NETSCOUT®

Canadian Board of Education IT Teams Collaborate to Improve Network Security and Performance with NETSCOUT Solution

nGenius Packet Flow Switch Enables City to Securely Manage Network Traffic from New Schools

OVERVIEW

Business Challenge

- The addition of new City schools increased network traffic and links to IT Data Centers, potentially resulting in oversubscribed links
- Board of Education (BOE) IT team identified a need for an updated network capacity management solution
- Budget considerations play a part in introducing new technologies

NETSCOUT Solution

- nGenius® 3900 Series Packet Flow Switch
- nGeniusONE® and InfiniStream® Service Assurance Technology

Business Value

- NETSCOUT's trusted business partnership with Network Operations team drives collaborative network traffic aggregation solution design
- Lower-cost NETSCOUT® solution securely manages network traffic, preserves school budget, and helps ensure a consistent learning experience
- Expanded NETSCOUT solution jointly shared by Network Operations and Security teams for their respective IT efforts

Customer Profile

This Board of Education (BOE) administers the school system for a Canadian city supporting more than 100,000 students, placing a high value on personalized learning for its students across grades kindergarten through 12. State-of-the-art facilities are top among its priorities, with several new and updated schools coming on line since 2016 and into the upcoming school year.

In supervising the city school system, the BOE oversees academic planning and curriculum delivery, standardized testing and design for certain grade levels, and facilities management, as well as delivering necessary Information Technology (IT) services to support students, administrators, and educators.

The BOE charter empowers the organization to make its own decisions regarding IT solutions deployed in city schools. In supporting the school system, IT operations include two data centers and a headquarters facility.

Business Challenge

Ongoing citywide population spikes prompted a corresponding increase in new students arriving in the school system. In addressing those increases and ongoing education needs, the BOE managed the introduction of a cluster of new schools across the city in early-2017 and is overseeing construction of a new high school facility scheduled to open in 2018.

For the BOE's IT teams, those new schools translate to additional facilities and resources to support, with increased network demand and traffic being sent across more network links to the BOE's data centers.

In addition, managing student populations poses information security challenges, and the BOE's IT Security team oversees cybersecurity of the school system's network and resources.

NETSCOUT enjoys a long-standing, trusted business relationship with the BOE's Network Operations organization, and the Network Operations Manager first approached NETSCOUT regarding the need to solve potential data center and network link oversubscription via coordinated capacity planning.

The Network Operations team uses NETSCOUT's nGeniusONE Service Assurance and InfiniStream and Adaptive Service Intelligence™ (ASI) data source technology for network and application management, ad hoc troubleshooting, and packet analysis.

In consultative meetings with NETSCOUT regarding the introduction of new schools and associated network traffic management issues, the Network Operations team identified a need to share the same network traffic used by the InfiniStreams for performance troubleshooting and capacity planning with a security solution to ensure nefarious traffic did not create problems for students, teachers, and staff.

NETSCOUT Solution

To distribute the network traffic to both the InfiniStream appliances and the new security tools, the BOE IT group selected the NETSCOUT nGenius 3900 Series Packet Flow Switch (PFS) and NETSCOUT Taps.

Budget considerations play a part in introducing new technologies for this public school BOE. Following a thorough evaluation of requirements and capabilities, the IT staff at the BOE identified the benefits and cost advantages that NETSCOUT PFS technology would offer.

NETSCOUT Solution in Action

With the NETSCOUT PFS and TAPs technology offering solutions to both Network Operations and Security teams, the IT organization entered into an internal agreement to jointly fund purchase of the traffic aggregation solution.

NETSCOUT and the collective IT team then jointly identified how many links required monitoring, which led to a fully architected PFS traffic solution, including a number of NETSCOUT TAPs. Specific uses for this solution include optimizing the flow of network packets from the network to security systems, as well as key flow management functions, such as speed conversion, distribution, aggregation, and load balancing.

Along with the installed NETSCOUT Service Assurance platform, the BOE is examining expanded-use scenarios for its optimized network.

Business Value

As a result of NETSCOUT's Packet Flow Switch and Network TAPs solution distributing traffic to both security tools and InfiniStream appliances, the city's students benefit from improved responsiveness of education applications running on the enhanced network design, hopefully leading to better learning experiences in the classroom and reinforcing the BOE's focus on personalized learning.

As a result of the purchase, the BOE Network Operations and Security teams organizationally share the Packet Flow Switch technology, which is helping build tighter collaboration between the two groups. Further, the Security team benefits from using the NETSCOUT PFS solution to aggregate, distribute, redirect, and share network traffic.

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