

# University of Guelph

---

## Statistics

---

- 27,000+ Students
  - Located in Guelph, Ontario
  - Consistently ranked as a top comprehensive university and given top marks for student satisfaction among medium-sized universities in Canada
- 

***“[SecureW2] JoinNow provides a fairly straight-forward utility for the onboarding process without requiring additional IT support.”***

– Dennis Xu  
CCIE #13056, CISSP,  
Network Analyst,  
Computing and Communications

---



## An Influx of Devices

---

At the beginning of the 2013 semester, the university was preparing for a massive proliferation of smartphones, laptops, and computers onto the company's network. As the Bring Your Own Device (BYOD) phenomenon continued to spread, students were requesting instantaneous access to information while expecting campus Wi-Fi to be secure and easily accessible.

Allowing students and staff to bring personal devices onto the network brought several inherent risks to the table, including the potential for widespread security vulnerabilities. “We were facing many problems with the manual onboarding process,” said Dennis Xu, University of Guelph Network Analyst, Computing and Communications (CCS), “Some manual configurations rendered devices vulnerable to certain impersonation and authentication attacks.”

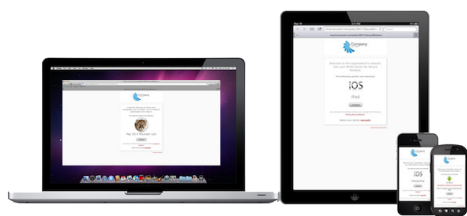
Guelph faced the serious challenge of supporting secure BYOD Wi-Fi for their end-users - they needed to figure out how to make the network as easy to access as possible without compromising over-the-air device security.

## Challenge of Having “No Solution”

---

Prior to implementing JoinNow, Guelph did not have an automated onboarding solution and instead, relied on manual device configuration. However, they quickly determined this would no longer work as IT staff continued to face inconsistent, suboptimal configurations among user devices.

Xu noticed many problems when attempting to get students onto the university's secure wireless network, including inconsistencies across devices and operating systems. “We noticed that, for example, Apple iOS devices show the



## JoinNow MultiOS

Supported OSs	Windows XP + Mac OS X 10.5 + Apple iOS 2.0 + Android 2.1 + Linux Kindle Fire ChromeOS
Supported EAPs	EAP-TLS PEAP/MSCHAPv2 PEAP/GTC EAP-TTLS/PAP EAP-TTLS/MSCHAPv2 EAP-SIM
Deployment Options	Internal Web Server SecureW2 Cloud

RADIUS server certificate “Not Verified” message even when the server certificate is issued by a trusted Certificate Authority (CA),” Xu said.

Configuring and connecting devices for secure wireless access in a reliable manner is one of the most challenging components of deploying WPA, WPA2, and 802.1X. Since manually configuring a device properly for 802.1X involves a series of steps: configuring the CA or installing the certificate, setting options to verify the certificate, entering the domain of the trusted RADIUS server, and more – there is plenty of room to err during setup.

Skipping one step in the process can leave students susceptible to a “man-in-the-middle” (MITM) attack. This occurs when an attacker with malicious intent can easily set up a rogue network and mimic the SSID in order to steal personally identifiable information. Guelph needed a solution they could depend on, and they needed it fast.

## Finding the “Right” Solution

The university was in the middle of migrating all students, faculty, and staff to secure Wi-Fi when they decided to deploy SecureW2’s JoinNow. “The tool has provided great assistance in this endeavor,” Xu said. “[SecureW2’s] JoinNow provides a fairly straight-forward utility for the onboarding process without requiring additional IT support.”

By integrating JoinNow into the guest/onboarding web portal, users are automatically configured with all of the proper settings required for WPA2-Enterprise level encryption. It is a straightforward onboarding process without any additional IT help required. “As a result, the calls to our help desk regarding connectivity challenges to secure Wi-Fi are less frequent,” Xu said.

Guelph configured their implementation of JoinNow to only allow devices to accept pre-defined server certificates; users are no longer prompted to authorize new or unknown certificates. After the user enters his Guelph credentials the device is automatically configured with the proper settings, including the installation of required trusted certificates.

JoinNow’s sophisticated reporting capabilities, including full network visibility and device monitoring, proved to be a win for Guelph. The solution delivers a plethora of data such as connection and error logs for user devices. According to Xu, the lack of Java requirement in the product proved to be very beneficial.

## Avoiding Errors in Manual Onboarding

Guelph began to see results immediately, with the number of users configured for the WPA2-Enterprise campus network steadily increasing. “In September 2014, the number of users on secure wireless doubled since the same time the year prior.”

With the onboarding challenge resolved, calls to the help desk have been less frequent, saving IT teams valuable time and resources. JoinNow’s capability of

---

***“Support teams from SecureW2 have been very helpful throughout the deployment and operation processes,” Xu said. “The support engineers are very knowledgeable and questions are always handled in a timely fashion.”***

---

showing crucial device data makes the jobs of network administrators much easier. Complementing SecureW2’s comprehensive onboarding solution is its unparalleled technical support: “Support teams from SecureW2 have been very helpful throughout the deployment and operation processes,” Xu said. “The support engineers are very knowledgeable and questions are always handled in a timely fashion.”

As the BYOD movement continues to grow, the number of Wi-Fi-enabled devices connecting to secure networks has increased exponentially. With JoinNow, device onboarding doesn’t have to be a support and end-user nightmare. SecureW2’s automated solution, JoinNow MultiOS, streamlines the user experience to deliver secure wireless with the click of a button.

---

[www.securew2.com](http://www.securew2.com)

**North America**  
(888) 363-3824  
(512) 900-5515

**UK and Ireland**  
+44 11 8455 0135

**Europe and Middle East**  
+31 53 302 0260

**Email**  
[sales@securew2.com](mailto:sales@securew2.com)