FORTINET

Canadian School Division Ensures Safe Online Access for 13,000 Students with Fortinet Secure Networking Solution

Black Gold School Division is the seventh-largest in Alberta, Canada, serving over 13,000 students across the region. The division employs approximately 1,300 full-time staff members and an additional 600 substitute and floating staff members who support operations. With 32 schools spread across multiple communities, they play a central role in providing education in the region. The school division employs a data-driven approach called "Visible Learning," which leverages valuable insights to inform educational decisions and improve student outcomes.

In 2024, several school systems in the province experienced severe data breaches on a widely used student information platform. By hosting its system on-premises across its urban and rural schools, Black Gold's IT team has avoided many cyberthreats that other schools faced by using a hosted student information system. However, the team bears full responsibility for the security and integrity of the entire division.

Protecting Critical Data

"Student data is absolute gold, and my job is to prevent us from becoming tomorrow's news headline," says the IT director for Black Gold School Division. Identity theft to commit financial fraud is the most common menace. Cybercriminals attempt to steal students' personal data to open credit accounts or commit other types of financial fraud in the victim's name. This can leave them with a fraudulent credit history they never built, which undermines their financial stability and limits their future opportunities even before they've turned 18.

Black Gold School Division's main challenges were maintaining data integrity and protecting students in a complex geographical distribution and IT infrastructure. He and his team need to secure about 10,000 student devices and 1,100 staff desktops while the volume and variety of threats increase across its seven communities. Cyber insurance is also a critical driver for stronger cybersecurity, as rising costs and stricter requirements have forced divisions to prioritize security.

"For me, visibility is critical; I need to see what's happening on my network: from cybercriminals' external attempts to students and sometimes staff testing limits from inside," he says. "That's why we chose the Fortinet Security Fabric. We needed to integrate everything into one dashboard, giving us the visibility and granularity to manage our network effectively."

Improved Visibility and Content Filtering

Long before cyberthreats became rampant, Black Gold, with support from Fortinet's local partner ACSI, rolled out FortiGate Next-Generation Firewalls (NGFWs) across its schools to ensure filtering and protection at each site.

"The Fortinet Security Fabric stands out because it balances cost-effectiveness and flexibility and supports us in challenging educational environments."

IT Director
Black Gold School Division

Details

Customer: Black Gold School Division

Industry: Education

Location: Alberta, Canada

Business Impact

- Complete visibility into network activity across 32 schools plus its headquarters, simplifying IT management with one unified ecosystem

- Secure learning environments for students

- Stronger student data protection against cyberthreats

- Cost savings through reduced vendor reliance with secure SD-WAN technology

"Content filtering is critical for us; it blocks inappropriate websites and keeps students safe, while the firewall and threat management protect against external risks," he asserts. The deployment replaced the need for separate firewalls and content filters, reducing costs and simplifying network management.

Additional features, such as packet shaping and centralized dashboards, provided the IT team with complete visibility into email, traffic, and bandwidth usage. This has become critical for prioritizing learning over non-essential activities, particularly in rural areas where bandwidth is limited. The division's goal is to ensure that entertainment platforms or streaming services never interfere with classroom activities. By keeping the network prioritized for education, Black Gold supports students' success without unnecessary distractions.

Black Gold also enabled Fortinet Secure SD-WAN. "It completely transformed how we manage connectivity by reducing reliance on Alberta's costly municipal broadband network," explains the IT director. Fortinet Secure SD-WAN enables the team to utilize business-class providers in urban areas, delivering faster and more affordable internet while maintaining essential filtering and threat management capabilities. Retaining the municipal broadband network as a backbone for internal systems, such as HVAC, security, and staff resources, also frees up capacity where it's needed most. Additionally, the setup enhances performance and ensures compliance with stringent data protection laws.

Unified Wireless and Network Control

To provide reliable, high-performance wireless coverage for students and staff, Black Gold deployed 600 FortiAP access points. Every device is tied to the same platform, which means the division can enforce content filtering and security policies directly over Wi-Fi. The IT team also segments users into different VLANs, separating staff, students, guests, and even Internet-of-Things devices. This segmentation helps prevent misuse, such as students attempting to access staff resources or sharing content inappropriately, by adding an extra layer of protection that isolates vulnerable systems from the rest of the network.

The deployment was complemented with 150 FortiSwitches to ensure fast internet access and content filtering without exposing staff resources. Black Gold segments high school computer labs where students often experiment and push boundaries to ensure internet connection and content filtering without exposing resources and intellectual property. The division can also restrict student access to social media on school networks, as per Alberta regulations, while still allowing staff to use it when needed. "By integrating FortiAPs, FortiSwitches, and FortiGates, we gain meaningful insights and consistent data, avoiding the inefficiencies and gaps that come with mixing vendors," the IT director says.

Centralized Visibility and Policy Control

Black Gold relies on log data, including records of network activity, security events, and system actions, to ensure everything is running properly. With FortiAnalyzer, the team can now analyze the automatically collected raw data and turn it into actionable insights. They can spot unusual traffic patterns or repeated failed login attempts, and quickly adjust policies based on those reports. Additionally, Black Gold extends log retention beyond the limits of FortiGate NGFW, allowing for a much longer history to be examined. This extended view is invaluable not only for threat detection and assessments but also for reviewing student activity when intervention or support is required.

The school division also rolled out FortiManager to configure, monitor, and manage policies across its firewalls, switches, and access points from a single platform. Black Gold can apply tailored rules and block content as needed, depending on the school's requirements.

Solutions

- Network Firewall
- Secure LAN
- Secure SD-WAN
- SOC Platform

Products

- FortiGate Next-Generation Firewall
- FortiSwitch
- FortiAP
- FortiManager
- FortiAnalyzer
- FortiCare Professional Services

"One of the biggest advantages of FortiManager is the ability to create multi-school templates, such as standard VLANs or baseline policies, and deploy them consistently across the division," he explains. "With FortiManager, any changes to firewall policies, like blocking a service, can be pushed out to all devices at once. In the past, this would have required logging into each firewall individually, a time-consuming process that slowed response."

Efficient and Education-Friendly

Before adopting Fortinet, managing multiple vendors for firewalls, switches, and access points resulted in increased complexity, slower response times, and the need for specialized staff to oversee each system. Today, Black Gold benefits from a unified platform and a single pane of glass for management, making the network faster, simpler, and more efficient. "The Fortinet Security Fabric stands out because it balances cost-effectiveness, flexibility, and strong support in challenging educational environments," says the IT director. "I also value having one point of contact in FortiCare service. Many vendors struggle with that, but Fortinet has always had strong support teams, alongside the local team presence."

The next step in their cybersecurity roadmap is FortiAI. By automating the detection of malicious traffic, identifying noisy devices across schools, and spotting new attack vectors, FortiAI could eliminate much of the guesswork in threat discovery and response. The result will be faster, more efficient network management and stronger protection for students and staff. Black Gold also plans to expand its FortiAP and FortiSwitch deployment to 1,200 access points and 500 switches. "With Fortinet, we can be responsible with tax dollars and meet legislative requirements while still securing our educational environment and students' data. It's the right balance of value, integration, and support," he concludes.

> *"Visibility is critical; that's why we chose the Fortinet Security Fabric. We needed to integrate everything into one dashboard, giving us the visibility and granularity to manage our network effectively."*
>
> **IT Director**
> Black Gold School Division

FRTINET

www.fortinet.com