

SOLUTION BRIEF

FortiGate 60F NGFW Delivers Optimal TCO for Secure SD-WAN Deployments at Smaller Branch Offices

Executive Overview

Many distributed businesses find that their traditional wide area networks (WANs) are unable to scale to meet the bandwidth requirements of digital innovations (DI) such as cloud on-ramping, Voice-over-IP (VoIP), and videoconferencing tools.¹ These innovations greatly increase traffic demands, causing performance bottlenecks as well as increased operating expenses (OpEx) due to exclusive reliance on expensive multiprotocol label switching (MPLS) connectivity.

As a replacement for traditional WAN, network engineering and operations leaders are moving to software-defined wide-area networks (SD-WAN). But many SD-WAN solutions lack robust security, which leads to greater risk exposure and higher total cost of ownership (TCO). FortiGate Secure SD-WAN consolidates robust networking, routing, and security capabilities in a single-box SD-WAN solution. In the case of the FortiGate 60F NGFW, it delivers SD-WAN or SD-Branch capabilities in a single, integrated solution that is optimized for both performance and TCO.

FortiGate Secure SD-WAN delivers the industry's best price/performance with 10 Gbps performance for network firewalls and 700 Mbps for threat protection.²

Branch DI Adoption Requires a Consolidated SD-WAN Solution

Outdated WAN infrastructures rely on an MPLS-based network that backhauls all traffic through the corporate data center to perform centralized security checks and filtering. As bandwidth demands increase with use of the latest cloud-based tools, traffic bottlenecks become more frequent—making for frustrating user experiences at branch and remote locations on the network edge. Beyond its architectural problems, MPLS connectivity is also expensive. And as network traffic continues to grow with ever-expanding DI adoption, operating expenses (OpEx) will increase proportionally using traditional WAN.

SD-WAN has become the de facto solution for many network engineering and operations leaders seeking to replace traditional WAN and provide better performance and reliability, as well as access to more affordable connectivity options. But not all SD-WAN solutions are the same—especially when it comes to security. Basic SD-WAN-only solutions often require multiple point products and supplemental devices to cover individual security gaps, compliance requirements, and critical network functions. This not only increases capital expenses (CapEx) and infrastructure complexity but it also exposes the organization to greater risk of a malware infection or security breach.

Alternatively, an SD-WAN solution that consolidates intelligent networking features and advanced defensive capabilities in one device offers network engineering and operations leaders a better option for more effective and secure implementations. And FortiGate Secure SD-WAN offers exactly this sort of solution.

FortiGate 60F NGFWs: Secure SD-WAN for Smaller Branch Networks

FortiGate Secure SD-WAN delivers SD-WAN networking, routing, and advanced security in a single, consolidated solution. While FortiGate 100F devices support larger branch office deployments, FortiGate 60F NGFWs deliver Secure SD-WAN and SD-Branch capabilities for smaller distributed branch offices.

The FortiGate 60 NGFW is the fastest and most powerful desktop SD-WAN appliance on the market. The latest release delivers significant performance increases by leveraging the Fortinet SOC4 SD-WAN ASIC, which gives network engineering and operations leaders greater visibility into business applications and enhanced performance without compromising on security. The integrated capabilities of the FortiGate 60F NGFW deliver:

- Outstanding quality of experience (QoE) for users with industry-leading TCO
- Critical features that ensure correct identification and routing of traffic
- Advanced security capabilities designed for network edge deployments

In NSS Labs testing, FortiGate Secure SD-WAN showed high performance for cloud applications and achieved high scores for VoIP and video—demonstrating resilient and uninterrupted user experience during WAN link failure.³

Simplified Management, Integrated Security, and Lower TCO

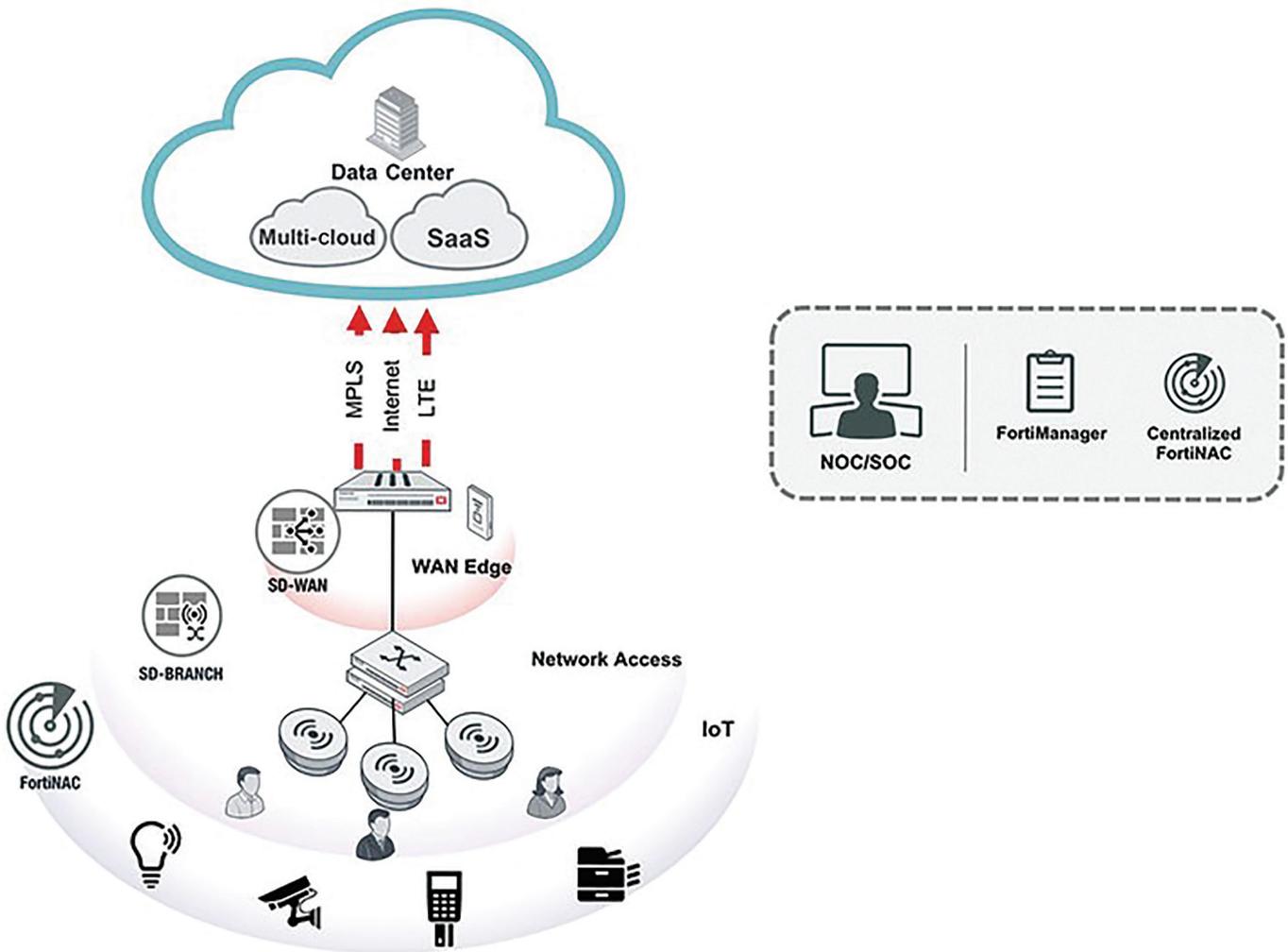


Figure 1: SD-WAN lays the foundation for organizations to extend WAN-edge transformation to SD-Branch, which consolidates networking and security into one solution.

Industry-leading security performance and threat protection

With nearly three-fourths (72%) of all network traffic being encrypted⁴ and 60% of malware using encryption to infiltrate networks and exfiltrate data,⁵ secure sockets layer (SSL)/transport layer security (TLS) inspection capabilities are now a must-have for branch offices in order to minimize risk exposure. The FortiGate 60 leverages security-driven networking principles to deliver the fastest application steering and deep inspection of SSL/TLS encrypted traffic—threat protection that is two times faster than competitors.⁶

The FortiGate 60 NGFW also delivers the lowest possible performance degradation. This is a clear differentiator, as many SD-WAN solutions do not scale when encryption inspection is turned on. As a result, organizations must purchase additional WAN optimizers to offset the degradation that occurs when SSL/TLS inspection is turned on. This increases CapEx costs and requires more OpEx management resources. And in instances where these performance problems are not addressed, service-level agreements (SLAs) associated with certain applications can be put at risk.

Traffic identification and routing capabilities

After Fortinet encryption inspection checks and identifies SSL/TLS packets, traffic can then be prioritized and routed based on user, devices, and applications. This intelligent application awareness makes optimal use of affordable connectivity options and network bandwidth, delivering outstanding QoE for network users.

As organizations extend cloud applications and infrastructure to the edges of the network, this creates QoE challenges due to network bandwidth constraints. Basic SD-WAN solutions lack these types of advanced capabilities. However, the FortiGate 60 NGFW solves these issues by delivering best-in-class cloud on-ramp performance. At the same time, FortiGate Secure SD-WAN capabilities protect cloud applications and infrastructure from advanced attacks.

Simplifies operations and reduces branch costs

The FortiGate 60 consolidates SD-WAN, routing, and firewalling capabilities into a single appliance that enables network engineering and operations leaders to implement Secure SD-WAN quickly and easily. It also delivers unparalleled performance and optimal TCO.

Using FortiGate 60 NGFWs for SD-WAN obviates the need for network engineering and operations leaders to purchase additional networking appliances and/or security devices. This eliminates the need for additional CapEx investments and reduces infrastructure complexity for better OpEx. The FortiGate 60 NGFW also lays the groundwork for network leaders to migrate from SD-WAN to SD-Branch, which further consolidates branch network infrastructure (including LAN switching and access points) for greater branch efficiency, security, and cost savings.

In the case of SD-Branch, organizations can converge their security and network access within their branch networks. Collapsing these separate islands enables them to deliver network and security capabilities from a single box—NGFW, network access control, switching, and wireless access points.

FortiGate 60 NGFW for SD-Branch implementations can enforce global policies at all WAN edges, at the branch access layer, and across all endpoint devices. It extends both security and network performance to the access layer by unifying WAN and LAN environments. It automates discovery, classification, and security of Internet-of-Things (IoT) devices when they seek network access. At the same time, it can automatically provide anomaly detection and remediation processes based on defined business logic. Finally, it allows distributed organizations to rapidly scale their operations across new offices and geographic locations. In combination, Fortinet SD-Branch capabilities reduce the need for onsite resources, which lowers TCO.

In NSS Labs' 2019 SD-WAN Group Test Results, FortiGate Secure SD-WAN earned high marks for QoE and availability. Its zero-touch provisioning features proved highly efficient—launching and configuring a new branch location in under six minutes.⁷

For the second year in a row, Fortinet received a "Recommended" rating and delivered industry-best TCO per Mbps in NSS Labs' SD-WAN testing.⁸

Delivering Security-driven Networking on the Edge

As distributed organizations increase the bandwidth demands at the network edge, network engineering and operations leaders must address branch performance, reliability, and security in lockstep with one another. The FortiGate 60 NGFW consolidates SD-WAN networking, routing, and firewall security to enable exceptional QoE for business applications, in addition to industry-leading TCO. Advanced features for intelligent application awareness and encryption inspection improve network performance while delivering proven threat protection for edge deployments.

SD-Branch capabilities can further consolidate the network access layer within a secure platform that provides visibility and security to the network and all devices that connect to it. For smaller branch networks, the FortiGate 60 NGFW unifies and simplifies critical branch functions that enable both networking and security in support of the latest digital innovations.

¹ Jason Pappalexis, "[Security Controls in the U.S. Enterprise: Software-Defined Wide Area Network \(SD-WAN\)](#)," NSS Labs, accessed September 2, 2019.

² "[Fortinet Receives Second Consecutive NSS Labs Recommended Rating in SD-WAN Group Test Report](#)," Fortinet, June 19, 2019.

³ Ibid.

⁴ "[Quarterly Threat Landscape Report Q3 2018](#)," Fortinet, November 2018.

⁵ Omar Yaacoubi, "[The hidden threat in GDPR's encryption push](#)," PrivSec Report, January 8, 2019.

⁶ Based on internal Fortinet testing and research.

⁷ "[Fortinet Receives Second Consecutive NSS Labs Recommended Rating in SD-WAN Group Test Report](#)," Fortinet, June 19, 2019.

⁸ Ibid.



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