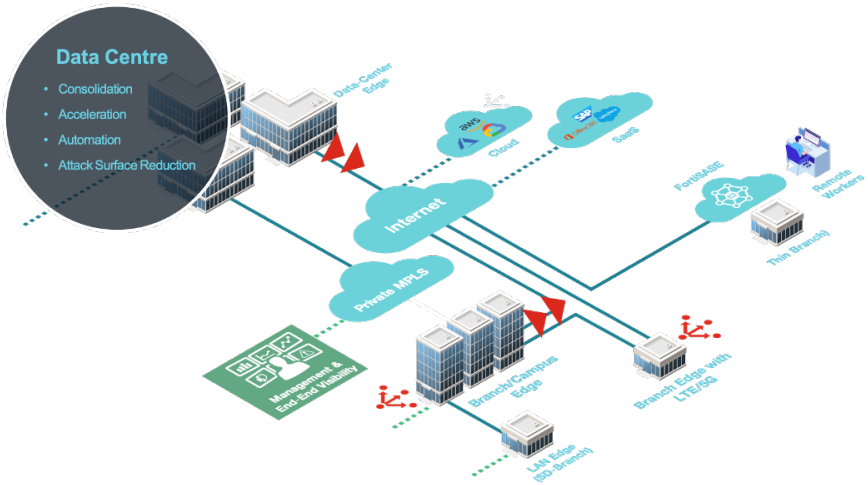
DATA SHEET

Fortinet Data Center Firewall



Today's networks have quickly become highly distributed and hybrid connecting on-premises data centers, co-location facilities, branches to various cloud IaaS and SaaS services resulting in many enterprise edges. While this growing reliance on flexible application consumption model has made businesses more agile, it has also expanded the attack surface, at the same time creating new perimeters that security stakeholders must protect. Rising encrypted traffic, fueled by the demand of secure connections, has resulted in lack of visibility and more blind spots.

The gatekeepers of network security must continue to think differently to provide secure remote access to users and partners to protect corporate and customers data to maintain compliance and data privacy. Those organizations, who believed in iron clad perimeter security, kept all internal networks flat, learning the hard way that once an attacker penetrates or a trusted user inadvertently becomes an infected source, the malware spreads laterally without much resistance.

Organizations, therefore, must find a way to manage internal and external risks across all enterprise edges including hybrid data centers and more importantly, find a way to create, orchestrate, and monitor consistent end to end security across this hybrid IT architecture. Last but not least, growing businesses, dealing with escalating business demands, should be able to support unprecedented security scale without sacrificing user experience and network performance.

While the Firewall market is among the most mature technologies within cybersecurity, Fortinet is rapidly innovating and redefining best-in-breed security with its FortiGate Network Firewall driven Security-Driven networking framework that delivers industry's highest Security Compute Rating[1]. Fortinet Network Firewall is an integral component of Fortinet's Security Fabric – a platform approach that enables zero-trust network access and prevents cyber-attacks with contextual threat detection and automated protection across all edges. Fortinet's Network Firewall offering is unparalleled for its single pane of glass management, performance, and security efficacy, enabling organizations to remain agile and secure, at whatever stage of digital transformation they find themselves in.

Key Features

- Security-Driven Networking is seamlessly integrated networking and security delivered by FortiOS
- Unparalleled performance is enabled by SPUs (Security Processing Units) and vSPUs (virtualized Processing Units)
- Deployment flexibility and enterprise security for hybrid and hyperscale data centers
- Streamlined operations with NOC/SOC management and analytics services

1. Security Compute Rating - Security Compute Rating is a benchmark (performance multiplier) that compares FortiGate Network Firewall performance versus the industry average of competing products across various categories that fall within the same price band

BUSINESS OUTCOMES

Manage Internal Risks

Segment to reduce attack surface, prevent lateral spread of threats, and implement Trusted Application Access and compliance

Manage External Risks

Full visibility with SSL decryption (including TLS1.3), Web Filtering, and threat protection to keep operations running

Reduce Costs

Consolidate network and multiple security functions to eliminate point products, protect vulnerable systems, and avoid disruptions

Manage Hyperscale

Implement hyperscale security to meet escalating business needs and preserve optimal user experience

CORE COMPONENTS

Fortinet Network Firewall converges and accelerates security and networking within security-driven networking framework making it suitable for any network design and deployment to protect any edge at any scale.

Security Processing Unit (SPUs)

FortiGate Network Firewalls are powered by physical SPUs that accelerate networking (e.g. NP7) and security function (e.g. CP9) to result in the industry's highest security compute rating[1]. Fortinet Network Firewalls also come in virtual form factors with industry-leading acceleration enabled by vSPUs (virtual SPUs). Fortinet Network Processor 7 (NP7) differentiates Fortinet Network Firewalls by solving some of the most unique security problems that are not answered by any existing NGFW firewall. This solution includes delivering ultra-scalable IPsec enabled secure access networks for hybrid workforce. Securing elephant flows of up to 100 Gbps for data center backups providing disaster recovery. Providing optimal user experience with tens of millions of connections per second in a high velocity eRetail environment. Fortinet Content Processor 9 accelerates advanced security functions like Application Identification, IPS, and Anti-malware.

FortiOS Innovations and Fabric Automation

Enables industry-leading automations with Fabric Connectors allowing hybrid IT architectures to create, automate, and orchestrate end-to-end security policy to protect all edges irrespective of their location.

Continued innovations and enhancement with FortiOS enable:

- Adaptable, auto learned and optimized firewall policy
- Zero-Trust Network Access that identities and secures users and devices both on and off network
- Automated upgrades include federated upgrades to implement automated compliance
- Operational simplicity with IPS running as a function in Network Firewall, augmented by a dedicated IPS admin account, allows separation of duties between NetOps and SecOps with effective vulnerability management and simplified operations

FortiGuard Services

FortiGuard services are AI/ML powered and are offered by FortiGuard Labs, the threat intelligence and research organization at Fortinet as follows:

- FortiGuard lab develops, innovates, and maintains one of the most recognized and seasoned artificial intelligence and machine learning systems in the industry
- FortiGuard security services are designed to optimize performance and maximize protection across the Fortinet Security Fabric and are available as both individual and bundled subscriptions

CORE COMPONENTS

	Features	Description
FortiOS — Networking	Advanced Networking	DHCP v4/v6, DNS, NAT – source, destination, static NAT, destination NAT, PAT, NAPT, Full IPv4/v6 support and advanced BGP capabilities.
	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.
	VXLAN Termination	VXLAN termination and re-origination in the hardware for higher performance.
FortiOS — Firewall	Ultra-Scalable Firewall Sessions	Hundreds of millions concurrent connections.
	Super-fast connections setup	Tens of millions of Firewall connections per second to enable high velocity eRetail and a wide variety of other use cases.
	DDoS Resiliency	IPv4/IPv6 DDoS metering controls to prevent flooding attacks.
FortiOS — Security	FortiGuard Web Filtering	AI/ML powered Web Filtering to rate URLs of categories and Integrated image classifier to rate and classify web sites into effective categories.
	FortiGuard Antivirus Security Service	Protects against the latest viruses, spyware and other content-level threats by using industry-leading advanced detection engines like patented CPRL (Compact Pattern Recognition Language) that can detect variations of the same malware. The June 2020 VB100 Reactive and Proactive Test ranked Fortinet the security industry's second highest business AV solution for security effectiveness.
	FortiGuard IPS Security Service	Identify and block known vulnerabilities through sophisticated signature sets. Purpose built for enterprise and designed for to deliver superior security efficacy and the industry's IPS performance.
Fabric Management Center	Centralized Management and Provisioning	FortiManager – zero touch provisioning, centralized configuration, change management, dashboard, application policies, QoS, security policies, application specific SLA, active probe configuration.
FortiGate	Redundancy/High-availability	Support a wide variety of clustering solutions like FGCP, FGSP, VRRP, HSRP. Supports asymmetric routing with FGSP cluster and advanced security inpsection.
	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
	High Speed and Density I/O	1G, 10G, 25G, 40G, 100G.

PRODUCT OFFERINGS

FortiGate

	13 GBPS IPS + SSL	20 GBPS IPS + SSL	30 GBPS IPS + SSL	34 GBPS IPS + SSL	50 GBPS IPS + SSL	85 GBPS IPS + SSL	65 GBPS IPS + SSL	110 GBPS IPS + SSL
Appliances	**1800F**	**2600F**	**3400E**	**3600E**	**4200F**	**4400F**	**6300F**	**6500F**
Data Center Firewall								
SSL Inspection Throughput	17 Gbps	20 Gbps	30 Gbps	34 Gbps	50 Gbps	86 Gbps	66 Gbps	110 Gbps
IPS Throughput	13 Gbps	24 Gbps	44 Gbps	55 Gbps	52 Gbps	94 Gbps	110 Gbps	170 Gbps
IPsec VPN Throughput	55 Gbps	55 Gbps	140 Gbps	140 Gbps	210 Gbps	310 Gbps	96 Gbps	160 Gbps
Hardware/Connectivity								
100G		✓	✓	✓	✓	✓	✓	✓
40G	✓	✓	✓	✓	✓	✓	✓	✓
25G	✓	✓	✓	✓	✓	✓	✓	✓
10G	✓	✓	✓	✓	✓	✓	✓	✓
With storage	1801F	2601F	3401E	3601E	4201F	4401F	6301F	6501F
Other Metrics								
Firewall Throughput (1518 byte)	198 Gbps	198 Gbps	240 Gbps	240 Gbps	800 Gbps	1.15 Tbps	239 Gbps	239 Gbps
New Sessions/Second	750 000	850 000	850 000	950 000	1 M	1 M	2 M	3 M
Threat Protection Throughput	9.1 Gbps	17 Gbps	25 Gbps	30 Gbps	45 Gbps	75 Gbps	60 Gbps	100 Gbps
Other Licenses								
HyperScale	✓	✓			✓	✓		
Carrier			✓	✓	✓	✓	✓	✓

ORDER INFORMATION

FortiGate	1800F	2600E	3400E	3600E	4200F	4400F	6300F	6500F
360 Bundle								
Hardware Bundle	FG-1800F-BDL-817-DD	FG-2600F-BDL-817-DD	FG-3400E-BDL-817-DD	FG-3600E-BDL-817-DD	FG-4200F-BDL-817-DD	FG-4400F-BDL-817-DD	FG-6300F-BDL-817-DD	FG-6500F-BDL-817-DD
Renewal	FC-10-F18HF-817-02-DD	FC-10-F26HF-817-02-DD	FC-10-F3K4E-817-02-DD	FC-10-F3K6E-817-02-DD	FC-10-F42HF-817-02-DD	FC-10-F44HF-817-02-DD	FC-10-6K30F-817-02-DD	FC-10-6K50F-817-02-DD
Enterprise Bundle								
Hardware Bundle	FG-1800F-BDL-811-DD	FG-2600F-BDL-811-DD	FG-3400E-BDL-811-DD	FG-3600E-BDL-811-DD	FG-4200F-BDL-811-DD	FG-4400F-BDL-811-DD	FG-6300F-BDL-811-DD	FG-6500F-BDL-811-DD
Renewal	FC-10-F18HF-811-02-DD	FC-10-F26HF-811-02-DD	FC-10-F3K4E-811-02-DD	FC-10-F3K6E-811-02-DD	FC-10-F42HF-811-02-DD	FC-10-F44HF-811-02-DD	FC-10-6K30F-811-02-DD	FC-10-6K50F-811-02-DD
UTP Bundle								
Hardware Bundle	FG-1800F-BDL-950-DD	FG-2600F-BDL-950-DD	FG-3400E-BDL-950-DD	FG-3600E-BDL-950-DD	FG-4200F-BDL-950-DD	FG-4400F-BDL-950-DD	FG-6300F-BDL-950-DD	FG-6500F-BDL-950-DD
Renewal	FC-10-F18HF-950-02-DD	FC-10-F26HF-950-02-DD	FC-10-F3K4E-950-02-DD	FC-10-F3K6E-950-02-DD	FC-10-F42HF-950-02-DD	FC-10-F44HF-950-02-DD	FC-10-6K30F-950-02-DD	FC-10-6K50F-950-02-DD

SFP Transceivers	1800F	2600E	3400E	3600E	4200F	4400F	6300F	6500F
10Gbps, 300m	FN-TRAN-SFP+SR	FN-TRAN-SFP+SR	FN-TRAN-SFP+SR	FN-TRAN-SFP+SR	FN-TRAN-SFP+SR	FN-TRAN-SFP+SR	FN-TRAN-SFP+SR	FN-TRAN-SFP+SR
10Gbps, 10km	FN-TRAN-SFP+LR	FN-TRAN-SFP+LR	FN-TRAN-SFP+LR	FN-TRAN-SFP+LR	FN-TRAN-SFP+LR	FN-TRAN-SFP+LR	FN-TRAN-SFP+LR	FN-TRAN-SFP+LR
10/25Gbps, 100m	FN-TRAN-SFP28-SR	FN-TRAN-SFP28-SR	FN-TRAN-SFP28-SR	FN-TRAN-SFP28-SR	FN-TRAN-SFP28-SR	FN-TRAN-SFP28-SR	FN-TRAN-SFP28-SR	FN-TRAN-SFP28-SR
10/25Gbps, 10km	FN-TRAN-SFP28-LR	FN-TRAN-SFP28-LR	FN-TRAN-SFP28-LR	FN-TRAN-SFP28-LR	FN-TRAN-SFP28-LR	FN-TRAN-SFP28-LR	FN-TRAN-SFP28-LR	FN-TRAN-SFP28-LR
40Gbps, 150m(OM4)	FN-TRAN-QSFP+SR	FN-TRAN-QSFP+SR	FN-TRAN-QSFP+SR	FN-TRAN-QSFP+SR	FN-TRAN-QSFP+SR	FN-TRAN-QSFP+SR	FN-TRAN-QSFP+SR	FN-TRAN-QSFP+SR
40Gbps, 10km	FN-TRAN-QSFP+LR	FN-TRAN-QSFP+LR	FN-TRAN-QSFP+LR	FN-TRAN-QSFP+LR	FN-TRAN-QSFP+LR	FN-TRAN-QSFP+LR	FN-TRAN-QSFP+LR	FN-TRAN-QSFP+LR
100Gbps, 100m		FN-TRAN-QSFP28-SR	FN-TRAN-QSFP28-SR	FN-TRAN-QSFP28-SR	FN-TRAN-QSFP28-SR	FN-TRAN-QSFP28-SR	FN-TRAN-QSFP28-SR	FN-TRAN-QSFP28-SR
100Gbps, 10km		FN-TRAN-QSFP-28-LR	FN-TRAN-QSFP-28-LR	FN-TRAN-QSFP-28-LR	FN-TRAN-QSFP-28-LR	FN-TRAN-QSFP-28-LR	FN-TRAN-QSFP-28-LR	FN-TRAN-QSFP-28-LR

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