# FORTINET

FORTIOS: ENABLING THE FORTINET SECURITY FABRIC

In addition to an acute shortage of skilled staff and limited budgets, today's enterprise security leaders face growing complexity everywhere they turn—from increasingly sophisticated cyber threats, to an expanding collection of disparate security products staggered across their networks, to new demands for compliance from regulation and security standards. The drive for digital transformation (DX) across all areas of a business requires networks to evolve rapidly, calling for applications, data, and services to flow faster across an increasingly diverse landscape of users, domains, and devices. As a result, networks are increasingly borderless. Internet of Things (IoT) devices and cloud infrastructure now require organizations to worry about an attack surface that may not even be visible to IT.

SECURITY FABRIC APPROACH

There are approaches that attempt to use multiple point and platform solutions to address these challenges. But what if all the data and security elements across an organization's various environments could be tightly integrated, cohesive, and coherent—like a seamlessly woven fabric? Such an approach would allow companies to see, control, integrate, and manage security across their entire network (even the cloud), to enable a secure digital business model.
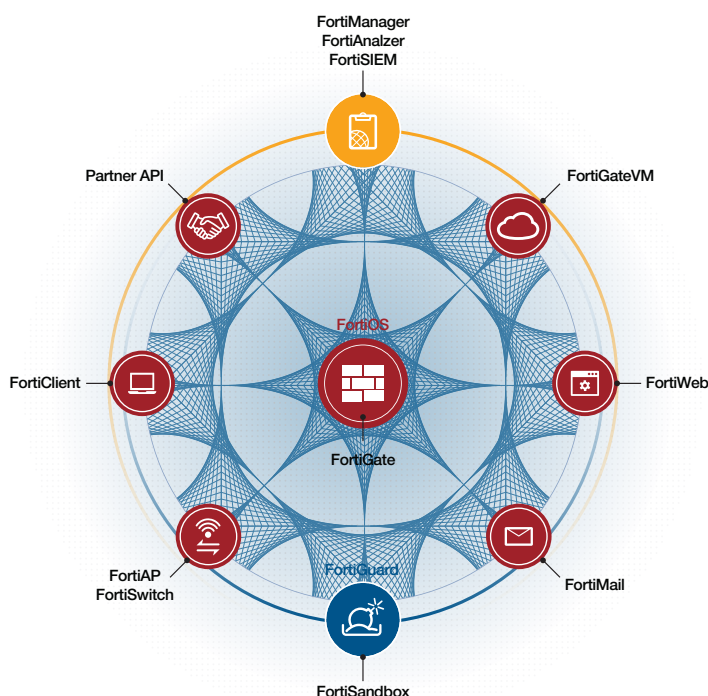
This approach would also allow security to dynamically expand and adapt as more workloads and data are added, while at the same time easily follow and protect data, users, and applications as they move back and forth between smart devices, borderless networks, and cloud-based environments.

The **Fortinet Security Fabric** provides a more effective alternative to point and platform solutions. All security components within the security fabric are made available to each other in real time to provide broad, integrated, and automated protection against sophisticated threats. And the **FortiOS** network operating system provides the foundation to establish and enable the Security Fabric. The latest release—**FortiOS 6.0**—includes more than 200 new features and capabilities that are designed to help enterprises embrace digital transformation without impacting network performance or compromising security.

BROAD: TRANSPARENT VISIBILITY & CONTROL

To protect today's businesses, security solutions cannot stand alone as isolated devices scattered across the network. Our Security Fabric covers the entire attack surface in order to stop the impact of a threat at multiple points. To help achieve this, FortiOS 6.0 enables greater visibility and control across the entire environment—including endpoints, access points, network elements, the data center, the cloud, and even the applications and the data itself. Combined with **dynamic network segmentation** that logically separates data and resources, the Security Fabric can cover all attack vectors to discover threats and contain them as they attempt to move from one network zone to the next.

Expanded cloud connectors within the Security Fabric enable full visibility across **multi-cloud environments**, including private, Infrastructure-as-a-Service (IaaS), and native cloud controls. FortiCASB (cloud access security broker) also provides visibility and advanced threat protection of Software-as-a-Service (SaaS) applications. Multi-cloud visibility can help organizations correlate both on- and off-network traffic through a single security management console.

Other new features within FortiOS 6.0 support best practices for **auditing and compliance** to make it easier for businesses to comply with the latest standards and regulations (e.g., GDPR, PCI, HIPAA). FortiOS 6.0 includes **built-in rules** that help enterprises avoid lengthy rule-creating processes which can be difficult to enforce and time-consuming to track.

INTEGRATED: THREAT INTELLIGENCE & DETECTION

Security has become incredibly complex for many organizations. They continuously add more point products to cover new security gaps and exposures. This, in turn, compounds the ongoing resource strains of deployment, management, and oversight—many of which may be manual processes. New regulations are increasing **compliance and reporting requirements**. Security budgets are shrinking. And there's a worldwide scarcity of skilled security professionals—so organizations might very well be shorthanded within this perfect storm.

To ensure comprehensive protection in the face of today's overwhelming complexity, all of the different parts of a company's security infrastructure must work together as a single, unified system. Our Security Fabric is designed not only for integrated protection across all devices and systems securing the distributed network but also for rapid awareness of advanced threats. FortiOS 6.0 integrates many new intelligent features that enable precise **threat detection** capabilities throughout the infrastructure. Intelligence shared throughout a cohesive, end-to-end security architecture unlocks potential automation, reducing the impact of staffing shortages. For example, the Security Fabric can take **automated action** based on trusted analysis, streamline communications, and expedite patching without the limits of human monitoring and intervention.

FortiOS 6.0 also supports integrated **secure SD-WAN** within the Security Fabric, providing application prioritization for granular control of SaaS, VoIP, and other business apps. These granular transactions are key in achieving better application performance for SaaS, VoIP, and business applications with in-built automated failover capabilities. New one-touch VPN and zero-touch deployment further reduce complexity and rapidly enable new enterprise branches.

FortiGuard Audit and Security Update Service includes several new intelligence-based features, including expanded audit rules and customized auditing based on network environments, as well as on-demand regulatory and compliance reports. This helps reduce the risk of compliance violations as well as the operational burdens of increasing regulatory requirements.

AUTOMATED: EFFICIENT OPERATIONS

Integration and automation go hand in hand. Once a threat is detected, the response time to a security event must be instantaneous to minimize exposure. The Fortinet Security Fabric is designed to shrink the windows from both **intrusion to detection** and **detection to response**. The Security Fabric correlates threat intelligence to determine the level of risk and automatically synchronizes a coordinated response. It shares intelligence about newly discovered threats, dynamically isolates affected devices, partitions network segments, updates rules, pushes out new policies, and removes malware. And beyond reducing risk exposure, replacing manual security processes with automation also helps address the organizational challenges of tighter budgets and a skilled staffing shortage.

FortiOS 6.0 introduces many new capabilities in this area, including automated application inventory on each device and automation of security responses to events across Fortinet switches and wireless access points. **Automated workflow** with continuous risk assessment allows users to easily set responses based on predefined triggers, such as system events, threat alerts, user and device status. Responses (such as quarantine, notification, configuration adjustments) and custom reports provide real-time control of workflow environments. **Automated auditing** provides trending data on a business' security compliance posture with benchmarking that ranks organizations against similar firms in terms of size and industry.

SUMMARY

Digital transformation (DX) raises multiple security challenges for an enterprise. Trends in computing and networking will continue to drive changes across businesses infrastructures, architectures, and practices, while cyber criminals continue to evolve new and better ways to exploit exposed vulnerabilities. As a critical part of these changes, business leaders must embrace a new approach to securing the entirety of their distributed infrastructures. The Fortinet Security Fabric provides an intelligent architecture designed around scalable, interconnected security combined with high awareness, actionable threat intelligence, and open API standards to protect even the most demanding enterprise environments.

FortiOS 6.0 is the latest version of Fortinet's network security operating system. With hundreds of enhancements and feature additions, it expands the Security Fabric with deeper visibility and control across the breadth of an organization's entire attack surface, integrated intelligence throughout the network for seamless protection and threat detection, and automated operations that quickly identify and resolve security issues.