Cloud-Enable and Secure Your K-12 Education Network

Juniper Powers Digital Learning with a Simple, Reliable, and Scalable Network

K-12 Education Solution Overview

K-12 education in the United States is being transformed by technology, with the widespread use of interactive curricula, cloud services, and mobile devices. Digital learning helps students become more active learners and acquire the knowledge and skills to be more collaborative and competitive in a global marketplace. With digital learning, teachers also can individualize learning plans to students' needs, and schools can readily assess students' progress. K-12 school districts are turning to Juniper Networks for carrier-class network solutions to power and secure their school district networks. Juniper builds modern, scalable school district networks which are easier to operate and cloud-enabled, transforming the network into a digital learning services platform.

Challenges

With the migration to a digital curriculum, school districts are critically dependent on fast, reliable Internet connectivity between online content and the classroom. It is common for districts making this migration to see a 60 percent year-over-year growth in network bandwidth demand due to the explosive consumption of cloud-based education applications and IT services, expanded use of online and distance learning courses, and the move to online assessments.

In addition, school districts are expanding their one-to-one programs with school provided laptops, Chromebooks, or tablets for every student. They are also supporting bring-your-own-device (BYOD) initiatives. This dramatically increases the number of mobile devices in a typical classroom, and for ill-prepared school districts, such concentrations and the need for higher-speed broadband connections are pushing legacy classroom Wi-Fi networks to their breaking point.

Many K-12 districts struggle to provide the necessary connectivity for their schools: in a survey[1] conducted by the Consortium for School Networking (CoSN), over two-thirds of school districts reported they did not have sufficient Internet bandwidth for today or for the next 18 months. The CoSN survey also revealed that although two-thirds of school districts were confident their Wi-Fi could handle a one-to-one initiative, the remaining one-third faced inadequate levels of Wi-Fi.

As a target set of recommendations for school districts, the State Educational Technology Directors Association (SETDA)[2] and adopted by the FCC tabled their broadband connection targets over the next several years (see Table 1). Based on real life trend data, many school districts still have a ways to go to align to these targets.

Traditional school networks were never designed for the era of digital learning. Most districts still have dated multilayer network architectures in place, encompassing the access (wired and wireless), distribution, and core layers combined with traditional network edge-based security. These traditional architectures impede the school district's agility in a cloud-based world because they are:

- **Static and inflexible:** Traditional school networks are resource inefficient and difficult to configure. Furthermore, with the huge dependency on cloud-based education applications and IT services, single points of network connectivity to the Internet expose the school district to network vulnerabilities due to dependencies on a single ISP and a single path for Internet service delivery. This hurts the district's agility and exposes digital learning and online assessments to reliability and performance issues.
- **Operationally complex:** Comprised of numerous layers of switches and VLANs, traditional campus networks require manual deployment and configuration by a highly skilled IT staff. Network staff typically has to touch one or

Table 1: Digital Learning Broadband Capacity Recommendations

	Broadband Connections	2017-18 Targets	2020-21 Targets
Internet Service Provider	Small School District (fewer than 1,000 students)	At least 1.5 Mbps per user (minimum 100 Mbps for district)	At least 4.3 Mbps per user (minimum 300 Mbps for district)
	Medium School District (3,000 students)	At least 1.0 Gbps/1,000 users*	At least 3.0 Gbps/1,000 users
	Large School District (more than 10,000 students)	At least 0.7 Gbps/1,000 users	At least 2.0 Gbps/1,000 users
WAN	Connections to each school to link to the internet via a district aggregation point	At least 10 Gbps/1,000 users	At least 10 Gbps/1,000 users

*Published by SETDA 2012, adopted by FCC in 2014

[1] "CoSN's Annual E-rate and Infrastructure Survey," www.cosn.org/Infrastructure2015

[2] "The Broadband Imperative II: Equitable Access for Learning" State Educational Technology Directors Association (SETDA), Sept. 2016, www.setda.org/wp-content/uploads/2016/09/SETDA-Broadband-ImperativeII-Full-Document-Sept-8-2016.pdf

more pieces of gear every time students, teachers, or staff onboards, changes locations, or brings a new device onto the network; this is also true whenever a new policy, application, or service is rolled out. These manual processes are time-consuming and prone to error, which drives up OpEx and prevents IT from performing tasks that are more critical to the district. In addition, network staff members typically use different tools to manage different elements, such as switches, routers, and firewalls, which adds to this complexity and slows time to troubleshoot and repair issues. Likewise, software upgrades are a major challenge and require a long maintenance window. If there are any problems with the new software, it's a huge task to roll back to the previous version, resulting in downtime. Network staff is being pushed to the limit.

Maintaining Network Systems Adequately

29% said staff stretched too thin and can't get to critical areas.

54% said staffing adequate but very busy.

Source: CoSN IT Leadership Survey

- **Difficult to secure:** Threats and attacks are increasing in sophistication, number, and type. In fact, it is the variability of these threats that makes them so hard to combat. Error-prone manual network changes can create inconsistencies or even open a security gap. Students, teachers, and staff who access public Wi-Fi can unknowingly infect their devices with malware, which they then spread to the school district's network when their device connects. Even a well-meaning school district employee developing an application can unknowingly download open-source code from an illegitimate website and unleash malware onto the network. Though perimeter security was often good enough in the past, now—with new threats popping up every day, sometimes already inside the school district's perimeter—it has become necessary to secure the entire network.
- **Expensive:** Traditional school networks are expensive, requiring considerable upfront capital investment, as well as cabling and power costs. District network traffic is projected to double every 18 months, placing significant demands on network infrastructure and staff, even as IT budgets remain flat. This means that network administrators need a strategy to scale their network to handle the constantly expanding volumes of traffic without the wasteful pre-building of network capacity. It also means incorporating best-in-class solution options to avoid the proprietary, single vendor approaches that lead to higher costs and slower innovation.

Juniper Networks Cloud-Enabled Education Network

To successfully overcome these challenges, Juniper Networks offers school districts a better, more forward-looking approach for a simpler, scalable, and reliable network; one with integrated security across the entire network, at every layer and port; and one built with open industry standards that enable the creation of best-in-class technology solutions.

This strategy challenges the conventional approach to building school networks by cloud-enabling the school district with an architecture called Juniper Networks® Unite. The architecture takes a three-pronged approach: simplify the infrastructure; secure the network; and deliver an open, converged framework that ensures best-in-class deployments (Figure 1). Based on Juniper switching, routing, and security solutions, as well as best-of-breed wireless LAN (WLAN), unified communications and collaboration (UCC), and network solutions through our Open Convergence Framework, Juniper Unite offers all of the essentials an expanding digital curriculum needs to support school operations today while preparing them for the future.

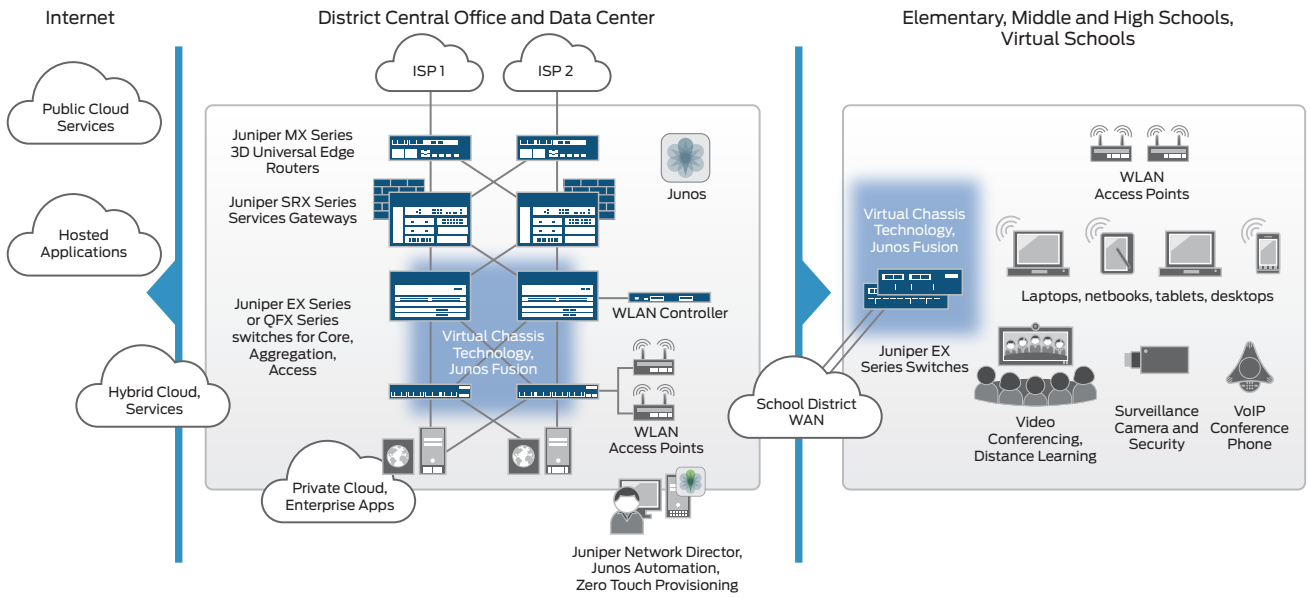

Figure 1: Juniper K-12 reference architecture

[3] Leased dark fiber and self-provisioned fiber are E-Rate Category One eligible subject to the USAC requirements, http://www.usac.org/sl/applicants/step01/requirements-for-fiber.aspx

Juniper's solution empowers school districts to integrate affordable and reliable broadband connections for Internet access and WAN connections, and our switching, routing, and security platforms function as modulating electronics directly lighting leased dark fiber[3] or self-provisioned fiber networks so that districts can leverage attractive cost points and bandwidth scale for today and tomorrow.

Simplify the Infrastructure

By collapsing core, distribution, and access layers into a single logical platform that can be managed from a central location, Juniper Unite removes operational headaches and costs while providing network agility. A single, easy-to-manage platform lets IT organizations expand access port functionality, protect the edge, and centralize configuration, provisioning, management, policy, and visibility.

It all works regardless of the deployment model: physical or virtual; public or private cloud; or traditional IT. Juniper Unite accomplishes this consolidation with its unique Virtual Chassis and Junos® Fusion Enterprise technologies on select switching platforms, enabling multiple interconnected Juniper Networks EX Series Ethernet Switches to operate as a single device, which reduces operational expense and management complexity (Figure 2). Juniper's Virtual Chassis and Junos Fusion Enterprise technologies share common benefits and are unique as follows:

- Juniper Virtual Chassis technology enables multiple interconnected EX Series switches to operate as a single, logical device, consolidating switch layers and reducing management overhead while delivering the flexibility to incrementally respond to changing educational needs. Up to 10 switches can be combined into a single logical device, and member switches can be separated by up to 80 km. The application of Juniper Virtual Chassis technology can help a school district reduce the number of managed network elements by up to 90 percent.
- Junos Fusion Enterprise is an innovative architecture that lets customers build an agile district-wide network that treats access switches as extension ports of the core switch—effectively making multiple switches appear as a single, logical device. Junos Fusion Enterprise uses automated configurations to simplify operations and management. It also supports both stacked and mesh topologies, allowing both end-user access and private cloud or IT data center environments to be consolidated into a single logical system. Network administrators can manage the entire district network—including hundreds of switches and thousands of ports—as a single, logical device.

Securing the Network

Protecting the school district network and data privacy from cyberthreats is now "top of mind" for school district leaders. In many school districts, "security" was layered on top of traditional networks. Built on a perimeter security model, security appliances at the edge of networks served as the primary means of defense for all types of threats. As time and threat complexity progressed, next-gen firewalls with additional security features were introduced to provide protection against application-layer threats. However, today the threat landscape has dramatically changed to the point where perimeter defense is no longer adequate. What's needed is the ability for the network to become adaptable, so that it can automatically detect outside and inside threat behavior and respond. Juniper's unique approach does just that by:

- Leveraging the district's entire network infrastructure, which includes all network elements such as Juniper switches, routers, and firewalls. Each element can provide threat intelligence and detect incoming threats.
- Adding a cloud-based threat defense, which includes security intelligence feeds from all sources including third-party sources. It also includes cloud-based, scalable malware detection to provoke and trick threats to reveal their malicious

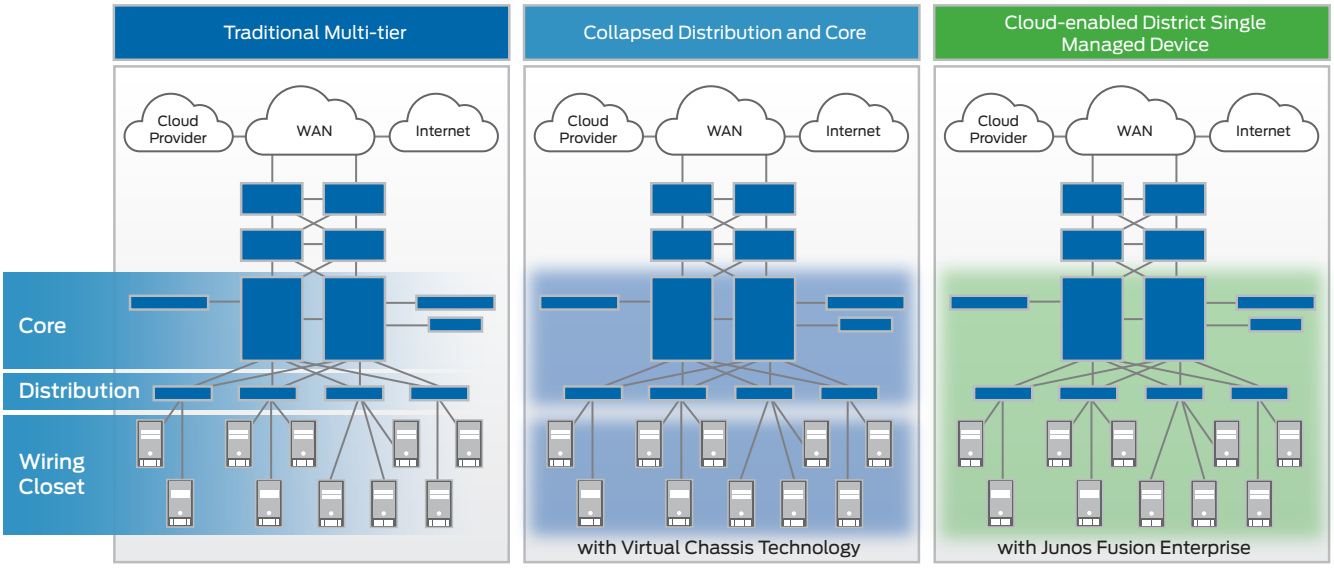

Figure 2: Switch infrastructure simplification with Virtual Chassis technology and Junos Fusion Enterprise

behavior. By leveraging the economics and scale of cloud-based intelligence, school districts amplify their detection capability and significantly widen their capture nets.

- Automating security through a centralized Juniper policy engine and controller to deploy policy across network devices the instant it is needed. The policy engine dynamically adapts policy to the constantly evolving threat conditions, while the controller serves to execute the policy by communicating it to all network elements including third-party network devices such as wireless access points or other third-party switches.

This security architecture is called Juniper Software-Defined Secure Networks, and it uses the bottoms-up and top-down approach illustrated in Figure 3.

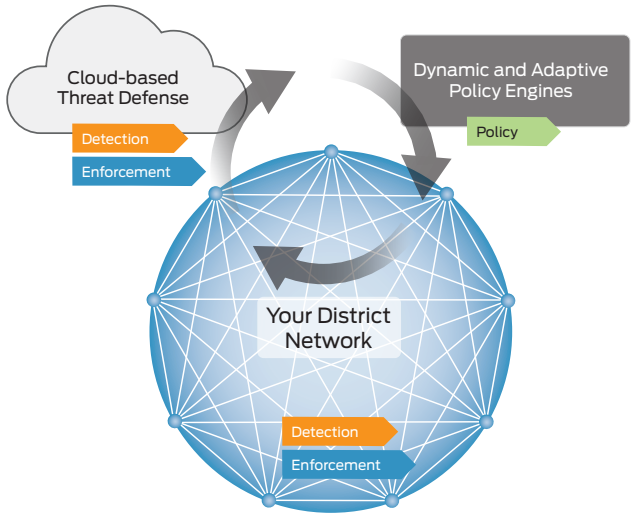

Figure 3: Juniper Software-Defined Secure Networks

Open Convergence Framework

With Juniper Technology Alliance partners, school districts can integrate best-in-class WLAN, unified communications, network access control (NAC), and security technologies with their Juniper network infrastructure through the Juniper Open Convergence Framework. With Open Convergence Framework, school districts gain a consistent user experience and a network that is easy to deploy, operate, and manage—without locking them into proprietary solutions when converging or upgrading their district network with the following technology solutions:

- **School and Classroom Wi-Fi**: Juniper's Open Convergence Framework includes leading WLAN vendors such as Aerohive Networks, Ruckus Wireless, and Aruba Networks, allowing school districts to move to more advanced technologies such as 802.11ac and emerging standards and a variety of management and integration options.
- **Unified Communications**: Juniper optimizes integration of the Skype for Business unified communications and collaboration tool so district users can work together in real time, sharing and collaborating anywhere, anytime, over a reliable Juniper-based network infrastructure.
- **Network Access Control**: Juniper's Open Convergence Framework includes integration for NAC technology from:
  - Pulse Secure, LLC's Pulse Secure Policy Secure, and Pulse Secure Profiler, which are fully integrated with Juniper Networks EX Series Ethernet Switches and SRX Series Services Gateways. School districts gain a complete 802.1X standards-based NAC solution with powerful pre- and post-admission access control management and enforcement.
  - Aruba Networks' ClearPass, which integrates with SRX Series gateways to give school districts policy enforcement, while policy integration with EX Series switches enforces network policy at the access edge.

Features and Benefits

Juniper Unite provides school districts with the following network features and benefits:

- Improved manageability: Broad support for unified device, network, and security management tools helps lower TCO and eases the task of maintaining the district's network.
- Single, consistent OS across the network: Unlike other vendors, Juniper Networks EX Series Ethernet Switches, QFX Switches, MX Series 3D Universal Edge Routers, and SRX Series Services Gateways all run the same Juniper Networks Junos® operating system, ensuring easy management and consistent operations.
- Seamless connectivity: EX Series switches allow always-on access for any application. Various interface types are supported, including 1GbE, 10GbE, 40GbE, and 100GbE port densities that dramatically simplify network topologies and operations. In addition, Juniper's Open Convergence Framework enables solutions from the ecosystem of technology alliance partners to create a converged network supporting data, voice, and video, along with anytime/anywhere access.
- Advanced, open, scalable, and secure networks: Juniper's Software-Defined Secure Networks architecture provides the building blocks for a comprehensive secure network, including a full range of firewall protection for the smallest school campus site to the largest school district. Advanced protection such as unified threat management (UTM), next-generation firewall, and threat intelligence services work in concert to keep both private data protected and the network safe from threats. The ability to accept open feeds from Juniper and outside sources allows users to fine-tune their security for the most efficient network protection available. Both physical and virtual firewalls can be centrally managed, ensuring that policies are consistent throughout the network.
- Broad range of switches for every need: The EX Series and QFX Series switches support everything from access to aggregation to core to data center deployments.

Juniper Enhanced Limited Lifetime Warranty

School and school district investments in Juniper Networks receive added protection.

On select EX Series switches, the Enhanced Limited Lifetime Warranty comes standard. For original purchasers who own these products, Juniper provides return-to-factory switch replacement for as long as you own the product. And this includes software updates.

The select models, many of which are the most popular for K-12, include EX2200, EX2300, EX3200, EX3300, EX3400, EX4200, EX4300, and EX6200 Ethernet Switches.

- Architectural advantages: Juniper's Virtual Chassis technology enables multiple interconnected EX Series switches to operate as a single, logical device, consolidating switch layers and reducing management overhead. Junos Fusion Enterprise offers a simple, reliable, and flexible solution for building district-wide networks, supported on the EX3400, EX2300, EX9200, EX4600, EX4300, and future EX Series switch models.

Solution Components

School districts looking to build a forward-looking network for their digital curriculum can select from the following Juniper Networks components:

EX Series Ethernet Switches: Most popular line of Juniper Ethernet core, aggregation, and access switches deployed by school districts to scale broadband connections with carrier-class reliability and capabilities.

QFX Series switches: High-performance, high-density platforms for district data center networking, WAN aggregation, and data center interconnect applications.

SRX Series Services Gateways and vSRX virtual firewall: High-performance security anti-threat firewalls with advanced, integrated threat intelligence, delivered on the industry's most scalable and resilient platform.

MX Series 3D Universal Edge Routers: Juniper's portfolio of high-performance, software-centric physical and virtual routers, with all of the performance, features, and functions for school district applications such as private WAN, providing multisite connectivity through a private backbone; data center interconnect, for connecting multiple data centers for disaster recovery; geo clustering and virtualization; and Internet edge, acting as the school district's Internet gateway.

Cloud-based threat defense, including Juniper Networks Spotlight Secure, which provides the latest threat intelligence to protect the network, as well as Sky Advanced Threat Prevention that detects and stops advanced malware and threats integrated with SRX Series firewalls to modernize perimeter security.

Modern user interfaces focused on the user experience, delivering single pane-of-glass management with Junos Space Network Director and Junos Space Security Director, which integrate with Juniper Networks Secure Analytics to enable dynamic workflow execution.

An Open Convergence Framework with published APIs, allowing school districts to choose best-in-class technologies that address all technology needs for their district from unified communications, WLAN access technology, and third-party security feeds.

These components integrate together for a complete and comprehensive secure network infrastructure as described in detail below.

District Network Infrastructure

The Juniper Unite solution begins with the high-performance EX Series switches, featuring the Juniper Networks EX4300 Ethernet Switch for access, the EX4600 Ethernet Switch for high-speed access or distribution, and the EX9200 Ethernet Switch for programmable core switching.

The EX Series switches offer a number of unique features, including Virtual Chassis technology, multichassis link aggregation (MC-LAG) support, Junos Space Service Insight technology, and unified in-service software upgrade (unified ISSU) in both modular and fixed platforms.

The EX Series has also assumed a new level of manageability and scalability with Junos Fusion Enterprise by enabling users to manage the entire district network—including hundreds of switches and thousands of ports—as a single, logical device.

Customers can use Junos Fusion Enterprise technology to collapse multiple networks into one, creating a large virtual system for the entire campus network that behaves and operates as a single logical switch. Districts can deploy multiple Junos Fusion clusters throughout the district, each capable of scaling to support thousands of user ports across satellite devices. Junos Fusion Enterprise leverages the open 802.1BR standard to create an Ethernet network fabric composed of EX Series switches.

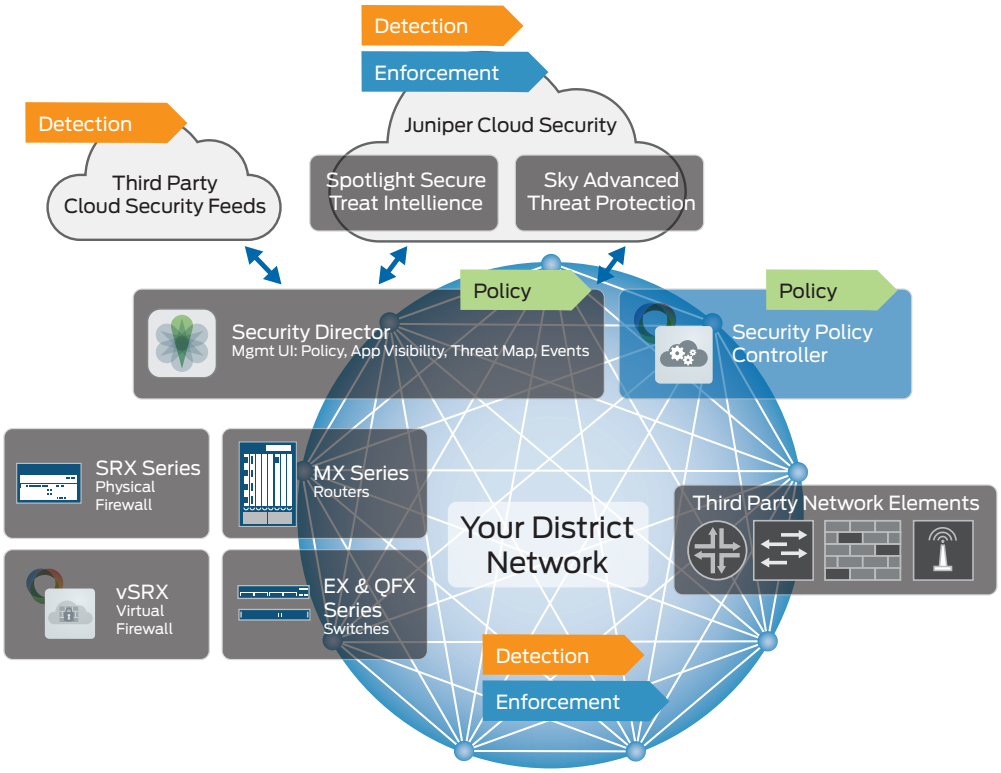

Figure 4: Juniper Software-Defined Secure Network building blocks

In a Junos Fusion Enterprise deployment, EX9200 switches serve as aggregation devices to provide the core service, while EX4300 switches serve as satellite access devices. A Junos Fusion Enterprise fabric can also serve as the common core for an on-premise data center, allowing the school district's network operations team to consolidate operations of both the school district campus network and the data center.

The EX Series switches support a number of network automation and plug-and-play operational features, including zero touch provisioning (ZTP), operations and event scripts, automatic rollback, and Python scripting. Juniper also supports integration with Chef and Puppet.

Junos Space Network Director is an intelligent, automated network management tool that enables network administrators to see, analyze, and control their entire enterprise network—physical and virtual; wired and wireless; data center, campus, and branch—through a single pane of glass. Using Network Director, administrators can manage and synchronize both physical and virtual environments in the data center, ensuring that network policies follow workloads as they move from server to server or from virtual machine to virtual machine. In the campus, Network Director automates routine and repetitive management tasks such as network provisioning and troubleshooting, dramatically improving operational efficiency and reliability.

Table 2: District Network Infrastructure Components and Use Cases

Digital Learning Network Readiness Use Cases	EX Series Ethernet Switches	QFX5100 Switches	SRX Series Services Gateways	MX Series 3D Universal Edge Routers	Next-Gen 802.11 from Juniper WLAN Partners	Junos Space Management Platform
Upgrade school district's high-speed broadband Internet access and WAN connections	X	X	X	X		X
Modernize and simplify school district's campus and data center switching network	X	X	X			X
Deliver high-speed broadband to the classroom	X				X	X
Protect network and data privacy against cyberthreats	X	X	X	X	X	X
Simplify management and provisioning across the school district to reduce operational complexity	X	X	X	X	X	X

Secure District Networks

Unique in the industry, the Juniper Networks Software-Defined Secure Network architecture provides the building blocks towards building a centralized and automated secure network for schools (see figure 4). The building blocks consist of the following:

SRX Series Services Gateways and vSRX virtual firewalls are Juniper's next-generation firewalls available in a range of models that are rightsized for district applications. They offer a complete set of next-generation firewall and UTM security features—including stateful firewall, application security, user role-based firewall controls, intrusion prevention, on-box and cloud-based antivirus, antispyware, anti-adware, and antiphishing, antispam, and enhanced Web and content filtering to protect district networks from the latest content-borne threats and help support Children's Internet Protection Act (CIPA) and Family Educational Rights and Privacy Act (FERPA) compliance. These capabilities are consistent across both physical and virtual platforms.

Sky Advanced Threat Prevention is a cloud-based service that provides complete advanced malware protection. Integrated with SRX Series Services Gateways, Sky ATP delivers a dynamic anti-malware solution that can adapt to an ever-changing threat landscape.

Juniper Networks Spotlight Secure threat intelligence platform aggregates threat feeds from multiple sources to deliver open, consolidated, actionable intelligence to SRX Series firewalls across the organization. These sources include Juniper threat feeds from Juniper-provided cloud-based service, third-party threat feeds, and threat detection technologies that the customer can deploy. The security intelligence service extracts relevant multi-threat feeds and delivers them to SRX Series firewalls for advanced threat protection.

Junos Space Security Director combined with Juniper's cloud-based security services (Sky ATP and Spotlight Secure) provide the foundation for an open policy engine. In concert with these services, Security Director provides the ability to deploy policy across network devices the instant it is needed. Taking information from Juniper's Sky Advanced Threat Protection cloud-based service, as well as from third-party GeoIP feeds to block malicious activities as they enter or traverse the network, the firewalls can be updated with signature or policy information in real time.

Spotlight Secure Connector dynamically deploys policy, as it adapts the network to protect against threats. File types that typically carry malware are copied and sent to the cloud. A sandbox environment within Sky ATP using static or dynamic inspection techniques manipulates the files to trick them into revealing their malicious behavior. Paired with Juniper's cloud-based Spotlight Secure and Connector services, enforcement is achieved by telling the network to block those files that are perceived as hazardous.

All of the capabilities above combine to offer the industry's only "inside-out" security model to protect against threats to the school network and to data privacy.

Scalable, Affordable Networks for E-Rate Projects

Juniper understands the importance of ensuring that all students have access to technology in the classroom. The Schools and Libraries Program of the Universal Service Fund, known as "E-Rate," was created in 1996 as part of the U.S. Telecommunications Act to help provide discounted access on broadband connectivity to and within urban, rural, and low-income schools. Together, Juniper Networks, Juniper Authorized

Table 3: Common List of Juniper E-Rate Eligible Product Services

E-Rate Eligible Components	Component Type	EX Series Ethernet Switches	QFX5100 Switches	SRX Series Services Gateways	MX Series 3D Universal Edge Routers	Next-Gen 802.11 from Juniper WLAN Partners	Juniper Care
Category One	Modulating electronics	X	X	X	X		X
Category Two Internal Connections (IC)	Access points, antennas					X	
	Cabling, connectors	X	X	X	X	X	
	Firewall			X			
	Switches	X	X	X	X		
	Routers	X	X	X	X		
	Wireless controller systems					X	
	Software	X	X	X	X	X	
Category Two Basic Maintenance of Eligible Broadband Internal Connections (BMIC)	BMIC covers: Repair, configuration changes, basic remote technical support, software upgrades, patches, bug fixes and security patches, time and material. • Juniper Care Core are 100% eligible. • Juniper Care Next-Day Ship, Delivery, Same-Day, Onsite options are partially eligible.						

Partners, and the E-Rate Program can provide applicants with a future-looking digital learning network solution that stretches their E-Rate budget dollars to create opportunity for every student. More and more E-Rate applicants are preferring Juniper for Category One and Category Two E-Rate services.

Category One

With growing bandwidth demand for Internet access and WAN broadband connections, applicants have new options for greater scale and affordability. Starting in Funding Year 2016, building out leased dark fiber or self-provisioned fiber networks (where the applicant owns the fiber infrastructure) can be considered. In both options, applicants can receive E-Rate Category One support to implement the project, including the required modulating electronics to light the fiber network to make the service operable. This is available provided that the applicant can demonstrate that the option selected is superior economically and in scale over the lit fiber services. Depending on the application and infrastructure topology needs, Juniper offers applicants a wide range of modulating electronics platform options, as well as the Juniper Care services to maintain the platforms needed for the ongoing reliability of the broadband connection services.

Category Two Internal Connections and Basic Maintenance

E-Rate eligible schools and school districts with plans to modernize their internal network infrastructure look to receiving E-Rate Category Two Internal Connections support for eligible services. With E-Rate Modernization, applicants are now bound by a 5-year Category Two Services budget cap. With this cap, applicants are more critical in selecting a vendor solution that allows them to get the most network for their E-Rate budget dollars while putting in place the most scalable, reliable network that meets their needs over a 5-year planning horizon. Failure to plan in this manner can leave the district short of network capacity in the long term, which can lead to higher out-of-pocket costs for the applicant when E-Rate budgets are exhausted prematurely.

Districts facing this challenge will see Juniper Networks as a better option for their E-Rate project. Juniper's routing, switching, and network security platforms not only deliver the digital learning experience, but Juniper can offer lower estimated total cost of ownership (TCO) to help stretch the applicant's dollars. When school districts factor CapEx, OpEx, space and power costs over a 5-year period, Juniper solutions have been shown to deliver over 50% better estimated TCO over the leading networking brand. For applicants planning their E-Rate projects, Table 3 shows the most popular lines of Juniper E-Rate eligible routers, switches, and firewalls chosen by applicants.

For Category Two Basic Maintenance of Internal Connections (BMIC) services, all Juniper Care Core tier services for eligible Juniper Internal Connection services are 100% eligible. Also popular with applicants are the Juniper Care Next Day services, which are partially E-Rate Category Two BMIC eligible.

Juniper Care Maintenance Services

With Juniper, education customers can maintain the health of their networks with 24x7 support that is tailored to their needs. Juniper Care Services is a suite of services that provides rapid response from Juniper Networks Technical Assistance Center (JTAC) engineers, and hardware replacement options that let schools choose the right timing and resources for their network needs. Juniper Care increases operational effectiveness and lowers operational costs for schools by using Juniper Networks

Table 4: Juniper Care Entitlements

	Juniper Care Core	Juniper Care Core Plus	Juniper Care Next-Day Ship	Juniper Care Next-Day Delivery	Juniper Care Next-Day Onsite	Juniper Care Same-Day	Juniper Care Same-Day Onsite
E-Rate eligibility	100%	Partial	Partial	Partial	Partial	Partial	Partial
Unlimited JTAC 24x7	X	X	X	X	X	X	X
Software releases	X	X	X	X	X	X	X
CSC online e-support	X	X	X	X	X	X	X
Junos Space Service Now/ Service Insight	X	X	X	X	X	X	X
E-learning	X	X	X	X	X	X	X
Return-to-factory		X					
Next-business-day advanced replacement parts shipment			X				
Next-business-day advanced replacement parts delivery				X	X		
Same-day advanced replacement parts delivery						X	X
Onsite technician					X		X

Junos Space Service Now to reduce the time for problem identification and diagnostics. This allows school IT staff to concentrate on strategic activities, not fixing equipment.

Juniper Care Core, one of the many tiers of Juniper Care services, is eligible under E-Rate Category Two BMIC for eligible Internal Connections services. Juniper Care Core entitles subscribing school districts to unlimited JTAC 24x7 support, software releases, and Customer Support Center (CSC) online e-support. Other tiers of Juniper Care services are partially E-Rate Category Two BMIC eligible as determined using the cost allocation method. Applicants are encouraged to contact their Juniper representative or Juniper Authorized Partners for questions about E-Rate eligibility for Juniper products and services.

Juniper Care Entitlements

To see which Juniper Care service tier is right for your school district, see Table 4 to compare the different Juniper Care services. Select your primary level of support to determine your hardware replacement options and gain access to Juniper's CSC to access software updates and online post-sales tools.

Summary

In a 21st century classroom, if the network goes down, digital learning and online assessments stop. That's why K-12 school districts have increasingly turned to Juniper Networks for carrier-class network solutions to power and secure their school district networks. Juniper builds modern, scalable, and simplified networks that are cloud-enabled, transforming the network into a digital learning services platform. Juniper secures the entire school district network, not just the perimeter, to protect the privacy and security of student data. Juniper offers school district choices with the integration of best-in-class, multivendor, open, next-generation 802.11 wireless technology for classroom Wi-Fi. Finally, school districts can modernize more of their network, with higher performance, for less money with Juniper's integrated solutions. So as your school district begins its journey to a full-on digital curriculum, Juniper is ready to help transform your campus and data center network infrastructures to meet the needs of a connected, 21st century learning environment.

Next Steps

Visit www.juniper.net/us/en/solutions/education/k-12-education/ or contact your Juniper representative or Juniper Authorized Partner for more information about Juniper solutions for K-12 Education.

About Juniper Networks

Juniper Networks challenges the status quo with products, solutions and services that transform the economics of networking. Our team co-innovates with customers and partners to deliver automated, scalable and secure networks with agility, performance and value. Additional information can be found at Juniper Networks or connect with Juniper on Twitter and Facebook.

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