Seneca

SOFTWARE AND SERVICES

Red Hat® Enterprise Linux®

Red Hat CloudForms

Red Hat OpenStack® Platform

Red Hat Consulting

Red Hat Technical Account Manager

HARDWARE

HPE BladeSystem servers

Seneca College, one of Canada's largest colleges, prides itself on delivering the latest, best technology to its students and faculty. But the IT infrastructure running its learning management system was complex, costly, and slow. By standardizing on Red Hat® Enterprise Linux®, the college saved more than CA\$100,000 and increased performance speed. In addition, implementing an open, private cloud based on Red Hat CloudForms and Red Hat OpenStack® Platform has helped the college create a foundation for future automation of IT resource delivery.



"The most important thing about working with a vendor is reliability. Now that we've standardized on the Red Hat platform, I can sleep at night."

ROY HART CHIEF INFORMATION OFFICER, SENECA COLLEGE



EDUCATION

4,700 EMPLOYEES
107,000 STUDENTS

BENEFITS

- Saved more than CA\$100,000 by migrating from proprietary platforms to Red Hat Enterprise Linux
- Created a private cloud infrastructure for faster, automated delivery of IT resources
- Achieved better performance and stability for its learning management system



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"We've worked with many different vendors, and Red Hat is the most stable and reliable. ... Performance has been incredibly faster, and there's been no production downtime, which improves the experience for students and faculty."

HASSAN ASSIRI
DIRECTOR OF INFRASTRUCTURE,
SENECA COLLEGE

COMPLEX INFRASTRUCTURE MAKES DELIVERING THE LATEST TECHNOLOGY CHALLENGING

With more than 100,000 full- and part-time students, Seneca College is Canada's largest college. The college is becoming one of the most modern, agile colleges in Canada by delivering the latest technology and IT services to its students and faculty.

But its complex infrastructure made providing these resources difficult. The infrastructure combined multiple Linux operating system distributions for academic use with the proprietary Oracle Solaris operating system, running on SPARC-based servers, for the college's learning management system. Using multiple operating systems and proprietary hardware increased cost of ownership for the IT environment and created an inconsistent experience for students attending technology courses. Addressing these issues and reducing the total cost of ownership (TCO) of the IT environment became a priority.

"My goal has been to transform the IT infrastructure and the way our team delivers services to the college," said Roy Hart, chief information officer at Seneca College.

The college decided to standardize on a single Linux distribution and eliminate proprietary platforms to provide a more consistent experience for its faculty and students. Seneca could then begin transitioning to the cloud and implementing automation to improve flexibility and responsiveness to events that access the IT infrastructure, such as students registering for a course.

SENECA STANDARDIZES WITH RED HAT

Seneca chose Red Hat Enterprise Linux to replace the multiple versions of Linux in its academic IT environment. Seneca has been working with Red Hat for more than 15 years, using Red Hat Enterprise Linux for research and teaching purposes as well as its internal IT infrastructure.

"We chose Red Hat Enterprise Linux for our standard platform because it meets our business needs for stability and reliability, including the enterprise-level support Red Hat provides," said Hart.

Another reason Seneca chose Red Hat was the interoperability of its solutions with the college's existing applications and technology. "It was important for us to have a solution that integrates with our other infrastructure components, such as Oracle Identity Management and Active Directory on-premise and on Microsoft Azure," said Hassan Assiri, director of infrastructure at Seneca College. "Red Hat works seamlessly within our IT infrastructure."

After successfully implementing Red Hat Enterprise Linux, the college then migrated its academic systems from a proprietary platform running Oracle Solaris to an open environment. Next, with planning and design help from Red Hat Consulting, Seneca deployed a private cloud infrastructure based on Red Hat CloudForms and Red Hat OpenStack Platform.

To assist with these changes, Seneca engaged a Red Hat Technical Account Manager (TAM). The Red Hat TAM continues to work collaboratively to provide guidance to the college and communication within Red Hat.



OPEN SOURCE SOLUTIONS IMPROVE I.T. FOR STUDENTS AND STAFF

ENHANCED SYSTEM PERFORMANCE AND RELIABILITY

By standardizing on Red Hat Enterprise Linux and taking advantage of other Red Hat technology, Seneca College improved availability and performance of its IT systems. "We've worked with many different Linux distributions, and the Red Hat solutions are the most stable and reliable," said Assiri. "For example, after we moved our learning management system from Solaris to Red Hat Enterprise Linux, its performance has been incredibly faster, and there's been no production downtime, which improves the experience for students and faculty."

EASIER INFRASTRUCTURE MANAGEMENT

Deploying the new private cloud infrastructure based on Red Hat technology has made managing the college's IT environment and resources easier for Seneca's IT team. "My team appreciates the ease of administration that we get with Red Hat OpenStack Platform and Red Hat CloudForms," said Assiri. "It's really improved our ability to efficiently manage our environment."

In addition, the new cloud environment will let the college automate provisioning of IT infrastructure resources—such as virtual machines—for students and faculty, reducing manual management effort and system lag while improving flexibility. As a result, students will gain faster access to the IT resources they need for courses, and faculty can focus on helping students learn, instead of provisioning the IT environment.

"We want to take a business event, such as a student registering for one of our programming courses, and use that as a trigger to automate building a new infrastructure," said Hart. "Previously, this required a great deal of collaboration and manual effort between faculty and IT staff. Now, with our new Red Hat infrastructure, it will be automated."

REDUCED HARDWARE COSTS

Seneca now runs core administrative applications—such as its Oracle PeopleSoft enterprise resource planning (ERP) system and its academic systems—on the Red Hat platform. By migrating to commodity hardware running Red Hat Enterprise Linux and eliminating its Solaris SPARC platform, Seneca saved more than CA\$100,000 in hardware maintenance costs.

"Now we only have one platform and operating system to support," said Assiri. "We don't need to spend money and time training people on Solaris. We have more time to improve IT service delivery."



PLANS FOR FUTURE I.T. INNOVATION

The college sees deployment of a private cloud infrastructure as the first step in its cloud journey. "Our long-term goal is to run everything in the cloud, taking advantage of both private and public cloud resources," said Hart. To achieve this goal, the college envisions moving all of its 1,500 servers to the cloud.

The college is also transitioning to a DevOps approach to further accelerate time to value for its IT organization. This approach will help Seneca deliver new capabilities that give students access to and experience with the latest technology.

To make these plans and strategies a reality, Seneca will continue to work with Red Hat and its Red Hat TAM to transform the way the college delivers IT services.

"The most important thing about working with a vendor is reliability," said Hart. "Now that we've standardized on the Red Hat platform, I can sleep at night."

ABOUT SENECA COLLEGE

With campuses in Toronto, York Region, and Peterborough, Seneca College is the largest comprehensive college in Canada, offering degrees in nearly 300 full-time, part-time, and online programs.

ABOUT RED HAT



Red Hat is the world's leading provider of open source software solutions, using a community-powered approach to provide reliable and high-performing cloud, Linux, middleware, storage, and virtualization technologies. Red Hat also offers award-winning support, training, and consulting services. As a connective hub in a global network of enterprises, partners, and open source communities, Red Hat helps create relevant, innovative technologies that liberate resources for growth and prepare customers for the future of IT.



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