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>
> Justin Whipple, Director of Operations at Benton County ECD

Company name:
Area Wide Communications, LLC (AWC)

Company size:
1-50

Industry:
Communications

Company website:
areawidecomm.com

Geographic region:
Benton County, TN in West Tennessee

Benton County takes care of citizens with a fast, reliable high-bandwidth network

SUMMARY

When it comes to emergency services, there is no room for downtime, and that includes having networks that are 100 percent reliable, and able to cope with growing amounts of voice and data traffic. Plus, as taxpayers' money is involved, network equipment needs to provide value for money. The M4300 series of network switches from NETGEAR — provided by Area Wide Communications (AWC) — addresses all those needs for Benton County Communications District 911.
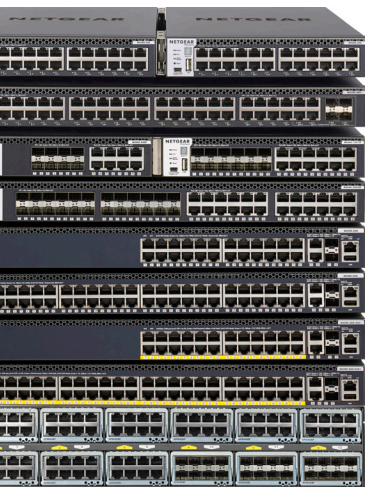
BACKGROUND

Area Wide Communications (AWC) was established in 1992 in Medina, Tennessee, and offers sales and support to customers across the Western part of the state. The company specializes in emergency services and other organizations with mission-critical requirements, such as electricity providers. AWC offers a wide range of products and services, including two-way radios, emergency 911 call-taking systems, tornado sirens, emergency vehicle outfitting and more.

One of AWC's customers is Benton County 9-1-1 Emergency Communications District (ECD), which supports law, fire and medical response agencies in the county. It accomplishes this by providing Next Generation (NG) 911, a nationwide initiative aimed to move systems still based on analog into the digital world. Benefits include more resiliency and a seamless flow of voice, photos, videos, and text messages from the public to the 911 network.

Part of being an early adopter of NG911 includes Benton County's introduction of text-to-911. This is ideal for citizens who cannot make a phone call, whether that is because they do not want to be overheard, or because they have hearing or speech problems.

CHALLENGE

When Benton County ECD contacted AWC to upgrade its existing switch system to align with its continued NG911 evolution, it had an essential need: a fully redundant system. Like any emergency service organization, the risk of outage and downtime simply was not an option, so that needed to be factored into the design.

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> Sherrill Belew, President of Area Wide Communications

A second requirement was to build in the bandwidth that NG911 demands. Says Sherrill Belew, President of Area Wide Communications: "Video and screen-captures take up a lot more bandwidth compared to just voice, particularly as they need to be recorded and stored. That puts more pressure on the network." So, in addition to replacing any legacy analog equipment, a few existing switches needed to be replaced with more powerful models.

A third but very important consideration was budget, as Sherrill Belew explains, "Customers like Benton County need a system that not only passes approval by the board, but also has room for growth. We aim to provide systems that have a good ten years."

SOLUTION

A core part of AWC's recommendation to Benton County ECD was to deploy NETGEAR M4300 network switches to support its main three locations where the dispatch teams are based: the sheriff's department, the police department, and the Emergency Management Services (EMS) center, plus a fourth location where the network switches are installed. Says Sherrill Belew, "We've been a NETGEAR partner since 2015. We only work with products that meet our criteria of redundancy, reliability and cost: NETGEAR provides all those."

With the M4300s, AWC has been able to build a network with full fail-over between locations, so that if one switch goes down for any reason, another takes over. Due to the high capacity of the M4300s — 1Gb, 10Gb and even 40G — routing high volumes of traffic is not a problem, even as demands on the network grow in the future. Sherrill also cites the cost-effectiveness of the M4300 Series: "They provide a lot of performance and functionality compared to much larger switches, and without the complexity that those can bring."

INSTALLATION

Once the proposal got the seal of approval, installation took place across approximately six weeks in Spring 2020, with different cutover dates for each location, which are connected by T1 lines and microwave connections, with gateways, static routing and VLANs directing traffic to the right place. The net result is a dual switch network, with complete failover recovery and power back-up.

Says Sherrill: "We built the entire system off-site, and then deployed it in stages from there. Our team knows what to expect from the M4300s, and there were no issues. Disruption to Benton County ECD was minimized. We did not need to use the M4300's preconfigured settings in this situation, but they've been useful for another customer, who needed to get some new switches operational very quickly."

RESULTS

As well as full fail-over and room for expansion in the future, additional benefits have already become apparent. Sherrill Belew explains: "The customer has already experienced huge improvements in communications and network speeds. Plus, Justin Whipple, Director of Operations at Benton County ECD, can be in his office, see everything that is happening in the network, and deal with any issues, without having to drive across town."

Adds Justin Whipple, Director of Operations at Benton County ECD: "The project went as smoothly as possible. The installation was flawless. The switches and all necessary equipment are operating better than expected."

With the new system in place, Benton County's emergency services can be secure in the knowledge that they are backed by a 100 percent reliable network, which will continue to the serve citizens for many years to come.

CASE STUDY:
Benton County ECD