



FortiWAN™
WAN Link Load Balancing



FortiWAN

FortiWAN 200B, 1000B, 3000B and VM

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

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

SPECIFICATIONS

	FORTIWAN 200B	FORTIWAN 1000B	FORTIWAN 3000B
Hardware Specifications			
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
System Specifications			
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
Dimensions			
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)
Environment			
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
Compliance			
	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
Hardware Specifications		
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.
Optional Accessory		
AC power supply	SP-FAD700-PS	AC power supply for FAD-700D, FML-400E, FDB-500D and FWN-1000B.



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