



## Desktop Virtualization Moves Canada's Largest Trauma Centre Closer to "Always-on, Anywhere Access"

### Sunnybrook Health Sciences Centre

Industry:	Healthcare
Main Campus:	Bayview Campus
Employees:	Over 10,000 staff, physicians and volunteers
Yearly number of patients:	1.2 million
Website:	<a href="http://www.sunnybrook.ca">www.sunnybrook.ca</a>



### Objectives: Phase one

Streamline IT management, reduce costs

Eliminate workstation image sprawl and the need for expensive PCs

Ability to quickly roll out new operating systems, applications and services

### Background

Sunnybrook Health Sciences Centre is Canada's largest trauma centre and one of the fastest growing hospitals in North America. With a staff of over 10,000 employees across 3 sites, the Sunnybrook IT team is continuously striving to keep up with rapidly changing technology cycles while ensuring physicians and nurses have ready access to the critical health care applications they require. After virtualizing the server and storage environment a number of years ago, the IT team decided it was now time to take a closer look at Virtual Desktop Infrastructure (VDI). VDI hosts virtual desktops on centralized servers, giving employees a full desktop experience while eliminating the need for labour intensive helpdesk support. VDI not only uses IT resources more efficiently, it also can improve the user experience for hospital employees who need to securely access information from any device.

### Challenge: Keeping pace with rapidly changing technology cycles

There is a movement afoot in the healthcare industry to modernize shared clinical desktops, providing faster access to applications and data from any terminal. The personal computer (PC) is no longer viewed as a strategic tool. It is hard to manage, a drain on resources, expensive, and difficult to secure. These issues, combined with the need to accommodate new devices and mobile workers, led Sunnybrook to consider a full VDI rollout. "In addition to all of the functional benefits of VDI to users, we felt that being able to manage operating system and application environments in a new BYOD world made good sense for us both financially and logistically," said Oliver Tsai, Director of Information Technology at Sunnybrook.

Tsai and his team reached out to their core infrastructure trusted advisor, Scalar Decisions. Scalar was already working closely with Sunnybrook to manage the storage, servers, load balancing and VMware environment within the hospital's multiple data centres. The decision was made to bring in Scalar to assess, design, architect, and install a VMware VDI for the Sunnybrook user community.



## Solution

Implementation of virtual desktops running Windows 7 within a VMware View 5.X environment

Utilization of best of breed compute, storage, agentless AV, persona management and infrastructure management

Ongoing knowledge transfer throughout the project

## Objectives: Future phases

Provide clinician staff with secure access to information from any device, anywhere, anytime

### Solution: Simplified management of desktops

With the goals of streamlining IT management and lowering the total cost of ownership (TCO) for desktops, the hospital mapped out a 3 year campus-wide VDI roll out plan, covering 4,880 users.

Scalar started off by conducting a thorough 4-week VDI assessment, evaluating the current physical desktop environment in order to gain the baseline data needed to size and design the infrastructure. A lightweight agent was deployed onto 400 physical desktops, capturing inventory and performance metrics. Samples of the collected data were then securely uploaded to a virtual hub appliance to be analyzed.

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“There needs to be a way to guarantee that the end user experience will easily transverse from a physical desktop to a virtual desktop, and that is where the VDI assessment comes into play,” said Ian Forbes, principal consultant at Scalar. “The assessment allows us to gain insight into everything from network latency to computing performance metrics. From this detailed information, we are able to ‘right-size’ the environment, properly calculating the bill of materials,” continues Forbes.

The phase one roll out consisted of 400 nursing workstations. Zero and thin clients were introduced, eliminating the need for expensive PCs, reducing boot time and saving energy. From an end user perspective, the change was minimal, however the ease of centralized IT management has been a blessing for the administrators. “The primary purpose of VDI is that we get the benefits of hosting desktops in our data centre with the power of centralized computing. When it comes to deploying and managing desktops, VDI has dramatically changed the way we do almost everything,” said Wilfred Yan, manager of IT at Sunnybrook.



## Implementation Overview

VDI Assessment:  
Liquidware Labs  
Stratusphere Fit

Profile Management:  
Liquidware Labs Profile  
Unity

Storage:  
NetApp

Servers:  
Dell

Client:  
Dell Wyse

Broker:  
VMware View  
Hypervisor: VMware  
vSphere

Authentication:  
Microsoft Windows Server  
Active Directory

Load Balancing:  
F5 Networks

## Future Phases: Roaming profiles, single-sign-on, and automated root cause analysis

Future phases of the Sunnybrook VDI roll out will see the team addressing key concerns such as giving their physicians and nursing staff access to information from any device, anywhere, anytime. ‘Follow me computing’ has been identified as a top priority. “For the VDI experience to translate effectively, it means we have to give our users the ability to securely and efficiently access their critical data and applications, whether they are sitting in their office or at a shared workstation accessed by a dozen clinicians,” said Tsai. “We are looking into providing single sign-on capability, allowing users to swipe in their staff ID at a shared workstation and securely access their VDI desktop,” he continued.

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Sunnybrook will also look at implementing operations management tools that will allow administrators to drill down into root cause, gaining visibility and insight into performance and allowing for capacity planning.

“Numerous technologies needed to converge to make VDI a reality for us. The fact that Scalar is multi-disciplinary and has deep knowledge around architecture, deployment and management of all of these technologies was key,” said Jack Mahoney, technical administrator at Sunnybrook. “Ultimately, we will provide users with ‘anytime, anywhere’ access to our applications and full, personalized desktops for staff and physicians,” added Yan.

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