



# How Appalachian Regional Healthcare nursed their network back to health

Operating a network of more than 100 hospitals and clinics—as well as retail pharmacies, home durable medical equipment stores and home health operations—located in very rural areas of Kentucky and West Virginia has made Appalachian Regional Healthcare (ARH) indispensable for the 400,000 lives that depend on this not-for-profit health system. The organization required a redundant network that would guarantee high-speed connectivity and zero downtime. ARH wanted a partner that would be with them every step of the way—from the server room to the emergency room—to maintain uninterrupted experiences for their physicians and patients.

## At a glance



### Industry

Healthcare

### Customer

100+ hospitals and clinics

Locations in Kentucky and West Virginia

6,000+ employees

### Challenges

Insufficient bandwidth

Inadequate resiliency

Lack of network visibility

### Windstream Enterprise Solutions

High Availability SD-WAN Concierge™

Wavelength Services

High Bandwidth Ethernet Fiber

Cable Broadband

### Results

Greater network diversity

High bandwidth and reliability

Reduced network outages

More time for strategic initiatives

## Network connectivity in need of a lifeline

ARH has always been first to respond to the changing demands of rural healthcare. As the largest provider of care and single largest employer in southeastern Kentucky, as well as the third largest private employer in southern West Virginia, ARH has continuously invested in new technology and medical capabilities to carry out its mission of improving the health and well-being of all people within their surrounding community.

The rural nature of ARH’s hospitals and clinics had contributed to a discernible challenge of acquiring consistent connectivity and network redundancy to support their employees and patients. So, when ARH began implementing an Electronic Medical Records (EMR) application into their network, the organization knew network connections at many locations would not support new high-bandwidth demands. Because locations were single-threaded and lacked the redundancy of having a second connection, outages were not uncommon.

On top of that, ARH was lacking the visibility necessary to monitor networks proactively, resulting in reactive

responses to outages and network issues. They needed a solution stat—one that encompassed monitoring and maintenance from a Network Operating Center (NOC) to ensure all locations were always up and running. ARH knew they wanted a solution that would integrate all of their facilities into a single network to streamline infrastructure management moving forward.

**“Windstream Enterprise is unlike a typical telco provider. They are easy to connect with, understand our business and help us think outside the box.”**

Mike Roberts, CTO, ARH

## Going under the knife

ARH had already diagnosed the geographic problems impeding its network’s ability to deliver high-speed connectivity on a single connection. When they chose to reach out for help, Windstream Enterprise was quick to answer the call and start laying the groundwork for a healthy, connected future.

Working closely with ARH's IT team, Windstream Enterprise implemented Wavelengths Services, a solution with point-to-point connections that would deliver virtually unlimited bandwidth between their 13 primary hospitals and the offices in the surrounding campuses.

Windstream Enterprise deployed High Availability SD-WAN Concierge™ at 37 additional locations, including two data centers and two system centers. All SD-WAN locations were provisioned with two diverse access connections, Ethernet as primary and cable broadband as secondary in an active/active configuration. Not only would the dual access connection deliver the additional bandwidth and reliability to support ARH's new EMR application, the automated failover of active/active would prevent any life-threatening network outages. And because many of the rural locations lacked options for fast, reliable Ethernet, Windstream Enterprise had also agreed to build out fiber into multiple locations to expand their network footprint.

To complement these other services, the Windstream Enterprise Professional Services team created a NOC to monitor their network and provide help desk support during the early days of implementation. Since then, ARH operates under Windstream Enterprise's Elite NOC—a world-class service upheld by highly experienced analysts—as part of a fully monitored and managed solution.

Quickly after Windstream Enterprise provided this tailored prescription for ARH's network obstacles, the company started noticing improvements. Even more promising was that the technology

was easy to use, providing confidence and accuracy into their network's bandwidth and uptime.

From there, ARH became heavy users of WE Connect—a customizable portal that provides total visibility and control for the SD-WAN network. ARH's IT team utilized the portal to identify issues by location and regularly analyze the utilization of circuits.

## A clean bill of health

Ever since administering a strong, reliable network foundation through Windstream Enterprise's SD-WAN services, ARH has experienced a significant reduction in outages across their locations nestled amongst the Appalachian Mountains. When any circuit goes down at any of the locations, the second circuit kicks in to keep the location running to prevent disruption.

The additional bandwidth and resiliency provided by Wavelength Services and High Availability SD-WAN solutions has significantly improved the experience for the ARH medical team and their patients. Doctors can get to EMR records quicker; less wait time translates to less frustration and chaos for doctors and patients alike.

ARH's IT team has been thrilled with the level of accountability and support provided by the Windstream Enterprise account and Elite NOC teams.

“Windstream Enterprise has been a true business partner to us. They have local presence, are always accessible and highly responsive to our needs,” said Patterson. “They were willing to invest in our future.”

Support for ARH's success came at every level. “It has been extremely beneficial to have Windstream Enterprise executive sponsor, CEO, Tony Thomas engaged in our business,” said Mike Roberts, CTO, ARH. “When we have any issues, he is easy to engage, quick to respond and gets us the resources we need.”

***“The WE Connect portal and Insight Engine is a powerful, easy-to-use tool that keeps us informed on network performance and helps us troubleshoot issues.”***

**Troy Patterson,**  
Telecommunications Manager, ARH

Backed by a resilient and reliable network solution—and with a leading team of experts for 24/7 support—ARH's network is fully alive and kicking. The promise of providing an unparalleled experience as the most trusted home for healthcare is undoubtedly being fulfilled.

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connectivity,  
communications and  
security—guaranteed.

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