



## Success Story

Growing Concierge Medical Group Improves Range, Reliability, and Security of Network Using Zyxel Nebula Solution



Healthcare



Diamond  
Physicians



USA



Zyxel  
Nebula  
solution

## Overview

### Challenges

Delivering fast, reliable, and secure wireless connectivity for a growing medical office

### Results

- Fast and easy deployment
- Cloud management
- Premium performance, greater capacity, and more coverage through smart antenna technology
- Reliable wireless connectivity
- Enterprise-level security

### Solution

- Zyxel Nebula Solution

“When we deployed Zyxel at Diamond Physicians, they immediately had an upgrade in their security.”

Bob Kehr  
Chief Technology Officer, Kehr Technologies, Inc.

## Background

Diamond Physicians is a membership concierge medical group with three locations in the Dallas-Fort Worth area. The group, established in 2012, has a mission to provide affordable, round-the-clock healthcare services by limiting fees to the true cost of care.

According to Dr. James Pinckney II, chief executive officer and founder, Diamond Physicians currently employs five doctors and 15 staff members. The medical group uses technology to eliminate barriers to care by allowing their clients to communicate securely with their doctor via text, video chat, or phone.

## Challenges

### **Lack of Reliable, Secure Wireless Network Connectivity Throughout Medical Office**

Diamond Physicians heavily leverages technology to deliver state-of-the-art services to its clientele. To achieve this, their office network must not only deliver maximum performance and reliability, but also create a secure, HIPAA-compliant wireless environment. "We're always looking for cutting-edge technologies that can help us improve from a security standpoint, from a connectivity standpoint, from a speed standpoint," Dr. Pinckney explained.

"My clients and I need to be able to connect to the network with our various mobile devices when we're in the office," he added. "We use a lot of touch screen applications on the iPad and often present data on a big screen television. I need instant connectivity; if I'm working with a client or doing a presentation for a Fortune 500 company, I can't have any performance issues with my network."

Last year, according to Pinckney, the medical group began to realize it had wireless network issues after they

### **Kehr Technologies, Inc.**

Headquartered in Plano, Texas and founded in 2005, Kehr Technologies, Inc. is a managed service provider that delivers a comprehensive suite of information technology products and services to small- and medium-sized businesses. Kehr Technologies maintains HIPAA compliance; 25 percent of its clients are in the medical industry. According to Bob Kehr, chief technology officer, the company's specialization in operating systems, networks, and databases enables them to provide a technology solution for just about any challenge a business would encounter.

expanded their 2,100-square-foot office to 3,000 square feet. "I wasn't able to receive a signal in my own personal office, which [had been] relocated to an area furthest away from our telecom closet," he said. This dilemma would later be amplified by a planned addition of 1,500 square feet to the office space.

Pinckney was also interested in having all of their offices connected seamlessly and securely, so that data could be shared between physicians and clients at any location and any time without the risk of it being hacked or intercepted.

"With the network failing, we were forced to figure out a different solution to keep our premium Diamond Physicians brand from being adversely affected," Pinckney said. "I had to make an immediate change."

Kehr Technologies' expertise in both network technology and the complex security and compliance requirements of the healthcare industry made it the ideal managed service provider for the medical group.

## Solutions and Benefits

### **Improved Range and Reliability, Proactive Management to Eliminate Network Downtime**

There were a number of requirements that were considered in the selection of the network equipment for Diamond Physicians, recalled Kehr. The wireless LAN needed to use the faster 11ac standard to support the many

bandwidth-intensive applications used by the company. The solution also needed to deliver extended range and seamless roaming to provide connectivity to all client devices throughout the office space.

The Zyxel **NSG200 Nebula Cloud Managed Security Gateways, NSW100-28P 24-Port Gigabit Ethernet Nebula**

**Cloud Managed PoE Switches, and NAP303 802.11ac Dual-Radio Smart Antenna 3x3 Nebula Cloud Managed Access Points** were selected to provide the secure, high-performance, cloud-managed solution at Diamond Physicians. Kehr said that product quality, cloud management, and technical support are the reasons that he deploys Zyxel solutions.

"Nebula has given us a lot of visibility into what's happening on the client's network, and it allows us to make changes on the fly without having to actually be on site or remote into a client computer," he said. "When we go on site it's a matter of bolting the equipment into the rack, plugging it in, connecting the cables, and we're good to go. It's really very simple—a very efficient way to actually install the equipment because we can configure everything ahead of time and it's just plug and play."

Kehr also outlined how the Nebula solution swiftly delivered benefits to the medical office. "When we deployed Zyxel at Diamond Physicians, they immediately had an upgrade in their security," he said. "The wireless LAN gave us much better reach and reliability, and we found that the connectivity within the building for all devices was greatly improved. We even use the PoE switch to provide both power and connectivity to the desk phones."

"Nebula helps us to be much more efficient in the way we service our clients," revealed Kehr. "We can access the network from anywhere, and in many cases, we know



when there's a problem with the network before the client realizes it. This enables us to take proactive steps to resolve problems before they impact the network. It's an enterprise-grade solution, even though the pricing isn't necessarily what you would expect for the value you're getting."

"[Kehr Technologies and the Zyxel Nebula solution] were able to improve our network, improve our connectivity, improve our security, and it's just been a beautiful relationship that really has boosted the value of our business," said Pinckney. "The clients may not see it, but when they're in our office they know that they are in an environment that is secure and basically unhackable."



## Products Used

### NSG200 • Nebula Cloud Managed Security Gateway



- Complete network, security, and application control from anywhere via the cloud
- Zero-touch site-to-site VPN
- Secure networks with IDP and Application Patrol, Content Filtering, and Anti-Virus
- Built-in DHCP, NAT, QoS, and VLAN management
- Static route and dynamic DNS support
- Identity-based security policies and application management
- Cloud management and cloud statistics

### NSW100-28P • 24-port Gigabit Nebula Cloud Managed PoE Switch



- Essential L2 features with user-friendly ACL and VLAN configuration
- Optimized for quality voice and video traffic with high 375 watt power budget PoE technology
- Support Port Mirroring for network traffic monitoring
- Support DHCP Server Guard and IGMP snooping
- RADIUS, static MAC forwarding, and 802.1X authentication

### NAP303 • 802.11ac Dual-radio Smart Antenna 3x3 Nebula Cloud Managed Access Point



- Cloud-managed dual-radio 3x3 MIMO 802.11ac AP
- Supports combined data rates of up to 1.75 Gbps
- Smart antenna provides breakthrough performance
- Self-configuration and zero-touch deployment
- Enterprise-class security and RF optimization
- Dynamic channel selection, load balancing, and smart client steering
- Industry-leading receiver sensitivity as low as -102 dBm
- Tool-less bracket design for streamlined installation

## About Zyxel Communications

Focused on innovation and customer-centricity, Zyxel Communications has been connecting people to the Internet for nearly 30 years. Our ability to adapt and innovate with networking technology places us at the forefront of creating connectivity for telcos and service providers, business and home users. Zyxel is building the networks of tomorrow, unlocking potential, and meeting the needs of the modern workplace — powering people at work, life, and play. Zyxel, Your Networking Ally.

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