CREATING GREAT CAMPUS AND DIGITAL LEARNING EXPERIENCES

Modern infrastructure for higher education improves student and faculty engagement

Challenge

Legacy IT infrastructures make it difficult for higher education institutions to adapt their business models to create safe campus spaces and flexible remote and hybrid learning experiences to attract and meet student and faculty expectations.

Solution

Juniper provides higher education institutions a complete client-to-cloud enterprise solution that will modernize, secure, and future-proof operations while providing great user experiences.

Benefits

- *Deliver personalized campus, distant learning, enrollment, and admissions experiences with best-in-class Wi-Fi and location-based services*
- *Meet the shifting needs of students and faculty, while reducing operational costs and inefficiencies with a modern network infrastructure*
- *Protect the ongoing privacy and availability of services with end-to-end connected network security and operations*
- *Improve resiliency of connected campus and remote learning capabilities, while lowering operational costs*

Colleges and universities are competing more than ever to attract a diverse student population and highly rated faculty. Students want innovative digital services and superior experiences in dorm rooms, classrooms, and everywhere they go on campus. Providing these services means improving network resiliency and creating a truly connected, secure campus. An AI-driven network can help meet these goals with automation, intent-based security policies, actionable insights, and more.

The Challenge: Expectations Are High for Higher Education

Higher education institutions are adopting new technologies and educational models to help them thrive in the face of ongoing uncertainty and upheaval. In the spring of 2020, only 26% of traditional institutions met their enrollment goals[1]. This is probably why 45% are reportedly implementing new business models[2]. The goal is to efficiently create great campus, remote, and digital learning experiences that can attract and engage a diverse student body and talented faculty.

To achieve these goals, institutions need to transform their operations—62% of institutions say they are re-evaluating their operational service models[2]. It takes a modern IT infrastructure built for higher education to keep pace with all the new demands. Juniper Networks provides the infrastructure that delivers the performance and insights needed to optimize resources, enhance user experiences, and improve competitiveness.

The Juniper AI-Driven Enterprise Portfolio

Juniper gives higher education institutions a complete client-to-cloud enterprise solution to modernize and future-proof operations. By relentlessly focusing on the experience of the network for staff, faculty, and students, you can rely on Juniper to power the connections that matter most. With Juniper, you have the secure client-to-cloud automation, insight, and AI-driven actions you need to deliver innovative digital services and enhanced experiences, both on and off campus, that will delight your students, faculty, and staff.

[1] "2020 Survey of Admissions Leaders," InsideHigherEd.com, Sep 2020.
[2] " Higher Education Industry in implementing new business models," ZDNet.com, June 2021.

Best-in-Class Wi-Fi and Location-Based Services

Offering the types of personalized digital experiences that keep students and faculty happy and engaged can be difficult without the right network infrastructure and technology. Juniper make things simple, enabling a great campus and application experience with best-in-class Wi-Fi and location-based services, along with automated and assured data centers.

With Juniper, students, faculty, staff, and guests can connect to the information, processes, and applications they need, when they need them. You can optimize experiences for different devices, users, groups, and locations to ensure predictably good network performance. In addition, you can offer new and enhanced services (notifying students when research they need from the library is available or when a study space opens up) that promote the satisfaction, health, and well-being of staff and students. The Juniper® Cloud-Ready Data Center provides the performance, agility, and scalability needed to confidently migrate applications and services to the cloud. This increases the availability and resiliency of your connected campus and remote learning capabilities, while lowering operational costs.

For more details on how Juniper is helping institutions create great experiences, check out the the solution brief "Roadmap To The Modern, Automated Data Center In Higher Ed."

52%
Institutions anticipate investing in classroom technology
ZDNet.com (June 2021)

68%
Institutions are in progress of implementing tech to manage the number of people in common spaces
Juniper Networks – Survey 2021

40%
Students believe the institution can best support wellbeing with more flexible learning options
ZDNet.com (June 2021)

Solution Components

- Juniper Series of High-Performance Access Points
- Juniper Mist™ User Engagement
- Juniper Mist Asset Visibility
- Juniper Mist Premium Analytics
- Juniper Mist Wi-Fi Assurance
- Marvis Virtual Network Assistant
- Juniper Apstra
- Juniper Networks® QFX Series Switches

Modern Network Infrastructure–AI

To meet the shifting needs of students and faculty, you need an infrastructure that easily adjusts to changing requirements. Juniper provides the artificial intelligence (AI) you need to gain insights and control over your infrastructure, enhance the operational efficiency of your campus, and reduce operational costs.

With best-in-class AI, you can improve the experience of the devices and users on your network, optimizing network performance based on device, applications, and bandwidth. Juniper simplifies network planning, design, and operation with network automation, allowing you to apply AI-driven actions to fix problems proactively and avoid common issues, so everything operates as it should. You can also improve the efficiency of classroom and campus-to-home network operations to improve performance and lower costs.

To see how Juniper is helping higher education institutions enhance their operational efficiency, check out the solution briefs "Roadmap to Build an AI-Driven, Secure, Distributed Remote Network (SD-WAN)" and "Roadmap to Automate Campus Ops in Higher Ed."

67%
Institutions anticipate focusing on access to networks, remote, or cloud-based research tools
BCG.com - Educause Research News (Dec 2020)

70%
Leaders consider digital capabilities to be their highest priority

83%
Institutions find the network is an important enabler to stay ahead of competition
Juniper Networks – Survey 2021

Solution Components

- Juniper Mist cloud architecture
- Juniper Networks EX Series Ethernet Switches
- Mist AI™
- Juniper Mist Wired Assurance
- Juniper Mist Wi-Fi Assurance
- Marvis Virtual Network Assistant
- Juniper Session Smart™ Router
- Juniper Apstra

Connected Security

Higher education institutions are a huge target for attackers. To combat cyberattacks and other threats, you need threat-aware networks that can provide end-to-end security, from the edge to the data center, as well as cloud applications. Juniper rises to the security challenge with pervasive, AI-driven network security and operations that leave no defensive gaps.

Juniper makes the network threat-aware, enabling you to detect and stop advanced threats in a much shorter timeframe to keep network pipes free and clear for student and faculty traffic. Juniper can unify and rate threat intelligence from multiple sources to help you understand what the latest risks are. Once detected, any point on the network can be used for policy and security enforcement to protect student and faculty data and privacy.

Juniper's unique connected security approach delivers proven protection where and when it is needed. Consistent, intent-based security policies can be created once and easily applied across the entire campus network, including third-party devices, to keep electronic faculty and student records safe, from applications for admission to enrollment information.

For more details, check out this this solution brief, "Roadmap To Automate Security In Higher Ed."

33%
Student information and records (systems) moving to the cloud
BCG.com - June 2021 – BCG survey
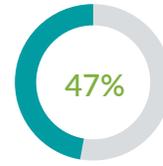
47%
Institutions expect to invest in a network security refresh in the next 12 months
Juniper Networks – Survey 2021

40%
Threats originate outside the targeted institution
EdTechMagazine.com, Accenture.com – 2021 Cyber Threat Intelligence Report

Solution Components

- Juniper Networks SRX Series Services Gateways
- Juniper Networks vSRX Virtual Firewall
- Juniper Networks Security Director
- Juniper Advanced Threat Prevention

Summary—Higher Education Institutions Are Primed for Innovation and Exceptional Learning Experiences with Juniper

Juniper gives higher education institutions the secure client-to-cloud automation, insight, and AI-driven actions needed to deliver innovative digital services and enhanced experiences, both on and off campus, to delight their students, faculty, and staff.
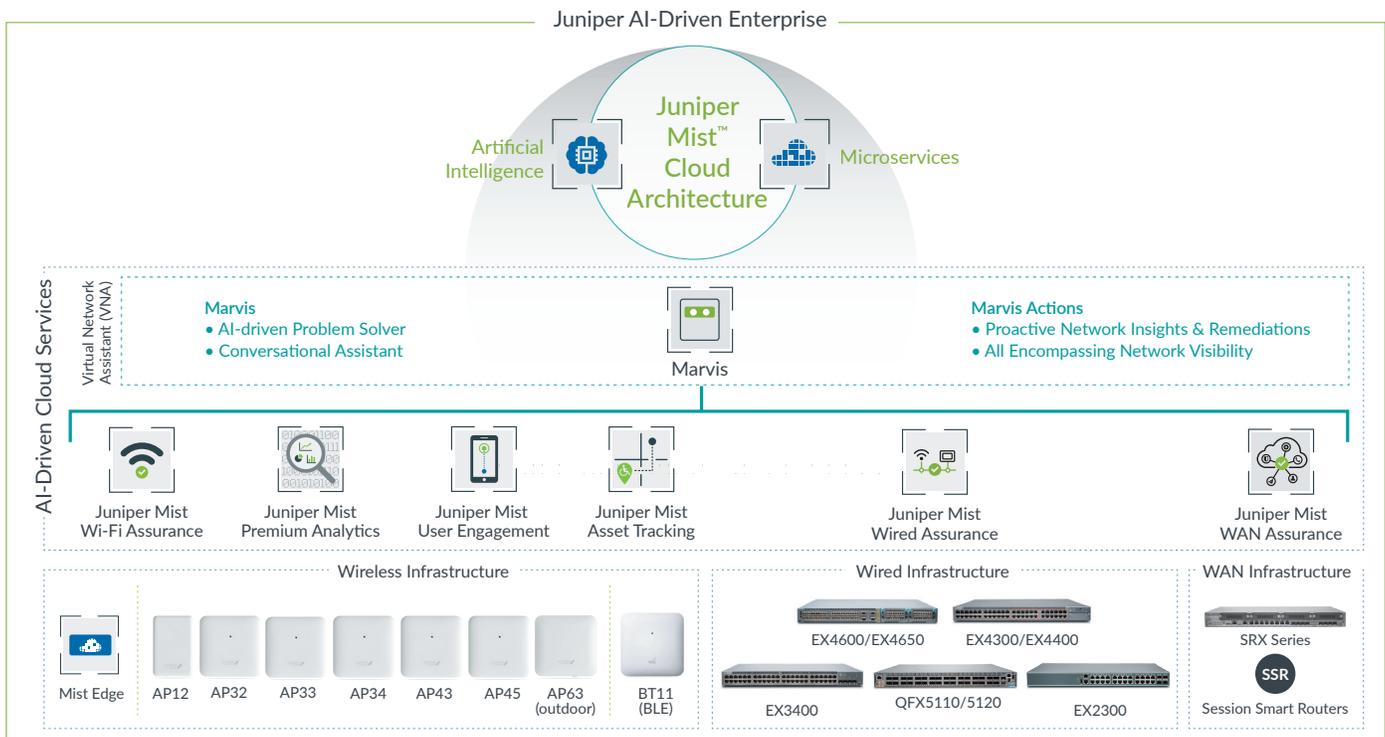

Figure 1: Juniper AI-Driven Enterprise portfolio overview

Real Results. Real Experiences.

- <u>University of Cyprus</u> advances High-Performance Computing (HPC) research projects and smart campus with single-vendor network.

- <u>University of Illinois Urbana-Champaign</u> efficiently scales regional network for digital growth.

- <u>The University of Texas Arlington</u> creates personalized digital experiences for students to increase engagement and retention with a smart, agile Juniper network.

- <u>Penn State College of Agricultural Sciences</u> connects its offices to support its mission of providing access to research and education in Pennsylvania with SRX Series, EX Series, and QFX Series solutions.

Next Steps

To learn more about how Juniper can help higher education institutions, visit <u>www.juniper.net/us/en/solutions/higher-education.html</u>.

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.