

SOLUTION BRIEF

Understanding FortiOS— The Heart of the Fortinet Security Fabric

Executive Summary

The Fortinet Security Fabric is the industry’s highest-performing cybersecurity platform. And FortiOS, the Fortinet operating system, is the heart of the Fortinet Security Fabric. It ties all of the security and networking components together to ensure tight integration. This enables the convergence of high-performing networking and security to deliver a consistent security posture throughout the entire infrastructure, including hybrid deployments of hardware, software, and X-as-a-Service.

FortiOS 7.0 dramatically expands the Fortinet Security Fabric’s ability to deliver consistent security across all networks, endpoints, and clouds. It includes new services such as secure access service edge (SASE) and zero-trust network access (ZTNA) to better address the challenges of today’s distributed networks and remote workforces.

FortiOS and the Fortinet Security Fabric Enable Broad, Integrated, and Automated Security

The Fortinet Security Fabric, built on FortiOS, enables multiple security technologies to work together seamlessly across all environments protecting you based on a single source of unified threat intelligence. This holistic approach eliminates security gaps in the network and hastens responses to attacks and breaches. Because FortiOS runs natively in any environment, it empowers the Security Fabric to span and adapt to the extended digital attack surface for broad, integrated, and automated protection of devices, data, and applications.

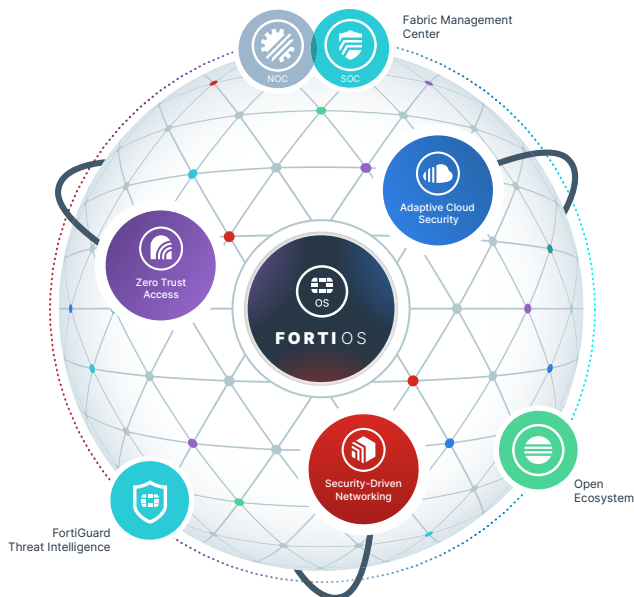


Figure 1: Fortinet Security Fabric diagram.

FortiOS is the foundation of the Fortinet Security Fabric, consolidating many technologies and use cases into a simplified, single policy and management framework.

Having one operating system across the Fabric ensures:

- Consistent management of context-aware security policy
- Broad reach and control across the attack surface and cycle
- High-performing consistent and context-aware security posture
- Artificial intelligence (AI)-based detection and recommendation to correlate data for analysis and reporting across a unified Fabric-level dataset
- Automated, multipronged response to cyberattacks across the attack surface and throughout the attack cycle
- Improved threat response and reduced risk through security orchestration, automation, and response (SOAR) capabilities

FortiOS 7.0 Delivers New Capabilities

With over 300 new features spanning the full Fortinet portfolio, organizations can stay ahead of the evolving threat landscape with continuous protection for data, users, devices, and applications across all network environments, endpoints, and multiple clouds.

Some of the key FortiOS 7.0 enhancements designed to address today's challenges include the following.

Secure Access Service Edge (SASE) services

FortiOS 7.0 enables security and networking functionality to be delivered anywhere users and devices are located via cloud-based consumption (Security-as-a-Service). Fortinet is the only vendor capable of providing consistent protection across every network edge. Its FortiSASE solution delivers advanced enterprise-grade security, eliminating security gaps without impacting users.

Because FortiSASE is part of the Fortinet Security Fabric, deployment is quick. For existing Security Fabric users, there is a minimal learning curve, ensuring comprehensive deployments to reduce the risk profile of remote workers while hardening the weakest link in most security architectures.

Like the Fortinet Secure SD-WAN solution, FortiSASE demonstrates Fortinet's innovative security-driven networking approach. It converges networking, security, and advanced routing into a single, integrated system designed to effectively defend today's highly dynamic environments. It also enables flexible, anytime and anywhere access for all network edges, including remote workers and home offices. With security woven into their core, networks can evolve, expand, and adapt to digital innovation to deliver a better user experience without ever compromising on security.

Zero Trust Network Access

FortiOS 7.0 delivers new Zero Trust Network Access (ZTNA) functionality to enable controlled remote access to applications for hybrid users, home offices, and other locations, such as retail stores. It's easier and faster to initiate than a traditional virtual private network (VPN), giving users a better experience while providing a more granular set of security protections. Users can automatically establish secure and reliable connections, whether the applications they need to access are located in the data center, private cloud, or public cloud.

The ZTNA solution built into FortiOS 7.0 also provides simplified management by enforcing the same adaptive application access policy whether users are on or off the network.

Adaptive Cloud Security

Fortinet Adaptive Cloud Security secures all aspects of a cloud journey across networks, applications, and platforms, enabling organizations to pursue multi-cloud-enabled digital innovation without having to sacrifice security, operational efficiency, or take on undue complexity.

The Fortinet Security Fabric is the first open architectural approach to security that dynamically adapts to and secures the evolving IT infrastructure.



Adaptive Cloud Security extends the Fortinet Security Fabric across all public clouds, Security-as-a-Service applications, and hybrid cloud deployments to deliver consistent, seamless security that is able to follow applications and data. To do this, FortiOS 7.0 provides centralized management, auto-scaling, and dynamic load-balancing within and across multi-cloud environments. This optimizes user experience and expands operations, security, and visibility across multi-cloud environments.

Open Ecosystem

The Fortinet Open Fabric Ecosystem is one of the largest cybersecurity ecosystems in the industry. Prevalidated, documented, Fabric-ready integrations and tools provided by Fortinet partners enable faster time to value and provide greater visibility, end-to-end security, and simplified operations across the network infrastructure.

Fabric Management Center

The Fabric Management Center in FortiOS 7.0 offers a range of incident monitoring and response platforms and components for organizations of all levels of security maturity. The unified console is equipped with network automation capabilities to eliminate complexity challenges for operations teams. This enables a shift from reactive to proactive security and networking operations, expediting time to coordinated response.

FortiOS 7.0 also makes SOC-as-a-Service available to organizations wishing to offload security event analysis to experienced FortiGuard Labs threat hunters, researchers, analysts, engineers, and data scientists.

FortiGuard Security Services

All of this is enhanced through FortiGuard Security Services, delivering near-real-time protection to every solution deployed as part of the Fortinet Security Fabric and ecosystem. It does this by constantly analyzing real-world threat intelligence gathered from over 5.6 million globally deployed sensors. Advanced AI is then applied to identify abnormalities and suspicious patterns and generate new protections that are then automatically distributed to the Fabric via native integration with FortiOS. This fully integrated and automated approach ensures timely and coordinated protection across the entire attack life cycle.

▪ FortiGuard Video Filtering Security Capability

FortiOS 7.0 introduces the industry's first Video Filtering solution. This function adds granular protection to the video-intensive content consumption patterns being driven by today's remote users working and learning from everywhere.

Device security has also been enhanced to include real-time queries for Internet-of-Things (IoT) devices to better address and assess risks arising from device proliferation.

FortiOS and the Fortinet Security Fabric Address Current and Emerging Security Challenges

As organizations embrace digital transformation to operate more effectively and provide improved customer and worker experiences, the outcome is largely determined by how well they apply effective security at every step. FortiOS 7.0 provides features designed to support today's fast-changing hybrid networking and security needs. FortiOS is continually updated to ensure organizations can stay ahead of the ever-evolving threat landscape. With a Fortinet Security Fabric solution in place, organizations of every size can be assured that they have the tools they need to address all of their security and networking challenges, both today and in the future.



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