Turning Need for Better Wi-Fi into Learning Experience

Toronto District School Board leverages a single framework to support the next generation of networks and the tools to manage it.

Toronto District School Board

Size: 246,000 students, 1400 international students, 595 schools, 180,000 adult and continuing education students, 41,000 faculty and staff

Industry: Largest school board in Canada, fourth largest in North America

Location: Toronto, Ontario, Canada

Challenges

- Inability to come up to speed to enable efficient, secure, and technologically advanced Wi-Fi access to meet the need of students and faculty with the proliferation of mobile devices on school campuses
- Lacked management and visibility with current wireless environment
- Required more specific and permanent IT budgets as part of new district guidelines

With nearly a quarter of a million students, plus more than 40,000 faculty and administrators in close to 600 schools, the Toronto District School Board (TDSB) faced a dilemma. The fast pace of the technology evolution and the proliferation of mobile devices on campus–more than 35,000 daily–threatened to overcome the district's ability to provide secure state-of-the-art access to its learning environment.

The TDSB culture is one in which it is believed that all students can benefit in digital classrooms that engage them, that are focused on learning, and that are inclusive. The TDSB guides the framework for leveraging technology as a critical K–12 grade learning vehicle through its Information and Communications Technologies (ICT) Standards.

Initially, the TDSB team approached its existing network vendor, Cisco, to help it enhance its Wi-Fi environment, so that all students, as well as faculty and staff members, have consistent easy-to-use access after they are on campus.

Partnership to Provide Continuous Learning

In considering solution options with the TDSB, the district and Cisco® teams realized that updating the Wi-Fi environment to improve access for mobile devices with more access points and controllers was just one component of the long-range learning plan.

To fully support the district's bring-your-own-device (BYOD) policy, schools also needed to be able to secure that access. The exponential growth of cyber attacks requires the best and most current protection.

The use of the Cisco Mobility Services Engine (MSE) and Cisco Identity Services Engine (ISE) were considered to minimize risk to the entire district as well as to its users–the students, faculty, and administrators. MSE allows TDSB to locate users, while ISE can secure the network to the endpoints against compromises that might be triggered with users bringing their own mobile devices on campus.

"Technology is changing fast on us. Learning does not just happen in the classroom anymore. We knew we needed to provide a better Wi-Fi experience to our students and faculty."

Peter Singh
Chief Technology Officer, TDSB

Solutions

- Expand Wi-Fi footprint to meet the growing demands of faculty and students for better and more pervasive wireless coverage
- Use robust Wi-Fi management, visibility, and security to scale the network

"Our partnership with Cisco and having access through Cisco ONE brings the innovation of Cisco to us."

Peter Singh
Chief Technology Officer, TDSB

Results

- Facilitated ability to port licenses, reducing risk and exposure with today's technology choices
- Realized approximately $400,000 in savings using a portable license, with ongoing savings over 3 to 5 years compared to buying MSE, ISE and Cisco Prime Infrastructure separately for wired and wireless management later
- Enabled TDSB to obtain all aspects of a secure enterprise Wi-Fi solution when budget is available so that the district can deploy technology as needed

"Cisco ONE gives us so much more, with seamless access to the tools of learning every day." Peter Singh, chief technology officer (CTO), TDSB

The sheer scale of requirements to support the vast numbers of students, faculty, staff, and campuses was daunting. With Cisco ONE™ Foundation for Wireless, the TDSB team reduced complexity in managing licenses and used the license portability feature to future-proof its investment.

Enhancements were made to the network, as part of the plan to scale mobile access. New Cisco UCS® servers were employed to run the software. Additionally, Cisco Prime™ Infrastructure was brought in to help manage the wireless and wired environment overall.

Cisco consultants are working side by side with the TDSB team to devise the Wi-Fi optimization strategy and roll out the new enhancements. The plan is designed to meet the district's current needs and 3- to 5-year growth projection.

"Using Cisco ONE, we can cut down on project cycles, so we save on time, resources, and money. We don't need to cut additional POs to get the services we need," says Singh.

Cisco ONE Foundation for Wireless Streamlines Projects, Reduces Costs

By implementing Cisco ONE Software, TDSB has found it easier to port licenses, reducing risk and exposure as it looks to future growth plans and technology needs to support the district.

Approximately $400,000 in savings has been realized at the outset due to the portability licensing feature offered by Cisco ONE Software. Additional savings will continue to be realized with the inclusion of MSE, ISE, and Cisco Prime technology versus purchasing the products individually over time. Using these Cisco products helps enable the district to take advantage of available budget at a time when funding for projects in education can fluctuate.

Eliminating the need to strike new contracts on a one-off basis means project cycles can be reduced. As a result, the district can save on time, resources, and money over the short and long term. And that means the IT team can focus on continuing to build a world-class learning environment on TDSB campuses. Everyone wins.

"We believe Cisco is the world leader in networking, and they address needs not just for today but also in preparing and helping us to take care of things that are going to come our way in the next 4 to 5 years," says Singh.

Products and Services

Cisco ONE Foundation for Wireless

- Cisco Wireless
- Cisco Mobility Services Engine (MSE)
- Cisco Prime Infrastructure

Security

- Cisco Identity Services Engine (ISE)

Data Center

- Cisco UCS C-Series Servers

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