

# Seneca

SCHOOL OF INFORMATION TECHNOLOGY  
ADMINISTRATION & SECURITY

## CASE STUDY

### INSTITUTE OVERVIEW

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Seneca Polytechnic is a college in Canada's Greater Toronto Area that offers full-time and part-time educational pathways with varied professional courses and degree programs. The programs are delivered in in-person, online, hybrid, and HyFlex formats.

Seneca became the first institution to offer a Canada-wide 'Azure Fundamentals' program through their school of part-time studies. This initiative provided training to approximately 6000 students.

# THE CHALLENGE

During the pandemic, institutions worldwide quickly shifted to virtual teaching methods, replacing traditional approaches that were not compatible with health and safety measures. Seneca's School of IT Administration and Security also embraced this change by adopting virtual labs supported by Microsoft's Azure for Students program. This program offers students a free \$100 cloud credit when they register for a course, providing access to various Microsoft Azure services throughout the academic year.

While the Azure for Students program was beneficial for individual students, it did not meet the requirements of institutions delivering courses to large student groups. Some of the many challenges faced in offering this program are outlined here:



To address the needs of students who exhausted their credits during the semester, a scalable solution was required. This solution needed to provide centralized control over students' environment for effective cost management, considering that students were often enrolled in multiple cloud courses within the same semester.



Professors lacked visibility into students' account details regarding resource and credit consumption, while the institution lacked access to crucial information, like resource costs and remaining credits per student. This lack of information made it impossible to assign a budget to students for their respective courses.



Due to the institution's lack of visibility into students' accounts, there was no ability to provide summary reporting of resource and cost usage across semesters. Such reporting was essential for tracking expenses accurately and forecasting the adequacy of budgets.



The school wanted to ensure secure virtual lab experiences for its students, by prioritizing the protection of student data, defending against cyber threats, and establishing a risk-free learning environment.



In order to accommodate the needs of students utilizing lab environments, it was necessary to provide 24/7 support for the institution, both during core hours and extending beyond them.

# THE SOLUTION

Seneca Polytechnic's School of IT Administration and Security had a main priority when it came to delivering Azure-related courses and programs: a scalable solution with effective cost controls. To meet this need, they turned to CloudLabs and its robust automation framework.

CloudLabs was able to accomplish the following solutions:

To provide a scalable solution by efficiently managing and distributing thousands of tenant environments, offer credit extensions for uninterrupted learning, and implement Infrastructure as Code (IaC) to eliminate manual management. This approach ensured cost control for students enrolled in multiple cloud courses.

To implement a centralized student account management system, with which professors can easily access students' account details, including resource and credit consumption. This also enables the institution to allocate budgets to students for their courses based on resource costs and remaining credits, leading to effective budget management.

To provide an automated BI tool that displays daily cost reports and budgets for each student, offering transparency into their resource and credit consumption and facilitating accurate expense tracking and budget forecasting.

To enhance security with isolated sandbox environments from students' EDU account with minimal attack surface. This helps secure students, faculty, and the organization from threats.


To ensure efficient lab experiences through the 24/7 support available to the School of IT Administration and Security.

## CONCLUSION

Since January 2022, CloudLabs has been collaborating with Seneca Polytechnic's School of IT Administration and Security to provide cloud solutions for its diverse programs. Throughout this partnership, CloudLabs has closely collaborated with the school to improve the environments for students, professors, and the entire team. Through their ongoing partnership, CloudLabs and the school anticipate substantial growth and an extended presence in the cloud industry.

As of May 2023, Seneca has been utilizing CloudLabs for multiple consecutive semesters. At present, the institution is leveraging CloudLabs to offer 34 courses focusing on different Azure-related programs, serving over 1,200 student accounts.

## TESTIMONIAL

 We are incredibly pleased with our experience using CloudLabs by Spektra Systems. Their responsiveness and support have been nothing short of outstanding. They have demonstrated remarkable flexibility in accommodating our unique processes and challenges, resulting in a seamless and highly productive collaboration. Thanks to CloudLabs, we have successfully delivered Azure-related courses to a substantial number of students in various programs. Our collective satisfaction with their services has been beyond measure, and we look forward to continuing this fruitful partnership to further grow in the cloud industry in the future.

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