

POINT OF VIEW

Secure Radiology: The Urgency To Protect Remote Radiologists



Executive Summary

Radiology departments are undergoing widespread industry consolidation, with the industry transitioning to primarily being a digital practice. As a result, they have also experienced an increase in cyberattacks over the past several years. And now, with more radiologists working from home due to COVID-19—often using less secure mobile devices and wireless networks—hackers are more keen than ever to jump at the opportunity to breach their private data.

Radiology groups that work from home are performance-driven, operating on a per-study basis. As a result, a department may read thousands of reports and studies per day. Due to the size and sheer volume of studies, combined with the private nature of the content, radiologists working from home need the same tools and secure connectivity as a hospital, remote clinic, or branch office. However, distributed networks requiring advanced protections can overwhelm IT teams. For maximum efficiency, IT needs to enable all available services, both network connectivity and security, using modern solutions designed for the new world of working from anywhere.

What do you need to make remote radiology reading more successful?

When Brigham and Women's Hospital moved to a pay-for-performance-based model, they realized a nearly 21% reduction in the time between completing an imaging scan and a radiologist signing off on the final report.³ And according to a report in the Journal of the American College of Radiology, physicians were able to close out more than 90% of critical alerts.⁴

This success offers essential lessons for imaging providers in today's rapidly shifting delivery landscape. When considering connectivity solutions designed to provide at-home radiologists with the performance and protections they need, IT teams need to consider the following baseline requirement:

Telehealth will see a compound annual growth rate of nearly 40% between now and 2025. As artificial intelligence (AI) and robotics technologies come into play, reliable, high-speed connections will become increasingly important.¹ Research shows increased provider reliance on telehealth since the COVID-19 pandemic presents a new slate of risks to patient data.²

Fast and safe internet connection

According to [one report](#), radiologists using a PACS workstation at home require a hospital VPN connection of 80 Mbps to achieve approximately the same results as working on-site. However, while this can be achieved under ideal conditions in most markets, connectivity speeds over public networks tend to decrease during peak work hours, especially when more people working from home are using the internet to connect to the office. Speed is also impacted when the home network is being used by others for things like work, e-learning, or streaming data. And while internet speeds as low as 30–40 Mbps may be “acceptable,” they result in noticeable lags, impacting productivity goals.⁵

Advanced secure access service edge (SASE) solutions designed for small offices allow hospitals to provide reliable, high-speed connections for their critical super-users, like at-home radiologists, while ensuring maximum security and optimal user experience. Secure failover to Long Term Evolution (LTE) or 5G connections, for example, help ensure that bandwidth can be seamlessly maintained when traditional internet bandwidth connections become unreliable. And full-stack security, cloud device management, and zero-trust network access help ensure that patient privacy is maintained while fending off determined cyber criminals. Fortinet Next-Generation Firewall and FortiClient VPN deliver a solution that is secure as well as performance driven to improve employee satisfaction with radiology groups.

As many hospitals and healthcare businesses embrace remote work arrangements for the first time, securing remote networks and endpoints has become a primary focus for IT teams.⁶

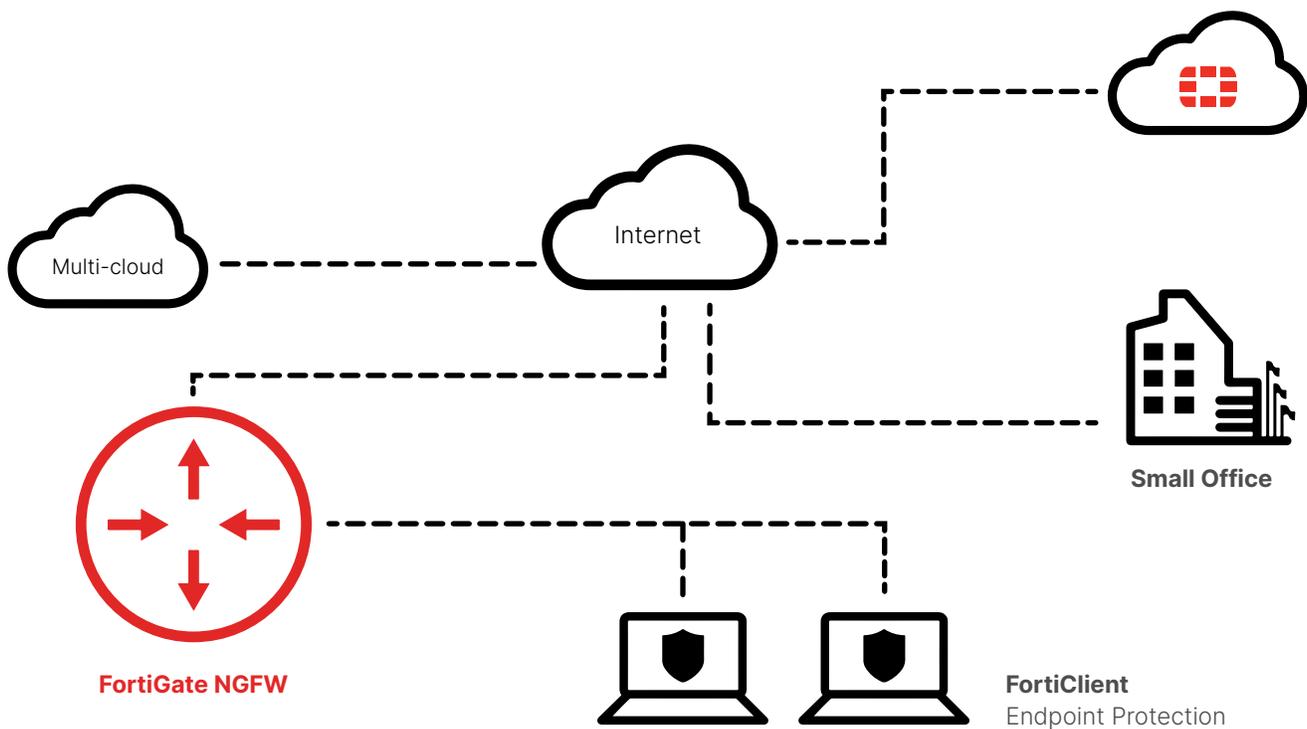


Figure 1: Small office deployment (NGFW).

Conclusion

It is essential for radiology practices to be aware of the growing breadth and depth of healthcare cybersecurity threats and then extend critical data security controls and methods to their remote workers to provide adequate protection to their patients' valuable data. Connectivity and cybersecurity solutions designed for hospital physicians, especially radiologists who need access to large, high-resolution images, must provide an easy-to-use means of working from the safety of their home. And at the same time, they must provide IT staff with streamlined management of all the devices distributed throughout their network. SASE solutions that combine advanced security with reliable connectivity are essential tools for today's increasingly remote medical workforce.

Most importantly, this must not be addressed as a temporary challenge. Even after the COVID-19 crisis subsides—whenever that may be—the productivity and business resiliency benefits enabled by an effective network connectivity and security solution will ensure that hospitals can maintain their position as a leader in technology innovation and continue to attract professionals looking to enjoy the benefits of a pay-for-performance model while working at least part of the time from home.

Contact your Fortinet healthcare security expert to learn more.

Healthcare@fortinet.com

¹“Radiology Patient Outcome Measures: Impact of a Departmental Pay-for-Performance Initiative on Key Quality and Safety Measures,” JACR, July 1, 2021.

² Marty Stempniak, “Pay-for-performance initiative markedly improves radiologists' quality and safety successes,” Radiology Business, January 31, 2021.

³ Ibid.

⁴ “Radiology Patient Outcome Measures: Impact of a Departmental Pay-for-Performance Initiative on Key Quality and Safety Measures,” JACR, July 1, 2021.

⁵ Leona Werezak, “Why Transition to Radiology Reading From Home?” Double Black Imaging, March 23, 2021.

⁶ “Radiology Patient Outcome Measures: Impact of a Departmental Pay-for-Performance Initiative on Key Quality and Safety Measures,” JACR, July 1, 2021.



www.fortinet.com