MCNC Helps Protect More than 1.1 Million Students and Educators with Zscaler Zero Trust Security and AWS Marketplace

Overview

MCNC is a nonprofit organization that provides internet connectivity and cybersecurity services to North Carolina's public school units (school districts and charter schools), community colleges, and public and private colleges and universities. Previously, each school district managed its own security hardware and filtering systems, creating inconsistent protection levels and straining IT resources. To solve this, MCNC deployed Zscaler Internet Access (ZIA) and improved operational efficiency in AWS Marketplace procurement.

MCNC offers Zscaler Internet Access to North Carolina public school units as an alternative to locally managed on-premise content filtering systems. Today, a majority of public school units opt into the MCNC Zscaler offering, serving over 1.1 million of North Carolina's 1.5 million public school students.

Zscaler helps MCNC protect students and educators, reduces hardware management requirements by 90 percent, reduces security incident response times from weeks to minutes, and streamlines operations. Procurement was simple and seamless using AWS Marketplace.

Modernizing Security Across North Carolina's Education System

MCNC serves as the digital foundation for North Carolina's educational ecosystem, providing internet connectivity to all K–12 public school units, community colleges, public universities, and a majority of private and independent colleges and universities. A 501(c)(3) nonprofit organization established in 1980, MCNC's mission focuses on strengthening North Carolina's future by making secure, high-speed internet and technology services more accessible to everyone in the state through partnerships, collaboration, and innovative solutions. For the education sector, this mission translates to connecting educational institutions to the internet while offering essential cybersecurity services that protect students and maintain regulatory compliance across diverse geographic areas and resource levels.

About MCNC

MCNC provides internet connectivity to all public K-12 districts, community colleges, and universities in North Carolina. The nonprofit organization operates and manages the North Carolina Research and Education Network (NCREN), the state's infrastructure for high-speed connectivity, with a fiber-optic network spanning 4,400+ miles.

AWS Services Used

- AWS Marketplace
- AWS Identity and Access Management

Benefits

- 90% – reduction in hardware management requirements for school districts
- 60% – faster onboarding for new educational institutions
- 3 days – procurement cycle time reduced from months through streamlined operations

“Purchasing Zscaler Internet Access in AWS Marketplace accelerated our implementation significantly. The full procurement cycle was complete in under a month, and now our renewals take just three days.”

Phil Emer

Vice President of Business Development and Innovation, MCNC

In 2005, the State of North Carolina initiated the School Connectivity Initiative (SCI) to ensure equitable access to the Internet for all K-12 public school units. The SCI now provides more than $40 million in annual state appropriations that complement federal E-Rate funding. It also supports services that ensure capacity grows with usage and that public school units have access to shared content filtering and other cybersecurity services. Before adopting a cloud-based approach, North Carolina's educational institutions relied on a fragmented security infrastructure where each school district independently managed hardware-based content filtering systems. This decentralized model created significant challenges: inconsistent protection levels across schools, substantial maintenance costs for aging equipment, and increased technical burden on already-stretched IT staff. When hardware failures occurred, entire districts experienced protection gaps and service disruptions, directly impacting classroom learning and administrative functions.

Beyond operational inefficiencies, the patchwork approach threatened compliance with the Children's Internet Protection Act (CIPA), a critical requirement for the E-rate funding that subsidizes educational connectivity. School districts struggled to maintain consistent filtering policies while adapting to evolving cybersecurity threats and internet usage patterns. Without CIPA compliance, schools risked losing millions in essential E-rate discounts that made internet access financially sustainable across the state.

“While we addressed the financial and connectivity barriers to equitable connectivity across the State in 2009-2010, we soon found that by increasing district-level bandwidth, locally deployed content filters required upgrades to match the growing Internet pipes and usage. MCNC’s Dave Furiness led our effort to provide a content filtering shared service that would be an alternative to locally managed systems that were deployed with varied success across North Carolina public school units and that would help address the ever-growing capacity needs of the on-premises filters," recalls Phil Emer, vice president of business development and innovation at MCNC. The challenge intensified as North Carolina's education system expanded to serve more than 1.6 million students and educators, including a growing number of charter schools joining the network each year after the state legislature removed the 100-charter school cap in 2011. Currently, there are 211 charter schools, a number that is still growing. This increasing scale, combined with rising cybersecurity threats and tightening budgets, called for a modern, comprehensive security approach that could protect all of North Carolina's educational institutions while reducing the burden on individual districts.

Transforming Education Network with a Cloud-Based Solution

MCNC selected Zscaler, an AWS Advanced Technology Partner, for its integrated zero trust security platform that could protect all users, regardless of location, through a single cloud-native service. This approach allows MCNC to deliver consistent security and zero trust access to educational institutions across North Carolina through one unified platform, aligning perfectly with MCNC's vision of making highly secure technology services accessible statewide.

The partnership began in 2014 using traditional procurement methods. In 2024, the company completed its first AWS Marketplace transaction by purchasing Zscaler Internet Access (ZIA). AWS Marketplace makes it easy for customers to find, buy, try, deploy, and manage third-party software, services, and data. Procuring Zscaler in AWS Marketplace enabled MCNC to adopt a more flexible, consumption-based financial model, consolidate software purchasing, streamline renewals, and convert capital expenditures into operational costs that better matched education funding models across North Carolina's diverse school districts.

Zscaler Internet Access (ZIA) provides AI-powered protection for all users and devices, all web and SaaS applications, in all locations. It minimizes the attack surface, stops compromise, eliminates lateral movement, and prevents data loss while delivering comprehensive web content filtering and advanced cybersecurity through a central management console accessible to all participating schools. Unlike traditional hardware-based solutions requiring on-premises equipment at each location, Zscaler's cloud-native approach eliminates physical infrastructure, reduces costs and complexity, and provides consistent policy enforcement across the entire state.

To optimize performance and enhance local control, Zscaler also deployed Private Service Edge instances within MCNC's North Carolina data centers. This extends Zscaler's cloud to an organization's premises and allows for local traffic inspection and policy enforcement while keeping student traffic processing within state borders. This approach aligns with MCNC's commitment to providing efficient, secure services tailored to North Carolina's educational institutions.

MCNC purchased the Zscaler solution using AWS Marketplace Private Offers, which allows partners and customers to negotiate custom prices and end-user licensing agreement (EULA) terms for purchases in AWS Marketplace. MCNC's custom agreement with Zscaler, refined over years of collaboration, transitioned seamlessly to AWS Marketplace Private Offers. This accommodated MCNC's unique procurement requirements and preserved specialized pricing and service levels.

Purchasing in AWS Marketplace also reduced implementation time. "Purchasing Zscaler Internet Access in AWS Marketplace accelerated our implementation significantly. The full procurement cycle was complete in under a month, and now our renewals take just three days," says Emer.

MCNC also integrated AWS Identity and Access Management (AWS IAM) workflows to ensure proper governance, with the organization's finance team gaining direct access for improved visibility and control.

Ensuring Online Safety for More than 1.1 Million Students and Educators

Zscaler Internet Access has delivered operational efficiencies across North Carolina's educational institutions. School districts have reduced hardware management requirements by 90 percent, eliminating the need to maintain on-premises filtering appliances at hundreds of locations. More than 1.1 million students—approximately three-quarters of North Carolina's student population—now benefit from consistent zero trust security and real-time content filtering that automatically adapts to emerging threats and changing online behaviors. The unified management console enables district administrators to implement policy changes instantly across all their schools, reducing response times from weeks to minutes when addressing new security concerns or adapting to curriculum requirements.

Beyond operational efficiencies, the shift to AWS Marketplace reshaped MCNC's procurement and financial models. The procurement process that once took months now takes just days, with the organization leveraging AWS Marketplace Private Offers to maintain its unique licensing arrangement. Moving to AWS Marketplace helped MCNC optimize costs and allow them to strategically reinvest in new cloud and data services.

Equally important, the new model reinforces compliance while supporting growth. The solution ensures continuous CIPA compliance across participating districts, protecting their essential E-rate funding that subsidizes connectivity costs. Onboarding new educational institutions has accelerated by 60 percent, supporting North Carolina's expanding network of charter schools, which typically lack the IT resources of larger districts. The streamlined deployment process allows MCNC to provision filtering protection for a new school in hours rather than weeks, so students are protected from their first day online. This scalability has proven particularly valuable because North Carolina adds 6–8 new charter schools annually, each requiring immediate, compliant internet security.

The successful implementation has attracted attention from education networks nationwide seeking similar models for their states. “This partnership between MCNC, Zscaler, and AWS has set a new standard for secure, equitable internet access—one that's being replicated across the country,” says Eddie Potter, regional sales manager at Zscaler. “We're actively engaged with research and education networks in multiple states that recognize the transformative potential of this cloud-based, centrally managed approach.” MCNC continues expanding its AWS footprint and is currently developing additional cloud-based data services that will adopt the same AWS Marketplace procurement model that proved so effective for security services.

About AWS Partner Zscaler

Zscaler, an AWS Advanced Technology Partner, has been a leader in zero trust for over a decade and has six AWS Competencies, including the AI Security specialty. The Zscaler Zero Trust Exchange helps protect thousands of customers from cyberthreats and data loss by securely connecting users, devices, applications, and workloads. Distributed across 160+ points of presence globally and in most AWS regions, including AWS GovCloud, the Zero Trust Exchange provides cyberthreat protection, data protection, risk management, and zero trust access controls.