Ontario ⬨

Ministry of Education	**Ministère de l'Éducation**
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2024: SB01

Date:	January 11, 2024
Memorandum to:	Directors of Education Secretary-Treasurers of School Authorities Senior Business Officials
From:	Rocco Passero Chief Information Officer/ Assistant Deputy Minister
Subject	**2023-24 school year reporting requirements for network operations and sustainment**

On April 17, 2023, the Ministry of Education shared information about the Grants for Student Needs (GSN) funding for **Broadband Continuous Improvement** for the **2023-24 school year** (*previously referred to as "Broadband Network Operations"*).

This funding will support your ongoing efforts to support the continued innovation, improvement and operation of board and school networks – to meet digital learning and operational demands and ongoing transitions to accommodate changing technology and usage. Please note that the Broadband Continuous Improvement funding is in addition to funding available in the classroom computers component of the GSN. For more information, please refer to the 2023-24 Education Funding Technical Paper available on the [Education Funding webpage](#).

I am writing to provide you with the details of the performance metrics and related reporting requirements for the 2023-24 school year.

Context

A major pillar of our collaborative work on the Broadband Modernization Program (BMP) was developing and implementing a strategy to sustain and maintain school board (board) networks at the industry standards – customized for K-12 education sector needs.

The architecture and technologies that you have implemented through the BMP include the tracking and reporting tools to allow each school board to monitor and report on the performance of their wide area network (WAN) on a school-by-school basis.

The Ministry of Education (ministry) has worked closely with many digital leaders in school boards representing small, large, rural, northern, public, Catholic, French and English to agree on measures that should be monitored, tracked and reported, to

support the appropriate WAN services performance requirements and keep up with industry standards for student learning. These measures have been informed by leading industry research and best practices for network operations and evolution, adapted and customized for the unique needs of the K-12 sector.

Reporting

We continue to work with colleagues in boards to mature the processes to monitor and report on local area networks' performance, with minimal reporting workload. We will achieve this goal by continuing to support boards with configuring and activating the monitoring tools in each school board and updating templates to collect the data automatically from those tools. Once the machine-to-machine process has been implemented by the board, the reporting will be automated with minimal to no additional reporting burden.

School boards are requested to submit reports on a monthly basis, in addition to the annual network operations and three-year strategic network plan, as detailed below. This includes:

1. Software-defined wide area network (SD-WAN), wireless local area network (wLAN) and WAN reporting
    a. WAN performance objectives
    b. LAN performance objectives
2. Transition to reference architecture 3.0 (RA 3.0)
    a. Reference architecture 3.0 performance measures
3. Annual Network Operational Plan
4. Network strategic plan
    a. Network strategic planning performance objectives

To support a resilient network and safeguard the sector from cyber threats, school boards will report on achievement of performance objectives for their network – WAN, wireless infrastructure (wLAN) transition to RA 3.0/ secure access service edge (SASE) – and the strategic plan for continuous network improvement (performance monitoring and management).

If a school is unable to meet a performance objective, the school board must submit a proposed plan to achieve the objective, or a technical rationale for why the objective cannot be achieved, such as lack of regional availability of the required solution.

In the immediate term, the monthly reports and other reporting requirements should be submitted to: edu.broadband@ontario.ca.

The **reporting schedule** is as follows:

1. **SD-WAN, wLAN and WAN Reporting – partially machine-generated**
   Currently, some reporting is already automated in boards. However, all boards should aim to achieve higher report automation levels over time.

Month	Due Date
February 2024	March 4, 2024
March 2024	April 3, 2024
April 2024	May 6, 2024
May 2024	June 3, 2024
June 2024	July 3, 2024
July 2024	August 6, 2024
August 2024	September 3, 2024

   a) **WAN performance objectives**
   Achievement of performance objectives for school boards' WAN will be measured in three categories:

   - Network performance during school hours;
   - Network availability during school hours; and
   - Network security.

Performance categories	Performance outcomes	Performance objectives
Network performance during school hours	Networks can support synchronous online learning and school board operations.	By August 31, 2024: • Network traffic volume is 70% or less of total capacity, no more than 80% of the time (in any given school day) • Network quality as measured by a latency at the student level of less than 50 milliseconds (ms) (in any given school day) • Network quality as measured by an error rate of less than 1% in any given school day

Performance categories	Performance outcomes	Performance objectives
Network availability during school hours	Networks services is available for learning and school board operations.	By February 28, 2024: • Network uptime per school initial target 99.5% By August 31, 2024: • Network uptime per school final target 99.9%
Network security	School boards have the ability to identify, filter and block malicious traffic in any layer of the network to maintain a cyber resilient state.	Immediately: • Critical subscription-based security updates applied within 24 hours of release; all others within 72 hours By February 28, 2024: • All network and network security appliances have latest vendor software updates and upgrades – at version "n-1" (current major version minus 1) or better • Network appliances patch management aligns with draft K-12 Cyber Protection Strategy (CPS) standard for patch management

b) Local area network performance objectives
Achievement of performance objectives for school boards' local area networks (LAN) will be measured in two categories:
- Network performance during school hours; and
- Network availability during school hours.

Performance categories	Performance outcomes	Performance objectives
Network performance during school hours	Networks can support synchronous online learning and school board operations.	By February 28, 2024: • Network traffic volume is 70% or less of total capacity, no more than 80% of the time

Performance categories	Performance outcomes	Performance objectives
		• Network quality as measured by a latency at the student level of less than 50 ms • Network quality as measured by an error rate of less than 1%
Network availability during school hours	Networks and connectivity are reliable, and available for learning and school board operations.	By February 28, 2024: • Network uptime per school initial target 99.5% By August 31, 2024: • Network uptime per school final target 99.9%

2. Transition to RA 3.0

i) Progress and/or status on transition to RA 3.0

ii) Status of implementation of continuous improvement to current architecture
(e.g., addition of a secondary circuit, deployment of more access points)

Month	Due Date
February 2024	March 4, 2024
April 2024	May 6, 2024
July 2024	August 6, 2024

School boards will report on achievement of their transition to RA 3.0. School boards will report only until their implementation has been completed. Post-implementation reporting is not required.

a) Reference architecture 3.0 performance measures

Performance category	Performance outcomes	Performance objectives
Network architecture	School board network architecture continues to improve and evolve to keep pace with industry advancements and sector needs.	By August 2024: • Transition to RA 3.0

3. Annual network operational plan – annually

Month	Due Date
February 2024	March 4, 2024

4. Network strategic plan (three-year outlook) – annually

Month	Due Date
April 2024	May 6, 2024

a) Network strategic planning performance objectives
School boards will report on achievement of network strategic planning objectives in one category annually, by August 31. This includes:

- Current year details (school year 2023-24); and
- Out-year forecasts for school years 2024-25, 2025-26, and 2026-27 and beyond.

Performance category	Performance outcomes	Performance objectives
Long-term network planning	School boards implement annual improvements that align with their long-term strategic plans.	By 2024-25: • Three-year network strategic plan • Annual network operations plan that aligns with the school board's network strategic plan

I thank you for your continued collaboration and engagement on initiatives that deliver required and equitable support for student learning across all schools.

Questions may be directed to the Digital Innovations Solutions team at edu.broadband@ontario.ca.

Signed electronically by

Rocco Passero
Chief Information Officer/ Assistant Deputy Minister