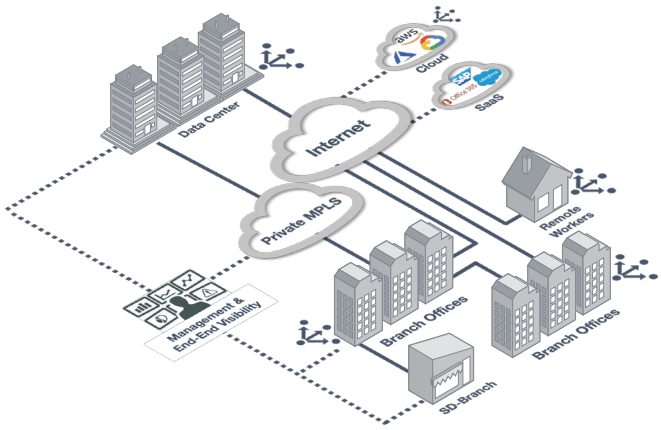
DATA SHEET

Fortinet Secure SD-WAN



As the use of business critical, cloud-based applications continues to increase, organizations with a distributed Infrastructure of remote offices and expanding remote workforce are switching from static, performance-inhibited wide-area networks (WANs) to software-defined WAN(SD-WAN) architectures. Traditional WANs may utilize SLA-backed private multiprotocol label switching (MPLS) or leased line links to organizations' main data centers for all application and security needs that comes at a premium price for connectivity. While this legacy hub-and-spoke, architecture provides centralized protection; it increases latency and slows down network performance to distributed cloud services for application access and compute. Operational complexity and limited visibility associated with multiple point products add significant management overhead and difficulties while trying to troubleshoot and resolve issues.

Fortinet's Security-driven Networking strategy tightly integrates an organization's network infrastructure and security architecture - enabling networks to transform at scale without compromising security. This next generation approach provides consistent security enforcement across flexible perimeters that combines next generation firewall with advanced SD-WAN networking capabilities to eliminate MPLS required traffic backhaul and deliver improved user experience without ever compromising on security. This allows simplified single console management for all networking and security needs, while extending SD-WAN into wired and wireless access points of branch offices. This enables network security and controls for a deeper integration and consistent security enforcements into branch LAN networks.

Key Features

- World's only ASIC Accelerated SD-WAN
- 5,000+ application identification with SSL Inspection
- Self-Healing capabilities for enhanced user experience
- Cloud-On-Ramp for efficient SaaS adoption
- Simplified Operations with NOC/SOC Management and Analytics
- Enhanced Granular Analytics for end to end visibility and control

BUSINESS OUTCOMES

Improved User Experience

Application Driven approach provides broad application steering with accurate identification, advanced WAN remediation and accelerated cloud on-ramp for optimized network and application performance

Accelerated Convergence

Industry's only organically developed purpose-built SD-WAN ASIC powered enables thin edge (SD-WAN, routing) and WAN Edge (SD-WAN, routing, NGFW) securing all applications, users and data anywhere

Efficient Operations

Simplify operations with centralized orchestration and enhanced analytics for SD-WAN, Security and SD-Branch at scale

Natively Integrated Security

Built-in next-generation firewall (NGFW) combines SD-WAN and security capabilities in a unified solution to preserve the security and availability of the network

CORE COMPONENTS

Fortinet Secure SD-WAN consists of the Industry's only organically developed software complemented by an ASIC accelerated performing platform to deliver the most comprehensive SD-WAN solution.

FortiGate

Broad product portfolio in different form factors: physical appliance and virtual appliance with the industry's only ASIC acceleration with SOC4 SPU or vSPU.

- Reduce cost and complexity with next generation firewall, SD-WAN and advanced routing on a unified platform that allows customers to eliminate multiple point products at the WAN edge
- ASIC acceleration of SD-WAN overlay tunnels, application identification, steering, remediation and prioritization ensures the best user experience for business critical, SaaS and UCaaS applications

FortiOS

Operating system that delivers Security-driven Networking strategy that secures and accelerates network and user experience. Continued innovations and enhancement enables:

- Real-time application optimization for consistent and resilient application experience
- Advanced next generation firewall protection and prevention from internal and external threats while providing visibility across entire attack surface
- Dynamic Cloud connectivity and security with effective support of cloud integration and automation

Fabric Management Center

Simplify centralized management, deployment and automation to save time and respond quickly to business demands with end-to-end visibility. With a single pane of glass management that offers deployment at scale, customers can:

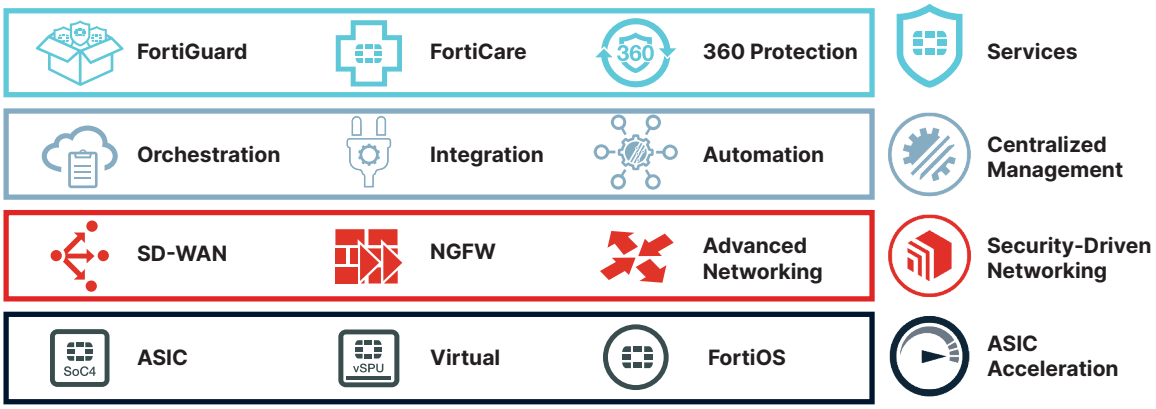
- Centrally manage 100K + devices including firewalls, switches, access points and Extenders / LTE devices from a single console
- Provision and monitor Secure SD-WAN at the application and network level across branch offices, datacenters and cloud
- Reduce complexity by leveraging automation enabled by REST API, Ansible and cloud connectors
- Separate and manage domains leveraging ADOMS for compliance and operational efficiency
- Role-based access control to provide management flexibility and separation

FortiGuard Security Services

Enables choice of SD-WAN use case with advanced protection by staying always ahead of the threats:

- Coordinated real-time detection and prevention against known and unknown protecting content, application, people, and devices
- Real-time Insights based on an extensive amount of data processed at a cloud-scale and analyzed with advanced AI, and are automatically distributed back for real-time enforcement and protection

CORE COMPONENTS



	Features	Description
FortiOS — SD-WAN	Application Identification & Control	5000+ Application signatures, First packet Identification, Deep packet Inspection, Custom application signatures, SSL decryption enabled, TLS1.3 with mandated ciphers and deep inspection.
	SD-WAN (Application aware traffic control)	Granular application policies, Application SLA based path selection, Dynamic bandwidth measurement of SD-WAN paths, active/active and active/standby forwarding, overlay support for encrypted transport, Application session-based steering, probe-based SLA measurements
	Advanced SD-WAN (WAN remediation)	Forward Error Correction (FEC) for packet loss compensation, packet duplication for best real-time application performance, Active Directory integration for user based SD-WAN steering policies, per packet link aggregation with packet distribution across aggregate members
	SD-WAN deployment	Flexible deployment – hub-to-spoke (partial mesh), spoke-to-spoke (full mesh), Multi-WAN transport support
FortiOS — Networking	QoS	Traffic shaping based on bandwidth limits per application and WAN link, Rate limits per application and WAN link, prioritize application traffic per WAN link, Mark/Remark DSCP bits for influence traffic QoS on egress devices, Application steering based on ToS marking
	Advanced Routing (IPv4/IPv6)	Static routing, Internal Gateway (iBGP, OSPF v2/v3 , RIP v2), External Gateway(eBGP), VRF, route redistribution, route leaking, BGP confederation, router reflectors, summarization and route-aggregation, route asymmetry.
	VPN/Overlay	Site-to-site ADVPN – Dynamic VPN tunnels, policy-based VPN, IKEv1, IKEv2, DPD, PFS, ESP and ESP-HMAC support, Symmetric Cipher support (IKE/ESP): AES-128 and AES-256 modes: CBC, CNTR, XCBC, GCM, Pre-shared and PKI authentication with RSA certificates, Diffie-Hellman key exchange (Group 1,2,5), MD5 and SHA1 based HMAC
	Multicast	Multicast forwarding, PIM spare (rfc 4601), dense mode (rfc 3973), PIM Rendezvous- Point.
	Advanced Networking	DHCP v4/v6, DNS, NAT – source, destination, static NAT, destination NAT, PAT, NAPT, Full IPv4/v6 support
FortiOS — Security	Security	Next Generation Firewall with FortiGuard threat Intelligence – SSL inspection, application control, Intrusion prevention, Antivirus, web filtering, DLP, and advanced threat protection. Segmentation – micro, macro, single task VDOM, multi VDOM
Fabric Management Center	Centralized Management & Provisioning	FortiManager – zero touch provisioning, centralized configuration, change management, dashboard, application policies, QoS, security policies, application specific SLA, active probe configuration, RBAC, Multi-tenant
	Cloud Orchestration	FortiManager Cloud through FortiCloud, Single Sign-on Portal to manage Fortinet NGFW and SD-WAN, Cloud-based network management to streamline FortiGate provisioning and management, Extensive automation-enabled management of Fortinet devices
	Enhanced Analytics	Bandwidth consumption, SLA metrics – jitter, packet loss and Latency, real-time monitoring, filter based on time slot, WAN link SLA reports, Per application session usage, threat information - malware signature, malware domain or URL, infected host, threat level, malware category, indicator of compromise
	Cloud On-ramp	Cloud integration – AWS, Azure, Alibaba, Oracle, Google. AWS – transit, direct and VPC connectivity, transit gateways, Azure – Virtual WAN connectivity, Oracle – OCI connectivity
FortiGate	Redundancy/High-availability	FortiGate dual device HA – primary and backup, FortiManager HA, Bypass interface, interface redundancy, redundant power supplies
	Integration	RESTful API/Ansible for configuration, zero touch provisioning, reporting and third-party integration.
	Virtual environments	VMware ESXi v5.5 / v6.0 / v6.5/ v6.7, VMware NSX-T v2.3 Microsoft Hyper-V Server 2008 R2 / 2012 / 2012 R2 / 2016 Citrix Xen XenServer v5.6 sp2, v6.0, v6.2 and later Open source Xen v3.4.3, v4.1 and later KVM qemu 0.12.1 & libvirt 0.10.2 and later for Red Hat Enterprise Linux / CentOS 6.4 and later / Ubuntu 16.04 LTS (generic kernel) ,KVM qemu 2.3.1 for SuSE Linux Enterprise Server 12 SP1 LTSS Nutanix AHV (AOS 5.10, Prisim Central 5.10) Cisco Cloud Services Platform 2100
	Built-in Variants	POE, LTE, WiFi, ADSL/VDSL

PRODUCT OFFERINGS

FortiGate

SD-WAN Branch Offices	FG/FWF-40F Series	FG/FWF-60F Series	FG-80F Series	FG-100F Series	FG-200F Series
Use Case					
Type	Remote Office/Home	Small Branch	Medium Branch	Large Branch	Large Branch
Performance					
Unrestricted Bandwidth	Fortinet Secure SD-WAN offers unrestricted bandwidth unlike other SD-WAN vendors				
IPSEC VPN Throughput	4.4 Gbps	6.5 Gbps	6.5 Gbps	11.5 Gbps	13 Gbps
Application Control Throughput	990 Mbps	1.8 Gbps	1.8 Gbps	2.2 Gbps	13 Gbps
Max Concurrent Connections	700,000	700,000	1,500,000	1,500,000	3,000,000
Threat Protection Throughput	600 Mbps	700 Mbps	900 Mbps	1 Gbps	3 Gbps
SSL Protection Throughput	310 Mbps	630 Mbps	715 Mbps	1 Gbps	4 Gbps
Connectivity					
Total Interfaces	4	6	8	14	26
Max FortiLink Ports	1	2	2	2	2
10GE	-	-	-	2	2
Dual Power Supply	-	-	✓*	✓	✓
Variants					
Built-in	3G/4G, WiFi	WiFi, Storage	Bypass, Storage	Storage	Storage
Form Factor	Desktop	Desktop	Desktop	1RU	1RU

Use Case	Offering Name	Support	Priority Access To Level 2 Support	Content Protection With AV & Cloud Sandbox	Web & Application Access Protection	Vuln. And Device Protection (Iot/Ot)	Compliance Monitoring Tools	SD-WAN Management & Orchestration	Network & Security Cloud Management
WAN Edge	360 Protection Bundle	24 × 7	✓	✓	✓	✓	✓	✓	✓

* second power adapter can be purchased separately

SD-WAN Hub Sites	FG-600E Series	FG-1100E Series	FG-1800F Series	FG-2600F Series	FG-4200F Series	FG-4400F Series
Use Case						
Type	Campus/Small Datacenter	Campus/Small Datacenter	Large Datacenter	Large Datacenter	Hyperscale Datacenter	Hyperscale Datacenter
Performance						
Unrestricted Bandwidth	Fortinet Secure SD-WAN offers unrestricted bandwidth unlike other SD-WAN vendors					
IPSEC VPN Throughput	20 Gbps	48 Gbps	55 Gbps	55 Gbps	210 Gbps	310 Gbps
Max G/W to G/W IPSEC Tunnels	2,000	20,000	20,000	20,000	40,000	40,000
Threat Protection Throughput	7 Gbps	7.1 Gbps	9.1 Gbps	17 Gbps	45 Gbps	75 Gbps
SSL Protection Throughput	8 Gbps	10 Gbps	17 Gbps	20 Gbps	50 Gbps	86 Gbps
Connectivity						
40/100GE	-	-	-	4	8	12
10/40GE	-	2	4	-	-	-
10/25GE	-	4	12	16	18	20
1/10GE	2	4	2	18	-	-
Dual Power Supply	Optional	Yes, Hot Swappable	Yes, Hot Swappable	Yes, Hot Swappable	Yes, Hot Swappable	Yes, Hot Swappable

Use Case	Offering Name	Support	Priority Access To Level 2 Support	Content Protection With AV & Cloud Sandbox	Web & Application Access Protection	Vuln. And Device Protection (Iot/Ot)	Compliance Monitoring Tools	SD-WAN Management & Orchestra-tion	Network & Security Cloud Management	Recommeded Add-on Protections / Products
Hub Option 1	Unified Threat Protection Bundle	24 × 7	-	✓	✓	-	-	-	-	SD-WAN mgmt.
Hub Option 2	360 Protection Bundle	24 × 7	✓	✓	✓	✓	✓	✓	✓	-

PRODUCT OFFERINGS

FortiGate-VM Support Matrix

	Private Cloud						Public Cloud				
	VMware VSphere	Citrix Xen	Xen	KVM	Microsoft Hyper-V	Nutanix AHV	Amazon AWS	Microsoft Azure	Oracle OCI / OPC	Google GCP	Ailbaba AliCloud
FG-VM **	✓	✓	✓	✓	✓	✓	✓ / #	✓ / #	✓ / #	✓ / #	✓ / #

** Available as FortiGate-VMX solution for VMware NSX environment, AzureStack and RackSpace (PAYG)
# on-demand

FORTINET

www.fortinet.com

FST-PROD-DS-SSDWAN
SSD-WAN-DAT-R4-202103