

# LAKERIDGE HEALTH

## EMC IT as a Service solutions improve EMR and HIS application access at reduced cost



### ESSENTIALS

#### Industry

Healthcare

#### Company Size

4,000 clinicians

#### Business Challenges

- Fast-growing volumes of electronic medical data and images
- Data storage and backup requirements were growing rapidly
- Lack of scalability
- Tape backup solution was completing only 40 percent of non-MEDITECH backups

#### Solutions

- EMC unified storage
- EMC Data Domain
- EMC Data Domain Boost
- EMC NetWorker
- VMware vSphere
- VMware View
- MEDITECH HIS, GE Centricity PACS, Picis, CBORD, Mosaic, Microsoft Exchange, SharePoint, ITaaS

### OVERVIEW

Lakeridge Health is one of Ontario's largest community hospitals, serving people across the Durham Region. With four hospital sites and three emergency rooms, Lakeridge Health serves a diverse population. Durham Region families rely on the hospital's many services including a leading regional cancer center, diabetes management, dialysis, adult and children's mental health services, and a newly renovated Women's and Children's program.

### BUSINESS CHALLENGES

With increasing volumes of medical information and images being managed electronically, Lakeridge Health's data storage and backup requirements were growing rapidly. In addition, Lakeridge Health implemented IT as a Service (ITaaS) to enable hosting of critical electronic medical records (EMR) and health information systems (HIS) for other healthcare providers in the region, placing additional demands on its storage infrastructure.

Lakeridge Health's previous IBM storage area network (SAN) supporting its MEDITECH HIS was nearing capacity thresholds and was too expensive to expand. Its NetApp storage for PACS images also could no longer scale. And Lakeridge Health's Bridgehead tape backup solution performed poorly for non-MEDITECH applications, with only 40 percent of backups completing successfully.

After reviewing vendors certified by MEDITECH and consulting with industry peers, Lakeridge Health decided to replace its IBM and NetApp storage, and Bridgehead backup solution, and standardize on EMC.

### SOLUTIONS

Lakeridge Health deployed EMC® unified storage with a FLASH 1<sup>st</sup> strategy using the EMC FAST™ Suite, including FAST Cache and FAST VP, along with Flash and high-capacity disk drives to optimize performance and utilization.

To protect vital data, Lakeridge Health also implemented EMC Data Domain® deduplication storage systems with EMC Data Domain Boost and EMC NetWorker® unified backup and recovery software for faster, more reliable backup.

The EMC infrastructure supports all of Lakeridge Health's most critical applications, including MEDITECH HIS, GE Centricity PACS, Picis OR Manager, CBORD dietary services, and Mosaic radiation therapy, along with Microsoft Exchange and Microsoft SharePoint. Lakeridge Health is also planning to upgrade EMC unified storage to EMC VNX® in its cancer center.

In addition, Lakeridge Health hosts MEDITECH applications for three other local hospitals, leveraging economies of scale to assist other IT organizations with limited resources.

CUSTOMER PROFILE

EMC<sup>2</sup>

## Results

- Delivered virtual desktops to 500 physicians
- Reduced individual backup times by more than half
- Achieved near 100 percent system availability
- Reduced total cost of ownership

Lakeridge Health has fully virtualized MEDITECH along with 85 percent of its entire infrastructure using VMware® vSphere™.

## MOBILE ACCESS TO CRITICAL MEDICAL DATA

With EMC and VMware View, Lakeridge Health is transforming the way critical healthcare and enterprise applications are delivered to clinicians and administrators. The performance and utilization gained from FLASH 1<sup>st</sup> enabled Lakeridge Health to advance virtualization and adopt ITaaS in a private cloud.

For example, Lakeridge Health is introducing virtual end user computing and a “bring-your-own-device” (BYOD) strategy. Approximately 500 physicians can now display virtual desktops on their smart phones, tablets, or thin clients to check patient records, access research, and use the full range of MEDITECH tools. Lakeridge Health eventually will support several thousand users with virtual desktops.

“EMC and VMware technologies are creating huge opportunities to improve access to vital medical information and enhance the quality and efficiency of patient care.”

Ken McMillan  
Director of IT at Lakeridge Health

Ken McMillan, director of IT, Lakeridge Health, comments, “We’re able to deliver tools for clinicians that were previously unavailable to them unless they were physically present at the hospital. EMC and VMware technologies are creating huge opportunities to improve access to vital medical information and enhance the quality and efficiency of patient care.”

Virtualization also helps improve availability, which is especially critical for MEDITECH applications. In fact, since standardizing on EMC, Lakeridge Health has maintained 100 percent system uptime.

Andrew Kelly, manager of technical services, notes, “MEDITECH automatically shuts down where there are drops in the network, which would cause doctors to lose data they were entering into the system. Now if connections fail, the doctors just restore their virtual desktops and MEDITECH is still running. So there’s no data loss.”

## STREAMLINED BACKUP AND RECOVERY

With Data Domain, Data Domain Boost, and NetWorker, Lakeridge Health has dramatically improved backup success rates from 40 percent to upwards of 98 percent.

“Data Domain is providing deduplication rates near 96 percent, which is fantastic,” reports Kelly. “And the combination of Data Domain and Boost enables us to back up significantly more data in the same amount of time. Individual backups that used to take an hour now take 25 minutes.”

With reduced backup volumes, Lakeridge Health has increased its MEDITECH data retention period on disk from 90 days to two years before moving data to tape.

Kelly adds, “Data Domain and NetWorker are well integrated so backups are easier and cleaner to manage and we get excellent metrics on backup performance. We’ve also reduced the time spent managing backups by 50 percent while saving thousands on tape.”

In addition, data can be restored in just 30 minutes from Data Domain compared to the more than 12 hours it took from tape. By replicating backup data to another site 20 kilometers away, Data Domain also provides Lakeridge Health with essential disaster recovery.

McMillan notes, "If we lost access to something like our OR system, it would be chaotic and surgeons wouldn't know what patients to operate on. By protecting our critical applications, EMC technology helps ensure quality patient care."

## REDUCED IT ADMINISTRATION

Well-integrated EMC technologies have enabled Lakeridge Health to reduce time spent on IT administration.

"One of the big advantages of partnering with EMC is the tight integration between the unified storage and VMware," says Kelly. "We have great visibility into both environments through a single pane of glass. It's much easier to manage than the IBM platform."

EMC also has helped Lakeridge Health reduce total cost of ownership compared to the ongoing maintenance and updates required for IBM.

"Cost of ownership was a driving factor in our decision to standardize on EMC," says McMillan. "We presented EMC with our challenge and they responded with not just a lower-cost system, but a solution that helps our hospital staff operate more efficiently every day. We really value partnering with a company that listens to us the way EMC does."

## CONTACT US

To learn more about how EMC products, services, and solutions can help solve your business and IT challenges, [contact](#) your local representative or authorized reseller—or visit us at [www.EMC.com](http://www.EMC.com).

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The logo for EMC, featuring the letters "EMC" in a bold, serif font, with a superscripted "2" to the right of the "C".