

Innovative university enrolls HP to create agile learning environment

Carleton University



"We see the IT department as an enabler of key university services. We don't just want to deliver technology; we want to affect outcomes and reinforce the goals and objectives of the organization."

– Ralph Michaelis, Chief Information Officer, Carleton University

Executive summary:

Today's colleges and universities are transforming education via managed learning solutions that provide comprehensive access to campus resources. For Carleton University, the starting point is a fast, easy-to-manage network that enhances communication while fostering innovation, creativity, and research. Carleton University depends on an Adaptive Enterprise solution from HP to synchronize business directives with IT functions; capitalize on learning opportunities; and make the organization more agile, productive, and efficient.

In partnership with *RealIT* Management Inc. and Cisco Systems, HP is helping Carleton unify the activities of students, faculty, and researchers in 36 buildings across campus. HP Services designed and implemented the new network, which passes the test for its value and simplicity as users learn to conduct secure transactions online – accessing student transcripts, viewing electronic courseware, and tracking graduation requirements.

Thanks to HP OpenView software, network administrators can manage network assets proactively, monitor and balance data traffic, and enhance the use of precious data-center resources. This solution allows the university to



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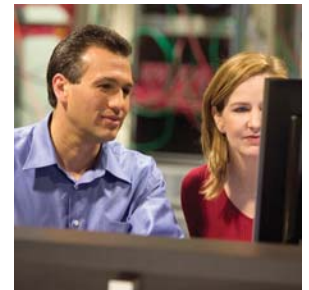
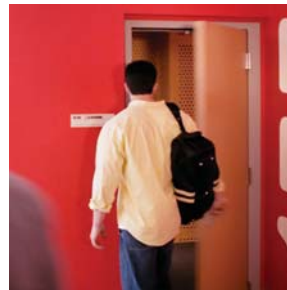
reliably broadcast courses on demand, undertake data-intensive research projects, and participate in desktop videoconferencing and e-learning initiatives.

Opening the book on intelligent service delivery

Carleton University's Chief Information Officer Ralph Michaelis wants to turn the university's IT department into a service-delivery vehicle as opposed to a mere purveyor of technology. This objective takes the form of three specific directives: Always strive to be a customer-focused organization, run IT like a business that makes sound investments for rational reasons, and align IT projects with business needs. Software and services from HP are turning his vision to reality. Michaelis maintains:

- **"Our investment in HP gives us a technology platform to accommodate our business plan – now and in the future."** Over the past several years, Carleton's research funding has increased dramatically, making way for nearly 800 research projects, including a virtual simulation lab, a human-computer interaction lab, and cyber-cartography projects. Along with a new ERP system, these research projects place a heavy demand on IT services and network resources. HP OpenView management software helps network administrators proactively manage network assets to balance resources among multiple projects and activities. For example, Carleton uses HP OpenView Network Node Manager to manage individual network devices and HP OpenView Internet Services to monitor business applications. External notification capability is provided via integration with CalAmp TelAlert, an HP OpenView Platinum partner.
- **"With help from HP and its partners, Carleton University is creating a campus-wide network that supports the university's goal of continually improving the student**





experience. Technology and processes are the puzzle pieces." HP's Adaptive Enterprise strategy helps the Carleton IT team put those pieces together effectively.

- **"We want to be able to turn up service levels on demand and monitor the impact on the network.** By creating an agile network-management platform and allowing the university to address potential problems proactively, we save money in the long run. Our IT staff is more efficient and we can maximize our system capacity. Additionally, if a web site is down or getting slow, we can react right away to bring the service back to its necessary level." Carleton uses HP OpenView Performance Insight to view performance metrics for the various segments of its network. By proactively managing the network as a whole, then homing in on particular devices that are slow or troublesome, system administrators can maintain efficiency for critical activities such as student registration, faculty communication, and financial accounting.

Keeping business and IT on the same page

Edward Pham, President of *RealIT* Management, an HP provider specializing in enterprise IT management, says that HP OpenView management tools enable the university to maintain higher IT service levels and react to problems more quickly. *RealIT* took the lead deploying this comprehensive management layer, as well as in supplying the procedures Carlton needs to identify potential issues and resolve them before they become critical. Pham affirms:

- **"We're putting processes and procedures in place that allow us to continually monitor the network so we can see potential problems and make adjustments before they occur."** The University is building a network operations center where system administrators can carefully track service levels and technology commitments, as they strive to adapt the network to match the way the university functions.

- **"The network operations center will streamline collaboration by making it easier for network administrators to integrate and manage content, processes, and workflow throughout the campus."**
- **"There might be a single problem that manifests itself in five or six different places. The HP software helps us correlate those problems so we can address the root cause of the issue and get the network back to a fully operational state."**

Earning high marks in customer satisfaction

HP OpenView software helps Carleton automate the dynamic link between business and IT, an essential ingredient in a first-rate experience for his constituents, according to Michaelis. For example, with OpenView Performance Insight, network administrators proactively manage network assets to balance resources among various projects and activities. If users complain that the e-mail service is slow, an administrator can use the HP software to quickly verify that all of the e-mail servers are online, and then drill down to examine the performance of each device. Says Michaelis:

- **"HP management software makes the IT team more knowledgeable and aware of what is going on with the network. It gives us a set of power tools as opposed to just wrenches."** This was not always the case. Denis Levesque, project director for network campus operations, recalls a situation in which a rogue server resulted in an IP conflict that required two days of troubleshooting to isolate. As Levesque recalls:
- **"Back then, we didn't have the right diagnostic tools in place, let alone the centralized problem solving procedures that we have today. If that same situation were to occur today, it would be detected immediately – with a lot less effort – thanks to our HP management software."**

Learning from the experts in network deployment

In addition to supplying the network hardware for Carleton's massive network-upgrade project, HP Services delivers a full suite of consulting services, including design, configuration, integration, installation, technical support, and project management. CIO Ralph Michaelis is pleased with the results:

"HP supports an ambitious business plan that meets our requirements for turning IT into a service delivery. Having a state-of-the-art technological infrastructure enables the university to offer an outstanding experience to faculty, students, and staff."

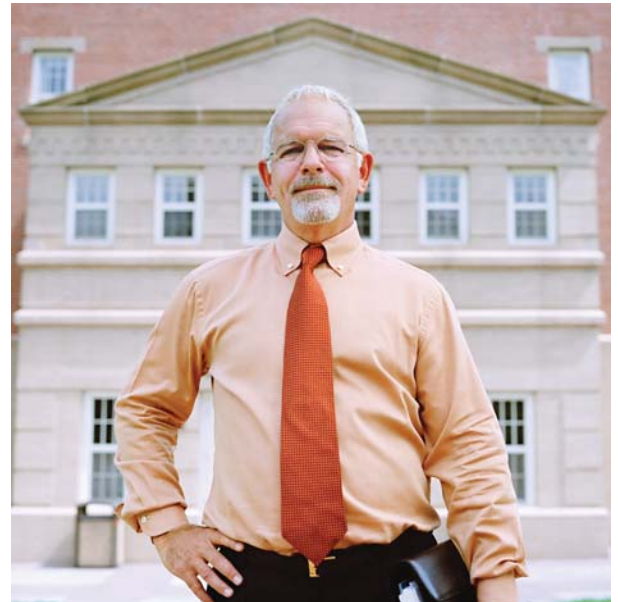
– Ralph Michaelis, Chief Information Officer, Carleton University

- **"We're quite happy with HP Services. They brought in good planning techniques, good design techniques, and they are executing according to plan."** Thanks to astute planning and top-notch vendor support, Carleton University is molding its IT investments into a cohesive infrastructure that reduces costs and boosts productivity.
- **"Our IT department is better able to fulfill its charter of affecting business outcomes while making a positive difference in the lives of students, faculty, and staff."** In the past, IT problems had a broad impact, sometimes affecting everybody on the network. Now, Carleton can detect problems more quickly and isolate their impact, so fewer users are affected.
- **"We're progressively improving uptime, even as our downtime windows become shorter and less pronounced."**

- **"Essentially, Carleton University is creating a reliable network environment that encourages interactive learning experiences."** All Carleton employees and students enjoy fast access to the Internet, and student registration is simplified through online business processes. This versatile infrastructure helps the institution turn information into knowledge while readying students for participating in a digital future driven by a technically competent workforce.

About Carleton University

Founded in 1942, Carleton University is a dynamic research and learning institution located in Ottawa, Canada. With 36 buildings for teaching, learning, research, administration, and housing, the University is a national leader in the study of public affairs, management, and technology – as well as a leading innovator in undergraduate education. Carleton University (www.carleton.ca) offers a vibrant work and learning environment – with close ties to the region's business, cultural, government, and high-tech communities.



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At a glance

Software

- HP OpenView Network Node Manager to manage individual network devices
- HP OpenView Internet Services to monitor business applications
- HP OpenView Performance Insight to view performance metrics for the various segments of the network
- CiscoWorks LMS and VMS to manage the configuration of Cisco devices
- CalAmp TelAlert to manage external notifications

Hardware

- 2 HP ProLiant DL380 servers
- Cisco 6509 and 3750 switches
- 2 Sun V-210 servers, 1 Sun V-440 server running HP OpenView software

HP Services

- HP consulting and integration services, including installation, network integration, infrastructure design, and project management
- HP customer support plan (offsite service during regular business hours, with 24-hour response)

Services from HP partner RealIT Management Inc.

- HP OpenView deployment
- Customized training services
- CiscoWorks deployment
- TelAlert deployment
- Integration of all network-management products

Business needs

- Supply a reliable IT infrastructure to support nearly 800 research projects and a new ERP system
- Create a fast, easy-to-manage network that enhances communication while fostering innovation, creativity, and research
- Raise the quality of education via universal access to information
- Investigate technology and processes that allow network administrators to continually monitor IT resources, make necessary adjustments, and perceive potential problems before they occur

HP solution

- HP OpenView software makes it easy for IT administrators to integrate and manage content, processes, and workflow
- The HP Adaptive Enterprise strategy helps the university synchronize business goals with IT deliverables.
- HP Services is creating a campus-wide network that supports the goals and objectives of the university

Customer benefits

Simplicity

- Synchronized business directives with IT functions
- Streamlined communication, campus-wide
- Enabled students to capitalize on learning opportunities

Agility

- Created a virtualized IT environment that quickly responds to change
- Network administrators can manage network assets and balance data traffic proactively
- Reduced diagnostic time from days to minutes

Value

- Constant management insight enhances the use of precious data-center resources
- Cost-effective infrastructure provides a basis for efficient growth by matching system capacity to business needs

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