Secure Access Service Edge (SASE) protects higher ed's highly distributed world

Simpler solutions for increasingly complex network and data-security requirements

In the high-bandwidth, super-connected and widely distributed world of higher education, the network is where the user is — every user is an edge. How can institutions ensure broad network protection and data security in this new world? Institutions increasingly turn to secure access service edge (SASE) – pronounced "sassy". SASE is a framework that offers not only a more scalable approach to protection but also more efficient network and security management.

"Conversations are very active in higher ed right now around SASE," said Matt Kenslea, senior account director for public sector business development at Lumen. "We believe the value is there, and we believe people are going to start evaluating it and putting it into place."

SASE converges networking and security into cloud-native architecture that shifts the security focus from traffic-flow-centric to identity-centric, according to Versa Networks.

"SASE encompasses a package of technologies that embeds security into the global fabric of the network, so it is always available no matter where the user is, where the application or resource being accessed is, or what combination of transport technologies connects the user and the resource," according to the company.

"In higher education, where the perimeter is so amorphous, this kind of solution really lends itself to protecting that," Kenslea said. "The users represent the risk. By pushing this out to the edge (to the user), you dramatically increase your security, your ability to update it, and more effectively manage network traffic."

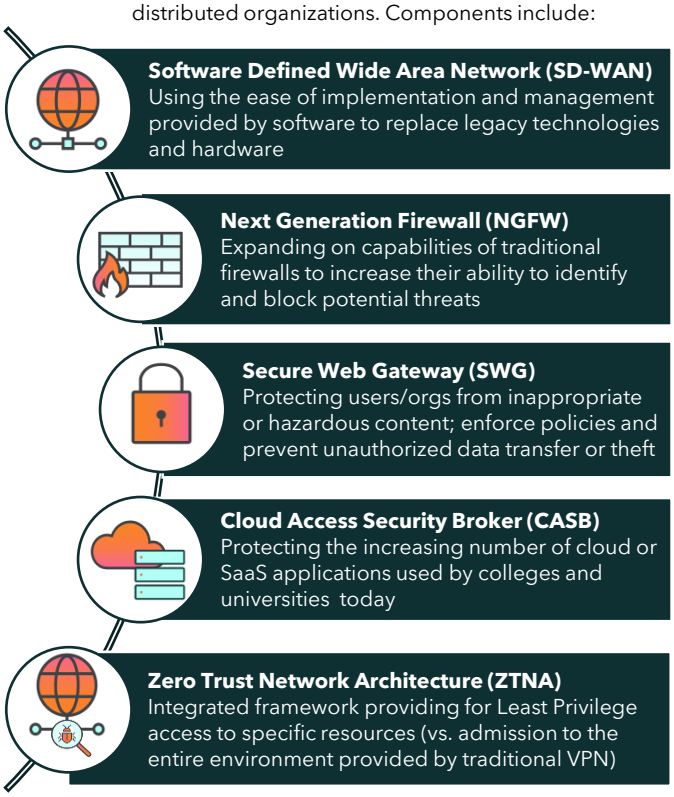
Absolutely zero trust

"In the old days, you connected to a VPN, and users had free reign to run around the network and access whatever they could get to. But that's also the way attackers operate," Kenslea said, citing the massive Solar Winds hack that attacked several components of U.S. government-operated infrastructure and perpetrated a series of data breaches in 2020.

"Those attackers were in the network for over a year before they hit. In a least-privileged, zero trust world, they wouldn't have been able to stay. They would have had to reauthenticate, and that's part of the zero-trust architecture in the SASE framework," Kenslea said.

What is SASE?

SASE unites network, security and management into a flexible architecture that delivers key technologies for distributed organizations. Components include:



Elements are implemented using a cloud-centric architecture, ideally with a single vendor, to help reduce costs and improve overall security posture

Opportunities abound

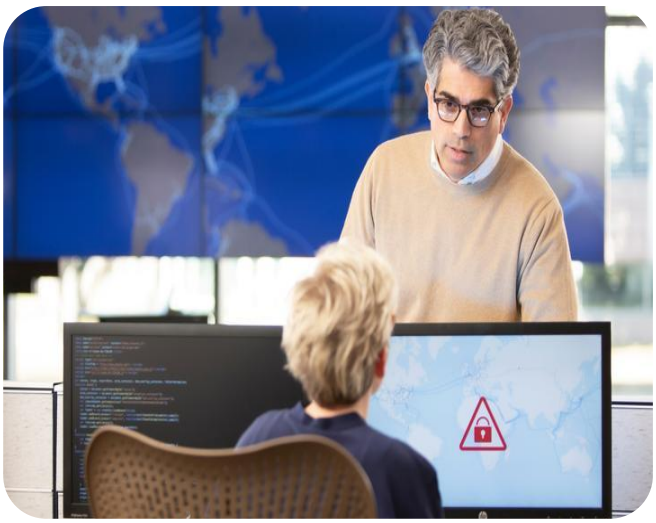
"In many cases, institutions may already have a piece or two of the SASE framework's core components implemented. They bought a new firewall, or they have the secure web gateway. We've heard others suggest that the SD-WAN should come first because that's the core and that gets you across. But there are lots of roads to Rome," Kenslea said. "You just need a plan, as with anything else."

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Smaller colleges within a larger university umbrella also present opportunities to evaluate the SASE concept on a smaller scale, perform any necessary tests, and learn valuable lessons before scaling out the framework to the entire university.

"One of the main benefits is the ease of deployment and then, once it's implemented, the ease of updating and expansion. If you add another user, you don't have to add more servers. You don't have to download VPN software. No one needs to physically go anywhere. The utility is real."

In the case of research institutions looking to comply more readily or rapidly with federal grant funding requirements or specific security frameworks such as NIST 300, the framework also offers more efficient and flexible ways to set policies through its software-based, hardware-neutral architecture.



32%

Of organizations are currently implementing SASE solutions

Source: State of Secure Network Access | Hughes | January 2025

Users' expectations demand SASE's efficiency

Higher education constituents – students, staff, faculty, researchers, research partners, parents, and anyone else who touches an institution's network – already expect anytime, anywhere access to data and connectivity to perform their roles, whether they're on campus or halfway around the globe. Given the ever-growing levels of service, and the rapidly exploding volume of data supporting research, teaching, and learning, many institutions may soon discover they have no choice but to start down the path of implementing a SASE framework concept.

"For all of those challenged IT and support staff, this really makes their lives easier," Kenslea said. "Now, you can set policy and controls that – boom – go across the entire environment. There's a lot of value there."

Beyond saving time on configurations, value is realized through fewer hardware upgrades and less maintenance, eliminating expenses for unused network capacity, and reductions to square footage in the data center's footprint.

"The data center is not necessarily the end-all, be-all," Kenslea said. "The network is where the user is, and that's true everywhere."

See how Lumen helps colleges and universities support student success and keep their campuses connected.

Why Lumen?

With a comprehensive portfolio, Lumen can help your university deliver high-quality connectivity, minimize costs and complexity, and enhance your security posture. Rely on the extensive and deeply peered Lumen global network, Black Lotus Labs' threat intelligence, and our team of experts to help deploy and manage your solution.

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866-352-0291 I lumen.com I info@lumen.com

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