

Analyzing the Economic Benefits of FortiGate Secure SD-WAN

By Nathan McAfee, Consulting Validation Analyst, and Jack Poller, Senior Analyst
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Executive Summary

Digital transformation is a strategic initiative for the majority of distributed organizations in 2019. The need to support cloud-based applications across sites has led many organizations to switch from wide area networks (WANs) to software-defined WANs in an effort to eliminate performance and operational bottlenecks. SD-WAN is cheaper, faster, and more flexible than legacy WAN. This, however, expands the attack surface.

Digital transformation has led to the need to protect data categories, sources, and endpoints that simply didn't exist ten years ago. Companies are addressing this risk by adding security and monitoring solutions to their SD-WAN environments, increasing cost and complexity.

Fortinet's FortiGate is a unified offering that combines next-generation firewall (NGFW) security, SD-WAN, advanced routing, and WAN optimization capabilities. This single box solution builds on the benefits of SD-WAN by providing powerful, yet easy to use, protection from threats while enabling a level of visibility and management that cannot be delivered by point solutions aimed at solving a single need.

For this validation, ESG analysts leveraged their experience with and research into existing case studies, along with interviews with customers who detailed their improved experiences planning, deploying, and maintaining FortiGate environments compared with previously deployed WAN and SD-WAN solutions. The focus was on the benefits they realized by shifting from WAN to SD-WAN to the unified experience of Secure SD-WAN.

All customers interviewed expressed a very high level of satisfaction with their Fortinet Secure SD-WAN deployment. They reported increased levels of business agility, security, and job satisfaction, along with a dramatic lowering of network costs.

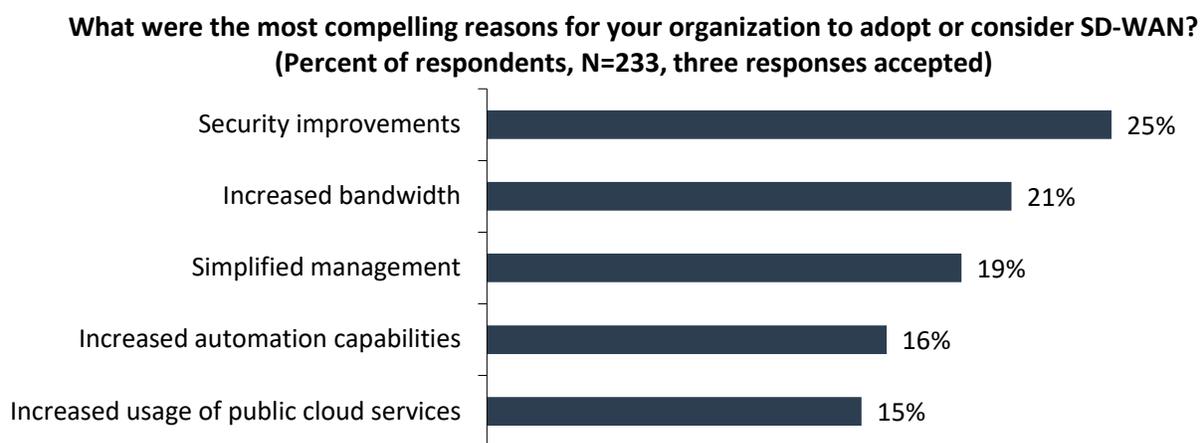
Introduction

This ESG Economic Validation focused on the quantitative and qualitative benefits organizations can expect from deploying Fortinet’s Secure SD-WAN. ESG created the insights in this paper based on forward-looking research, reviews of existing case studies detailing deployment decisions and post deployment impact, and the experienced opinions of our industry analysts. ESG also validated the ability of Secure SD-WAN to help achieve business goals through interviews with IT professionals at distributed organizations who have experience operating both Fortinet and other WAN/SD-WAN solutions.

Challenges

The global reach of business has expanded significantly in the past 25 years with the introduction of WAN technology. WANs enabled companies to efficiently work across the globe, opening new streams of revenue and opportunities. Today, many businesses find themselves dependent on connected resources limited by WAN technologies developed a quarter century ago. Data density has clogged the limited bandwidth that traditional WANs provide while the demands of cloud computing require a new level of connectivity, agility, and security that WANs were not designed to provide. Software-defined wide area networks (SD-WANs) offer flexibility in networking that allows for efficiency in routing with the ability to easily add new bandwidth as demand requires, at a much lower cost than the traditional MPLS network that WANs utilize. Customers deploying SD-WAN also report an ease of management that speeds deployment and administration, giving flexibility that was lacking in the past. ESG research identified security improvements, increased bandwidth, simplified management, increased automation capabilities, and increased use of public cloud services as the most compelling reasons for organizations to adopt or consider SD-WAN (see Figure 1).¹

Figure 1. Top Five Compelling Reasons to Adopt or Consider SD-WAN



Source: Enterprise Strategy Group

While SD-WAN networks offer incredible improvements and agility when compared with WANs, SD-WAN alone does not provide all the security and application-centric planning capabilities required for today’s global applications. ESG research indicated that organizations believe the network can help their digital transformation initiatives (DX), and ESG believes that most vendors fall short, especially when considering the increased attack surface area and variety of endpoints found in the modern network structure. Too often, the result is software-defined networking bogged down by complexity introduced by the addition of hardware or software implemented by security as an afterthought. Many businesses are left wanting for a better solution.

The Solution: Fortinet Secure SD-WAN

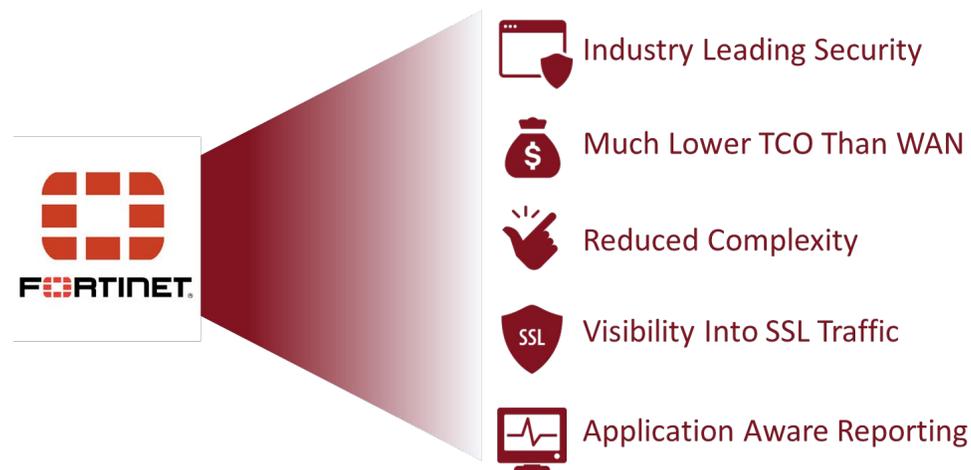
Fortinet combines native SD-WAN capability within its next-generation firewall (NGFW), giving customers a single solution to provide and secure their networks at the WAN edge, while greatly reducing the complexity seen in other SD-WAN

¹ Source: ESG Brief, [The Role of SD-WAN in Network Modernization](#), November 2017.

infrastructures. Fortinet avoids the need to deploy, manage, and maintain individual routers, optimization hardware, firewalls, and secure web gateways at the branch edge (see Figure 2).

For most alternative SD-WAN solutions, security and other functionality requires the integration of add-on products. Fortinet offers a cost-effective and easy-to-deploy solution with the added benefits of providing optimized Secure SD-WAN. Organizations can greatly reduce cost, complexity, and risk by deploying a Fortinet Secure SD-WAN solution at the WAN edge of branch locations, while retaining visibility into the application layer from the data center or cloud.

Figure 2. FortiGate Provides SD-WAN with a Security-first Mindset



Source: Enterprise Strategy Group

ESG Economic Validation

ESG completed a quantitative and qualitative economic analysis studying the impact of Fortinet Secure SD-WAN compared with SD-WAN offerings from other vendors and traditional WAN. ESG's Economic Validation process is a proven method for understanding, validating, quantifying, and modeling the economic value propositions of a product or solution. The process leverages ESG's core competencies in market and industry analysis, forward-looking research, and technical/economic validation. ESG conducted in-depth interviews with end-users to better understand and quantify how Fortinet's Secure SD-WAN has impacted their organizations, particularly in comparison with previously deployed and/or experienced solutions.

FortiGate SD-WAN Value Overview

ESG's economic analysis revealed that customers that deployed Fortinet Secure SD-WAN realized significant benefits when compared with traditional WAN. These benefits fell into three main categories:

- **Lower Risk** – The modern network incorporates data types, endpoints, and public data stores that did not exist ten years ago. With these changes comes newly introduced attack surfaces that have not been considered in the past. FortiGate is a security-first product that leaves most competitors lagging. This security-first mindset is also a contributor to business agility as it allows for growth without the security risks that come with piecemeal networks.
- **Improved Cost Savings** – Organizations using FortiGate reported a dramatic savings in costs when compared with their previous WAN or SD-WAN environments. Both CapEx and OpEx numbers were substantially lower with FortiGate while maintaining service levels that far exceeded previous levels.
- **Greater Business Agility** – The ability to quickly deploy, modify, and support network operations allows Fortinet Secure SD-WAN customers to better meet business needs and provide a pathway to data center and cloud modernization. In

addition to these capabilities, Secure SD-WAN enables scenarios that were not reasonable in traditional WAN infrastructures.



Lower Risk

Fortinet's native security capabilities help to lower risk to distributed organizations by effectively protecting branches at the WAN edge without the need to integrate, deploy, and manage additional security appliances or services that require security expertise and complex routing of traffic. Security is at the core of Fortinet's offering. Very few companies offering SD-WAN take this security-first approach. The impact of this is that disparate systems with security devices patched into the network introduce additional cost, complexity, and risk.

- **Next-generation firewall (NGFW)** – FortiGate is uniquely positioned to provide secure SD-WAN capabilities while maintaining enterprise-level security in a single integrated solution. Fortinet is the only SD-WAN vendor with an NGFW recommendation from NSS Labs.
- **SSL inspection** – Approximately 70% of enterprise network traffic is securely encrypted. While this protects the content of the data, it also can mask the presence of malware. Fortinet offers one of the few solutions that allows for multiple levels of SSL inspection whereby Fortinet can unlock encrypted sessions, examine encrypted packets, and block threats. This dramatically reduces malware attacks and eliminates the cost of subscription anti-malware software.
- **Web filtering** – Web filtering eliminates malware by blocking access to malicious, hacked, or inappropriate websites, helping to reduce risk to end-users and devices and keep the business running effectively.
- **Real-time threat assessment**– FortiGate keeps customers up to date with threats, both within the network and throughout the world. The threat assessment tracks which vulnerabilities are putting the network at risk and helps eliminate risk before it becomes attacks.

“Companies are seeing the increasing risk of storing business and customer data in WAN connected legacy data centers. They often choose to ignore opportunities to alleviate risk. My customers who deploy Fortinet don't have that fear. They are seeing the benefit of cloud enablement while staying secure.”

- Consultant, Enterprise Networking Architect



Improved Cost Savings

Interviewed customers deploying SD-WAN report seeing a 40% reduction in networking costs when compared to traditional WAN. Fortinet customers report even greater savings by reducing both capital and operational expenses when compared with both WAN and alternative SD-WAN solutions. These savings stem from:

- **Elimination of redundant security appliances, software, or subscriptions** – Fortinet's next-generation firewall security offering provides exceptional SD-WAN capabilities. Fortinet's customers find they no longer need disparate firewalls, multiple anti-malware subscriptions, or standalone web filtering technologies. Not only are these costs alleviated, customers report improved levels of protection and service resulting from a consolidated Fortinet offering.
- **Reduction in cost of bandwidth** – SD-WAN uses internet bandwidth instead of the costly dedicated MPLS lines required of legacy WANs. Compared with MPLS, internet bandwidth can provide significant speed increases, is 50-70% cheaper, and is often easier to obtain without the long lead times and constraining contracts seen with MPLS. Lower bandwidth cost also allows for greater redundancy, which can reduce or eliminate downtime.

- **Deployment and administration** – Fortinet Secure SD-WAN networks are substantially easier to deploy, manage, and maintain than legacy WAN. An insurance company reported saving \$500,000 by reducing the need for cybersecurity staff and reclaimed \$1.4 million in alleviated downtime by deploying Fortinet. Customers from all industries report more than 50% reduction of deployment times and costs. One customer interviewed by ESG reported better IT employee satisfaction and retention as an indirect benefit to the ease of administration provided by Fortinet. They remotely complete tasks using mobile devices instead of travelling into the office on evenings or weekends.



Greater Business Agility

One of the benefits of Fortinet’s Secure SD-WAN offering, especially for distributed organizations, is the ability to quickly deploy or change a network, allowing a company to adjust for market changes or new opportunities. In legacy networks, each route is tied to physical boxes and MPLS bandwidth. These limit agility due to the cost and time it takes to plan and manage change. Growth opportunities are often delayed or ignored due to the cost to change a traditional network.

- **Speed of deployment** – Fortinet customers find that they can cut their planning and deployment time by 70% compared with their previous environment. Not only does this reduction lower costs, it also allows companies to take advantage of opportunities that otherwise might be missed or delayed.
- **Ability to adjust bandwidth** – The ability to quickly alter bandwidth availability allows companies to react to changing needs, business demands, or seasonal trends. Low-cost internet bandwidth can be procured quicker, and at a lower cost than MPLS, and can be scaled back to minimize costs when not required.
- **Adaptability to cloud-centric network** – Fortinet enables cloud traffic to eliminate backhauling, reducing overall network usage via routing traffic to the appropriate endpoint without needing to pass through the data center. This reduces latency and bandwidth consumption and allows for cloud access regardless of the source location or destination.
- **Application-centric controls** – Software-as-a-service (SaaS) is at the top of strategic planning lists for most enterprises. However, moving confidential and critical data to offsite locations injects uncertainty. Fortinet’s Secure SD-WAN gives companies visibility into application traffic on their network, enabling prioritization of traffic based on rules and adjustments to the flow of application traffic based on changing needs. The result is improved availability of mission-critical apps and improved user experience.

“Our needs were not [the need for] more bandwidth, they were the ability to quickly integrate customers and countries. Our old environment had a lot of outages. We found that our customers quickly took their business elsewhere when we had network problems. With Fortinet we cut our deployment time by 50%, and virtually eliminated outages. Our malware occurrences have dropped by 80% and we have eliminated our expensive firewalls.”

- Security Architect, Multinational Enterprise

The Bigger Truth

Digital transformation is a top priority for many organizations. ESG's 2019 research shows that 57% of companies are currently in the process of undergoing a digital transformation while another 39% are just beginning or in the planning stage.² Many companies have pointed to the WAN as a barrier to success and most agree that a successful digital transformation requires rethinking of the WAN infrastructure. SD-WAN is a disruptive technology that will allow organizations to harness the benefits of the cloud without the limitations of legacy WAN.

SD-WAN has substantial benefits in cost, administration, and flexibility when compared to WAN. However, as companies expand into the cloud, new connections, applications, and endpoints increase risk and expand the attack surface. Addressing these issues often results in a patchwork compromise of multiple SD-WAN, security, and monitoring point tools.

Fortinet's Secure SD-WAN offering is a natively integrated and efficient network security and SD-WAN solution. Customers using Fortinet reported overall network savings of 40%, an 80% reduction in the number of malware instances, and noticeable increases in business agility that enable growth and new opportunities.

Through extensive review of existing SD-WAN and Fortinet studies, ESG validated the potential impact of upgrading from legacy WAN to a Fortinet Secure SD-WAN solution. ESG interviewed Fortinet customers to evaluate the benefits they experienced and compared with the results reported in case studies. ESG found that Fortinet's Secure SD-WAN can help lower risk for the organization and reduce the expected total cost of ownership, while also providing a network that is less complex to manage, monitor, and maintain. ESG recommends that any company considering the adoption of SD-WAN strongly consider Fortinet as a single integrated security and network WAN-edge solution that will help drive digital transformation initiatives across the entire distributed organization.

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www.esg-global.com



contact@esg-global.com



P. 508.482.0188

² Source: ESG Research Report, [2019 Technology Spending Intentions Survey](#), February 2019.