![Trustwave logo] Trustwave®
Smart security on demand

TRUSTWAVE WEB APPLICATION FIREWALL (WAF)

APPLIANCE SPECIFICATIONS

Trustwave WAF is the only Web Application Firewall that can protect Web applications against attacks and data loss with bi-directional traffic correlation and policy enforcement even in out-of-line mode.

Trustwave WAF can be deployed as a **physical appliance** or a **virtual appliance**, and a managed service is available.

PHYSICAL APPLIANCES

Trustwave WAF physical appliances can be deployed as sensors, managers, stand-alone appliances, or as a managed WAF service.

	TS150	TS250	TS500	TS750	TS-500 WAF MGR
Hardware					
CPU	1 Intel Xeon E3-1220 v3 3.1GHz 8MB cache	1 Intel Xeon E5-2620 2.0GHz 15MB cache	2 Intel Xeon E5-2630 v2 2.6GHz 15MB cache	2 Intel Xeon E5-2658 v2 2.4GHz 25MB cache 20-core	2 Intel Xeon E5-2630 v2 2.6GHz 15MB cache
RAM	4GB	8GB	16GB	32GB	16GB
Disk	Single Disk 500GB SATA, no RAID	Single Disk 1TB disk, no RAID	Two 1TB SATA, RAID-1	Two 1TB SATA, RAID-1	Two 1TB SATA, RAID-1
Dimensions	14.5 X 17.2 X 1.7 in 369 x 437 x 43 mm	19.8 x 17.2 x 1.7 in 503 x 437 x 43 mm	25.6 x 17.2 x 1.7 in 650 x 437 x 43 mm	25.51 x 17.2 x 3.5 in 648 x 437 x 89 mm	25.6 x 17.2 x 1.7 in 650 x 437 x 43 mm
Form Factor	1U	1U	1U	2U	1U
Weight	21 lb 9.54 kg	37 lb 16.82 kg	45 lb 20.45 kg	71 lb 32.27 kg	45 lb 20.45 kg
Power Supply	Single 350W	Dual 400W	Dual 700W	Dual 740W	Dual 700W
AC Power	350W - 100-240 V, 50-60 Hz, 4.2-1.8 Amp	400W - 100-240 V, 50-60 Hz, 6-3 Amp	700W - 100-240 V, 50-60 Hz, 8.5-3.8 Amp	740W - 100-240 V, 50-60 Hz, 9-3.5 Amp	700W - 100-240 V, 50-60 Hz, 8.5-3.8 Amp
Heat at Rated Power	1474 BTU/hr	2455 BTU/hr	3110 BTU/hr	3069 BTU/hr	3110 BTU/hr
Default NIC	Silicom 2 x GigE Bypass Copper 10/100/1000	Silicom 2 x GigE Bypass Copper 10/100/1000	Silicom 4 x GigE Bypass Copper 10/100/1000	Silicom 4 x GigE Bypass Copper 10/100/1000	
Optional NIC Configurations (in place of default NIC)			Silicom Quad Port Fiber 1GbE 2 x Silicom Dual Port Fiber 10GbE	Silicom Quad Port Fiber 1GbE 2 x Silicom Dual Port Fiber 10GbE 2 x Silicom Content Director Dual Port Fiber 10GbE 2 x Silicom Quad Port Fiber 10Gbe	
Inline Bypass	1 segment	1 segment	2+ segments	2+ segments	
Capacity*					
Throughput	600Mbps SSL – 50% degradation	750Mbps SSL – 50% degradation	1 Gbps SSL – 50% degradation	1.5+ Gbps SSL – 50% degradation	
Transactions/sec	18,000	18,500	35,000	40,000+	
Concurrent connections	35,000	40,000	40,000+	40,000+	
Websites	30	60	Up to 200	Up to 200	

* Real capacity can vary significantly depending on underlying hardware, the Web application environment, HTTP compression rates, and selected modules.

VIRTUAL APPLIANCES

With virtual appliances, you can use the hardware of your choice and help reduce costs and effort in aligning with your organization's data center strategy. The simplicity and flexibility of virtual appliances allow you to quickly provision and configure new security services as requirements change.

VMware ESX/ESXi

Trustwave WAF virtual appliances for VMware ESX/ESXi servers can be deployed as sensors, managers, or standalone appliances.

	VX15i	VX30i	VX60i	VX110i	Manager
Host Minimal Requirements					
Hypervisor	VMware ESXi v4.0/4.1/5.0/5.1	VMware ESXi v4.0/4.1/5.0/5.1	VMware ESXi v4.0/4.1/5.0/5.1	VMware ESXi v4.0/4.1/5.0/5.1	VMware ESXi v4.0/4.1/5.0/5.1
CPU	Dual Core Server Intel VT-x or AMD-V	Dual Core Server Intel VT-x or AMD-V	Dual Core Server Intel VT-x or AMD-V	Dual Core Server Intel VT-x or AMD-V	Dual Core Server Intel VT-x or AMD-V
Memory	4GB	4GB	4GB	4GB	4GB
Disk	250GB	250GB	250GB	250GB	250GB
Guest Recommended Settings					
Virtual Cores	4	8	12	16	8
Memory	4GB	8GB	8GB	12GB	8GB
Capacity*					
Throughput	25Mbps SSL – 50% degradation	50Mbps SSL – 50% degradation	100Mbps SSL – 50% degradation	600Mbps SSL – 50% degradation	
Transactions/ sec	Up to 3,500	Up to 6,000	Up to 9,000	Up to 13,000	
Websites	30 (out of the box)	60 (out of the box)	60 (out of the box)	200 (out of the box)	

All models support 30,000 concurrent connections.

* Real capacity can vary significantly depending on underlying hardware, the Web application environment, HTTP compression rates, and selected modules.

Amazon Web Services (AWS)

Trustwave WAF virtual appliances for Amazon Web Services (AWS) can be deployed as stand-alone appliances.

	AWS15i	AWS30i	AWS110i
Network Interfaces	4	4	8
AWS Instance Type	c3.xlarge	c3.2xlarge	c3.4xlarge
Memory	8GB	16GB	30GB
Disk	80GB	80GB	80GB
Virtual Cores	4	8	16
Throughput	25Mbps SSL – 50% degradation	50Mbps SSL – 50% degradation	600Mbps SSL – 50% degradation
Transactions/sec	Up to 3,500	Up to 6,000	Up to 13,000
Websites	5 (out of the box)	15 (out of the box)	200 (out of the box)

Disk size is provided on instance configuration with a minimum requirement of 80GB. (No RAID protection is available.)

Trustwave WAF requires at least two network interfaces, one for management and one for traffic protection. AWS allows only one network interface per subnet per instance.

Warning: Not providing the minimum requirements listed in this section may lead to unexpected Trustwave WAF behavior.