

Large Scale Virtual Desktop Infrastructure Deployment for Sheridan College Addresses Multiple Use Cases

Sheridan College

Industry:	Education
Campus:	4 campuses spanning 3 cities
Scope:	18,000 full-time students, 35,000 continuing education and part-time studies students
Website:	www.sheridancollege.ca



Objectives

Streamline device management and support, reduce costs

Support aging software packages

Contribute to college-wide sustainability initiatives

Background

Founded in 1967, Sheridan has grown from a local college of 400 students to one of Ontario's leading postsecondary institutions, educating approximately 50,000 full and part-time students every year on four campuses in three Ontario cities. The Information and Communications Technology team at Sheridan is responsible for services and systems that are critical to the on-going operation of the college's business.

In early 2012, the Sheridan IT team solidified a plan to introduce Virtual Desktop Infrastructure (VDI) into the college environment. VDI hosts virtual desktops on centralized servers, giving users a full desktop experience while reducing the need for helpdesk and imaging support. IT resources are now used more efficiently, resulting in significant operational savings for the college. VDI also improves the user experience for students and employees by making it very quick and easy to access their required programs as they move across and between campuses. While VDI is growing in popularity, Sheridan College is the first Canadian educational institution to roll VDI out on a large scale, addressing multiple user groups.

Opportunities for Improvement

Equipment Leasing Cycles

Equipment leasing cycles provide Sheridan with an opportunity every 3 or 4 years to look at new technologies and innovative ways of managing their environment. This played heavily into the team's decision to take a serious look at VDI.

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Use Cases

- Learning Commons and computer labs
- Distance education
- Mobile computing
- Administrative staff
- Podium PCs (future)

Sustainability

VDI supports Sheridan's ambitious institution-wide sustainability initiatives that have a mandate to re-envision the college's energy future, making significant reductions in energy costs. "We expect to realize substantial power savings over the next few years with the introduction of zero clients," said John McCormick, Director, Information and Communications Technology, Sheridan College. "One of Sheridan's sustainability targets over the next 5 plus years is to reduce energy consumption by 50% and the VDI project contributes to this goal," he continued.

Dated Software Packages

The IT team also faced ongoing challenges supporting older software packages on newer operating systems and technology platforms. For example, the school's Paralegal program instructors need to teach students on dated software that is still widely used in legal offices. "VDI allows us to deliver exactly what instructors and students require to any device; in essence, we are extracting the hardware out of the equation, eliminating the problem of how to support it," said McCormick.

"When you consider that we have a few thousand desktops across the college, this represents meaningful operational savings. We can now re-deploy these technical resources on more valuable work"



Implementation Overview

VDI Assessment:
Liquidware Labs
Stratusphere Fit

Profile Management:
Liquidware Labs Profile
Unity

Zero Client:
Dell Wyse

Software Platform:
VMware - View

Computing Platform:
Cisco Systems - Unified
Computing System (UCS)

Storage Platform:
NetApp

Network Platform:
Cisco Systems

Agentless AV:
Trend Micro

Solution

The IT department issued an open request for proposal (RFP) for both the platform and implementation partner, resulting in 7 or 8 responses. “Scalar submitted an extremely well executed, well planned response to our RFP,” said James Duncan, Senior Technology Architect at Sheridan. Working with Scalar, Duncan and the team identified 4 use cases which would be assessed and rolled out in phases.

Use Case #1: Learning Commons and Labs

The first phase of the project saw 400 zero clients deployed in labs and in the Learning Commons, a common open space designed for collaboration and communication. Students congregate in this area to work, socialize and sometimes just to pass time between classes. “We see a huge variety of applications in the Learning Commons environment, from Microsoft Office and Adobe suite of products through to video games and Facebook,” said Duncan. Knowing that VDI projects can fail upon scale out, Scalar and the Sheridan IT team put a great deal of emphasis on the VDI assessment in which usage data was collected for a period of 2 months. “It was critical to understand usage patterns, how much memory and CPU the machines were consuming and the kinds of applications users were running so we could effectively build the back end storage and servers to support the environment properly,” Duncan continued.

“With VDI, we are shifting control back to the data centre; we are able to support and run the software and applications students require for their programs within the data centre, regardless of the device they are using, offering all students the same experience”



Prior to the VDI implementation, the support team was spending a lot of time re-imaging PCs in the Learning Commons and computer labs. Now the team can quickly install zero clients that automatically configure themselves. “When you consider that we have a few thousand desktops across the college, this represents meaningful operational savings. We can now re-deploy these technical resources on more valuable work,” said McCormick. As PCs come off lease, Sheridan will continue to replace them with zero clients, operationalizing this first phase of the project.

Use Case #2: Distance Education

With the successful rollout in the Learning Commons areas, the team is now building out the project plan to offer remote computing capabilities for Continuing and Professional Studies students who are engaged in distance learning. “There are students who may not have the appropriate hardware at home or the right platform. In other cases we might not be able to offer required software for home use due to licensing reasons - VDI addresses these challenges,” said Duncan.

“Scalar has been great to work with, and their technical team is very knowledgeable. When we had issues, they fixed them directly or got the right people involved to get things resolved. The whole experience with Scalar was extremely professional.”

Use Case #3: Mobile Computing Program

Over the course of time, device control has shifted; students are now permitted to bring their own device, whether it be laptop, tablet or phone. This presents significant support challenges. “With VDI, we are shifting control back to the data centre; we are able to support and run the software and applications students require for their programs within the data centre, regardless of the device they are using, offering all students the same experience,” said McCormick.



Use Case #4: Administrative Staff

While the VDI deployment has been largely invisible to end users, there are value-adds to staff and students. Administrative staff such as the financial services group and IT teams will soon benefit from virtualization. Many college employees are mobile, travelling within the campus and between campuses for meetings. With VDI, there is virtually no start-up time. Users can disconnect from a session and come back later in a different location or from a different device and quickly resume where they left off. Because the session is running in the back end in the data centre, it is fast and simple to reconnect - documents and presentations are ready to go.

Future Phases

Pilot projects for distance education, mobile computing and administrative staff are underway and will be followed up with scaled out deployments. Beyond these 4 identified use cases, the Sheridan IT team is also looking at what they call “podium PCs” from which their instructors teach and deliver lectures. They are confident that they can streamline support of the podium PCs with a VDI model.

What differentiates Sheridan from educational institutions in other countries that have deployed VDI is the breadth of their use cases. Some are offering VDI on a slightly larger scale, but none have tackled the administrative, mobile computing or distance learning scenarios.

On a closing note, McCormick said, “Scalar has been great to work with, and their technical team is very knowledgeable. When we had issues, they fixed them directly or got the right people involved to get things resolved. The whole experience with Scalar was extremely professional.”

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