

## CASE STUDY

# Manitoba First Nations ICT School Program Increases Digital Inclusion and Security Across 48 Locations with Fortinet

Manitoba First Nations SchoolNet (MFNS) is a unique initiative by the Keewatin Tribal Council that delivers information and communication technology (ICT) services to 48 publicly funded Indigenous schools in Manitoba, Canada. MFNS aims to bridge the ICT gap, improve connectivity, and promote digital inclusion for these communities through broadband expansion, computer refurbishing, and IT training programs. The project also focuses on creating employment opportunities for First Nations youth by equipping them with essential ICT skills to support their communities.

MFNS is responsible for protecting students and securing a digital environment against critical cybersecurity risks such as phishing, malware, and cyberbullying. These can disrupt learning, compromise personal data, and endanger students' well-being. Phishing attacks can deceive students into revealing sensitive information, while malware can cause data breaches or critical system failures. Cyberbullying poses a significant threat to students' mental health, often leading to long-term psychological harm.

To counter these, MFNS strongly promotes awareness across institutions and provides technical training and education to empower everyone to recognize threats and mitigate attacks. However, the program must rely on a robust cybersecurity posture to support these important initiatives. This is crucial to protect students and staff while ensuring digital inclusion and internet access for a vast school network.

## Cost-Effective Security Across a Vast Geography

"As threats increased, we needed to standardize our cybersecurity across all 48 schools," says Nikki Muswaggon, program manager at the Keewatin Tribal Council. "The solution deployed back then was not at the required level, and we started looking for a significant upgrade." Not all institutions that join MFNS have compatible policies or firewalls adequately configured, and the lack of integration back then often caused the system to malfunction and allowed threats to bypass their security measures, putting students at risk.

Further, the standardization also needed to be cost-effective. Indigenous schools in Manitoba are publicly funded and often have limited IT resources. MFNS wanted to implement solutions that ensured strong security without straining the budget. The goal was to provide consistent, high-level protection across all institutions while maximizing the return on investment.

Given the number of schools across the geography, simplifying network and asset management was also critical for MFNS. The team needed to streamline and centralize the management of numerous networks and wired and wireless devices without requiring extensive on-site IT support. This would reduce operational complexity, allowing institutions to focus on education while MFNS oversees the technology infrastructure.



*"Fortinet has been an essential component for us to deliver our mission of growing digital inclusion among the Manitoba First Nations community while protecting students from dangerous cyberthreats in the school environment today."*

**Nikki Muswaggon,**  
Program Manager,  
Keewatin Tribal Council

## Details

**Customer:** Manitoba First Nations SchoolNet

**Industry:** Education

**Location:** Manitoba, Canada

## Business Impact

- Higher digital inclusion, bridging the information and communication technology gap among First Nations communities
- Scaled ICT service coverage to grow the number of schools in the program's network

## Ensuring Ease of Management and Strong Security

With the help of Fortinet's partners Broadview, HUB Technologies, and Horizon, MFNS began replacing the existing infrastructure with 48 FortiGate Next-Generation Firewalls (NGFWs). It became the core cybersecurity component, allowing the team to manage the network and devices across all 48 schools from a central dashboard. MFNS could cost-effectively combine multiple security functions such as antivirus, intrusion prevention system, web filtering, and application control, protecting students and staff from threats without needing dedicated solutions or additional hardware.

With FortiGate, MFNS could also segment the networks within each school to separate sensitive traffic, reducing the risk of cross-contamination in the event of a breach. The team could establish consistent security policies across all locations, ensuring uniform protection standards.

MFNS also gains web filtering and application control with FortiGate, enabling them to address cyberbullying by blocking access to harmful websites, social media, gaming platforms, or suspicious apps. With real-time monitoring, IT teams can also detect unusual traffic activity (a possible indicator of cyberbullying) and scan and block offensive messages through data loss prevention capabilities, encrypting data transmissions that violate policies.

"We chose Fortinet because it offers the perfect balance of strong security, ease of management, and cost-effectiveness," Muswaggon says. "We have addressed threats within our budget and ensured that every school, no matter how remote, received the same level of cybersecurity with Fortinet's scalability and all-in-one security approach."

## Deployment of Secure Communications

MFNS also deployed FortiAPs high-performance wireless access points, giving students and staff the connectivity needed for education or administration activities. By integrating FortiAP with FortiGate, MFNS can configure, monitor, and troubleshoot all wireless access points across all schools from a single console. This has reduced the need for technical support on-site and ensured consistent wireless policies across all locations.

"As our school network and number of devices grow, we can easily scale the wireless coverage by deploying additional access points without major reconfigurations or investments in new infrastructure," Muswaggon says. With FortiAP, MFNS can create a reliable learning environment for students and staff in all schools across Manitoba, regardless of size or location, by giving access to a stable and secure wireless network.

MFNS also wanted to improve network performance, security, and management across all locations. To do this, the team rolled out FortiSwitch Ethernet switches to simplify network administration. Fortinet integration capabilities allow IT staff to manage all switches from a single platform, even for remote or rural schools. With the switches, MFNS can also prioritize traffic to optimize the network for learning platforms, video conferencing, or critical administrative functions.

MFNS used a standard configuration for all communities with FortiDeploy to deploy all Fortinet solutions. This provided a base template for subnets, VLANs, and wireless SSIDs, which the team could build on during deployment and meet community requirements. It helped reduce the time from design to implementation, depending on the customizations needed.

## Business Impact (contin.)

- Protects students and staff from cyberthreats in the school environment and supports youths' mental health by protecting them against cyberbullying
- Reduced need for technical support on-site and consistent wireless policies across a vast geography
- Standardized, unified, cost-effective cybersecurity protection across 48 widespread locations

## Solutions

- FortiGate Next-Generation Firewall
- FortiAP
- FortiSwitch

## Services

- FortiCare Premium Support
- FortiDeploy

## Driving Digital Inclusion

MFNS plans to implement the Fortinet Security Awareness Training Service across all 48 schools. This will improve student and staff knowledge of all the critical cyberthreats they face in today's educational environment. Also, because of the sheer number of locations, MFNS contemplates enabling the Fortinet Secure SD-WAN solution through FortiGates to protect and improve branch connectivity.

"With Fortinet, our security has significantly improved, and we feel safer. The previous systems didn't provide the level of protection we needed, but now we're fully prepared to tackle any challenges in every new school year," Muswaggon says. "The FortiCare support has also been instrumental in guiding our community technicians in learning how to configure and manage the solutions."

MFNS has overcome the challenge of protecting a vast school network across the Manitoba geography while simplifying network and asset management and expanding its service coverage without any additional investments. "Fortinet has been an essential component for us to deliver our mission of growing digital inclusion among the First Nations community while protecting students from dangerous cyberthreats in the school environment today," Muswaggon concludes.

*"Fortinet's scalability and all-in-one security approach allows us to address threats within our budget, ensuring that every school, no matter how remote, receives the same level of cybersecurity."*

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