Ontario ⟁

Ministry of Education

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Ministère de l'Éducation

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2022: SB18

Date: April 27, 2022

Memorandum to: Directors of Education
Secretary-Treasurers of School Authorities
Senior Business Officials

From: Soussan Tabari
Chief Information Officer/ Assistant Deputy Minister

Subject   **Reporting requirements for network operations and sustainment**

On February 17, 2022, the Ontario government announced $39.9 million in Grants for Student Needs funding for the 2022-23 school year to support the continued innovation, improvement, operation, and network security of school boards' and schools' networks to meet digital learning and operational demands, and ongoing transitions to accommodate changing technology and usage.

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

Context

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

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

The 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 wide area network 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 elementary and secondary school sector.

Reporting

We are currently working with colleagues in boards to finalize the processes to monitor and report on local area networks' performance, with minimal reporting workload. We will achieve this goal by configuring and activating the monitoring tools in each school board, and developing templates to collect the data automatically from those tools. Once the machine-to-machine process has been completed, the reporting will be automated with no additional reporting burden.

To begin, 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.

School boards will report on achievement of performance objectives for their wide area networks (WAN), transition to reference architecture 3.0 (RA 3.0), local area networks (LAN) and network strategic planning.

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:

Month	Due Date
LAN/WAN reporting – Computer-generated	
May 2022	May 31, 2022
June 2022	June 30, 2022
July 2022	July 29, 2022
August 2022	August 31, 2022
September 2022	September 30, 2022
October 2022	October 31, 2022
November 2022	November 30, 2022
December 2022	December 30, 2022
January 2023	January 31, 2023

Month	Due Date
February 2023	February 28, 2023
March 2023	March 31, 2023
April 2023	April 28, 2023
May 2023	May 31, 2023
June 2023	June 30, 2023
July 2023	July 31, 2023
August 2023	August 31, 2023
Progress on transition to reference architecture 3.0	
September 2022	September 30, 2022
December 2022	December 30, 2022
March 2023	March 31, 2023
June 30, 2023	June 30, 2023
August 2023	August 31, 2023
Annual network operational plan - annually	
August 2022	August 31, 2022
Network strategic plan (three-year outlook) - annually	
August 2022	August 31, 2022

1. Wide area network (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
- Network security

Wide area network		
Performance categories	**Performance outcomes**	**Performance objectives**
Network performance during school hours	Networks can support synchronous online learning and school board operations	By August 31, 2023: • Network traffic volume is 70% or less of total capacity, no more than 80% of the time • Network quality as measured by a latency at the student level of less than 60 milliseconds (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 January 31, 2023: • Network uptime per school initial target 99.5% By August 31, 2023: • Network uptime per school final target 99.9%
Network security	School boards have the ability to deny known malicious traffic and access to known malicious sites on all networks	Immediately: • Critical subscription-based security updates applied within 24 hours of release; all others within 72 hours By August 31, 2023: • All network and network security appliances have latest vendor software updates and upgrades - at version "n-1" (current major version minus 1) or better • Vulnerability and patch management align with requirements from the CPS standard - when finalized

2. Transition to reference architecture 3.0 (RA 3.0)

School boards will report on achievement of their transition to RA 3.0 – by September 30, 2022, December 31, 2022, March 31, 2023, June 30, 2023, and August 31, 2023.

School boards will report only until their implementation has been completed. Post-implementation reporting is not required.

Reference architecture 3.0		
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 – with flexibility for contract end dates, contingent on cyber hub onboarding schedule

3. 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
- Network availability during school hours

Local area network		
Performance categories	**Performance outcomes**	**Performance objectives**
Network performance during school hours	Networks can support synchronous online learning and school board operations	By August 31, 2023: • Network traffic volume is 70% or less of total capacity, no more than 80% of the time • Network quality as measured by a latency at the student level of less than 60 milliseconds (ms) • Network quality as measured by an error rate of less than 1%

Local area network		
Network availability during school hours	Networks and connectivity are reliable, and available for learning and school board operations	By January 31, 2023: • Network uptime per school initial target 99.5% By August 31, 2023: • Network uptime per school final target 99.9%

4. Network strategic planning performance objectives

School boards will report on achievement of network strategic planning objectives in one category annually, by August 31.

Planning		
Performance category	**Performance outcomes**	**Performance objectives**
Long-term network planning	School boards implement annual improvements that align with their long-term strategic plans	By 2023-24: • 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 in initiatives that deliver the required, 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

Soussan Tabari
Chief Information Officer/ Assistant Deputy Minister