

Providing Seamless Connectivity for Peel Regional Police Department

Peel Regional Police serves over one million people residing in the cities of Mississauga and Brampton, as well as the 30 million travelers who annually pass through Pearson International Airport. It is the second largest municipal police organization in Ontario, Canada, with roughly 1,800 uniformed members and 700 civilian staff. The police department supports a geographic area of approximately 538 square kilometers (335 square miles). Bordering Lake Ontario, the Peel Marine Unit also patrols all accessible shoreline including inland bodies of water and 105 square miles of water to the international border with the United States.

OBJECTIVE

Peel Regional Police Department wanted to increase the productivity of their patrol officers by enabling secure, seamless connectivity between their Wi-Fi and a wide area network. "We needed a roaming solution," explained Jason Grainger, Peel's Sr. Systems Engineer, "that let our officers' applications switch between the police department's Wi-Fi network and the wide area network." It was advantageous for the officers to have access to the department's high speed network for transmission of reports, software updates, and larger files. But the moment they left range of the Wi-Fi, Peel Regional Police wanted their connection to roam to the next fastest network.

In addition, Peel's IT team wanted to ensure that any data sent across either network was encrypted. So finding a mobile VPN that provided data security was another key objective for their wireless plan.

CHALLENGES

"We had recently upgraded our mobile system. Our patrol vehicles are fitted with touch screen LCD monitors and keyboards that connect to ruggedized laptops docked in the trunks," says Grainger. The next step in the development of their mobile solution was to find a way to roam live application sessions (Computer Aided Dispatch, Internet access, etc.) between disparate network types and avoid the hassle of patrol officers having to manage this switch themselves. "We were looking for a simple solution," continues Grainger, "that would be easy for our patrol officers to handle and let them stay focused on their jobs not the technology."

In addition to roaming concerns, the varied topography of the patrol area Peel serves means that continuous access to wireless networks is not possible. "Our officers cover a very large area which includes the international waters bordering with the US," comments Grainger. As network connectivity becomes spotty, applications the officers depend on would not function correctly or in some cases require restarting. "There are also times," adds Grainger, "that officers lose network access when their vehicles go out of coverage because they're in an underground parking garage or tunnel." Finding a way to persist applications through periods of lost coverage was a serious challenge that Peel's IT team needed to resolve.

SOLUTION

Peel's IT department began testing a number of mobile VPNs that offered capabilities of roaming and session persistence. They chose NetMotion Wireless' Mobility XE, as Grainger explains, "it was so simple to deploy and roaming was flawless. It was easy to put together and even with disaster recovery testing, we were up and running in only a couple of days.

Organization

Peel Regional Police Department

Industry

Public Safety

Challenges

- Needed a simple, secure way for patrolling officers' applications to roam between available wireless networks
- Wanted to ensure that all wireless data was secured and encrypted
- Required a solution to resolve a network speed inaccuracy that would not allow users' sessions to roam accurately

Solution

- Mobility XE VPN solution

Results

- Application sessions seamlessly roamed between the department's Wi-Fi and wide area networks without user intervention
- Mobility XE persisted applications through wireless coverage gaps
- Mobility XE's Policy Management Module overrode the OS's speed inaccuracies to properly roam sessions
- Data sent across the wireless link secured with AES 128-bit encryption

Once you get it set up you almost forget it's there. It does exactly what it's supposed to do." With installation of client software on the mobile devices and server software within their IT department, Mobility XE was able to provide the network roaming Peel needed. Mobility XE also provides end-to-end AES encryption which ensures that all data sent across the wireless link is protected.

"Another significant issue that Mobility XE solved dealt with our laptop and modem set-up," continues Grainger, "Our laptops connect via Ethernet to external modems that are hard mounted in the vehicles' trunks. Unfortunately, this means that the laptops' OS thinks that it is connected at Ethernet speed of 100 MB/s and will not roam to a perceived slower network. But Mobility XE's Policy Management Module allowed us to create a policy to override what the OS was receiving and roam to the truly fastest available network."

"Overall, Mobility XE offers us a lot of flexibility," concludes Grainger. "We are also using the Policy Management Module to control what applications are accessible dependent upon the network. So we only allow OS and virus software updates when our officers are on Wi-Fi and not on the wide area network. This allows us to better manage the available bandwidth for the mission critical applications they need to do their jobs."

Mobility XE also optimizes wide area networks by reducing the number of retransmitted data packets and control information. It also compresses data and images to improve throughput and make applications work more effectively across the EVDO and fall back 1xRTT networks that Peel uses.

RESULTS

Peel's patrolling officers now have reliable access to applications as they roam through urban centers, across open country and even the shores and waters of Lake Ontario. With Mobility XE installed, they've optimized their wide area network connection and made their applications resilient to lost connectivity. Best of all, from the officers' perspective their applications just work and they do not need to configure anything. For the IT team, they've implemented a wireless solution that will grow and adapt as their needs change.

In the future Peel's IT team plans to explore greater use of Mobility XE's Policy Management Module's Quality of Service (QoS) capabilities. QoS will allow Peel to shape the data traffic across the wireless networks and place priorities on applications to ensure that mission-critical applications always get the largest amount of available bandwidth. With the successes they've seen already, they'll also look at deploying additional applications for mobile access such as their report management system and email.

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