

Virginia school district serves 27,000 students with AI-driven Wi-Fi



Newport News, Virginia, has a rich history of shipbuilding for the U.S. Navy and commercial companies. The city’s 27,000 public school students follow in the tradition of hard work and success with a focus on preparing to be college-, career-, and citizen-ready.

Newport News Public Schools’ graduation rate is above average in Virginia and has steadily been increasing for many years. Student success is supported by an AI-driven wireless network from Juniper.

OVERVIEW

Company	Newport News Public Schools (Virginia)
Industry	Education
Products Used	AP12, AP43, AP63, Wi-Fi Assurance, MX204
Region	Americas

CUSTOMER SUCCESS AT-A-GLANCE

5 Hours

For IT team to install 35-40 APs with AI-driven operations

10x

Improvement in wireless network coverage

Wi-Fi 6

Improved network throughput and response times

CHALLENGE

Greater digital demands

The pandemic made 1:1 learning a top priority for many school districts, including Newport News Public Schools in Virginia. When in-person learning resumed in 2021, students brought more devices into the classrooms and teachers continued to incorporate digital resources into learning.

The change put greater pressure on the schools’ wireless networks.

“The students all came back to school with Chromebooks,” says Jim Pike, who has been at Newport News Public Schools for 23 years and been the network engineer for the past five years.

But the IT team was prepared for higher digital demands, with a complete wireless LAN refresh nearing its completion. The move to Wi-Fi 6 would improve network throughput and response times to better support digital learning and help prepare students for the state’s mandated assessments.




SOLUTION

10x improvement in wireless coverage

Newport News Public Schools deployed the Juniper Wireless Access solution, driven by Mist AI, for Wi-Fi that's predictable, reliable, and measurable. Juniper AP43 and AP12 access points deliver fast, reliable connectivity in schools and administrative sites, while Juniper AP63 APs provide outdoor Wi-Fi.

"Juniper is a night-and-day difference from our previous wireless LAN," says Pike. "We saw a tenfold improvement in wireless coverage."

Juniper cloud services, including Juniper Mist Wi-Fi Assurance and Juniper Marvis Virtual Network Assistant, give IT clear visibility into the user experience and can speed troubleshooting when issues arise.

"People always blame the network when their devices don't connect," says Pike. "With Juniper and Marvis, we have the tools to see if it's really a problem with the network or something else, like a client driver, and resolve it quickly."

Pike also notes that the Mist dashboard gives him visibility and control over network traffic, allowing him to restrict non-school-related traffic to ensure a safer and more focused learning experience.


OUTCOME

Building a path to college, career, and the future

The Juniper wireless network is meeting the expectations of Newport News students and teachers.

High-performance Wi-Fi 6 is available in every classroom, and every student can stream YouTube to their Chromebooks.

"Teachers are happy they can use wireless all the time," he says. "We don't have to tell them to plug in anymore when the wireless is slow."

Reliable Wi-Fi is essential during Virginia's standards of learning (SOL) assessment. "In our validation testing prior to this year's assessment, two Juniper APs could support 1000 connections," says Pike. "Last year, we needed to put in an additional five APs to test 120 kids" using the older WLAN technology.

Wi-Fi adds convenience to sporting events and other community gatherings, allowing the concession stand to use a mobile payment system. Parents and board of education members have access to guest Wi-Fi.



"Marvis and Mist AI help us proactively solve problems for our users."

Jim Pike
Network Engineer, Newport News Public Schools

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