

SOLUTION BRIEF

# Gain Advanced Secure Web Gateway Capabilities with FortiProxy

## Executive Summary

As the web landscape evolves and increasingly becomes the de facto work interface, web-based threats increase in volume and sophistication. Deploying robust cybersecurity measures for internet access is paramount to safeguarding sensitive data and maintaining business continuity. Web-based threats, including malware, phishing attacks, and unauthorized access, pose significant risks to organizations across all industries. FortiGate Next-Generation Firewalls (NGFWs) and FortiProxy secure web gateways (SWGs) offer protection from web-based threats, with FortiProxy augmenting the FortiGate capabilities.

FortiGate is versatile and provides basic SWG capabilities, and FortiProxy specializes in advanced SWG functionality with unique features. This document explores the key benefits of FortiProxy and the synergy between FortiProxy and FortiGate, highlighting why deploying both solutions delivers unparalleled security and operations benefits.

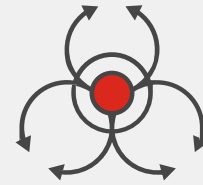
## FortiProxy and FortiGate Fortify Security Posture

Advanced SWG capabilities are especially critical for large enterprises. Adding a FortiProxy SWG to a FortiGate NGFW delivers a myriad of benefits, including separation of security duties, enhanced performance, data protection, and fortified security posture.

When used alongside FortiGate, FortiProxy helps distribute security functionality between perimeter firewalls and SWG appliances, optimizing resource utilization, enhancing network security, and splitting the operational burden. As part of the Fortinet Security Fabric platform, FortiProxy seamlessly integrates with FortiGate and other solutions, requiring minimal operational overhead. Adding FortiManager and FortiAnalyzer streamlines the management of larger environments and enhances the overall security ecosystem.

In addition, FortiProxy optimizes network performance by offloading resource-intensive tasks from FortiGate. By handling web filtering and SSL-inspection functions, FortiProxy reduces the processing burden on FortiGate, improving overall performance and scalability while leaving important NGFW resources available to deal with any burst of traffic. This distributed approach enables organizations to scale security infrastructure efficiently where needed without compromising performance, ensuring seamless protection across the entire network infrastructure.

FortiProxy also provides some key data protection features not included with FortiGate. One example is the Data Protection Services Bundle available with FortiProxy, which combines content analysis and data loss prevention (DLP). FortiProxy provides optical character recognition (OCR) capabilities by integrating content analysis and DLP. Accordingly, organizations can strengthen web security posture, mitigate risks associated with web-based threats and data exfiltration, and enhance visibility and control over web traffic content. These features enable FortiProxy to provide comprehensive protection for text-based and multimedia content traversing the network so you can effectively secure your digital assets and sensitive information.



An estimated 12.8 million websites are infected with malware worldwide [and] 88% of websites infected by malware are not blacklisted by search engines.<sup>1</sup>

Feature		FortiProxy 7.4	FortiGate 7.4	FortiProxy Capabilities
<b>Deployment</b>	ICAP server	Yes	No	Can serve as an ICAP server, extending its rich data protection features to other systems
<b>Security Features</b>	Content analysis, advanced DLP, and OCR	Yes	No	Detects and categorizes previously unknown image content using IA 8.0 integration and includes DLP and OCR functionality
	Native browser isolation	Yes	No	Enables policy control through browser extension and browser sandbox mode
<b>Web Caching and WAN Optimization</b>	High-throughput caching	Yes	No	Accelerates access to frequently visited sites, reducing bandwidth needs
	High-volume storage	Yes	No	Includes high-capacity storage for robust data handling needs
	Reverse web cache	Yes	No	Provides content delivery and retrieval optimization
	HTTP stream splitting	Yes	No	Efficiently diverts traffic for optimized network distribution and performance
	Dynamic adaptive stream over HTTP (MPEG-DASH)	Yes	No	Enhances media delivery with agile protocol for seamless streaming experiences

Figure 1: Key FortiProxy features that augment FortiGate

## FortiProxy Key Features

FortiProxy delivers a comprehensive feature set, including advanced threat protection, and seamlessly integrates into existing security infrastructures. Backed by Fortinet's decades of experience in cybersecurity, FortiProxy provides a robust and reliable defense against web-based threats. Deploying FortiProxy in conjunction with FortiGate shores up security against web-based threats.

The specialized capabilities of FortiProxy are ideal for organizations with more than 5,000 on-premises users. It efficiently secures web traffic originating from offices and focuses solely on web-traffic security.

### Comprehensive FortiGuard AI-powered web filtering

FortiProxy complements FortiGate security controls with advanced web filtering features. By filtering out malicious content and enforcing acceptable use policies, FortiProxy helps mitigate risks associated with web-based threats, such as malware, phishing, and data leakage. FortiProxy leverages advanced AI algorithms to enhance content filtering accuracy. This proactive approach identifies and blocks potentially harmful content not classified by traditional threat intelligence feeds, bolstering security defenses.

### Advanced Layer 7 processing and protection

FortiProxy enhances the capabilities of FortiGate defenses through advanced Layer 7 processing and protection. At its core, FortiProxy empowers administrators with precise control over web traffic. Leveraging advanced algorithms, it scrutinizes incoming data at a granular level, allowing policies to be enforced based on categories, applications, and user identities. This level of granularity ensures that only authorized activities are permitted while malicious content is promptly identified and intercepted.

### Enhanced threat protection

FortiProxy provides enhanced threat protection for encrypted traffic with integrated threat intelligence and SSL-inspection capabilities. It works seamlessly with FortiGate to decrypt and inspect SSL/TLS traffic to detect threats hidden in encrypted traffic. By leveraging FortiGuard Labs comprehensive threat intelligence, FortiProxy identifies and blocks emerging threats in real time, safeguarding the network against advanced attacks.



## Content analysis

The FortiProxy real-time image analysis engine employs a range of patented techniques for accurately detecting inappropriate content, such as adult situations and violence in images and videos. With 12 distinct detection layers, including grayscale image scanning, our system thoroughly scrutinizes content. The image analysis engine can be adjusted to accommodate varying detection needs. Its heuristic engine eliminates the need for signature updates, enabling sustained effectiveness. Leveraging multi-threading technology, our high-performance solution enables rapid processing of large volumes of data without compromising accuracy.

## Advanced DLP

With sophisticated DLP capabilities, including OCR, FortiProxy strengthens data protection measures. OCR enables precise identification of sensitive data within images, for example, a photo of a credit card, mitigating the risk of data exfiltration.

## Native browser isolation

FortiProxy supports native browser Isolation to segregate web browsing sessions from the underlying operating system and network, confining them within isolated environments. Unlike traditional browsing methods in which web content is accessed directly by the user's browser within the operating system, native browser isolation executes web browsing sessions within isolated containers on an agent on the device. These isolated environments act as sandboxes, preventing any malicious code or activity encountered during web browsing from affecting the user's device or the broader network.

## High-capacity web content caching

The FortiProxy extensive forward proxy web content caching capability accelerates access to frequently visited websites, reducing bandwidth consumption and enhancing performance. In the hardware appliance form factor, additional memory enables high-performance caching.

## Conclusion

FortiProxy enriches SWG capabilities and is indispensable for organizations with a significant number of users in the corporate office. By integrating FortiProxy with FortiGate, you can achieve a more comprehensive security architecture to protect your network more effectively. Together, FortiProxy and FortiGate offer a holistic and effective defense against modern cyberthreats, helping you stay ahead of even the latest and most sophisticated attacks.



Over 70% of all system intrusion breaches involve malware, and 32% of all malware is distributed via the web.<sup>2</sup>

<sup>1</sup> Caitlin Jones, "50 Web Security Stats You Should Know In 2024," Expert Insights, February 9, 2024.

<sup>2</sup> Ibid.