

Sentara provides quality healthcare for 850,000 members with tech innovation



Sentara Healthcare, a not-for-profit health organization, provides care in more than 100 sites across Virginia and North Carolina. For more than 20 years, Sentara has earned Best Hospital recognition from U.S. News and World Report and Digital Health Most Wired distinction from the College of Healthcare Information Management Executives (CHIME) for applying advanced technologies to improve healthcare in its community.

As a forerunner in digital innovation, Sentara quickly recognized the advantages it gained by migrating to Juniper networking.

OVERVIEW

Company	Sentara Healthcare
Industry	Healthcare
Products Used	AP45, AP43, AP12, Wi-Fi Assurance, Marvis VNA, MX204
Region	Americas

CUSTOMER SUCCESS AT-A-GLANCE

29,000

Team members support a system of 12 hospitals

20%

Reduction in CapEx

20-30%

Savings in operational expenses with Wi-Fi automation

20%

CapEx savings with cloud-based Wi-Fi microservices

CHALLENGE

Solving healthcare’s biggest problem: the wireless network

When more than 4.5 million COVID patients filled ERs and ICUs from 2020 to 2022, hospitals were blindsided by their weakest links. Wireless networks, a lifeline for isolated patients, were painfully disappointing and frustrating for all.

“Wireless networks are the biggest problem in healthcare,” says Matthew Douglas, chief enterprise architect at Sentara Healthcare Systems. “COVID showed us how critical Wi-Fi is to patient care and staying in touch with loved ones. Healthcare providers can’t run a successful operation without a modern Wi-Fi network.”

As an IT innovator, Douglas is transforming Sentara’s network. Upgrading the Wi-Fi should be every hospital's priority," he says. "Medical devices, precision medicine, patient experiences, and frictionless check-ins are all part of providing the best possible care to patients. We can't do that on traditional, controller-based wireless networks."




SOLUTION

Mesh wireless, AI, and IoT are medical game changers

Sentara Health is migrating its 12-hospital system to the Juniper Wireless Access solution, driven by Mist AI. Juniper Mist provides a robust suite of cloud-based microservices that support Wi-Fi 6, IoT, AI, automation, and location-based services.

Sentara Health also uses Juniper MX204 Universal Routing Platforms for highly resilient, carrier-grade connectivity among its hospitals, clinics, and office locations.

Reliable Wi-Fi performance is a foundation for new services such as wayfinding, medical device tracking, and digital patient check-in. Juniper AP45, AP43, and AP12 High-Performance Wireless Access Points support the working needs of the clinical and administrative staff as well as the fleet of mobile carts that allow clinical staff to provide care wherever patients are located in the hospital.

AI-driven operations assure excellent user experiences and simplified network operations. With the Marvis Virtual Network Assistant plain-language conversational interface, the IT team has extensive visibility into service levels and can proactively identify and solve Wi-Fi issues that might create poor performance and security gaps.


OUTCOME

AI Ops are a launchpad for telehealth and precision medicine

When Sentara Health relied on a controller-based wireless network, it struggled with outages and performance issues due to network saturation. The IT team no longer deals with those problems.

Automated configuration got the Wi-Fi network into production in minutes. A Juniper network has led to big savings, with Douglas estimating 20% to 30% in OpEx savings and a 20% reduction in CapEx.

“We’re able to cover twice the square feet with Juniper that we could with traditional Wi-Fi technology,” he says.

Douglas is proud of the cost savings, but says his biggest wins are innovation and modernization.

“Juniper supports Wi-Fi 6, which is what the nurses’ handhelds use,” he says. “Juniper has asset tracking that works, which means wheelchairs and infusion pumps won’t go missing. We can also start planning for wayfinding and contact-free registration to enhance patient experiences.”

Douglas continues: “Juniper technology modernizes our patient care, enabling precision medicine and telehealth, and hopefully extending human life.”



“The foundation of patient care today is technology, and Juniper is the leading innovator in wireless. Nobody is even close to Juniper when it comes to modernizing wireless.”

Matthew Douglas
Chief Enterprise Architect, Sentara Healthcare

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