WHITE PAPER

MODERNIZING IT FOR CONTEMPORARY PRACTICES

Meet evolving healthcare challenges with the right infrastructure

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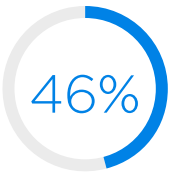
Communication sits at the heart of healthcare. Discussions between patients and providers, access to data to make the right diagnosis, care coordination across facilities — each step benefits from technology that facilitates the secure and streamlined flow of information.

It's fair to say modernizing digital infrastructure has strong ties to improving practice management, effective care delivery and overall competitiveness. However, it is not without challenges.

Practices must protect against the ongoing cybersecurity risks confronting the industry. In the first three quarters of 2020, more than 350 healthcare organizations reported breaches of protected health information (PHI) to the Department of Health and Human Services affecting 19.7 million patients — more than twice the number of breaches reported during the same period of 2019.[1] Cyberattacks can become especially damaging when they involve strictly regulated PHI. Security measures to confront these threats quickly become ineffective without regular updates, and more avenues for attack emerge as systems grow more complex. In fact, 46 percent of healthcare IT leaders in one study rated system complexity as their biggest barrier to data security.[2]



of healthcare IT leaders rated system complexity as their biggest barrier to data security.[3]

Compounding the challenge, many practices face skills gaps and limited IT personnel to protect their networks while simultaneously implementing new applications for patient care. These teams are often challenged to standardize systems during mergers or when adding new locations as practices grow. Their maintenance workload becomes time consuming when legacy solutions lack visibility into, or centralized control of, an expanding network. And, especially in light of the budget strains experienced as a result of the COVID-19 pandemic, any initiative to improve IT operations must strike the right balance between new capital spending and ongoing operational expenses.

As a result, fewer than one in three healthcare professionals strongly agree their organizations are taking the right steps to build a digital infrastructure that will carry them into the future.[4] They say the biggest challenges are:[5]

- Limited budgets.
- Evolving healthcare models and delivery initiatives.
- Exponential growth of connected medical and IoMT devices.
- Staffing (too few and/or skill gaps).

Providers need modern IT solutions that reduce the burden of these challenges by enhancing network capabilities and offering more efficient management as healthcare technology evolves.

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Building blocks for IT modernization

It's important for any healthcare practice modernization initiative to consider the full range of IT infrastructure necessary to keep pace with patient expectations, competitors and the future of medicine. This includes:

Dependable connections: Modern healthcare systems — from cloud-based electronic health record (EHR) platforms to remote patient monitoring — require greater reliability and performance than ever before. Providers must plan for uninterrupted network and internet access for essential applications. Redundant fiber, broadband or LTE-advanced wireless connections are important safeguards for failsafe connectivity.

The communication services that providers deploy must also be able to scale, as patient and provider satisfaction become tied more closely to the digital experience and performance of connected applications. Fiber solutions and dedicated internet access offer flexible, resilient options that can evolve with your practice. With more services relying on video calls, digital voice and instant access to patient records, routers are necessary to optimize and prioritize the fast-growing volume of internet traffic. IT teams need platforms that make it simple to manage updates and configuration settings for routers across the organization.

Security solutions: Legacy firewalls are no longer enough. Seven in 10 U.S. healthcare organizations have experienced a security breach from a constantly evolving array of online threats.[6] And with the increase in clinicians and staff working remotely due to the pandemic, the attack surface only grows. Modern network architecture requires flexible security solutions that can meet the unique risk profile of your organization. A trusted solutions provider can create the right combination of on-site hardware, unified threat management (UTM) and DDoS protection that meets your needs, as well as automate firmware changes and patches for managed services that keep them up to date.

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Cloud connectivity: Providers have steadily moved applications to the cloud for simpler remote access, interoperability and more efficient workflows across locations that can reduce the cost of care. Providers can increase the speed and reliability of cloud-based applications with a high-performing and private connection between their organization and cloud service providers, bypassing the public internet for superior performance and security.

Modern networking: Networks have become more sophisticated and complex, and practices often need connections to multiple locations. Capabilities like SD-WAN can improve interoperability among practice locations, enhancing provider satisfaction and creating efficiencies by making it easier to share patient data. Modernizing a WAN or LAN, as well as other network architecture, can be accomplished without adding to the maintenance workload of your IT team. New turnkey solutions for routing, firewalls and WiFi make deployment and configuration of network services fast, simple and easier to manage from the cloud.

of healthcare professionals use mobile devices to help manage their workflows.[8]

WiFi: Eight in 10 medical professionals say they use mobile devices to help manage their workflows and much of this activity is offloaded to the WiFi network.[7] Patients and providers alike rely on wireless access to keep them connected and engaged with their care. Practices are also leveraging WiFi capabilities for safety during the pandemic, for example having patients check in from their cars and enjoying streaming services while they wait. A managed WiFi solution solves for the growth and variety of this internet traffic and can provide proactive monitoring without maintenance overhead or upfront capital costs.

Voice and collaboration solutions: Cloud-based unified communications (UC) eliminates most physical phone network hardware — along with its maintenance — supporting staff and patient communication with cost-effective solutions for voice, video calling and messaging. UC's ability to support mobile clinicians by routing calls across different devices has also become essential as providers and staff move between their desks, exam rooms and even outside the facility throughout the day.

Enterprise TV: A TV solution designed for the needs of healthcare practices and their patients can increase engagement, inform with custom content relevant to their care and enhance the overall experience.

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Managed solutions for more effective IT

With greater capabilities come greater concerns about keeping a complex network architecture optimized and secure. That's the primary reason eight in 10 healthcare leaders say managed services for SD-WAN, WiFi, routers, security and similar infrastructure is critical or very important for their digital health innovation.[9] By offloading hardware maintenance, system updates and network administration to an expert partner, IT teams can focus more time on improving the patient experience.

The top five benefits of managed services cited by healthcare leaders are:[10]

- Improved workflow efficiency.
- Enhanced security.
- Reduced network/administration burden.
- Increased reliability/uptime.
- Acceleration of digital health initiatives like telehealth.

Working with a service provider to customize the right suite of networking and connectivity solutions can be a powerful resource to revitalize IT infrastructure with minimal disruption. Yet only 32 percent of healthcare leaders feel extremely or very confident they are maximizing the value of their vendor relationships.[11] Finding a collaborative partner to build and manage healthcare networks can help organizations discover efficiencies and cost savings they might not realize on their own.

Especially for teams that are IT-lean, a single vendor and point of contact make issue resolution and integration of new solutions easier to manage.

In many cases, it's possible to replace aging hardware by placing multiple network components under the management of a single vendor. This strategy offers several advantages to practices facing IT resource constraints. Especially for teams that are IT-lean, a single vendor and point of contact make issue resolution and integration of new solutions easier to manage. Working with a partner offering solutions across connectivity, networking and security provides an expert resource for better overall system design and management. Going forward, that relationship also provides value and knowledge continuity when providers face IT staff turnover.

All-in-one solutions represent another way to simplify providers' technology infrastructure. Options are available to bring network administration, connectivity, settings and analytics into a centralized, cloud-based dashboard that can greatly reduce the time required to manage network components individually. Firmware updates and security patches can be automated. Adding locations can be as simple as contacting your provider so they can quickly deploy the needed customer-premises equipment (CPE) and configure your network with the new site. Certain solutions can be co-managed or fully managed. This gives IT leaders choice of control and visibility of the network when they want it or the ability to offload maintenance entirely to service providers. Plus, all-in-one hardware can be provisioned without upfront capital costs, shifting IT expenses for modernization into operational budgets.

Experience the benefits of IT modernization

Practices face IT infrastructure challenges that show no signs of abating in the years ahead. Bandwidth demands and reliability requirements can outpace legacy solutions as more patients expect remote services. New healthcare technologies, cloud applications and more connected devices continue to add complexity that makes IT systems more vulnerable to threats. Meanwhile, IT leaders must focus on quality of care and experience to remain competitive, even as administrative concerns pose non-stop demands on their time.

Thankfully, technology also has the ability to address these issues as healthcare leaders prepare for the future. Modernizing IT infrastructure with the right solutions and a dedicated partner can streamline operations, increase productivity and maximize long-term technology investments.

Discover how Spectrum Enterprise can help you modernize your network.

Learn more

1. "Breach Portal: Notice to the Secretary of HHS Breach of Unsecured Protected Health Information," U.S. Department of Health and Human Services Office for Civil Rights, accessed Nov. 4, 2020, https://ocrportal.hhs.gov/ocr/breach/breach_report.jsf.
2. "2019 Thales Data Threat Report Healthcare Edition — Infographic,"Thales Group, 2019, https://cpl.thalesgroup.com/resources/encryption/2019/thales-data-threat-report-healthcare-edition-infographic.
3. Ibid.
4. "Anatomy of Innovation: Six Critical Questions for Healthcare Organizations,"HIMSS Media and Spectrum Enterprise, May 2020, https://enterprise.spectrum.com/insights/resources/reports/anatomy-of-innovation-six-critical-questions-for-healthcare-organizations.
5. "Digital Infrastructure Is Critical for Innovation," HIMSS Media and Spectrum Enterprise, February 2020, https://enterprise.spectrum.com/insights/resources/white-papers/digital-infrastructure-is-critical-for-innovation.
6. "2019 Thales Data Threat Report Healthcare Edition — Infographic," Thales Group, 2019, https://cpl.thalesgroup.com/resources/encryption/2019/thales-data-threat-report-healthcare-edition-infographic.
7. "HIPAA Encryption Requirements," HIPAA Journal, accessed Nov. 12, 2020, https://www.hipaajournal.com/hipaa-encryption-requirements/.
8. Ibid.
9. "Digital Infrastructure Is Critical for Innovation," HIMSS Media and Spectrum Enterprise, February, 2020, https://enterprise.spectrum.com/insights/resources/white-papers/digital-infrastructure-is-critical-for-innovation.
10. "Anatomy of Innovation: Six Critical Questions for Healthcare Organizations," HIMSS Media and Spectrum Enterprise, May 2020, https://enterprise.spectrum.com/insights/resources/reports/anatomy-of-innovation-six-critical-questions-for-healthcare-organizations.
11. Ibid.

About Spectrum Enterprise

Spectrum Enterprise, a part of Charter Communications, Inc., is a national provider of scalable, fiber technology solutions serving America's largest businesses and communications service providers. The broad Spectrum Enterprise portfolio includes networking and managed services solutions: Internet access, Ethernet access and networks, Voice and TV solutions. Spectrum Enterprise's industry-leading team of experts works closely with clients to achieve greater business success by providing solutions designed to meet their evolving needs. More information about Spectrum Enterprise can be found at enterprise.spectrum.com.

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