

Understanding E-rate

Get the most out of your E-rate dollars



Introduction

School systems across the country (especially those in rural communities) lack broadband capacity and experience high costs in their efforts to deliver adequate Internet access to classrooms. School districts and libraries consistently cite capacity and cost as the two greatest impediments to expanded connectivity, regardless of community type.

Preparing America's students with the skills they need to compete in a global economy depends on the availability of interactive, personalized learning experiences driven by new technology. [The State Educational Technology Directors Association \(SETDA\)](#) recommends that districts target broadband speeds of 1.0 gigabits per second (Gbps) per 1,000 students and upward of 3.0 Gbps per 1,000 students by the 2020-21 school year.

In [CoSN's Annual E-rate and Infrastructure Survey](#), 50 percent of school districts identified the cost of recurring expenses as the biggest barrier to robust connectivity for the sixth year in a row.

The proliferation of student devices is the top driver of the need for bandwidth growth for the third year in a row. Twenty-three percent of school districts reported two or more devices per student; in just three years, respondents expect that more than a third of all students (38 percent) will use two or more devices at school. Today, only 37 percent of high schools and 29 percent of elementary schools have the capacity to meet the demands of multiple devices per student.

Clearly, in spite of advances made thanks in part to E-rate, much work remains to be done. High costs, inadequate funding, and lack of capacity continue to be key challenges for schools and districts working to transform their learning environment.

Three Key E-rate Goals

To help schools and libraries maximize their investment in broadband, the Federal Communications Commission (FCC) adopted three goals for the E-rate program.

1. **Affordable access:** Ensuring affordable access to high-speed broadband sufficient to support digital learning in schools and robust connectivity for all libraries by increasing Internet access and speeds, targeting WAN connectivity, and improving internal connections.
2. **Maximum return on investment:** Maximizing the cost-effectiveness of spending for E-rate supported purchases.
3. **Simplified process:** Making the E-rate application process and other E-rate processes fast, simple, and efficient.

To reach these goals, the E-rate program focuses on the largest and most urgent need—closing the Wi-Fi gap on school premises.



A Brief Overview

E-rate funds are allotted in two categories to align to a “whole network” approach. Category One is broadband connectivity to schools, and Category Two is broadband or network services within schools and libraries. Eligible Category One services include data transmission and Internet access services. Eligible Category Two services include internal connections, managed internal broadband services, and basic maintenance of internal connections.

The E-rate program establishes an annual funding cap and designates a specific amount each year for Category Two. E-rate relies on budget caps to ensure that all applicants—regardless of their discount rate—will have the opportunity to apply for and receive Category Two support. If Category Two demands exceed available funds, requests are prioritized based on discount rate, though this has yet to happen since the program was modernized.

Category Two budgets are designed to provide broader and more equitable support for Category Two services.

- **Schools:** Individual school discounts up to total pre-discount budget amount of \$159.66 per student.
- **Libraries:** Individual library discounts up to total pre-discount budget amount of \$2.44 per square foot. This budget increases to \$5.12 per square foot for urban libraries. (Read more about the Category Two [budget](#).)
- **Minimum:** Minimum pre-discount budget, or floor, for schools or libraries is \$9,793.04, no matter the student count or square footage.

The maximum Category Two discount is 85 percent, and the rate is calculated based on the percentage of students in a district eligible for the National School Lunch Program, aligned to the E-rate discount matrix.



How to Develop a Winning Network Strategy

A winning strategy starts with the right plan. Be sure to spend time early on in the process considering your school's or library's top priorities. According to [CoSN's Annual E-rate and Infrastructure Survey](#), most school districts seek increased Internet bandwidth to accommodate online assessments and digital content and to provide for the increase in students with devices. Will your school's or library's priorities be the same? And if so, what infrastructure will be needed to address them? These and other questions will begin to shape your network strategy.



While each school or library has specific and unique needs, we suggest considering the following issues:

- **High-density network:** The network needs to support significant density of devices on a per-classroom basis. Today, with 1:1 and “bring your own device” (BYOD) initiatives, most classrooms have 20 to 30 devices plus as many devices as students per school. Your wireless and/or wired network should be capable of supporting a significant density of devices.
- **Device management:** Mobile devices have become the primary way to access the Internet in school districts, and districts across the country are rolling out thousands of mobile devices at every school. Mobile learning encourages students to use many types of devices, and a robust digital learning environment demands multiple devices per student.
- **Systems management:** Make sure your technology plan clearly articulates how devices are procured, provisioned, and maintained.
- **Video:** Mobile devices in classrooms enable blended, flipped, and distance learning through video technology. But the video technology you deploy must be reliable and fast to ensure that students and teachers can connect without interruption.
- **WAN caching:** Curriculum providers are racing to digitize most of the content consumed in our classrooms. This content is high bandwidth yet common across many classrooms. Caching such content can assist schools in managing and reducing the increasing amount of bandwidth usage between schools inside the district.
- **Reliability for supporting your learning outcomes:** With the advent of online assessments and testing, the expectation in class is for an always-on network. Ensure that your digital learning strategy considers a highly reliable and redundant network design to support the mission-critical needs of assessments.
- **Anytime, anywhere access:** Digital learning requires students to have access to the network in the classroom, on school grounds, and at home. Your technology plan should account for a common access strategy.

Next Steps

Applying for E-rate funding requires several steps, beginning with requesting bids for the services you need by submitting FCC Form 470. You'll select a service provider through a competitive bidding process and then apply for funding using FCC Form 471. (Please note: It is critically important that you allow a minimum of 28 days for vendors to submit their bids.) You can find specific information about the application process [here](#).

As Cisco has worked with schools and libraries across the nation, we have learned they must have technologies that:

- **Deliver** media-rich, robust digital learning experiences for students.
- **Prepare** students for a global environment.
- **Level** the playing field for rural and underserved students.
- **Improve** professional development to increase teachers' skills.
- **Enable** online learning.
- **Support** collaboration with teachers across districts, states, and nations.

The solution to these needs is simple: connectivity. Thanks to the E-rate program, your school district or library can now benefit from the implementation of your own broadband solution. By using the latest technology, you can better prepare your students to compete in the global economy of the 21st century.



Why Cisco for Education

Cisco's true value is not in what we make—it's in what we make possible. Cisco offers a broad portfolio of network-centric options to enable digital transformation, including switching, mobility and services, rich and pervasive video, immersive collaboration, and unified and guaranteed data center/virtualization/cloud. These technologies can enable your district or library to improve teaching and learning, connect and engage users, increase administration and management efficiency, and enhance safety and security.

At Cisco we have a history of and commitment to education. Combined with the breadth and depth of our solutions focused on improving teaching and learning, this is what allows Cisco to meet our customers' most pressing education imperatives: improving student outcomes and providing students with the skills and knowledge needed to succeed in the global economy.

To learn more about Cisco's role in education, please read [Why Cisco for Education](#). To learn more about E-rate, visit the Universal Service Administrative Co. website at www.usac.org or Cisco at cisco.com/go/erate.