to run reports when they want to, instead of having to run reports overnight, when demands on the system are less.

"For me, the greatest advantage of the Cisco UCS platform is the peace of mind, knowing that we're on a rock-solid platform for our mission-critical application," says Kelly. "We're delivering Lakeridge Health a world-class infrastructure that provides clinicians with the information they need, when they need it. And our success is getting noticed, with some healthcare organizations turning to us as a model, and others asking us to host applications for them. Cisco UCS is enabling us to do it all: improve the experience for patients and doctors, save the hospital money, and bring in new revenues."

For More Information

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