

THE TOP FIVE ADVANTAGES OF HYBRID PACKET-OPTICAL NETWORKS FOR HEALTHCARE

Healthcare providers face enormous difficulties as they strive to keep pace with the demand for new digital health services and applications, devices, data backup, security, and privacy requirements.

Many providers find the currently separate networks they rely on for voice, data, video and storage are costly and cumbersome to maintain. At the same time, managed service solutions tend to be inflexible and slow to respond, and can come with a hefty price tag.

This is why healthcare providers are turning to hybrid packet-optical networks to deliver the intelligence, efficient speed, performance, and capacity needed to meet the demands of healthcare applications and services. Hybrid packet-optical networks enable healthcare providers to leverage cloud services for a broad range of operational applications and services, delivering greater agility along with advanced security features such as encryption to protect data-in-motion. Those same organizations also gain the ability to leverage private packet-optical network functionality that bypasses the Internet for specialized applications and services that require the highest levels of security and patient privacy protection.

Considerations for Building a Healthcare Private Optical Network

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The virtually endless capacity and low latency of packet-optical networks ensures high-quality delivery of bandwidth-intensive applications. This type of network enables providers to integrate administrative and clinical applications seamlessly over a single high-speed network.

This is precisely what the Lehigh Valley Health Network, based in Allentown, Pennsylvania, did—consolidating disparate networks that once carried data, voice, storage information, and video traffic onto a single converged private optical network. Iowa Health Systems (now called UnityPoint Health) also deployed its own private optical network to connect 11 affiliate hospitals, 14 rural hospitals, 125 physician clinics, and 80 communities throughout Iowa, western Illinois, and southern Wisconsin. And the Baptist Health System in San Antonio, Texas implemented a private network to provide redundant 10G interconnection among all locations, including a backup site in Philadelphia.

These and other healthcare providers have found packet-optical networks can help resolve their biggest capacity, performance, and bandwidth demand headaches. Following is a list of the top five advantages these high-performance networks deliver for healthcare providers:

- 1. Carrier-grade resiliency and reliability** to ensure delivery of critical healthcare applications
- 2. Bandwidth capacity** to support new medical technology, applications, and devices, with scalability to support future requirements as they arise
- 3. Flexible connectivity and full security** to protect patient privacy and security in compliance with HIPPA. **Covered Entities and Business Partners** can work with providers to configure their hybrid networks to comply with NIST guidelines to protect data-in-motion, which may help them avoid penalties in the event of a data breach
- 4. Lower operating costs** by allocating bandwidth based on application requirements. Ciena healthcare customers have achieved savings ranging from \$500,000 to \$4.7 million over five years, when compared to prior managed service contracts
- 5. Rapid investment returns** ranging from as little as nine months to just under 18 months