

Independent Validation of Fortinet Solutions

NSS Labs Real-World Group Tests
January 2020



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Note: Fortinet earned a 'Recommended' rating in NSS Labs' most recent Breach Detection and Data Center Security Gateway tests. The test result documents were not licensed by Fortinet and are thus not displayed in this document.

Introduction

Organizations can get overwhelmed by vendor claims and alleged “silver bullets” when evaluating solutions that can reduce the risk of a data breach. An IT security purchase made solely based on vendor claims is likely to lead to regret. In a recent survey by Forrester Research¹ of next-generation firewall purchase decision makers, 71% surveyed would do more comprehensive testing during the evaluation process if they could do it over again, and 61% would also consider a broader selection of vendors. How do you navigate it all to make good decisions then?



Would do more comprehensive testing during evaluation



Would consider a broader selection of vendors

Fortinet believes that independent, third-party tests provide a critical and impartial measure of the quality of a product, and a mandatory reference for anyone making an IT Security purchase decision. Fortinet is committed to participation in unbiased credible testing so customers can see how we compare to alternative solutions and select the solution that is right for their needs. This commitment is why we consistently submit our products to a large number of third party independent tests for evaluation.

There are many analysts, researchers, and test houses who make it their business to provide their take on the various security solutions available. However, a relatively small number actually evaluate products in real-world, independent conditions. The leader in the independent testing space is NSS Labs.

Fortinet requires the following criteria to be met to participate in a review, test or assessment:

- ✓ Published, clearly defined methodology with customer and vendor input
- ✓ Enterprise customer environment with real-world traffic and current threats
- ✓ Not vendor sponsored or “pay to play”
- ✓ Report and ratings based on quantified criteria and demonstrated performance

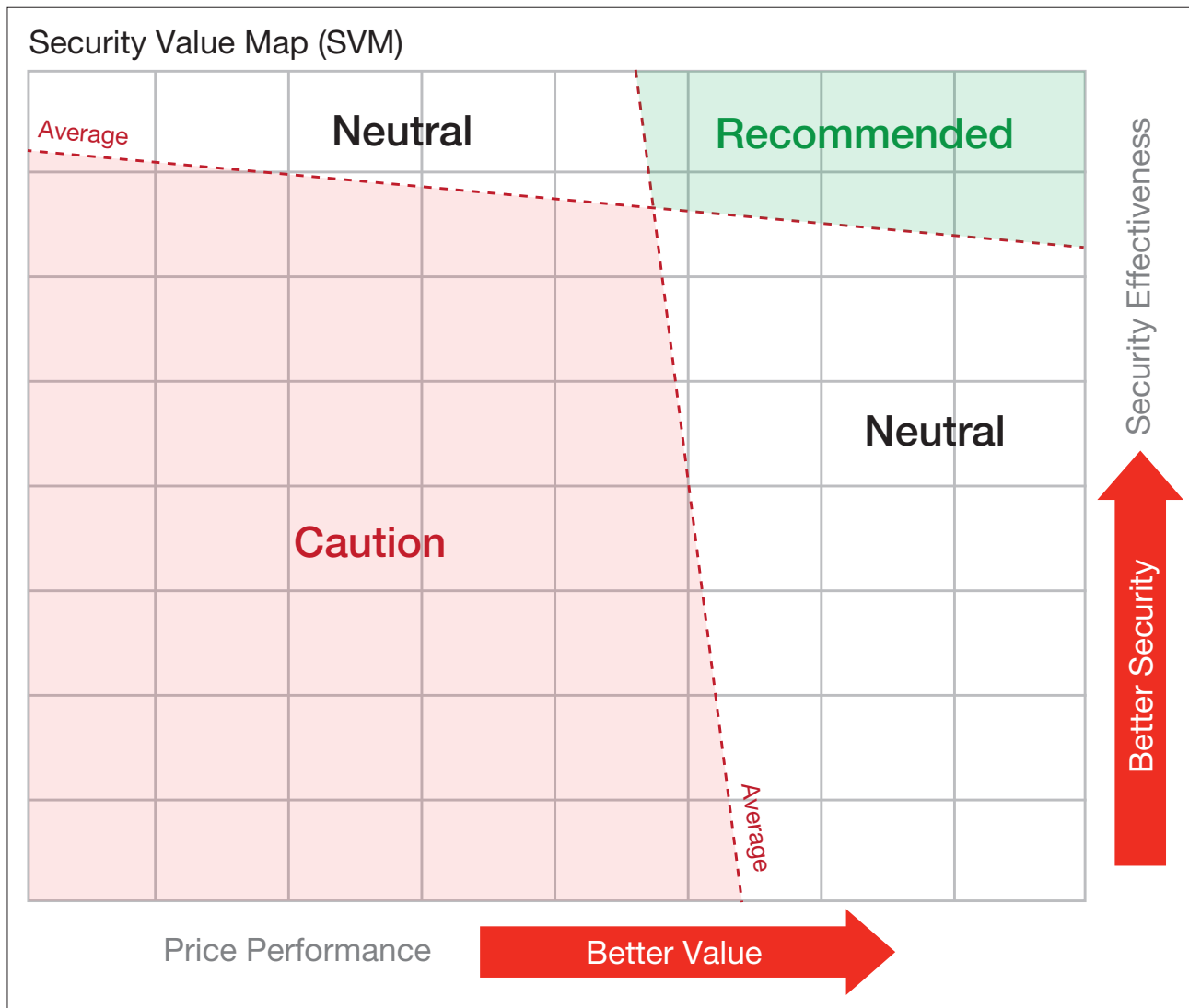
Who is NSS Labs?

- 1 World’s leading security product testing laboratory
- 2 Focused exclusively on IT security
- 3 In-depth security product test reports, research, and analyst services
- 4 Public methodologies open for vendor review and input
- 5 Tests conducted regularly and free of charge -- no compensation required for vendor participation
- 6 CEOs, CIOs, CISOs, and information security professionals rely on NSS to evaluate their security investments

¹ Your Best Defense: Next-Generation Firewalls Enable Zero Trust Security... Best Practices For Evaluating And Implementing A NGFW Forrester Research Inc. July 2015

How NSS Rates Products: Understanding the NSS Labs Security Value Map

NSS Labs assesses the security effectiveness and performance-adjusted total cost of ownership for each product. They typically publish their findings in a number of different reports starting, at the highest level with a summary of results called a “Security Value Map” or SVM. The SVM illustrates the relative value of security investment options by mapping security effectiveness and relative value of tested products. Each technology area – NGFW, IPS, WAF, Sandbox etc. – has its own SVM.



X-AXIS: 3 year TCO per protected unit of measure (Megabit per second, Connection per second)

Y-AXIS: Security Effectiveness (block rate)

4 QUADRANTS:

Upper-right: “Recommended”, products that provide an above average level of security effectiveness and value for money

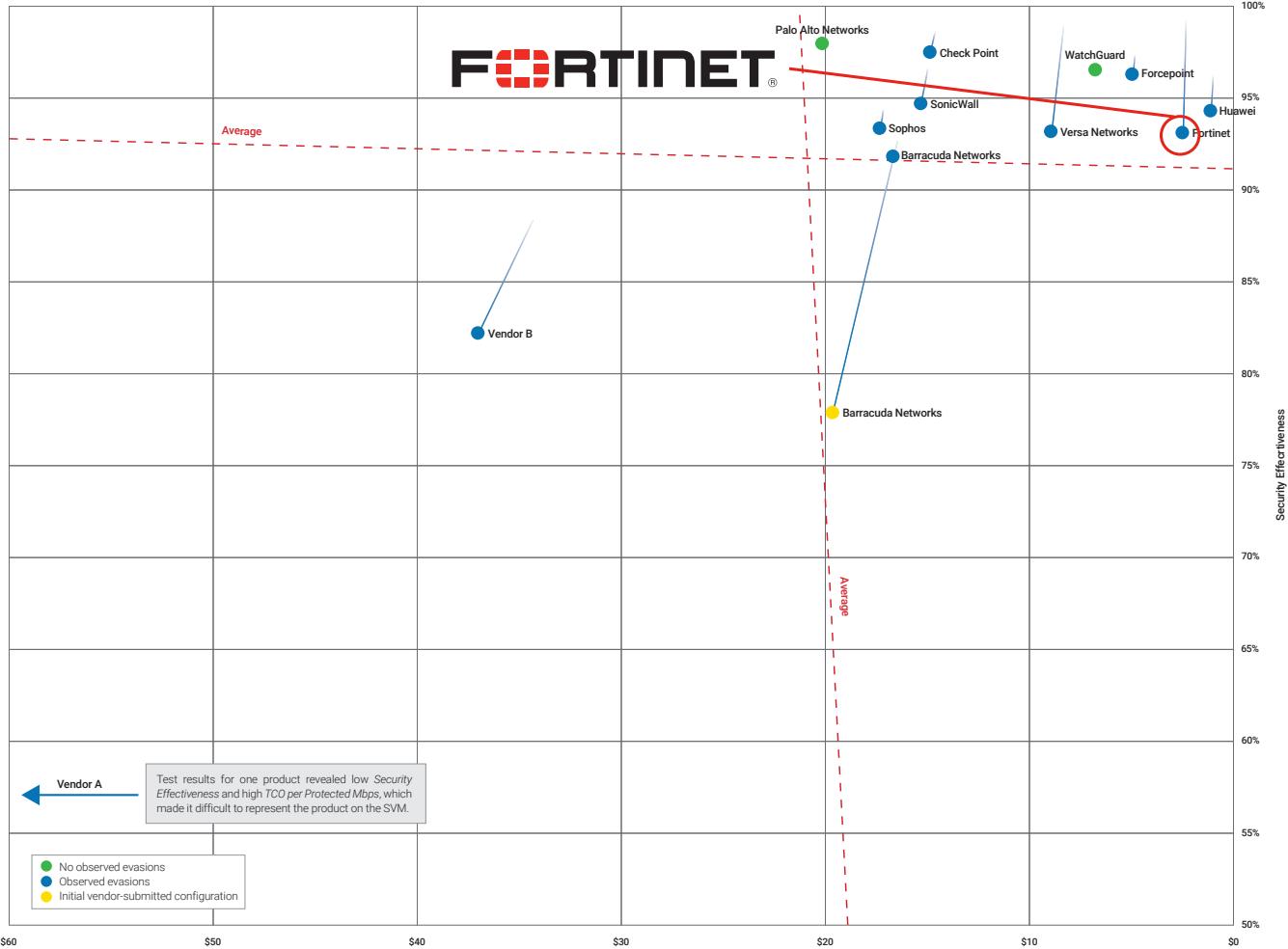
Lower left: “Caution”, products that offer below average value and security effectiveness

Upper left/Lower Right: “Neutral”, may still be worthy of consideration depending on budget limitations.

The following is a review the most current SVMs across several key IT security technologies and offerings. SVMs pictured are the most current version as of date of publication of this document.

Current Test Results

NEXT GENERATION FIREWALL (NGFW) SECURITY VALUE MAP™



NEXT-GENERATION FIREWALL TEST (2019)

FortiGate 500E

Capabilities Tested:

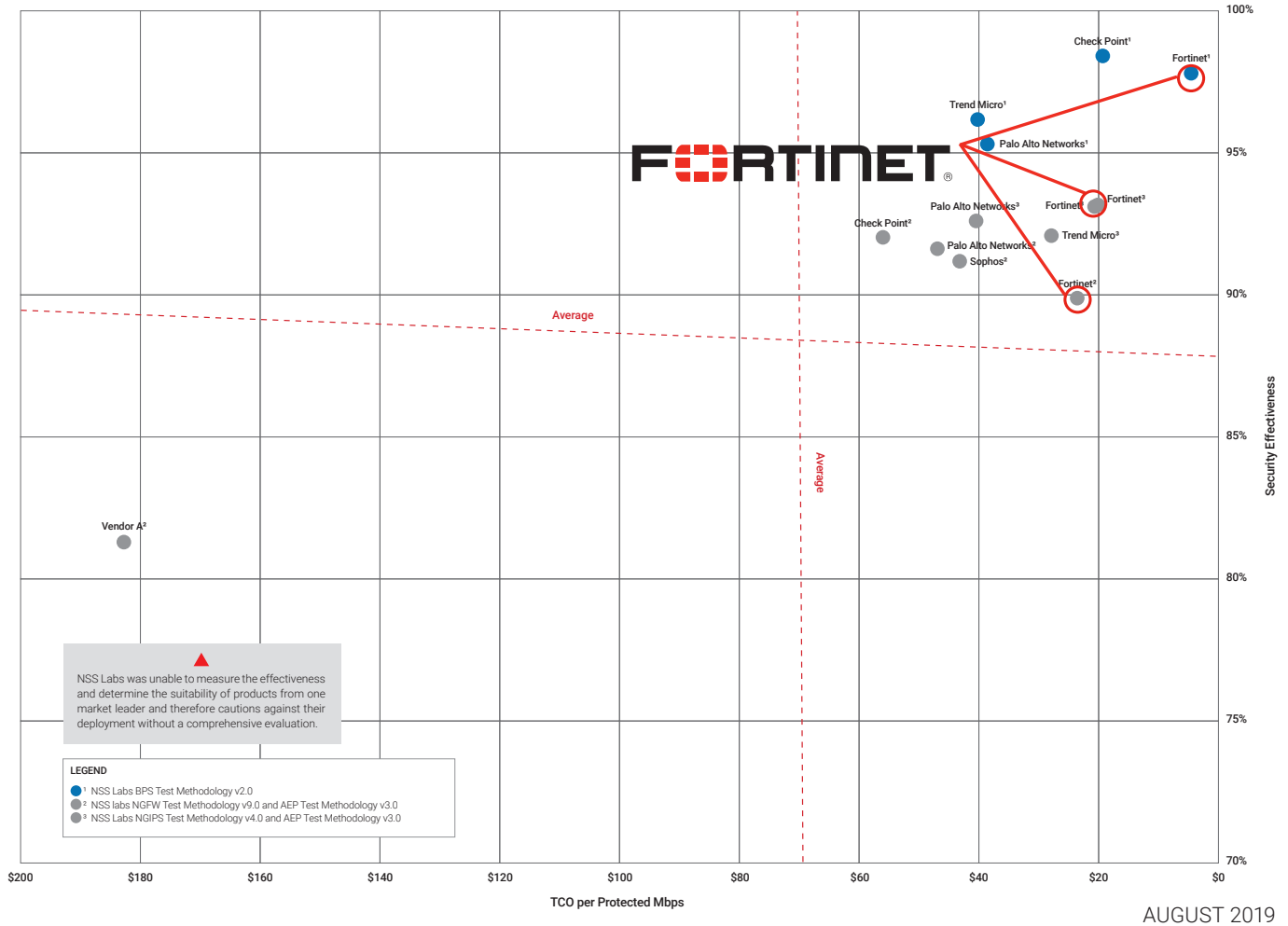
- Intrusion Prevention
- Application Control
- SSL/TLS Inspection
- Evasions

Results:

- ✓ “Recommended” for the 6th test in a row
- ✓ 99% Exploit Block Rate
- ✓ 100% Live Exploit Block Rate
- ✓ Best SSL Performance with least degradation
- ✓ Very low Total Cost of Ownership (\$2 per Protected Mbps)



BREACH PREVENTION SYSTEMS (BPS) SECURITY VALUE MAP™



BREACH PREVENTION SYSTEMS TEST (2019)

FortiSandbox on AWS, FortiGate 500E, FortiClient 6.2

Capabilities Tested

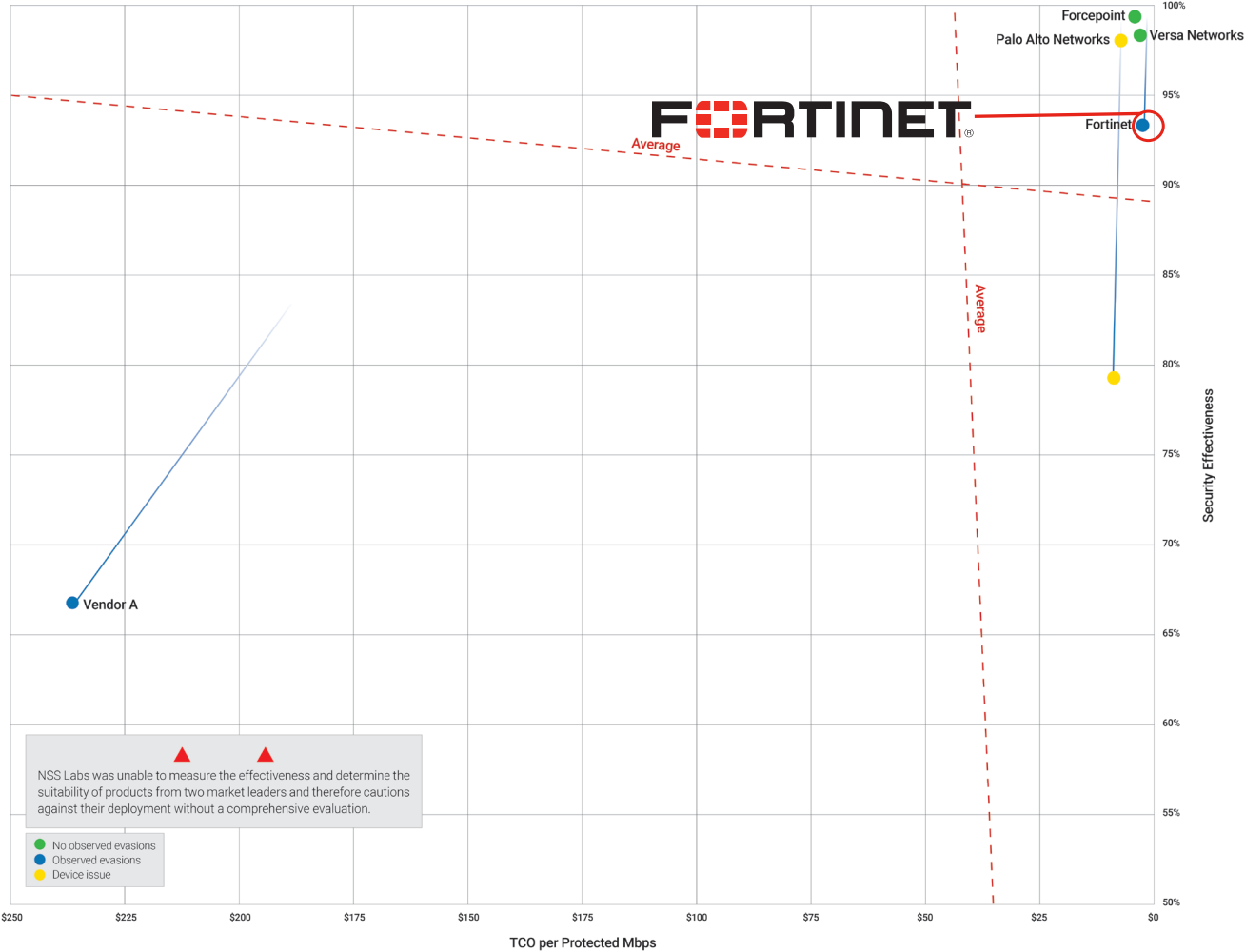
- Detection and prevention of exploits, malware, and evasions across web, email, and endpoint threat vectors
- False positives
- Throughput
- Value/TCO

Results:

- ✓ "Recommended"
- ✓ 100% drive-by and social exploits blocked
- ✓ 100% web-delivered malware detected and blocked
- ✓ 99.4% mail-delivered malware detected and blocked
- ✓ Overall security effectiveness at 97.8%
- ✓ 0% false positives
- ✓ Lowest TCO (\$5 per protected Mbps)



NEXT-GENERATION INTRUSION PREVENTION (NGIPS) SECURITY VALUE MAP™



NEXT-GENERATION INTRUSION PREVENTION TEST (2019)

FortiGate 100F

Capabilities Tested:

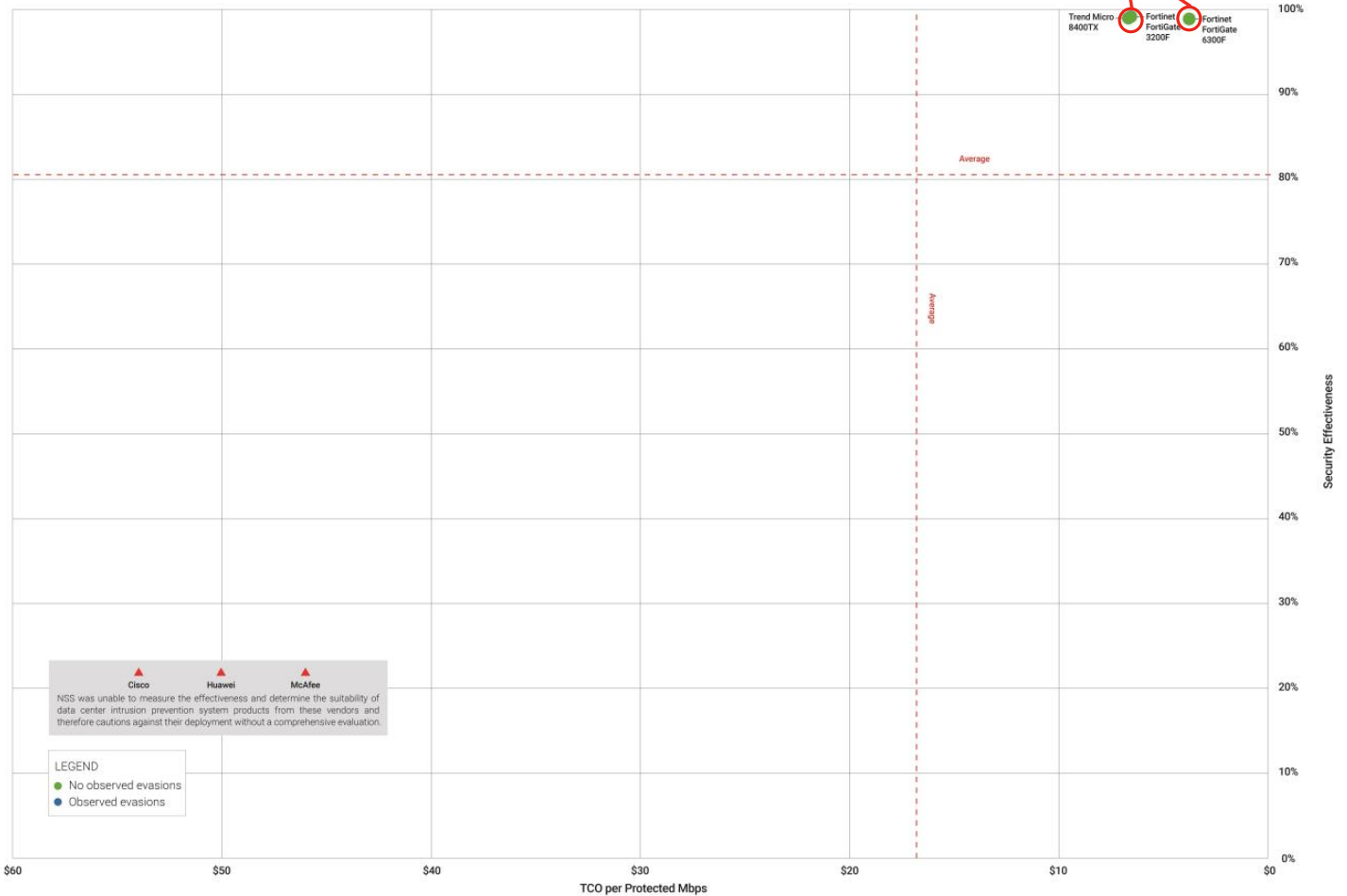
- Intrusion Prevention Systems (IPS)
- Application Control
- Live and library exploits
- Client and Server focus

Results:

- ✓ "Recommended"
- ✓ Overall Security Effectiveness: 93.2%
- ✓ Overall Exploit Block Rate: 99.18%
- ✓ Live Exploit Block Rate: 100%
- ✓ Lowest TCO: \$2/Mbps



DATA CENTER INTRUSION PREVENTION SYSTEM (DCIPS) SECURITY VALUE MAP™



DATA CENTER INTRUSION PREVENTION SYSTEMS TEST (OCT. 2018)

FortiGate 3200D and 6300F

Capabilities Tested

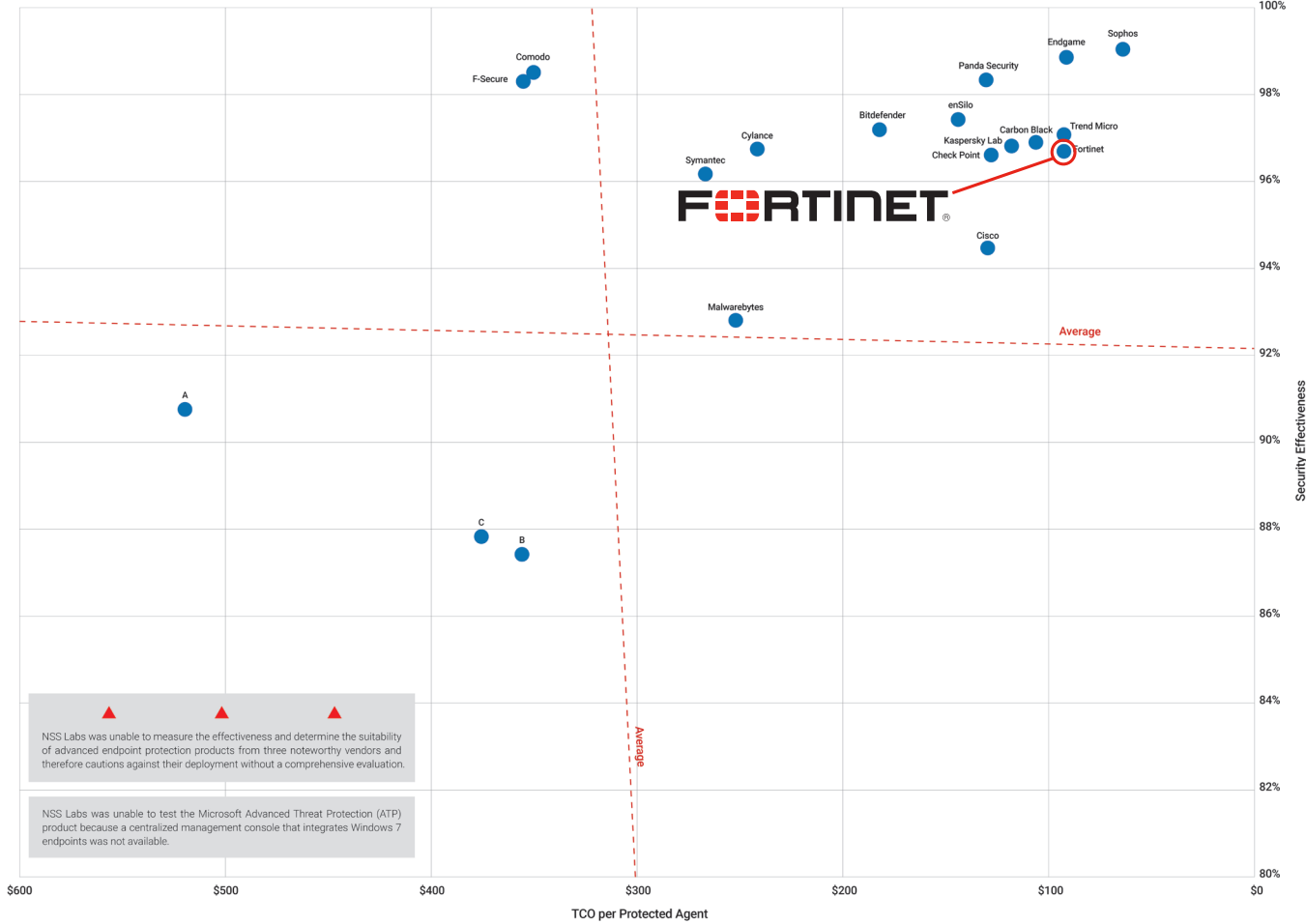
- Data Center IPS
- IPv4 and IPv6 Performance
- Evasions
- Throughput with various traffic types

Results:

- ✓ “Recommended” for both models
- ✓ Security Effectiveness: 99.2% and 99% respectively
- ✓ 100% evasions blocked
- ✓ Excellent IPv4 and IPv6 performance
- ✓ Lowest TCO per protected Mbps
- ✓ Best average throughput



ADVANCED ENDPOINT PROTECTION (AEP) SECURITY VALUE MAP™



ADVANCED ENDPOINT PROTECTION (AEP) TEST (2019)

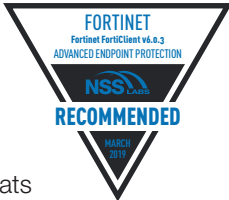
FortiClient with integrated FortiSandbox

Capabilities Tested

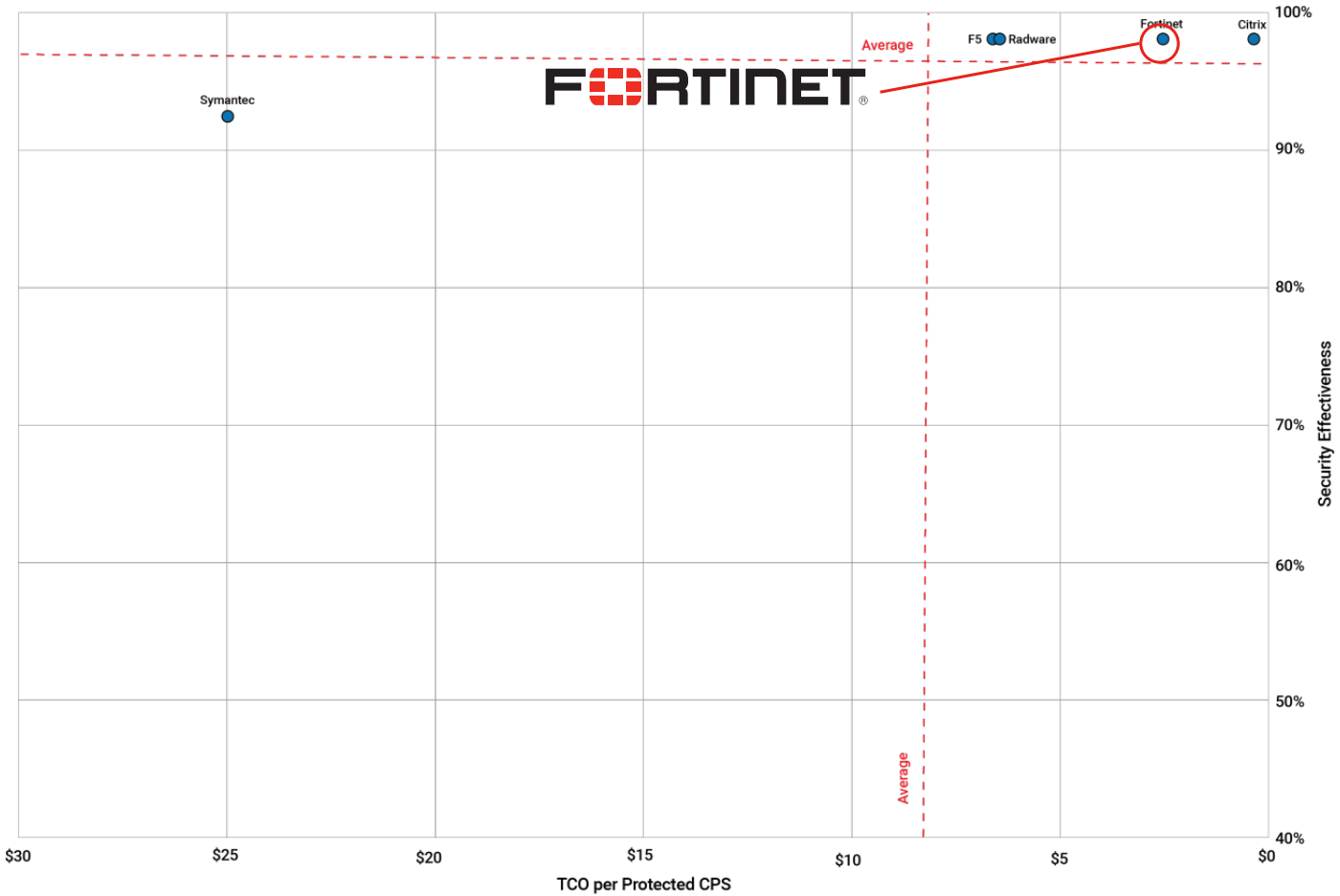
- Effectiveness against
 - Exploits and evasions
 - Offline and unknown threats
 - Document and script-based malware
 - Web and email-borne malware
- Value/TCO

Results:

- ✓ “Recommended”
- ✓ 97.5% overall capability score
- ✓ 100% block rate on exploits, evasions and unknown threats
- ✓ 100% block and detection on web and offline threats
- ✓ Zero false positives
- ✓ Among the highest vendor ROI (3055%)



WEB APPLICATION FIREWALL (WAF) SECURITY VALUE MAP™



WEB APPLICATION FIREWALL TEST (2017)

FortiWeb 3000E

Capabilities Tested

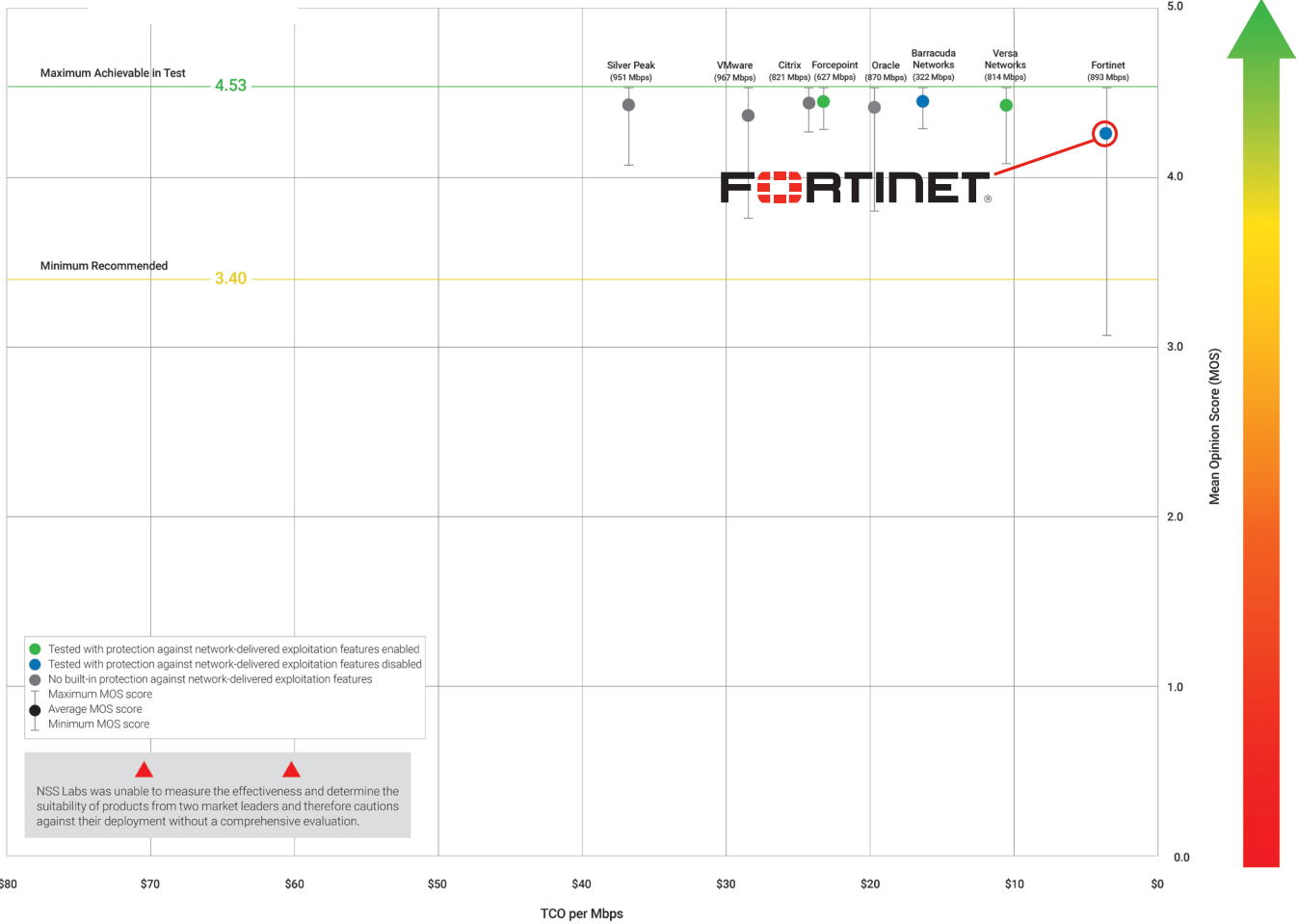
- Effectiveness against
 - Cookie and URL manipulation
 - SQL injection
 - Cross-site scripting
 - Evasions
- Throughput, value/TCO

Results:

- ✓ “Recommended”
- ✓ 98.1% block rate
- ✓ Perfect scores in 9 of 10 OWASP categories



SOFTWARE-DEFINED WIDE AREA NETWORK (SD-WAN) VALUE MAP™



SOFTWARE-DEFINED WIDE AREA NETWORK (SD-WAN) TEST (2019)

FortiGate 61E

Capabilities Tested:

- Speed of Provisioning
- Quality of Experience for VoIP
- Quality of Experience for Video
- Security
- Total Cost of Ownership/Value

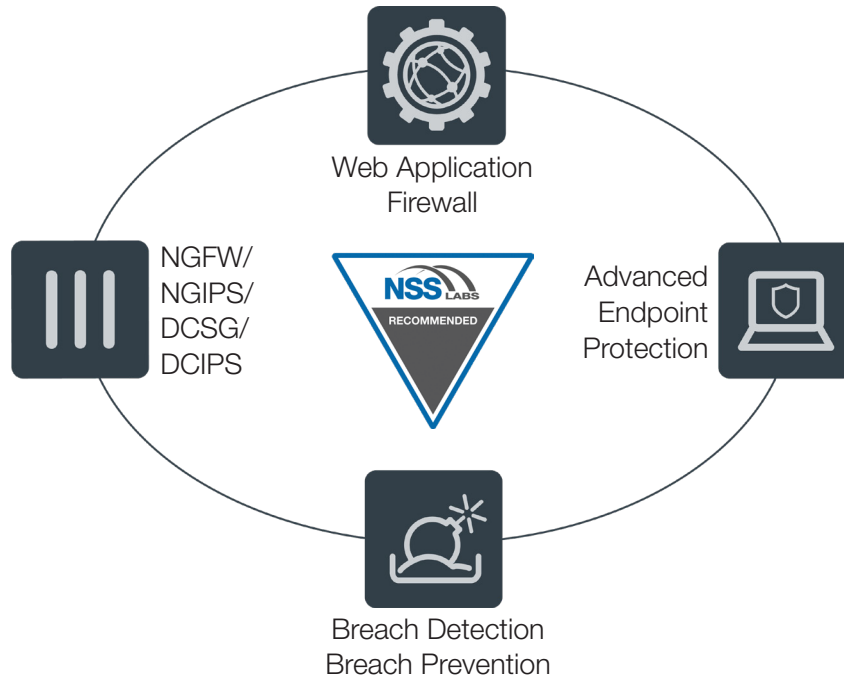
Results:

- ✓ Second consecutive SD-WAN “Recommended” rating
- ✓ Lowest Total Cost of Ownership, 8X better than competitive offerings
- ✓ Deployment in under 6 minutes with Zero-Touch Provisioning
- ✓ Reliable Quality of Experience for Video and VOIP
- ✓ Best user experience in HA deployments
- ✓ In-built NGFW security has received six consecutive “Recommended” ratings from NSS Labs



Putting It All Together – The Only Edge to Endpoint Solution “Recommended” by NSS Labs

By participating in these tests, enterprises and Fortinet, have an independent measure of how our products rate against real-world enterprise requirements as well as alternative offerings. Earning “Recommended” ratings in each of the preceding NSS Labs tests, Fortinet stands out as the only vendor to provide an Advanced Threat Protection Solution that is NSS Labs “Recommended” from the edge to the endpoint.



Looking at the 9-year summary of Fortinet ratings in NSS Labs group tests, a pattern emerges of consistent improvement and excellence, a growing list of “Recommended” ratings, and our ongoing commitment to participation in all relevant NSS Labs tests.

| Product | 2011/12 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|------------------------------|---------|-------------|-------------|-------------|-------------------|-------------|-------------|-------------|
| NGFW | Neutral | Recommended | Recommended | | Recommended | Recommended | Recommended | Recommended |
| Data Center Security Gateway | | | | | | Recommended | Recommended | Recommended |
| Data Center IPS | | | Neutral | | Recommended | | Recommended | |
| NGIPS | | | | Recommended | Retested & Passed | Recommended | Recommended | Recommended |
| Breach Detection | | | Recommended | Recommended | Recommended | Recommended | Recommended | |
| Breach Prevention | | | | | | Recommended | | Recommended |
| Web Application Firewall | | | Recommended | | | Recommended | | |
| Adv. Endpoint Protection | | | | | | Recommended | Recommended | Recommended |
| DDoS | | | | | Neutral | | | |
| SD-WAN | | | | | | | Recommended | Recommended |

As of January 31, 2020

“Real-world third-party validation is an essential resource for enterprises considering security products to help cut through confusion caused by vendor marketing, NSS Labs’ testing continues to demonstrate Fortinet’s commitment to meet high industry standards for security detection, performance, reliability, management and value.”

- Fortinet CEO Ken Xie

Fortinet’s Unparalleled Commitment To Independent Testing

Earning a Recommended rating from NSS Labs indicates that a product has performed well and deserves strong consideration. Only the most effective and best value products earn a Recommended rating from NSS—regardless of vendor market share, size or brand recognition. In a broad set of the most recent NSS Labs reports, Fortinet has consistently earned “Recommended” ratings. In NSS Labs’ CAWS real-time service, customers can also see how Fortinet consistently delivers highly effective security over time.

Fortinet’s commitment to independent testing and certification even extends beyond NSS Labs. ICSA, AV Comparatives, Virus Bulletin and other independent testing organizations have also consistently validated the effectiveness of Fortinet solutions. At the 2015 ICSA Labs awards reception, Fortinet was honored with ICSA’s prestigious Excellence in Information Security Testing (EIST) award. Fortinet was recognized for outstanding achievement in information security certification testing for 10 years running.



Recommendation And Conclusion

To avoid the regret expressed by a majority of IT security purchasers in the Forrester study, avoid biased sources of information during your next IT security purchase evaluation.

- ✓ Consult independent, objective sources like NSS Labs to separate the truth from the hype.
- ✓ Conduct a bake off – either in-house or outsourced to a testing specialist. Test with real-world traffic loads to ensure the products can meet your requirements with the appropriate features activated.
- ✓ Select based on your criteria– effectiveness, ease of use, performance, price, vendor history and more may have a role to play.

Since its inception, Fortinet has committed to consistently proving the efficacy of its solutions through stringent independent testing and certification. The company has received more certifications to validate its solutions than any other network security vendor. These test results are proof that — in real world traffic and deployment scenarios — our products will beat the competition and perform as advertised.

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