St. Lawrence College

"*By embracing virtualization, our latest data center technology refresh puts us in a position to take advantage of cost-effective virtualized solutions. The combination of VMware and Trend Micro messaging security highlights the overall benefits of virtualization, and the VMware Ready validation of the Trend Micro virtual appliance gives us confidence that our solution is backed by both companies.*"

— **Michael Zeleny, Technical Support Specialist,** St. Lawrence College

KEY HIGHLIGHTS

St. Lawrence College
Dream it. Then live it.

INDUSTRY
   Education

CHALLENGE
   Provide a more resilient and flexible infrastructure that can adapt to changing requirements while reducing power and cooling costs.

SOLUTION
   Implement virtualization to consolidate servers using fewer more powerful servers that allow resources to be easily and quickly redistributed to provide increased comput-ing power to critical applications during peak times, while improving application availability and thereby ensuring business continuity.

VMware™ AT WORK
VMware Infrastructure 3 Enterprise, featuring:

• VMware ESX™ 3.5

• VMware VMotion™

• VMware Storage VMotion

• VMware vCenter™

• VMware High Availability (HA)

• VMware Distributed Resource Schedule (DRS)

vmware®
READY

Established in 1967, St. Lawrence College serves students from three campuses in eastern Ontario, Canada. The college's philosophy places students' interests at the forefront, resulting in a commitment to the delivery of relevant in-demand courses supported by superior faculty and staff, state-of-the-art facilities, and a wide variety of support services.

More than 800 employees, 6,500 full-time students, and 20,000 part-time registrants at St. Lawrence College rely on its robust, technology-rich infrastructure. IT has deployed and managed a variety of technology solutions over the years, striving to create a productive environment for its entire community. The college has also embraced technology advancements such as consolidation and virtualization.

Over the last couple of years, St. Lawrence College has virtualized its servers for email, enterprise resource planning, human relations, print services, main file servers, and other mission-critical services and applications. According to Michael Zeleny, technical support specialist for St. Lawrence College, "Before we virtualized our servers, we found many instances where one server would be overworked and the others would be idle. To be able to handle times of peak demand, we were purchasing servers that were only be utilized for four or five weeks a year. We started looking at VMware ESX servers and began an eight-month pilot for consolidating our 70 servers. The VMware team has helped us embrace virtualization, and we've learned that there is nothing to fear about this new data center model. We have fully embraced it, and everything has gone really smoothly."

SAVING COSTS AND IT TIME

The virtualization initiative has yielded cost savings in many ways. For server hardware, the college has migrated to fewer, larger servers and does not need to add on dedicated servers for every new application or service. "With fewer servers, we have reduced our service costs and cut back on electrical and cooling requirements," said Zeleny. "We had hit our limits a year ago, and we are building a brand new data center. With the adoption of virtualization, we will have

less electrical draw, and produce less heat. We also save in data center space. For the IT staff, the amount of time required to manage our servers has decreased."

St. Lawrence College will also use VMware VMotion™ technology to improve load-balancing capabilities between servers and maximize performance for critical applications. VMotion enables the dynamic reallocation of critical resources between virtual machines, and allows IT to more effectively assign processing power to further increase server utilization. It also facilitates effective disaster recovery by enabling IT to easily shift a software stack to another server in the cluster.

"VMware has been so effective for us that we now routinely virtualize any new application or service that our end users want us to deploy," said Zeleny. "Our goal is to virtualize 90% of our servers."

ALIGNING VIRTUALIZATION AND SECURITY

During the move to virtualization, IT grew increasingly dissatisfied with the security solutions they had previously deployed. "More spam was getting through to our users every day," explained Zeleny. "Combined with increased licensing costs, the disappointing filtering results led us to evaluate other vendors. When we looked at Trend Micro Enterprise Security solutions, they met all of our requirements. We gained a multilayered spam solution, web threat protection, and a security vendor that was aligned with our commitment to virtualization."

Today, St. Lawrence College has introduced Trend Micro Enterprise Security to protect:

• Endpoints (Trend Micro™ OfficeScan™ Client-Server Suite)
• Messaging (Trend Micro InterScan™ Messaging Security Virtual Appliance)

VIRTUAL APPLIANCE FOR SECURITY

By introducing an InterScan Messaging Security Virtual Appliance at the gateway, the college gains protection from spam, viruses, spyware, phishing, blended threats, and data loss resulting from email-borne threats. Filtering capabilities help IT comply with regulations and college policies, and the virtual appliance allows them to lower operating costs for messaging security.

"Compared to a traditional software solution, Trend Micro's virtual appliance gives us numerous cost savings," said Zeleny. "We have avoided purchasing new server hardware to host email security, and therefore I avoid the long process of acquiring and testing a new physical server. As a further benefit, I also avoid increasing our cooling, electrical, and space requirements."

Powered by Trend Micro™ Smart Protection Network™, the virtual appliance blocks many threats before they can impact the college's network and systems. "Trend Micro messaging security and our virtualized environment have reduced the CPU and memory requirements for security while increasing the spam catch rates and overall protection," said Zeleny. "The in-the-cloud reputation services detect threats faster, help to mitigate them more quickly, and also reduce the time and resources consumed for updates. It's really nice to see Trend Micro moving in this direction."

DEPLOYMENT ENVIRONMENT

• ESX 3.5 running on IBM™ quad-core x3850 M2 servers with 128 GB memory attached to IBM DS4700 SANs

• Guest operating systems: Microsoft™ Windows™ 2003, and Microsoft Windows 2008, Windows XP, Linux™ (customized versions)

• Virtualized applications in production: Microsoft IIS, WebCT™ CE™ 6.3, Microsoft SQL Server 2005, Microsoft Windows Server Update Services, Grouplogic™ ExtremeZ-IP™, Equitrac™ Express, Lotus™ Domino™ 8.5, Trend Micro™ InterScan™ Messaging Security Virtual Appliance, Trend Micro™ OfficeScan™ 10, Ghost™, PeopleSoft™, WhatsUp™ Gold™, rDirectory™, GWI™ cSupport™, Johnston Controls™ Metasys™, Infosilem™ TPHi™, Mandarin™ M3™, Xerox™ SmartSend™, ION™ energy management

EASY DEPLOYMENT AND MANAGEMENT

The college's VMware platform has simplified the deployment of solutions such as the security software virtual appliance. "Under VMware, it was very easy to deploy InterScan Messaging Security Virtual Appliance, and it took less than an hour," said Zeleny. "We were getting great results using the out-of-box configuration. After we fine tuned it to our unique environment, we have been able to more or less ignore it. Other than checking it now and then, we enjoy a hands-off approach to managing it. The browser-based console makes it easy to monitor any time from anywhere, and since it has the Trend Micro look and feel, it is easy to navigate. Our previous vendor's management console was awkward and difficult to keep up to date—with Trend Micro, the web-based console is another nice plus."

Today, with its virtualized messaging security solution, IT enjoys a reduction in the time required to manage email security. InterScan Messaging Security Virtual Appliance takes less than 10 minutes a day to check on status, and user complaints about spam and other email security issues have also decreased, resulting in additional time savings for the busy staff.

VMware READY VIRTUAL APPLIANCE

Trend Micro fully supports its virtual appliance solutions with VMware servers. The InterScan Messaging Security Virtual Appliance is a validated VMware Ready solution that gives customers like St. Lawrence College the benefits of the effective working relationship between VMware and Trend Micro.

"Trend Micro's relationship with VMware—resulting in the VMware Ready validated virtual appliance—was a big contributing factor to our switch to Trend Micro security solutions," said Zeleny. "In the next phase of our virtualization initiative, we are creating an ESX cluster in our DMZ so we will be able to use VMotion to move our InterScan Messaging Security Virtual Appliance to another server on the fly. We'll have a highly secure and very manageable solution that allows us to take down a server for maintenance without introducing vulnerabilities."

RESULTS

• Cut the time required for server selection, acquisition, and build from five or six weeks down to a day or less
• Optimized server investment by eliminating a dedicated security server and increasing server utilization
• Decreased time required to install and configure the messaging security solution
• Enabled more flexible management and administration, with ability to move the security virtual appliance without disrupting protection of critical assets during service times
• Increased protection of mission-critical email communications while lowering overall cost of ownership for the messaging security solution
• Increased flexibility and responsiveness for servers
• Conserved data center resources, including space, power, and cooling