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FortiSASE—Cloud-delivered Security to Every User, Everywhere

Executive Summary

Organizations with large numbers of remote offices and a hybrid workforce often struggle to ensure that security policies are being applied and enforced consistently across their distributed networks. The growing number of new network edges, often implemented as discrete projects, leave gaps in security that cyber criminals are all too anxious to exploit. Secure Access Services Edge (SASE) solutions help extend secure access and high-performance connectivity to users anywhere. However, many SASE solutions either fail to provide enterprise-grade security to remote users and locations, or are unable to seamlessly integrate with the range of physical and virtual network and security tools deployed at the network edge.

FortiSASE takes another approach.

Our unique Security-Driven Networking strategy, supported by FortiOS, enables us to weave security and networking functionality into a single, integrated system to deliver consistent security and user experience across all edges. And now, by extending FortiOS to the cloud, we can empower organizations to deliver the same, enterprise-grade security they enjoy at the core to their hybrid workforce. FortiSASE for the cloud provides seamless integration between security, networking, and connectivity functionality to ensure that the same level of protection, visibility, and control is extended to every device and every user, from anywhere to anywhere.

FortiSASE

The FortiSASE for the cloud solution delivers and enables the broadest range of integrated physical and cloud-based security solutions on the market. It starts with the industry-leading **next-generation firewall (NGFW)** and **Firewall-as-a-Service (FWaaS)** solutions, supported and enhanced by FortiGuard Labs threat intelligence services. These are essential elements of the Security-Driven Networking functionality provided by FortiOS that are core to the FortiSASE solution. This enables the FortiSASE cloud-native architecture to deliver high-performance security and connectivity at scale, enabling maximum flexibility and security for any configuration or environment, including multi-cloud deployments.

Because FortiSASE is built into FortiOS, the most deployed security operating system in the world, it is fast and easy to deploy and intuitive to learn because everything is designed to work seamlessly with everything else. This also means that any deployment can be centrally managed and fully orchestrated as part of the Fortinet Security Fabric.
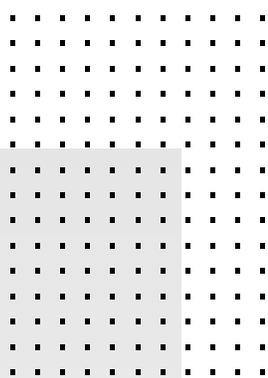
> FortiSASE provides Fortinet's leading enterprise-grade security and powerful FortiOS delivered on the cloud, as a service, enabling consistent security and user experience across all edges.

In addition to FortiSASE, FortiOS provides the following services, all of which can function as part of the SASE solution:

- **Next-Generation Firewall (NGFW).** An NGFW combines deep inspection and advanced techniques to establish and maintain secure connections and analyze inbound and outbound traffic.

- **Intrusion Prevention System (IPS).** The IPS monitors the network looking for malicious activities attempting to exploit a known vulnerability.

- **Data Loss Prevention (DLP).** DLP functionality prevents end-users from moving key information outside the network.

- **Domain Name System (DNS).** DNS identifies and isolates malicious domains to prevent malicious threats from entering the network.

- **Secure Web Gateway (SWG).** An SWG filters malware from web traffic and enforces compliance with corporate and regulatory policies.

- **Zero Trust Network Access (ZTNA).** ZTNA authenticates users and devices and then only provides access to specific network resources based on context and policies.
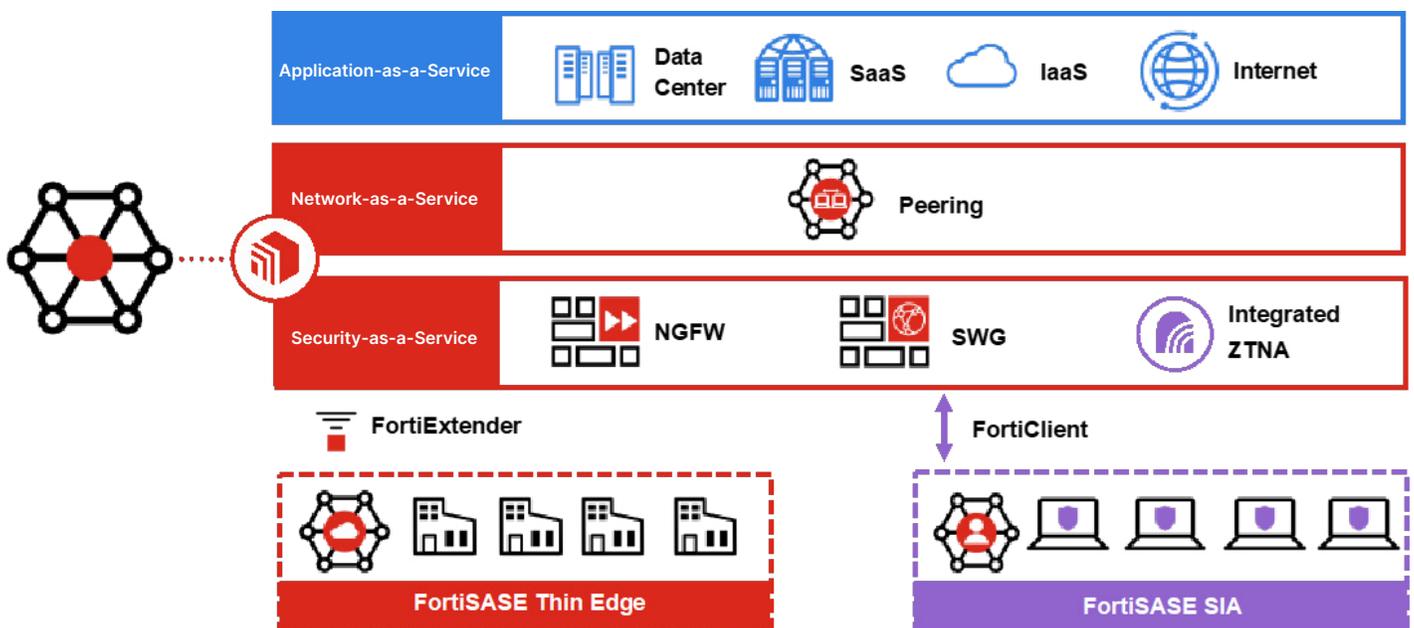

Figure 1: FortiSASE overview.

Fortinet's SASE solution is delivered in two primary form factors:

- **FortiSASE Secure Internet Access (SIA)** delivers high-performance, always-on threat protection through the cloud to remote users. It includes unified networking and security functions beyond virtual private network (VPN), such as FWaaS, IPS, DLP, DNS, SWG, ZTNA, and sandboxing, without latency or impeding user experience.

  This approach enables end-users to enjoy consistent firewall and security policy protections at all times, regardless of their locations. This always-on strategy helps prevent cyberattacks to the corporate network and to on-premises assets by enforcing overarching security to off-network users.

- **FortiSASE Thin Edge** provides the same high-performance, always-on, cloud-delivered threat protection as FortiSASE SIA, but to thin edge users. It was designed for those organizations looking for a simple edge solution requiring fewer appliances, including those planning to move from CapEx to OpEx for their security services. FortiSASE Thin Edge deploys easily over 5G/LTE using FortiExtender, allowing infrastructure leaders to rapidly scale Security-as-a-Service (SECaaS).
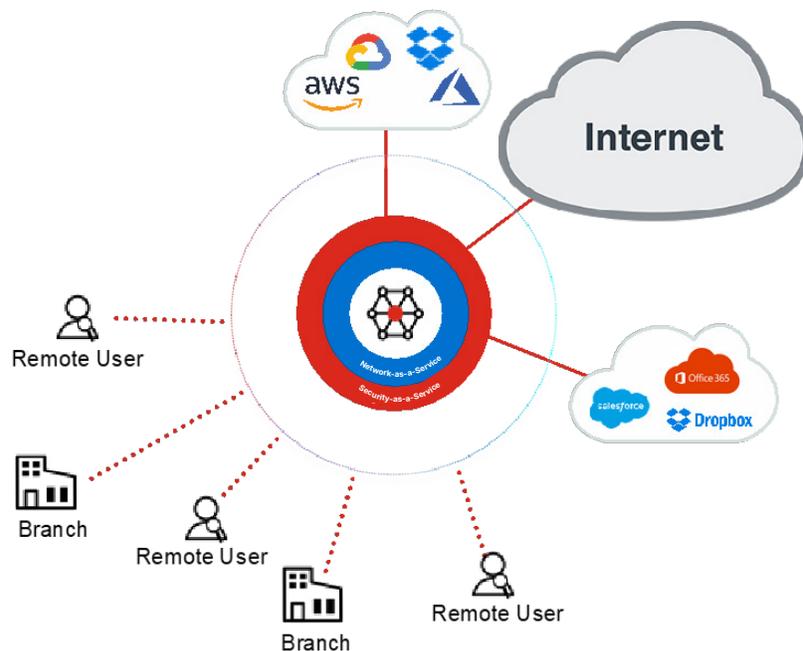
Figure 2: SIA and Thin Client use cases.

Extending SASE Through the Fortinet Security Fabric

The Fortinet Security Fabric enables the consistent delivery and orchestration of security solutions, including FortiSASE, across all networks, endpoints, and clouds. All Fortinet Security Fabric elements run on or interface with a common operating system, FortiOS, giving administrators expanded visibility and control. This ensures the consistent deployment and enforcement of security policies, as well as centralized management across the entire distributed network.

Because it is part of the Fortinet Security Fabric, FortiSASE can also seamlessly integrate with security and networking solutions deployed at the edge, enabling a single, seamless security and access management solution. While every organization's needs are different, limiting a SASE solution to only its core functions simply adds unnecessary risk and complexity to the network. A more comprehensive network and security approach, one that sees the entire distributed network as part of a single ecosystem, where everything on every edge works together, provides a richer set of business outcomes.

This ensures the delivery of a consistent and dynamic security posture that enables users and devices to quickly access applications, resources, data, and services wherever they are deployed, from anywhere in the world, with security that automatically assesses threats and automatically adjusts systems to match risk.

The Fortinet Advantage

Fortinet is the only SASE vendor to provide consistent, enterprise-grade protection across every network edge based on the Security-Driven Networking strategy. FortiSASE delivers its advanced security via cloud-based consumption, eliminating common security gaps with no impact to workflow operations. And because every element is part of the same FortiOS deployment, a full-featured FortiSASE solution is also fast to deploy and intuitive to manage.

FortiSASE delivers on the promise of the Fortinet Security Fabric by reducing risk profiles and optimizing hybrid enterprise networks to support and secure users wherever they are located, providing consistent protection at every network edge. And because it supports the demands of both enterprise and service provider networks, infrastructure leaders can extend their investments in existing security infrastructure by delivering the same security through the cloud.

Fortinet Innovation

Thanks to over 20 years of security innovation at Fortinet:

- We were the first major security vendor to fully integrate security into software-defined wide-area networking (SD-WAN) by combining years of security and networking experience into a single, unified solution. This strategy is known as Security-Driven Networking. The same approach is now fundamental to the FortiSASE for cloud solution.

- Our FortiGuard Labs team, leveraging one of the industry's most sophisticated artificial intelligence (AI) systems, correlates intelligence from around the world to identify, investigate, and classify emerging threats. This intelligence is then fed directly to Fortinet solutions, including FortiSASE, to update components and to raise threat shields consistently across the distributed network.

- We earned a designation in the Leader's quadrant of both the Gartner 2020 Magic Quadrant for WAN Edge Infrastructure[2] and the Gartner 2020 Magic Quadrant for Network Firewalls,[3] the only appliance from a single vendor to achieve such recognition in both reports.

- Our security solutions are also the most tested and validated in the industry. They have received top awards from numerous testing labs, including six consecutive NSS Labs NGFW "Recommended" ratings, ICSA Labs, and Virus Bulletin.

The Fortinet Difference

Delivering the kind of comprehensive SASE solution today's organizations need, by combining tested and validated networking and security technologies into an integrated solution, has been part of Fortinet's approach to networking and security for years. And unlike other vendors, Fortinet can customize any solution with the widest range of advanced connectivity and security technologies in the industry. This ensures that a SASE solution is specifically designed for each unique environment, and can easily adapt as its requirements evolve.

And because it is part of the Fortinet Security Fabric, a FortiSASE solution can also be easily integrated and connected with other Fortinet and Fortinet Fabric-Ready Partner solutions deployed across any network edge, whether on-premises or in the cloud. What's more, all of this is covered by a single-pane-of-glass management system to ensure broad visibility and granular control across the entire distributed network.

[1] Jonathan Forest, Andrew Lerner, and Naresh Singh, "Gartner Magic Quadrant for WAN Edge Infrastructure," September 23, 2020.

[2] Rajpreet Kaur, Adam Hils, and Jeremy D'Hoinne, "Gartner Magic Quadrant for Network Firewalls," November 9, 2020.

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