



**Illinois  
Department of Commerce  
& Economic Opportunity**

OFFICE OF BROADBAND  
JB Pritzker, Governor

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September 4, 2020

**By Electronic Filing**

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 Twelfth Street, S.W.  
Washington, D.C. 20554

Re: Reply Comments to FY 2021 E-rate Eligible Services List, WC Docket No. 13-184

Dear Ms. Dortch :

The Illinois Office of Broadband (“IOB”) offers these Reply Comments concerning the FY 2021 E-rate Eligible Services List (“ESL”) in the above-referenced docket.<sup>1</sup> In these Reply Comments, the IOB urges the Commission to confirm the eligibility of modern basic firewalls and network security services, as proposed by SECA and other parties.<sup>2</sup> In addition, the Commission should immediately open a proceeding to examine the eligibility of network services generally under the E-rate program.

The IOB, housed within the Illinois Department of Commerce and Economic Opportunity (“DCEO”), is an interagency collaborative effort including the Illinois Department of Innovation and Technology (“Illinois DoIT”) and the DCEO, among others. The IOB administers the Connect Illinois broadband grant program, which includes \$400 million in state-appropriated funds for competitive broadband deployment grant awards. In addition, Connect Illinois includes \$20 million for upgrades to the Illinois Century Network, the state’s 2,000-mile open access fiber network serving over 3,400 K-12, higher education, and library locations across the state. The ICN is a high-performance network built to meet the Internet and Intranet needs of the educational, research, and governmental organizations serving the citizens of Illinois. The ICN maintains fourteen Points of Presence and nine Regional Technology Center offices around the state, which allow Community Anchor Institutions to connect and receive service locally. In addition, the ICN network serves as an Illinois local area network enabling interconnectivity, resource sharing, and access to in-state content and cloud resources.

One of IOB’s constituent agencies, the Illinois DoIT, also serves as state-wide consortium lead for all E-rate eligible entities.<sup>3</sup> Illinois schools and libraries consistently receive

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<sup>1</sup> Public Notice, “Wireline Competition Bureau Seeks Comment on Proposed Eligible Services List for the E-rate Program,” WC Docket No. 13-184, DA 20-767 (rel. July 21, 2020) (“*FY 2021 ESL Public Notice*”).

<sup>2</sup> See SECA Comments at 10-11; Funds for Learning Comments at 2-10; *Modernizing the E-rate Program for Schools and Libraries*, WC Docket No. 13-184, Petition for Waiver of Cisco Systems, Inc. (filed Aug. 20, 2020) (“Cisco Waiver Petition”).

<sup>3</sup> See Letter from Robin Woodsome, DoIT-ICN Field Operations Manager (July 22, 2019) (“On July 1, 2020, ICN will discontinue participating as a USAC E-rate Service Provider . . . . This year, DoIT

approximately four percent of the total E-rate support committed annually.<sup>4</sup> Over the past decade, USAC has committed over \$100 million annually, on average, in E-rate support to schools and libraries in the state. There are more than 4,500 public, private and charter schools in Illinois with almost 30% of them classified as rural, and over 400 public libraries with more than 40% classified as rural.

#### **A. The Bureau Should Confirm the Eligibility of Modern Firewall Capabilities and Network Security**

In 2010, the Commission accepted the eligibility of “basic” firewall protection, defined as the level of protection “that is included as part of an Internet access service,” would be eligible under Category One.<sup>5</sup> The Commission accepted in principle that protecting E-rate supported networks from unauthorized access is a “legitimate concern” that could be addressed by more advanced and capable firewalls under Category Two, but the Commission declined to do so as a matter of discretion.<sup>6</sup> Rather, the Commission found that, as a result of then-acute E-rate budget constraints, “the limited E-rate funds should not be used to support these services.”<sup>7</sup>

As SECA argues, the eligibility of “basic” firewalls should be updated to reflect technological advances over the past decade, as well as modern network security realities.<sup>8</sup> Certainly, budgetary considerations should no longer carry the weight they did in 2010. In 2014, the Commission relieved the funding constraints under which E-rate had labored nearly since its inception by increasing the E-rate cap to accommodate current demand, with room to grow.<sup>9</sup> Allocation of scarce E-rate funding resources should no longer present such a weighty counterpoint to eligibility of this important network security tool.

Both firewall capability and cybersecurity threats have continued to grow over the past decade, but USAC continues to limit firewall eligibility to the same set of “basic” services that were included as part of Internet access service a decade or more ago. As Fortinet explains:

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will form a consortium acting as an E-rate applicant on behalf of our public K-12 schools. This Fall, DoIT will issue Form 470 RFPs for Internet access and supporting transport (Last Mile.)” (*available at: <https://www2.illinois.gov/icn/news/Documents/20190722-DoIT-K12-Broadband-Initiative.pdf>*).

<sup>4</sup> See USAC Search Commitments Funding Tool (advanced search for funding commitments in the state of Illinois), *available at:*

<https://data.usac.org/publicreports/SearchCommitments/Search/SearchByYear> (visited Sept. 3, 2020); see also <https://tools.e-ratecentral.com/us/stateInformation.asp?state=IL> (visited Sept. 3, 2020).

<sup>5</sup> *Schools and Libraries Universal Service Support Mechanism*, CC Docket No. 02-6, Sixth Report and Order, FCC 10-175, 25 FCC Rcd 18762 ¶ 105 (2010) (“*E-rate Sixth Report and Order*”).

<sup>6</sup> *Id.*

<sup>7</sup> *Id.*

<sup>8</sup> SECA Comments at 10-11.

<sup>9</sup> *Modernizing the E-rate Program for Schools and Libraries*, WC Docket No. 13-184, Second Report and Order and Order on Reconsideration, FCC 14-189, 29 FCC Rcd 15538 (2014) (“*Second E-rate Modernization Order*”), at ¶ 116 (increasing the E-rate budget to \$3.9 billion because the “record is clear that demand for and costs associated with high-speed broadband services will continue to grow”).

The current standard of “basic port protection” is horribly outdated and an inefficient means to secure the learning networks. Today, broadband networks cannot function without advanced security, monitoring, and related services.<sup>10</sup>

The Bureau should acknowledge and clarify, at a minimum, that the *Sixth Report and Order* adopted a flexible, dynamic definition of “basic” firewall eligibility, based not on a specific set of capabilities, but on the way in which they are sold. As Funds for Learning points out:

[C]onnected devices serve an educational purpose and facilitate broadband connectivity regardless of whether the device accesses the internet by end users or serves some other supporting purpose for the school of [sic] library. USAC’s approach fails to consider the myriad devices that support the operation and administration of education and the buildings in which the education occurs – all of which is essential to ensure the availability of broadband and education.<sup>11</sup>

Thus, the Bureau should direct USAC to accept as eligible “basic” firewall protections any such capabilities included by the service provider as part of the associated Internet access service. That eligibility should attach, regardless of whether the firewall protections are provided remotely at the network level, or using a device installed at the customer premises as part of the service.

#### **B. The Commission Should Open a Notice of Proposed Rulemaking to Revisit E-rate Eligibility of Network Security Tools**

Expanding the application of the definition of eligible “basic” firewall functions is an important first step, but will not be enough to address today cybersecurity threats. While the IOB believes that no waiver is necessary, and that the Commission has the power, based on notice provided in the *FY 2021 ESL Public Notice* to change the FY 2021 ESL to provide immediate eligibility for firewalls and other vital network security tools, the Commission should at a minimum grant Cisco’s recent Petition for Waiver in order to achieve that result.<sup>12</sup> Moreover, the Commission should issue a companion Notice of Proposed Rulemaking to seek comment on expanding eligibility of network security tools.

In today’s world, no school or library could use Internet access services without robust firewall protection. The ongoing COVID-19 pandemic has forced schools and libraries to expand the reach of their networks and enable an unprecedented level of remote use of Internet access and network resources remotely by teachers, students, and administrators alike. In the face of continuing FBI warnings of a spike in ransomware and other cybersecurity threats, schools and libraries acutely need more powerful tools to protect their networks, and the teachers, students, and staff that use them.<sup>13</sup> Yet, as SECA points out, schools and libraries so far have been forced to bear the cost of the necessary firewalls and other network security

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<sup>10</sup> Fortinet Comments at 1.

<sup>11</sup> Funds for Learning Comments at 9.

<sup>12</sup> Cisco Waiver Petition at 2.

<sup>13</sup> *Id.* at 2-3.

measures themselves,<sup>14</sup> even as the pandemic has driven up a host of other costs as a result of extraordinary operational changes.

Growing cybersecurity risks have fundamentally altered the now-dated cost-benefit assessment that led the Commission to deem firewall and other network security services ineligible in the *Sixth Report and Order*. Schools are becoming more frequent targets of ransomware attacks and other hackers.<sup>15</sup> Citing the recent ransomware attacks on the Louisiana school system that caused the Governor to declare a state of emergency, CoSN explains that, “[t]he risks to school systems are only increasing as the number of data breaches and cyberattacks increase every year.”<sup>16</sup> Even more recently, CrowdStrike recently decried the “dark turn in cybercrime toward preying on schools, municipal departments and our other chronically understaffed and overburdened public institutions . . . when the targets are schoolchildren, or just ordinary people trying to go about their daily lives.”<sup>17</sup>

Cybersecurity attacks compromise schools’ ability to pursue their educational mission and put the privacy of students’ personal information at risk, and growth in schools’ reliance on information technology resources, including one-to-one educational approaches and electronic storage of student identity data, health records, and performance and achievement history, only heighten these risks. A lack of support for robust network security measures thus may create barriers for schools to meet their technology needs, further widening the digital divide. As CoSN explains, this limitation creates an “unfunded mandate [that] may prevent some school systems from participating. In addition, the lack of funding support for cybersecurity tools may be increasing risk and exposure to participating districts who lack funding to invest in the rest of the infrastructure necessary to protect their networks.”<sup>18</sup>

Network security should include, in addition to robust firewalls, other tools, features, and services to protect networks against intrusion and interference. Networks security and intrusion detection services are often bundled together with firewalls, but currently, these features of firewall appliances are not eligible and must be deducted from funding requests for firewall appliances creating another layer of unnecessary complexity.

For example, under the Children’s Internet Protection Act (“CIPA”), all schools requesting Internet access and Category Two funding are required to have filtering measures in

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<sup>14</sup> SECA Comments at 11; *see also* Comments of the U.S. Department of the Interior at 2 (urging the Commission, in light of unprecedented challenges of remote learning, particularly on Tribal lands, to “further review the ESL Category One and Category Two lists to ensure it is inclusive of the equipment and services necessary to provide broadband connectivity to and within students’ primary places of learning”).

<sup>15</sup> Comments of ADTRAN, Inc. at 7.

<sup>16</sup> Consortium for School Networking (CoSN), “K-12 Cybersecurity Cost Report,” Fall 2019, at 1-2, *available at*: [https://www.cosn.org/sites/default/files/cosn\\_cybersecurity%20cost%20report.pdf](https://www.cosn.org/sites/default/files/cosn_cybersecurity%20cost%20report.pdf).

<sup>17</sup> CrowdStrike, 2020 Global Threat Report (2020), at 4, *available at*: <https://go.crowdstrike.com/rs/281-OBQ-266/images/Report2020CrowdStrikeGlobalThreatReport.pdf>.

<sup>18</sup> CoSN K-12 Cost Cybersecurity Report at 2-3.

place.<sup>19</sup> CIPA does not preclude the Commission from granting eligibility of such filtering for E-rate support,<sup>20</sup> yet the Commission has not taken this step. The IOB believes that CIPA filtering should be E-rate eligible and that there is nothing in the statute or regulations that bar the FCC in making this determination. Indeed, it would greatly serve the public interest and the needs of our nation's children to ensure that no school faces a financial barrier to putting such filtering in place.

With many schools now opening for the upcoming school year in "online-only" mode, they are required to rely heavily on reliable IP networks and Internet connectivity as they never have before. Internet access has become the foundation for delivering the basic educational curriculum for millions of students, not only a means to enhance learning opportunities. For these reasons, the Bureau should provide E-rate funding for the firewall and network security tools necessary to protect vital educational resource.

Sincerely,



Matt Schmit

Director, Illinois Office of Broadband

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<sup>19</sup> Consolidated Appropriations Act, 2001. (PL 106-554). Title XVII – Children's Internet Protection; Subtitle B -- Universal Service Discounts; Section 1721(g).

(<https://www.govinfo.gov/content/pkg/PLAW-106publ554/pdf/PLAW-106publ554.pdf>.)

<sup>20</sup> *Id.*