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The Regional Municipality of Durham Report

To: Finance and Administration Committee
From: Commissioner of Corporate Services
Report: #2024-A-8
Date: May 14, 2024

Subject:

Upgrades of Existing Bell Internet and Wide Area Network Speed and Internet Edge Firewalls

Recommendation:

That the Finance and Administration Committee recommends to Regional Council:

- A) That staff be authorized to negotiate and execute an amendment to the existing agreement with Bell Canada for the upgrade of the Region's Internet and wide area network services at Regional Headquarters from 1 gigabit per second (Gbps) to 10 Gbps, including the distributed denial of service protection, at an estimated one-time capital cost of \$42,000 and estimated annual operating costs of \$459,000, to accommodate the increasing Internet usage from various digital initiatives and demand for high-quality content (audio, 4K video, collaboration, etc.);
- B) That the 2024 unbudgeted costs for the upgrade of the Region's Internet and wide area network services at Regional Headquarters estimated at \$501,000 (including \$459,000 in annual operating costs) be approved with funding to be provided at the discretion of the Commissioner of Finance, with future annual costs to be included in the Region's annual Business Plans and Budgets; and
- C) That the 2024 unbudgeted costs for the replacement of the two Internet Edge Cisco firewalls estimated at \$404,000 (including \$148,000 in annual operating costs) be approved with funding to be provided at the discretion of the Commissioner of Finance, with future annual costs to be included in the Region's annual Business Plans and Budgets.

Report:**1. Purpose**

- 1.1 The purpose of this report is to seek approval for unbudgeted upgrades to the network, firewall and related security services at Regional Headquarters including the required procurement and financing approvals, to improve system performance.

2. Previous Reports and Decisions

- 2.1 In December 2013, Regional Council, through [Report #2013-A-54](#), approved an award of contract to Bell Canada for the provision of a wide area network solution through a competitive request for proposal (RFP) process.
- 2.2 In November 2020, Regional Council, through [Report #2020-COW-32](#), approved the extension of the existing agreements and required amendments with Bell Canada for wide area network and Internet access services for a term of seven years.

3. Upgrades to the Region's Internet and Wide Area Network Services

- 3.1 The Internet connection at Regional Headquarters provides service to thousands of employees and members of the public through Wi-Fi each day and through the wide area network at more than 80 Regional facilities. The performance of this service is vital for regional operations including digital participation.
- 3.2 Internet usage has reached over 90 per cent of available bandwidth during office hours, which risks connection timeouts, traffic congestion, and packet loss. This results in decreased performance, particularly for real-time applications such as voice and video conferencing.
- 3.3 Bandwidth usage increases by approximately 40 percent per year, requiring ongoing upgrades to maintain service at current levels.
- 3.4 The Internet and wide area network have been upgraded in the past to meet bandwidth requirements with funding provided through the approved 2012, 2013, 2015, 2016, 2018, and 2020 Business Plans and Budgets.
- 3.5 The ongoing expansion and enhancements continue as new advanced technological capabilities are delivered to new and existing facilities. These capabilities include enhanced collaboration tools (audio and video conferencing, real-time collaboration, telework), cloud services (maintenance management), physical and personal security, and building automation systems, etc.
- 3.6 The Internet upgrade includes applying the Region's existing sophisticated security services to the expanded network capacity at Regional Headquarters. These services protect the Region from distributed denial of service attacks and maintains resilient connections to ensure high network availability.

3.7 Bell Canada was awarded a seven-year contract for Internet and wide area network services through a competitive procurement process. This agreement was extended through [Report #2020-COW-32](#) for a term ending May 1, 2028.

3.8 A market study of Internet service providers, including Durham OneNet Inc., will be conducted in advance of the expiry of the current agreement with Bell Canada.

4. Upgrades to the Region's Internet Edge Cisco Firewalls

4.1 The current Internet Edge Cisco 2110 firewalls were sourced before the implementation of many Regional digital solutions and are not scalable to handle the increasing Internet usage demand being experienced at Regional Headquarters.

4.2 The workload often reaches a critical state during office hours, which results in decreased network performance, including connection timeout, traffic congestion, and package loss for application required internet connections.

4.3 The recommended firewall work, will provide superior, seamless network performance for future technologies and internet usage, supporting the organization's innovative requirements while protecting the Region's system, applications, and data against any known and emerging cybersecurity threats.

5. Financial Implications

5.1 Section 7.2 of the Region's Purchasing By-Law 16-2020 permits limited tendering through negotiation for additional deliveries by an original supplier for goods and services not included in initial procurement if a change of supplier cannot be made due to interchangeability/interoperability with existing goods and services from initial procurement and would cause significant inconvenience or substantial duplication of cost. It is recommended that staff be authorized to negotiate an amendment to the Region's existing agreement with Bell Canada for Internet and wide area network services under this provision of the Purchasing By-Law. Another service provider would be unable to use Bell Canada's equipment and network to deliver the services, leading to delays in obtaining these urgently required upgrades and substantial duplication of costs in maintaining both services.

5.2 OnX, an authorized reseller of Cisco products was awarded a five-year contract in 2023 for the supply of Cisco hardware and software through a competitive procurement process. The proposed acquisition of two Internet Edge Cisco firewalls will be procured under the Region's existing contract with OnX. No amendments to the Region's existing contract with OnX are required for this procurement.

5.3 Section 14.2.2 of the Region's Budget Management Policy requires the approval of the Treasurer, CAO, the applicable Standing Committee and Regional Council where unbudgeted capital expenditures in excess of \$50,000 are to be incurred.

- 5.4 The estimated 2024 unbudgeted one-time capital and annual operating costs of \$905,000 for the works outlined in this report are detailed in the following table.

	2024 Estimated Cost
	\$
<u>Capital Items (One-time):</u>	
Network Upgrade Installation	42,000
Firewall Replacement	<u>256,000</u>
Total Capital Costs	298,000
<u>Annual Operating Costs:</u>	
Network	459,000
Firewall	<u>148,000</u>
Total Annual Operating Costs	<u>607,000</u>
Total Estimated 2024 Costs	<u><u>905,000</u></u>

- 5.5 It is recommended that financing for the 2024 upgrade of the network services (estimated at \$501,000) and support and security subscriptions for the firewall (estimated at \$404,000) be provided at the discretion of the Commissioner of Finance and that future annual operating costs estimated at \$607,000 be included in future annual Business Plans and Budgets.

6. Relationship to Strategic Plan

- 6.1 This report aligns with/addresses the following strategic goals and priorities in the Durham Region Strategic Plan:
- a. Goal 5: Service Excellence. Objective: To provide exceptional value to Durham taxpayers through responsive, effective and fiscally sustainable service delivery.
 - 5.1 Optimize resources and partnerships to deliver exceptional quality services and value

7. Conclusion

- 7.1 It is recommended that the network, firewall and related security services at Regional Headquarters be upgraded, including the required procurement and financing approvals, to improve system performance at Regional Headquarters.
- 7.2 This report has been reviewed by the Finance Department and the Commissioner of Finance concurs with the recommendations.

Respectfully submitted,

Original signed by

Barb Goodwin, MPA, CPA/CGA,
B.Comm, CPM, CMMIII
Commissioner of Corporate Services

Recommended for Presentation to Committee

Original signed by

Elaine C. Baxter-Trahair
Chief Administrative Officer