Upgrading Healthcare Wi-Fi Networks for the Future of Patient Care

Healthcare providers are facing increasing pressure to upgrade their Wi-Fi networks to accommodate the rapidly evolving needs of modern medical environments. Atlantic Health System, based in northern New Jersey, is one such organisation that proactively addressed these challenges by replacing its legacy network with a Juniper Mist Wi-Fi 6 infrastructure. This new network, equipped with cloud management and artificial intelligence (AI) capabilities, positions the organisation to handle both current and future demands. As healthcare continues evolving with more connected devices and real-time data transmission, robust Wi-Fi networks are essential for patient care, operational efficiency, and cybersecurity.

Meeting the Growing Demand for Wireless Connectivity

As medical devices rely increasingly on strong and stable network connections, healthcare organisations must ensure their infrastructure meets these demands. Atlantic Health System's decision to upgrade to Wi-Fi 6 was driven by the increasing number of connected devices and the need for more reliable, high-speed data transmission. The Internet of Things (IoT) is increasingly critical in healthcare, with devices like monitoring systems, handheld medical tools, and mobile workstations requiring constant network access. These devices allow healthcare professionals to monitor patient data in real time, improving both the quality and timeliness of care. The upgraded Wi-Fi 6 network supports not only these devices but also the organisation's expanding services, including multiple hospitals, urgent care centres, outpatient facilities, and rehabilitation services. This proactive approach ensures that the organisation is prepared for the continued growth of medical technologies and patient demands.

Leveraging AI and Cloud Management for Operational Efficiency

Atlantic Health System's shift to a cloud-managed Wi-Fi network with AI-driven capabilities marks a significant strategic evolution in healthcare network management. The Juniper Mist platform offers cloud-based management tools that provide greater flexibility and operational control than traditional on-premises solutions. One of the standout features of this platform is the Marvis AI engine, which automates troubleshooting tasks. In healthcare settings, where network downtime can have critical consequences, such automation is invaluable. By identifying and resolving connectivity issues in real time, AI reduces the burden on IT teams and minimises disruptions in clinical operations. The AI capabilities also allow for predictive analytics, helping the IT department anticipate potential issues before they impact the network. This improves the network's reliability and frees IT teams to focus on higher-level tasks, such as innovation and improving patient care.

Expanding Capacity and Enhancing Security

The need for expanded network capacity is a growing concern in healthcare as the number of connected devices continues to rise exponentially. Atlantic Health's Wi-Fi 6 upgrade dramatically increased the system's capacity, enabling more devices and applications to function without network slowdowns or connectivity issues. This capacity expansion is critical in a healthcare environment where seamless communication and real-time data sharing can be a matter of life and death. The new network infrastructure also enhances cybersecurity, offering more secure virtual network configurations. With the sensitive nature of healthcare data, including patient records and medical history, protecting this information is a top priority. Wi-Fi 6 networks provide advanced encryption and better network segmentation, ensuring that sensitive data remains secure while allowing for smoother day-to-day operations. Atlantic Health also leveraged Bluetooth low-energy services as part of the Juniper Mist platform. It uses real-time location systems to track physical assets within its facilities, further enhancing operational efficiency and security.

Conclusion

In the ever-evolving healthcare landscape, upgrading Wi-Fi networks is no longer optional—it is essential for staying ahead of technological advancements and improving patient care. Atlantic Health System's decision to adopt a Juniper Mist Wi-Fi 6 infrastructure demonstrates a commitment to future-proofing its operations and addressing the growing needs of a modern healthcare environment. By increasing capacity, enhancing cybersecurity, and leveraging cloud management with AI-driven troubleshooting, Atlantic Health has created a robust, reliable network capable of handling today's and tomorrow's demands. As more devices and applications continue to rely on wireless connectivity, a well-

managed and modernised Wi-Fi network is crucial for delivering top-notch patient care, ensuring seamless communication, and safeguarding sensitive data. For healthcare organisations, investing in upgraded Wi-Fi infrastructure is a strategic move that enhances both operational efficiency and the overall patient experience.

Source: HealthTech

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Published on : Sun, 8 Sep 2024