

HPE Aruba Networking Security-first, AI-powered networking K-12

Industry advisor

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HPE 
GreenLake



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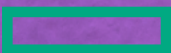
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Introduction

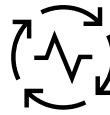
Learning environments are constantly changing. K-12 organizations are embracing digital initiatives, issuing student devices, creating smarter spaces for interactive learning, and implementing campus safety initiatives. From immersive learning apps, open education resources (OER), and e-textbooks to organizational platforms and cloud-based productivity suites, there's no shortage of tools that can transform the classroom or help with school administration. The COVID-19 pandemic has further impacted K-12 institutions, causing them to create hybrid learning options, where most instruction and materials are available online and where students and teachers require uninterrupted access anytime, anywhere, and on any device. IT will need to have solutions and tools that allow management of distributed campus sites with ease while offering quick adoption of new technology-based teaching and learning tools.

Key K-12 challenges



Hybrid learning

to support in-person, online, and flexible instructional learning modalities.



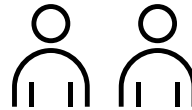
Digital transformation

to enable better ways to engage and assess student learning using tools like G-Suite for Education™, Microsoft 365, Canvas, Zoom, and so forth.



Improved operational efficiencies

to save energy and improve security to keep students safe and maximize taxpayer investments.



Increase 1:1 initiatives

that support the #1 priority of having one computing device per student to ensure equity of access and improve the learning process.



Cybersecurity

to ensure security of data given the increase in digital transformation and digital tools usage.



K-12 transformation: Is your network ready?

Supporting security anytime, anywhere, any modality learning, on any device is a requirement for K-12. Building a network foundation that is agile and able to quickly adopt solutions that facilitate learning is the goal. Is your network ready?

44%

of ITDMs pointed to the potential for more personalized learning plans¹

45%

of ITDMs have mentioned use of AI and ML data to coach and monitor pupils²



Hybrid education

Flexible instruction delivery requires a redesign of resources and tools so that the focus can remain on student engagement and learning, even when remote.



Cloud services

Equitable, agile, and cost-effective cloud-based services are not only an advantage to administrators, but they also simplify access for students and teachers, no matter the user's location or device being used.



Student data insights

The impact of the COVID-19 pandemic has driven a wave of new demands for understanding insights from digital assessments and learning management systems to keep students engaged and learning.



Adaptive learning tools

AI-based enhancements add new capabilities and insights. LMSs and other instructional products now often include AI-enhanced adaptive learning tools, with more diverse subject matter than ever before.



Collaboration technologies

Enable secure and reliable tools for communicating, working together, and sharing resources as needed, regardless of where the user is located. Anywhere, anytime collaboration will require rethinking policies, governance models, security practices, and more.

¹ At the Edge Report

² Gartner — Top 5 Trends Impacting K-12 Education in 2021



The way forward: Solutions to resolve your biggest worries

Are these your biggest IT worries?

- Inconsistent or unreliable network performance
- Identifying where and when connectivity issues are happening
- Lack of visibility as growing attack surfaces increase security risks
- Digital acceleration by the line of business
- Maintaining IT efficiency with limited staffing
- Scaling to address the needs of the campus
- Ensuring architectural flexibility as future infrastructure needs change
- Budget restraints and future cost uncertainties

Solutions for a worry-free network



1. **Cloud-native unified network management** with AI capabilities that improve IT efficiency and network scale for Wi-Fi, switching, and SD-WAN



2. **High-performance WLAN** for seamless connectivity, reliability, increased capacity, and support of IoT and digital transformation



3. **Purpose-built switching for mobility and IoT**, with intuitive management tools and built-in analytics that cut complexity and reduce troubleshooting



4. **Policy-driven security** for users and devices, with simpler visibility, control, and dynamic segmentation of traffic



5. **Flexible consumption and management** of network infrastructure, combining all required hardware, software, and services into a single monthly subscription



HPE Aruba Networking Security-first, AI-powered networking

Connectivity, security, and AIOps convert data into business outcomes

HPE Aruba Networking Security-first, AI-powered networking provides a network foundation K-12 institutions can trust to enable hybrid learning initiatives and digital transformation projects. This edge-to-cloud platform, which provides connectivity, WAN, security, and management solutions, gives IT the ability to be agile and to scale with speed, keeping up with a very mobile and device-demanding campus. Let's explore some of the key components of Security-first, AI-powered networking.

- **HPE Aruba Networking Central** provides a single point of visibility and control across all domains and locations and includes AI-powered features that help identify issues before they impact business.
- **WLAN and switching** offer high-performing and secure connectivity.
- **Policy-driven security** applies principles of zero trust to increase protection levels while simplifying operations.
- **As a service** flexible consumption model offers network infrastructure hardware, software, management, and licensing components.

HPE Aruba Networking Security-first, AI-powered networking is the industry's first AI-powered, cloud-native platform to automate, unify, and protect the edge.



Figure 1. HPE Aruba Networking Security-first, AI-powered networking



Solution #1: Add HPE Aruba Networking Central

Cloud-native unified network management

Unify network operations and ensure the best possible user experience for all campus locations by deploying HPE Aruba Networking Central in the cloud or on-premises.

Maintain visibility and control across wired, wireless, and WAN for home-based staff and students, administrative offices, classrooms, labs, grounds, outdoor spaces and more.

Proactively identify and solve network and client issues before they occur to reduce or eliminate help desk tickets from students, staff, or faculty.

Enhance network scale to evolve and adapt quickly to new building deployments, use-cases, and moves/adds/changes, even with limited IT staff.

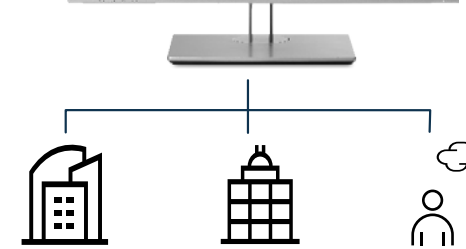
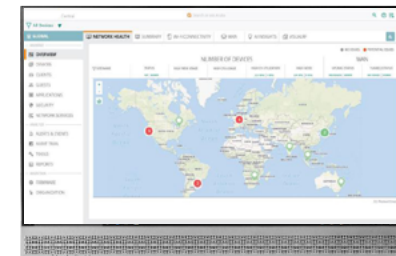
Move quickly to execute smart school initiatives (lighting, HVAC, security cameras, vending machines, automatic door locks, etc.) with a zero trust security approach.

Enable integrations with best-of-breed software, services, and IoT providers to enable the digital transformation and initiatives most important to the institutions.

HPE Aruba Networking Central is a single pane of glass across your entire network, enabling management of WLAN, switching, SD-WAN, and VPN services using cloud, on-premises, or as-a-service options

HPE Aruba Networking Central

A single point of visibility and control for modern network and security use cases



Pre-school

Secondary school

Outdoor space

Tip: if you are not planning to upgrade your APs or switches, as long as they can be managed by HPE Aruba Networking Central, move your management plane now

Figure 2. HPE Aruba Networking Central



Solution #2: High-performance WLAN

Wi-Fi access points for seamless, always-on, and secure connectivity

High-performance Wi-Fi is essential and needs to provide a reliable and effortless experience for students, staff, faculty, and visitors wherever they are on campus.

Deliver the best Wi-Fi experience, ensuring that there are no drops while students move across campus, the parking lot, or other outdoor spaces.

Support growing wireless device demands as wireless devices increase by delivering more capacity and better performance with additional spectrum provided by Wi-Fi 6E.

Ensure seamless roaming to provide network access and a great connection while on the move, all while managing peak device traffic.

Leverage existing AP infrastructure to securely connect IoT devices using Wi-Fi, BLE, 802.15.4/Zigbee, and USB-port extensions to support wayfinding, location tracking, sensor monitoring, door locking, and other operational use cases.

Eliminate downtime so daily operations are not impacted. Live upgrades and hitless failovers ensure that the wireless network can stay current with the latest security updates, tolerate faults, and be available whenever needed without impacting student learning.

HPE Aruba Networking Wi-Fi 6 and Wi-Fi 6E offer the highest performance, security, and capacity and are up to date with the latest certifications and device interoperability

HPE Aruba Networking Central

Manages the WLAN network



Figure 3. High-performance WLAN network



Solution #3: Enterprise network switching

Performance and intelligence for your network access layer

K-12 institutions are transforming. Applications are moving to cloud, hybrid learning delivery methods are on the rise, and new devices are being added to support instruction, student entertainment, and operational efficiencies. HPE Aruba Networking CX Switch Operating System (AOS-CX) is purpose-built for cloud, mobility, and IoT.

Deliver the throughput, performance, and actionable insights IT administrators need to handle the massive amounts of data now being generated at every primary and secondary school.

Prioritize connectivity and security. Student records can be a high target for hackers. AOS-CX switches are an integral component of Dynamic Segmentation, providing secure, automated, role-based access for users and IoT devices.

Ensure high availability with AOS-CX so that uninterrupted learning can remain the #1 priority. Upgrades and updates can be easily enabled, reversed, and changed without impacting the network or the people who rely on it.

Reduce configuration time and accelerate troubleshooting through smart automation and built-in analytics. HPE Aruba Networking Network Analytics Engine (NAE) and HPE Aruba Networking Switch Multi-Edit Software deliver insights that help with issue prevention and resolution.

Support IoT use cases including lighting, HVAC, security cameras, vending machines, automatic door locks, and more. HPE Aruba Networking switches securely connect devices and Wi-Fi 6 access points, power IoT devices, and have the flexibility to support all digital transformation initiatives.

HPE Aruba Networking CX Switch Operating System cuts complexity, automates diagnostics, and is business-ready for what comes next

HPE Aruba Networking Central

Manages the wired network

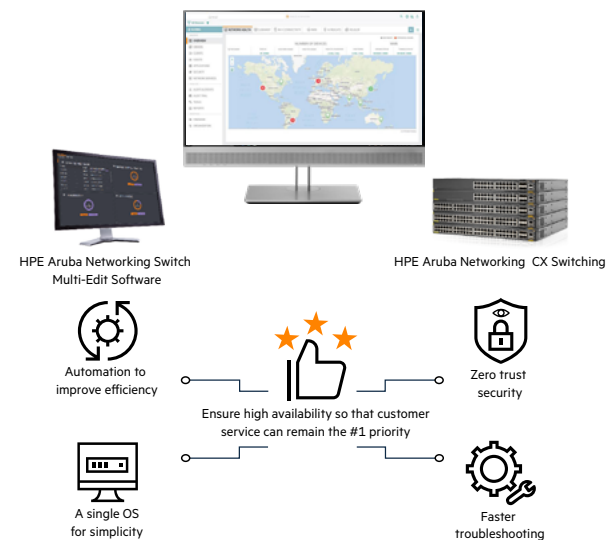


Figure 4. Enterprise network switching



Solution #4: Adopt HPE Aruba Networking ClearPass, gateways, and HPE Aruba Networking EdgeConnect for SASE

Full visibility, control, and enforcement from campus to home to cloud

Distributed facilities, technology driven uses cases, and cloud applications are elevating security concerns for K-12. A smart network can not only identify and detect new devices as they come onto the network, but also find malware or intrusions to the environment. HPE Aruba Networking security solutions empower IT with the same controls applied to campus, outdoor spaces, or home-based faculty for wired and wireless connections, extending security policies across the WAN.

Set and automate policies for new wired and wireless technology (security cameras, motion detectors, temperature sensors, etc.) quickly. HPE Aruba Networking ClearPass simplifies access for authorized users as they come on the network.

Ensure the same security policies across your distributed footprint. Users and devices are mobile but need restricted access to the network, IT, and application resources for which they have been approved only. Security management should be simple, no matter how or where connectivity takes place.

Keep student records, campus data, and IoT traffic separate. Regardless of the location of the user, device, or switch port carrying the traffic, be assured that access to the network is secure using role-based policies and dynamic segmentation.

Simplify IT operations. Save time and eliminate VLAN sprawl by reducing configurations needed for SSIDs, ACLs, subnets, and wired ports.

HPE Aruba Networking offers complete visibility, authentication, policy-based access authorization, and attack detection and response for the modern enterprise by assuming that all users, devices, servers, and network segments are inherently insecure and potentially hostile.

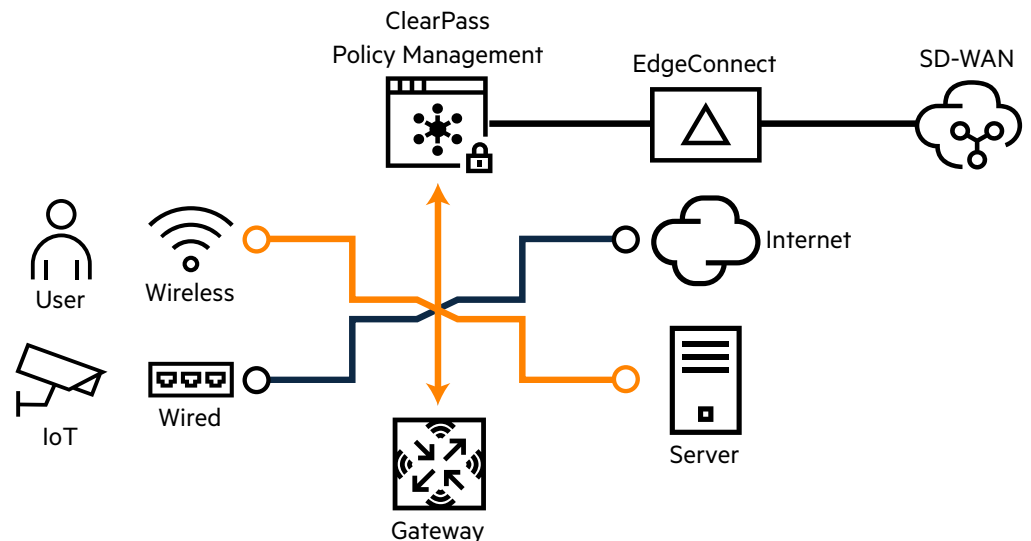


Figure 5. HPE Aruba Networking ClearPass, gateways, and EdgeConnect for SASE



Solution #5: Embrace NaaS

A new K-12 network consumption model

HPE GreenLake for Networking enables K-12 institutions to accelerate digital transformation initiatives and hybrid learning services and adopt next-gen networking for cost-reducing outcomes.

Focus on better learning experiences and enabling new technologies. NaaS helps educators efficiently implement digital initiatives with enhanced security protocols and automation.

Improve investments and time management as part of your network infrastructure strategy. Focus on administrative tasks and student success instead of day-to-day management of the network.

Drive efficient administration and operations with management tools like AI/ML capabilities for enhanced visibility and automation.

Be flexible and scale when needed with a network that is flexible, both financially and operationally.

HPE GreenLake for Networking is network infrastructure hardware, software, management, and licensing components consumed in a flexible consumption model

Single monthly payment

Secure equipment recycle and upcycle

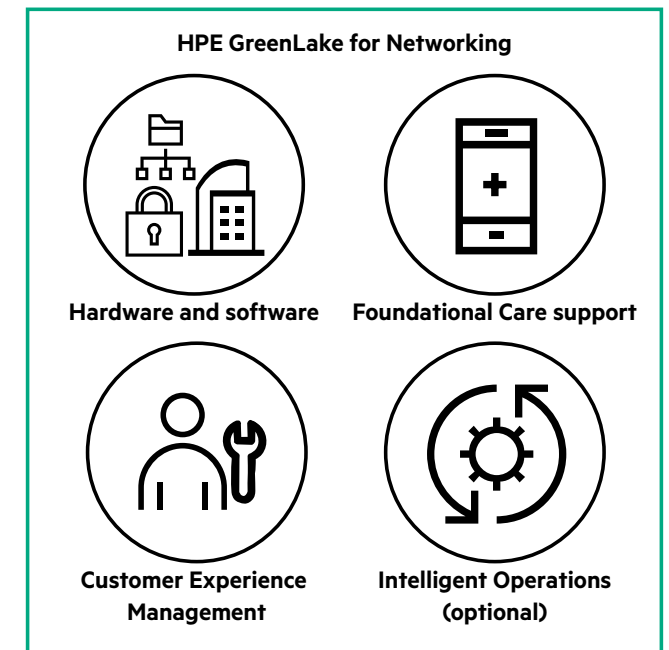
- Access to new technology
- Sustainability

Financial flexibility

- Sale and leaseback options
- Flexible procurement models

Superior system optimization and monitoring

- Automated analysis, system optimization and custom services



Contracted over 3, 4 or 5 years

Figure 6. HPE GreenLake for Networking



Starting points and destinations — The journey

There are multiple, flexible ways to adopt HPE Aruba Networking solutions. **If you are new to HPE Aruba Networking**, let us help you identify your top priorities and start you on your journey. **If you are an existing customer**, there are options too! Review the next few slides to understand possible adoption journeys and let us work with you to build the best plan for your unique situation.

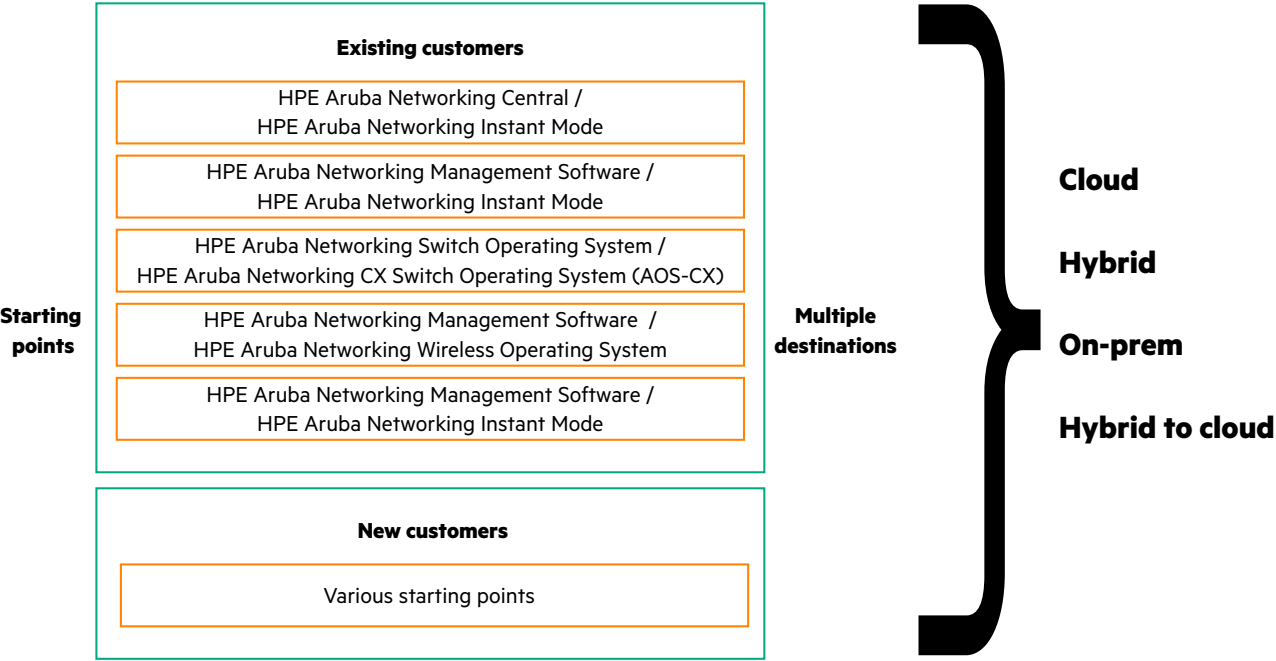


Figure 7. Networking solutions, existing and new customers



Existing customer — Where will your journey take you?

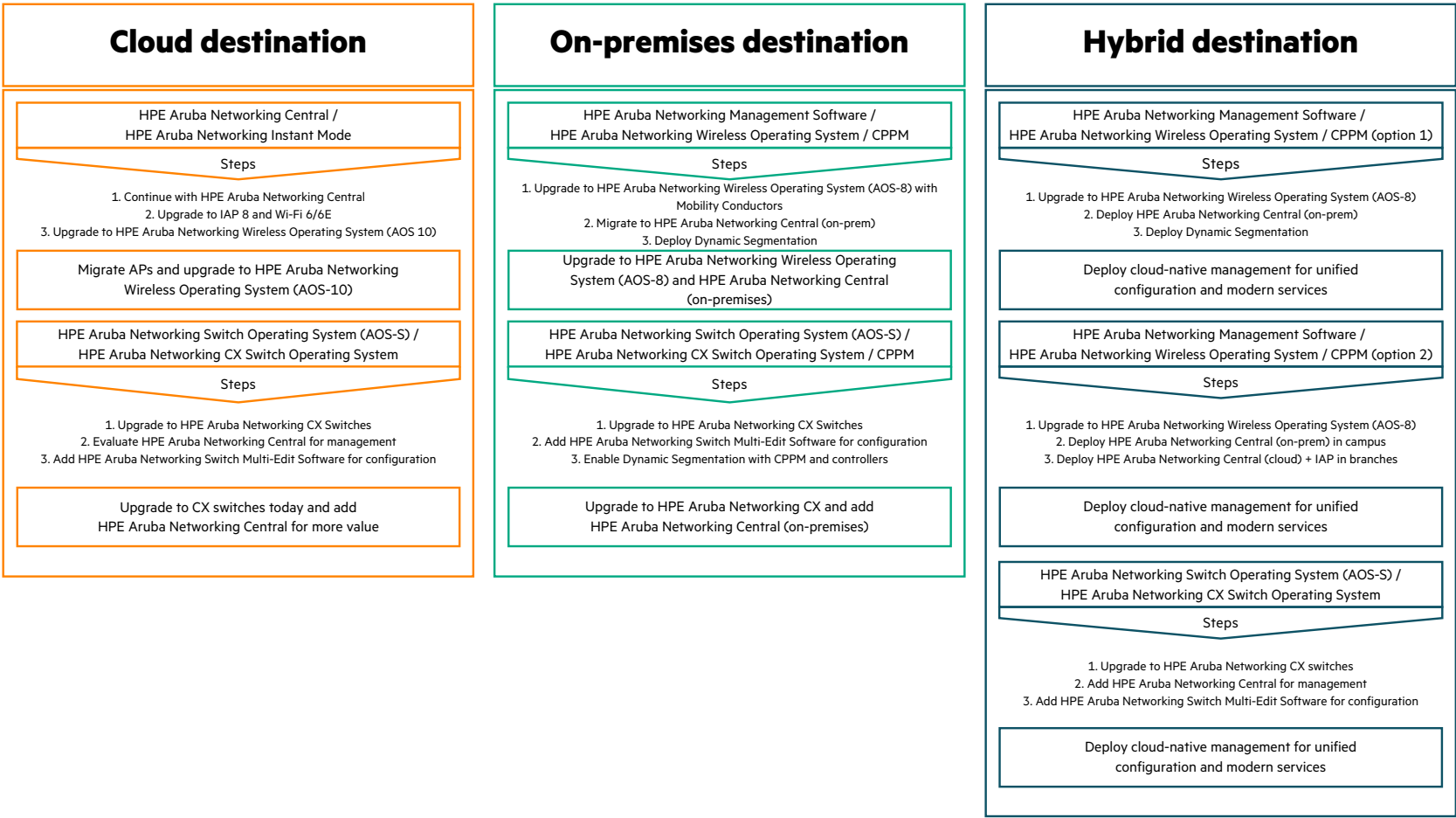


Figure 8. Existing customer — Where will your journey take you?



Why K-12 institutions choose HPE Aruba Networking

HPE Aruba Networking can help you meet student, staff, and operational demands while addressing operational challenges with leading-edge technology. Discover why campuses like yours look to HPE Aruba Networking for smarter, more flexible networks.



“With over 55,000 devices connecting to our network daily, IT is expected to **deliver seamless, secure experiences for everything** from personally owned smartphone apps, to mission critical business applications,” Turner says. “We now have capability to secure all hardware, all software and all users”.

– **Dan Turner**, Director of Information Services



“Prior to implementing HPE Aruba Networking, teachers reported sporadic wireless connectivity. With HPE Aruba Networking and HPE Aruba Networking Central as a **one-stop location for troubleshooting and correcting issues**, we’ve reduced our teacher downtime from four or five hours to a few minutes.”

– **Keith Price**, Director of Technology



“I was the one pushing our central IT team to tell the provider that there was a bad pair in their network. Silver Peak let me **identify the problems before even the provider** knew of them.”

– **Yves Bouchard**, Network Architect and Security Analyst



“We’ve had full classrooms, 25 students all streaming Zoom and all working off Chromebooks™. The junior school has enabled BYOD. We’re fully using a range of SaaS applications. If there have been issues, **none has been to do with the network infrastructure.**”

– **Nik Cragg**, Head of IT



“For me, the idea of the perfect network is one where you don’t need to intervene. Everything is automatic. You don’t have to worry about security or reliability. **We have that with HPE Aruba Networking.**”

– **Stephen Pink**, IT Systems Manager



“Previously, an incident required us to remove the hard drive from a bus’s onboard camera and physically take it to a laptop or other computer loaded with the security system’s proprietary software. Using our new Wi-Fi, **the onboard video will automatically upload to the cloud, where our administrators can access it from anywhere.**”

– **Roman Gaddis**, Executive Director of Technology

Learn more about how HPE Aruba Networking has helped other organizations. Visit our [news releases](#) and our [case studies](#) pages.





Start your journey today!

Leverage the links below to learn more about HPE Aruba Networking solutions and the value they provide. Let us help you with your HPE Aruba Networking Security-first, AI-powered networking journey.



HPE Aruba Networking Security-first, AI-powered networking in K-12 Education

Schools and districts across the country are embracing digital learning—with admittedly mixed results. Let us show you how, together, we can help you bring safer, smarter learning spaces to life. Click [here](#) to watch the video.



Why K-12 institutions choose HPE Aruba Networking

HPE Aruba Networking solutions deliver education anywhere, enhance collaborative learning environments, and support student, staff, and faculty safety initiatives.

56%

of K-12 educational organizations use HPE Aruba Networking by volume in 2022

90%

of districts agree to deploy the next school

The Network Can Help!

Why K-12 institutions choose HPE Aruba Networking

Learn directly from HPE Aruba Networking K-12 education organizations on how HPE Aruba Networking is helping improve student and staff experiences while improving operational outcomes. HPE Aruba Networking solutions provide better, faster, less expensive, and higher-performing services. Click [here](#) to view the infographic.







HPE Aruba Networking products and solutions

Learn about HPE Aruba Networking’s portfolio, including HPE Aruba Networking Central, access points, switches, HPE Aruba Networking ClearPass, and more. Click [here](#) to access this document.

Make the right purchase decision.
Contact our presales specialists.

**Chat now (sales)**

**Call now**

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