



## FortiWAN™

### WAN Link Load Balancing



## FortiWAN

FortiWAN 200B, 1000B, 3000B, VM and FortiWAN Manager

### WAN Link Load Balancing

Fortinet's FortiWAN intelligently balances Internet and intranet traffic across multiple WAN connections, providing additional low-cost incoming and outgoing bandwidth for the enterprise and substantially increased connection reliability. FortiWAN is supported by a user-friendly UI and a flexible policy-based performance management system. It provides a unique solution that offers comprehensive multi-WAN management that keeps costs down as well as keeping customers and users connected.

#### Increase Network Performance

FortiWAN intelligently aggregates multiple broadband and/or leased access lines to significantly increase Internet access performance. FortiWAN load balances Internet service requests, optimally distributing traffic across all available access links. Seven different load balancing algorithms provide the flexibility to maximize productivity from any network scenario.

#### Inbound Access Load Balancing

FortiWAN also load balances service requests from Internet users accessing Enterprise-hosted web, email or VPN servers. Multiple links, media and ISPs can be utilized without complex interfaces or programming with your service providers. Bandwidth can be added and removed quickly and easily.

#### Site-to-Site WAN Connectivity

FortiWAN gives you high-performance inter-site connectivity without the need to lease expensive links such as T1 and T3. FortiWAN aggregates multiple low-cost Internet access links to create site-to-site Virtual Private Line (VPL) tunnels of up to 1 Gbps for LAN-like performance between company locations. By using multiple carriers and media, reliability of these VPL tunnels can exceed that of traditional engineered carrier links.

### Highlights

- Increase Internet bandwidth
- Increase site-to-site bandwidth
- Improve reliability/availability
- Reduce bandwidth costs
- Outbound Link Load Balancing to fine-tune traffic across up to 50 links
- Optimum routing to prioritize traffic for mission-critical applications
- Automatic fallback or failover of WAN links to ensure continuity of traffic flows
- Multi-homing (inbound Link Load Balancing) to improve response times and availability for incoming requests
- Virtual servers for simple server load balancing and high availability
- GE fiber connectivity to Carrier and LAN services
- Comprehensive usage and quality reporting



## Tunnel Routing — Virtual Private Line Services

Inter-site tunnels can be created from fractional, full, multiple and fractions of multiple WAN links. Applications requiring large single-session bandwidth such as video conferencing or WAN optimization can use multiple links to build the bandwidth needed.

Multi-session traffic can share an appropriately-sized tunnel. Tunnels have the same functionality as single links, supporting load balancing, fallback, failover and health detection within and between tunnels.

## FEATURES

### Load Balancing Algorithms

- Fixed
- Weighted Round-Robin
- Application
- Connections
- Traffic
- FQDN
- Optimum Route
- Full IPv6 Support of all WAN types

### Multi-Homing

- WAN Load Balancing and Fault Tolerance
- Multiple Domains
- DNS Relay
- Full IPv6 Support of all WAN types
- IPv4/IPv6 Authoritative DNS / DNSSEC

### Bandwidth Management

- Maximum and minimum bandwidth
- Priority
- Source/Destination IP and Application
- Schedule

### Flexible Licensing

- Stackable bandwidth options
- Increase throughput as needed
- Please see product specifications for maximum bandwidth supported on each appliance

## Central Management

FortiWAN offers the tool you need to manage multiple appliances and gain valuable insights on inbound and outbound link traffic. From within a single management console you can configure and manage multiple FortiWAN devices using our VMware-based central management utility.

### Tunnel Routing

- VPN Load Balancing/Failover
- AES Encryption
- Dynamic IP Support
- NAT Pass-Through
- Peer Routing Exchange
- Tunnel DSCP QoS for MPLS Links
- Aggregate Multiple Internet Links into Virtual Private Lines

### Other Features

- Server High Availability
- L4 Server Load Balancing
- Built-in Authoritative Public and Private DNS
- NAT Mode / Routing Mode
- RIP V1/2 and OSPF
- PPPoE / DHCP WAN-Type Support
- Multiple Public IP Pass-Through
- IEEE 802.1q VLAN
- Redundant Power Supply on most models
- Automated Failover, N:N-1 Redundancy, On-Demand Line Backup
- HA (High Availability)
- IPv4/IPv6 DHCP for each subnet

### Management

- Web Admin (SSL)
- Console (RJ45, RS232 or SSH via network)
- SNMP
- Central management for multiple devices

## SPECIFICATIONS

	FORTIWAN 200B	FORTIWAN 1000B	FORTIWAN 3000B
<b>Hardware Specifications</b>			
WAN Bandwidth	200–600 Mbps*	1–2 Gbps*	3–9 Gbps*
WAN Links	up to 25**	up to 50**	up to 50**
Network Interfaces	5x GE Cu	4x SFP, 3x GE Cu	8x 10 GE SFP+, 8x GE SFP, 8x GE Cu
Storage	500 GB HDD	1 TB HDD	1 TB HDD
HA Ports	1	1	1
Power Supply	Single	Dual	Dual
<b>System Specifications</b>			
Concurrent Connections	800,000	2,000,000	6,000,000
Connections per Second	42,000	180,000	550,000
Multi-Homing A/AAAA Records	200	400	800
Management	any network port	any network port	any network port
<b>Dimensions</b>			
Form Factor	1U	1U	2U
Height x Width x Length (inches)	1.75 x 17.32 x 10.55	1.75 x 17.32 x 16.22	3.46 x 17.32 x 23.66
Height x Width x Length (mm)	44 x 440 x 268	44 x 440 x 412	88 x 440 x 601
Weight	9.9 lbs (4.5 kg)	17.9 lbs (8.1 kg)	36.2 lbs (16.4 kg)
<b>Environment</b>			
Input Voltage	100–240V AC, 50–60 Hz	100–240V AC, 50–60 Hz	100–240V AC, 50–60 Hz
Typical Power Consumption	40 W	135 W	450 W
Maximum Current	110V/0.37A, 220V/0.22A	110V/5A, 220V/3A	110V/9A, 220V/4A
Heat Dissipation	110V/138 BTU/h, 220V/163 BTU/h	110V/508 BTU/h, 220V/699 BTU/h	110V/1843 BTU/h, 220V/2177 BTU/h
Operating Temperature	32–104°F (0–40°C)	32–104°F (0–40°C)	32–104°F (0–40°C)
Storage Temperature	-4–167°F (-20–75°C)	-4–167°F (-20–75°C)	-4–167°F (-20–75°C)
Humidity	10–85% non-operating, non-condensing	10–85% non-operating, non-condensing	10–85% non-operating, non-condensing
<b>Compliance</b>			
	FCC, CE, RCM, VCCI, BSMI, UL, CB.	FCC, CE, RCM, VCCI, BSMI, UL, CB.	FCC, CE, RCM, VCCI, BSMI, UL, CB.

\* Throughputs based on license(s) selected. \*\*Additional links beyond the physical hardware ports on the appliances are supported through external VLAN switches.

VIRTUAL APPLIANCES	FORTIWAN-VM02	FORTIWAN-VM04
<b>Hardware Specifications</b>		
Hypervisor Support	VMware ESXi / ESX 5.5, 6.0	
vCPU Support (Minimum / Maximum)	1 / 2	1 / 4
Boot Memory (Minimum / Maximum)	1 GB / 2 GB	
Memory Support (Minimum / Maximum)	1 GB / 16 GB	
Network Interface Support (Minimum / Maximum)	Up to 10x GE / 10 GE vNICs (1 reserved for HA)	
Storage Support (Minimum / Maximum)	120 GB / 1 TB	
Throughput***	1 Gbps	2 Gbps

\*\*\* Actual performance values may vary depending on system configuration and network traffic. Performance metrics were observed using a Dell PowerEdge R730 server (2x Intel Xeon E5-2630v3 2.4 GHz 20 MB Cache) running VMware ESXi 5.5 with 2 GB of vRAM assigned to the 2 vCPU and 4 vCPU FortiWAN Virtual Appliances.

## ORDER INFORMATION

Product	SKU	Description
FortiWAN 200B	FWN-200B	FortiWAN 200B Link Load Balancing System, supports Tunnel Routing. Base system 200 Mbps throughput, upgradeable to 600 Mbps. 5x GE RJ45 ports, 1x RJ45 HA port, 1x RJ45 serial console port, 1x 500 GB HDD storage, single PSU.
	FWN-UPG-200B	Stackable upgrade license for FWN-200B to increase throughput to 400 Mbps (buy 1) or 600 Mbps (buy 2).
FortiWAN 1000B	FWN-1000B	FortiWAN 1000B Link Load Balancing System, supports Tunnel Routing. Base system 1 Gbps throughput, upgradeable to 2 Gbps. 3x GE RJ45 ports, 4x GE SFP ports, 1x RJ45 HA port, 1x RJ45 serial console port, 1x 1 TB HDD storage, redundant PSU.
	FWN-UPG-1000B	Upgrade license for FWN-1000B to increase throughput to 2 Gbps.
FortiWAN 3000B	FWN-3000B	FortiWAN 3000B Link Load Balancing System, supports Tunnel Routing. Base system 3 Gbps throughput, upgradeable to 9 Gbps. 8x GE RJ45 ports, 8x GE SFP ports, 8x 10 GE SFP+ ports, 1x RJ45 HA port, 1x RJ45 serial console port, 1 TB HDD storage, redundant PSU.
	FWN-UPG-3000B	Stackable upgrade license for FWN-3000B to increase throughput to 6 Gbps (buy 1) or 9 Gbps (buy 2).
FortiWAN VM02	FWN-VM02	FortiWAN VM02 Link Load Balancing System for VMware ESXi platform, 1-2x vCPUs cores. Supports Tunnel Routing, Max 9 vNICs + 1 vNIC reserved for HA.
FortiWAN VM04	FWN-VM04	FortiWAN VM04 Link Load Balancing System for VMware ESXi platform, 1-4x vCPUs cores. Supports Tunnel Routing, Max 9 vNICs + 1 vNIC reserved for HA.
FortiWAN Manager VM	WMG-VM-BASE	FortiWAN Manager base license. Manages up to 10 FortiWAN devices. Designed for VMware vSphere platform.
FortiWAN Manager 10	WMG-VM-10-UG	FortiWAN Manager stackable upgrade license for adding 10 FortiWAN devices.
FortiWAN Manager Unlimited	WMG-VM-U-UL	FortiWAN Manager upgrade license for adding unlimited FortiWAN devices.
<b>Optional Accessory</b>		
AC power supply	SP-FAD700-PS	AC power supply for FAD-700D, FML-400E, FDB-500D and FWN-1000B.



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產品	效能	Description	作業版本
Fortinet 標準版資安防護系統 一年授權	防護系統 一年授權	提供防火牆控管存取政策，使用者身份辨識，IPSEC VPN, SSL VPN, SLB(主機負載平衡) 及 無線網路控制器 (Wireless Controller)	Vmware Hyper-V Citrix Xen OpenXen KVM AWS
Fortinet 標準版資安防護系統 防護升級模組 一年授權	防護升級模組 一年授權		
Fortinet 高階版資安防護系統 一年授權	高階版防護系統 一年授權	提供防火牆控管存取政策，使用者身份辨識，IPSEC VPN, SSL VPN, SLB(主機負載平衡)，無線網路控制器 (Wireless Controller)，入侵防禦，應用程式式控管，防毒，不當網頁過濾，防垃圾郵件	Vmware Hyper-V Citrix Xen OpenXen KVM AWS
Fortinet 高階版資安防護系統 防護升級模組 一年授權	高階版資安防護系統 防護升級模組 一年授權		
FMG-VM-Base Fortinet 集中管理系統	集中管理系統 10 台設備	Fortinet 防火牆管理，設定和集中派送 (政策，資安防禦資料庫) 的中央管理系統 r, 支援 10 台設備	Vmware Hyper-V AWS
FMG-VM-10-UG Fortinet 集中管理系統	集中管理平台設備 數量升級 - 10 台設備		
FAZ-VM-BASE Fortinet 集中日誌報表系統	集中日誌報表系統	Fortinet 防火牆的集中日誌報表管理系統	Vmware Hyper-V AWS
FAZ-VM-GB1 Fortinet 集中日誌報表系統 紀錄數量升級 - 1 GB/Day	集中日誌報表系統 紀錄數量升級 - 1 GB/Day		
FSA-VM Fortinet 先進威脅防護系統 (ATP)	先進威脅防護系統 (ATP)	即時執行沙箱檢測，提供虛擬的運行環境來分析高風險或可疑的程式，研判威脅完整的生命週期，協助用戶智慧地立即偵測出既存與新興的 網路威脅。	VMware
FWB-Base Fortinet 網站應用程式式防火牆(WAF) 25Mbps	網站應用程式式防火牆(WAF) 25Mbps	提供網站應用程式式防火牆功能 (WAF)，網頁防置換，網頁自動備份及回復等功能	Vmware Hyper-V Citrix Xen Open Xen AWS
FWB-100-UG Fortinet 網站應用程式式防火牆(WAF) 頻寬升級 100Mbps	網站應用程式式防火牆(WAF) 頻寬升級 100Mbps		

FWB-VM01/VM02/VM04/VM08 Fortinet 網站應用程式防火牆(WAF) (授權方式: 依照 CPU 數量 1/2/4/8 四個授權方式出貨)	網站應用程式防火牆(WAF) 支援 1 CPU		
FAD-Base Fortinet 主機負載平衡系統 (SLB) 1Gbps	主機負載平衡系統(SLB) 1Gbps	支援網路的主機負載平衡, 全球服務負載平衡 (GSLB) 及線路負載平衡 (LLB) 等功能	VMware
FAD-1000-UG Fortinet 主機負載平衡系統 (SLB) 頻寬升級 1Gbps	主機負載平衡系統(SLB) 頻寬升級 1Gbps		
FAD-VM01/VM02/VM04/VM08 Fortinet 主機負載平衡系統(SLB) (授權方式: 依照 CPU 數量 1/2/4/8 四個授權方式出貨)	主機負載平衡系統(SLB) 支援 1 CPU		
FortiWAN-VM02/VM04 Fortinet 網路線路負載平衡 400Mbps	網路負載平衡系統(WAN) 400Mbps	提供網路線路負載平衡, 整合不同 ISP 的線路同時並存, 提供進出 Internet 的資料流量	VMware ESXi / ESX 5.5, 6.0
FortiWAN-VM02/VM04 Fortinet 網路線路負載平衡頻寬升級 400Mbps	網路負載平衡頻寬升級(WAN) 400Mbps		
FC-10-FWV02-851-02-12 Fortinet 網路線路負載平衡 一年續約授權	網路負載平衡系統(WAN) 一年續約授權		
FortiWAN-VM02/VM04 Fortinet 網路線路負載平衡系統(SLB) (授權方式: 依照 CPU 數量 2/4 二個授權方式出貨)	網路負載平衡系統(WAN) 支援 2 CPU		
FSM-AIO-BASE Fortinet 稽核管理系統 50 台設備一年 授權	稽核管理系統 50 台設備一年授 權	SIEM 應用解決方案, 提供收集和整合各種網路和安全資 訊, 匯整之後進行統一分析和統計, 藉以收集、監視和 報告企業中的網路設備和資安產品發生的行為, 持續進 行企業內全面的安全風險評估。	Vmware ESX, Microsoft HyperV, KVM, Xen, Amazon Web Services AMI, OpenStack, Azure
FSM-AIO-100-UG Fortinet 稽核管理系統升級 100 台設備 一年授權	稽核管理系統升級 100 台設備一 年授權		
FSM-WIN-ADV-50-UG Fortinet 稽核管理系統 Windows Agent 50 台設備一年授權	稽核管理系統 Windows Agent 50 台設備一年授權		

<p>FC1-15-EMS01-158-02-12 Fortinet 端點(End Point)資安防護 200 Clients 一年授權</p>	<p>端點(End Point)資安防護 200 Clients 一年授權</p>	<p>提供防病毒與惡意軟體檢測、雙因子認證、VPN 等功能，強化企業資安建置。FortiClient 主動防禦高級攻擊。它與 Security Fabric 的緊密集成使基於策略的自動化能夠控制威脅並控制爆發。FortiClient 與 Fabric-Ready 合作夥伴兼容，進一步加強企業的安全態勢。</p>	<p>Microsoft Windows, Windows Server</p>
<p>Fortinet 物聯網安全管理系統 100 台終端設備 一年授權</p>	<p>物聯網安全管理系統 100 台終端設備 一年授權</p>	<p>提供物聯網上每個終端設備的詳細分析以增強其可視性，控管設備之物聯網存取以保障資訊安全，並具備資料分析與報表功能。</p>	<p>VMware, Hyper-V</p>
<p>Fortinet 物聯網安全管理系統升級 100 台終端設備 一年授權</p>	<p>物聯網安全管理系統升級 100 台終端設備 一年授權</p>		
<p>FML-Base Fortinet 反垃圾郵件及郵件保全系統 100 人版</p>	<p>反垃圾郵件及郵件保全系統 100 人版</p>	<p>提供電子郵件主機功能、過濾並攔截垃圾郵件</p>	<p>VMware Hyper-V Citrix Xen KVM</p>
<p>FML-300-UG Fortinet 反垃圾郵件及郵件保全系統使用者數量升級 300 人</p>	<p>反垃圾郵件及郵件保全系統使用者數量升級 300 人</p>		
<p>FML-VM01/VM02/VM04/VM08 Fortinet 反垃圾郵件及郵件保全系統 (授權方式: 依照 CPU 數量 1/2/4/8 四個授權方式出貨)</p>	<p>反垃圾郵件及郵件保全系統支援 1 CPU</p>		
<p>FAC-VM-Base Fortinet 身份認證系統 (Authenticator) 100 人版</p>	<p>身份認證系統(Authenticator) 100 人版</p>	<p>整合 RADIUS、LDAP 伺服器，提供標準及安全的雙因子認證</p>	<p>VMWare Hyper-V</p>
<p>FAC-VM-100-UG Fortinet 身份認證系統 (Authenticator) 使用者數量升級 100 人</p>	<p>身份認證系統(Authenticator) 使用者數量升級 100 人</p>		