

BUILDING A THREAT-AWARE NETWORK WITH JUNIPER CONNECTED SECURITY

Enabling great, secure digital learning experiences for higher education institutions and their research facilities

Challenge

Colleges and universities are at an increased risk for harmful cyberattacks. A breach can lead to fines due to noncompliance; damage to the university's brand and reputation; loss of revenue; and costly remediation and recovery activities.

Solution

Juniper Connected Security enables institutions to create a threat-aware network that can safeguard and satisfy the needs of users, devices, applications, and infrastructure. The solutions consist of:

- SRX Series Firewalls
- vSRX Virtual Firewall and cSRX Container Firewall
- Spotlight Secure
- Advanced Threat Prevention
- Juniper Security Director Cloud
- Secure Edge

Benefits

- Improve experiences by enabling anytime, anywhere access and information sharing
- Increase network security, performance, scalability, and reliability with expanded threat visibility
- Simplify operations and improve threat response agility with a secure, zero-trust network
- Ensure consistent access and resource usage by creating policies once and applying them anywhere and everywhere with unified policy management

Higher education and research institutions are increasingly targeted by cyberattackers, including nation-state actors with advanced capabilities. They are drawn, in large part, by the high-dollar assets flowing through an institution's network, including financial and personally identifiable information (PII), ground-breaking research, and other intellectual property.

The Challenge

The attack surface these institutions need to protect is vast—the many devices connecting to the university's network require different security policies and parallel security strategies, as these have different use needs and access levels. Within the industries facing cybersecurity challenges, higher education is especially vulnerable due to the open access these institutions need to allow students and faculty to have a smooth and seamless exchange of information, and the attractiveness of the sensitive nature of research and investigation. Another concern for higher education institutions is the legacy systems and slow technology adoption that are public knowledge and put them at risk for attacks and breaches.

Institutions need to understand the many requirements these different networks have, along with the risks that all the users, devices, and applications pose, in order to determine how best to enable and protect them. It can be a delicate balancing act to support and secure all this access while providing both a safe and great experience. According to **KPMG, higher education is on high alert for cyberattacks**, and a referenced 2021 EDUCAUSE report states that higher education experienced over six times more malware attacks than other affected industries within a 30 day period in 2021.

The rapidly growing security threats require **a strategy of building security into the infrastructure**. This creates trustworthy, threat-aware networks that can ensure fast, reliable, and scalable access; users and devices that are protected; and data in applications and workloads that is safeguarded. This is what Juniper® Connected Security helps higher education institutions achieve.





Figure 1. Juniper Connected Security and the threat-aware network

The Solution: Juniper Connected Security

Juniper® Connected Security enables higher education and research institutions to extend security across their distributed hybrid learning and research environments to create a threat-aware network that can safeguard all their users, devices, applications, and infrastructure. With Juniper, institutions can secure every point of connection, using a zero-trust model that combines policy, detection, and enforcement with a comprehensive product portfolio. This solution centralizes and automates security, making it easy to manage, and it provides the great experiences that students, faculty, staff, and guests require.

Solution Components

Juniper Networks® SRX Series Firewalls help smooth the transition to a more secure, distributed learning environment, providing higher education and research institutions the flexibility to seamlessly implement visibility and control everywhere. Institutions can deploy SRX Series inspection and enforcement points in whatever form factor—physical, virtual, containerized, or Software as a Service—to protect every point of connection across their campus, satellite, resident, research, and remote networks. The result is access that is fast, reliable, scalable, and protected.

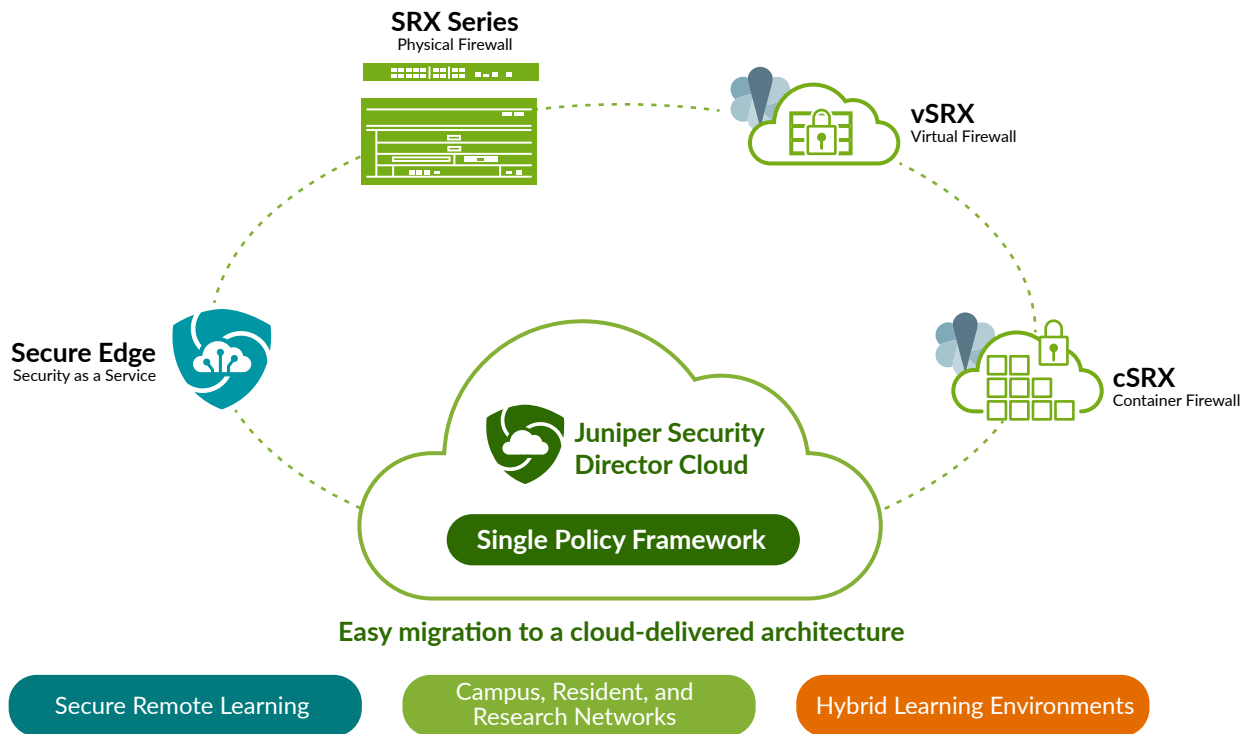


Figure 2. Zero trust from edge to campus provides unified visibility and management across a distributed learning environment from a single UI



Figure 3. A zero trust framework with Juniper Connected Security

With Juniper, institutions can create a threat-aware network with built-in visibility and security that protects against the variety of threats they are facing, while providing great experiences from campus to cloud. Institutions can use a zero-trust framework to secure their data and applications and ensure they are accessible to the students, faculty, and staff who need them, when they need them.

Everything is centrally managed and maintained by Juniper Security Director Cloud for maximum operational efficiency. With a unified management stack, it is easy to set up, orchestrate, and enforce consistent security policies that protect all users, devices, and applications, regardless of where they are located—on campus or in the cloud. Institutions can quickly scale their security, spinning up and running hundreds of thousands of vSRX Virtual Firewalls to immediately apply a consistent policy. This allows institutions to operationalize and scale their security, making sure students and staff managing security for the institution can keep security in force, regardless of staffing changes or turnovers.

Institutions can pick and choose the security applications they need to better protect their environment against the threats they are facing. This allows them to augment and fill gaps in their defenses, while maximizing the value of any existing investments they may have.

Security That Works

- 99.8% effective block rate—according to tests run by NetSecOPEN 2022
- 99.5% effectiveness against client- and server-side exploits—according to CyberRatings 2021 Next-Gen Firewall
- 100% malware block rate—according to ICSA Labs Advanced Threat Defense tests 2020 and 2021

Summary—Giving Institutions Trustworthy Networks That Work

The attack surface that higher education and research institutions need to defend to keep their data and applications secure is extremely large and increasing in size. Juniper can help bring some sanity to the incredibly challenging job higher education institutions are facing, creating a threat-aware network that strengthens and operationalizes security across campus, satellite, resident, research, and remote networks. With Juniper, institutions have the scalable security they need to reduce their risks and costs, while delivering great experiences—from campus to cloud—that satisfy the needs of all their students, faculty, staff, and guests.

Next Steps

To learn more, please contact your Juniper representative or go to [Juniper Networks/Higher Education](#).

About Juniper Networks

At Juniper Networks, we are dedicated to dramatically simplifying network operations and driving superior experiences for end users. Our solutions deliver industry-leading insight, automation, security and AI to drive real business results. We believe that powering connections will bring us closer together while empowering us all to solve the world's greatest challenges of well-being, sustainability and equality.

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