Cisco® ASA 5500-X Series Next-Generation Firewalls – ASA 5512-X, 5515-X, 5525-X, 5545-X and 5555-X

Corporate networks are encountering the highest levels of change in history. No longer is work a place you go, but what you do; users are more mobile than ever before, requiring anywhere, anytime access to the enterprise and cloud-based resources. In response, the number and variety of mobile devices has surged, fueling the need to enable BYOD. In addition, unlike the monolithic software of the past, applications have evolved to be highly dynamic and multifaceted. Combined with the increasing velocity of internet-based threats, the trends of device proliferation, dynamic access use, and cloud have broken the legacy models of security.

A new approach is needed, one that unifies the network with security, ensures consistent protection across the enterprise, accelerates business innovation, and proactively protects you months before new threats impact the business. The Cisco ASA 5500-X Series Next-Generation Firewalls provide next-generation security capabilities at scale without requiring additional hardware modules. These appliances support services such as application visibility and control, web security essentials, intrusion prevention, remote access and cloud web security to provide an end-to-end, scalable security solution. Furthermore, integrating with Cisco ISE (Identity Services Engine) and Cisco AnyConnect Mobility solution, ASA 5500-X Series Next-Generation Firewalls provide a comprehensive BYOD solution for high-end enterprises and small businesses alike.

What's New?

- **Cisco ASA Next-Generation Firewall** provides services such as Application Visibility and Control (AVC) Services to control specific behaviors within allowed micro-applications, Web Security Essentials (WSE) Services to restrict web and web application usage based on reputation of the site and Intrusion Prevention (IPS) to provide critical threat protection from internet edge related attacks on your personal use computing systems. Through Cisco Security Intelligence Operations (SIO)*, these services provide web reputation that protects against zero-day threats.

- **Cisco Prime Security Manager** can now be used to centrally manage core ASA-X features along with Next-Generation services such as Application Visibility and Control, Web Security and IPS.

- **ASA IPS** is the only context aware IPS that uses device awareness, network reputation of the source, target value and user identity to drive mitigation decisions and provides a proactive protection against threats. It uses a combination of on- and off-box intelligence and does not require an additional hardware module.

- **4x increase in firewall throughput** protects users as their current and future data consumption demands increase.

- **Redundant power supplies (on the ASA 5545-X and 5555-X appliances)** protect against power outages.

- **Multicore enterprise-class CPUs** deliver better performance.

- **Additional copper and small form-factor pluggable (SFP) Gigabit Ethernet ports** provide greater flexibility for network configuration.

- **Cisco Cloud Web Security** provides unmatched web security, application visibility and control for organizations of all sizes through a network of global data centers.

- **Cisco AnyConnect** enables seamless secure remote access by providing an always-on secure connectivity experience across a broad set of desktop and mobile devices.

* http://www.cisco.com/en/US/prod/collateral/vpndevc/ps5729/ps5713/ps12156/white_paper_c11-715386.html

Table 1. Cisco ASA 5500-X Series Next-Generation Firewalls Comparison Table

	ASA 5512-X	ASA 5515-X	ASA 5525-X	ASA 5545-X	ASA 5555-X
Next-Generation Firewall					
Stateful Inspection throughput (max[1])	1 Gbps	1.2 Gbps	2 Gbps	3 Gbps	4 Gbps
Stateful Inspection throughput (Multi-Protocol[2])	500 Mbps	600 Mbps	1 Gbps	1.5 Gbps	2 Gbps
Concurrent Sessions	100,000	250,000	500,000	750,000	1,000,000
Connections per second	10,000	15,000	20,000	30,000	50,000
Packets/Second (64-byte)	450,000	500,000	700,000	900,000	1,100,000
VLANs	50	100	200	300	500
ASA OS	64-bit				
Cisco ASA Next-Generation Firewall Services					
Next-Generation Firewall Throughput[3] (Multi-Protocol)	200 Mbps	350 Mbps	650 Mbps	1 Gbps	1.4 Gbps
Next-Generation Firewall Throughput with IPS	60 Mbps	90 Mbps	300 Mbps	450 Mbps	600 Mbps
Cisco Cloud Web Security					
Cisco Cloud Web Security users	100	250	500	1500	3000
ASA IPS					
Intrusion Prevention	Yes (no hardware module required)				
Firewall + ASA IPS Throughput	250 Mbps	400 Mbps	600 Mbps	900 Mbps	1.3 Gbps
VPN					
3DES/AES VPN Throughput	200 Mbps	250 Mbps	300 Mbps	400 Mbps	700 Mbps
Site-to-Site and IPsec IKEv1 Client VPN User Sessions	250	250	750	2500	5000
Cisco AnyConnect® or Clientless VPN User Sessions	250	250	750	2500	5000
Bundled SSL VPN User Sessions	2	2	2	2	2

Table 2. Cisco ASA 5500-X Series Hardware and Physical Specifications

	ASA 5512-X	ASA 5515-X	ASA 5525-X	ASA 5545-X	ASA 5555-X
Hardware					
CPU	Multicore, enterprise-grade				
Memory (RAM)	4 GB	8 GB	8 GB	12 GB	16 GB
Flash	4 GB	8 GB	8 GB	8 GB	8 GB
SSD (Solid State Drive)	1 slot, 120 GB MLC SED	1 slot, 120 GB MLC	1 slot, 120 GB MLC	2 slots with RAID1, 120 GB MLC SED	2 slots with RAID1

[1] Maximum firewall throughput measured with UDP traffic under ideal conditions.

[2] Multi-protocol = Traffic profile consisting primarily of TCP-based protocols/applications like HTTP, SMTP, FTP, IMAPv4, BitTorrent, and DNS.

[3] Throughput was measured on Cisco ASA CX Software Release 9.1.1 with multi-protocol traffic profile with both Application Visibility Control (AVC) and Web Security Essentials (WSE). Traffic logging was enabled as well.

	ASA 5512-X	ASA 5515-X	ASA 5525-X	ASA 5545-X	ASA 5555-X
Integrated Network (GE) Ports	6	6	8	8	8
Dedicated Management (GE) Port	Yes	Yes	Yes	Yes	Yes
Maximum Network Ports	12	12	14	14	14
Interface Card Slots	1	1	1	1	1
Interface Card Options	6-port 10/100/1000, 6-port GE SFP SX, LH, LX				
USB 2.0 Ports	2	2	2	2	2
Serial Console	1	1	1	1	1
Redundant Power	No	No	No	Yes	Yes
Power Supply Type	AC or DC	AC or DC	AC or DC	AC or DC	AC or DC
Physical Specifications					
Form Factor	1 RU, 19-in. rack-mountable				
Rack-mounting options	Brackets included (slide rails optional)			Slide rails included	
Dimensions (H x W x D)	1.67 x 16.7 x 15.6 in. (4.24 x 42.9 x 39.5 cm)			1.67 x 16.7 x 19.1 in. (4.24 x 42.9 x 48.4 cm)	
Weight	13.39 lb (6.07 kg) (AC power supply); 13.7 lb (6.2 kg) (DC power supply)	13.39 lb (6.07 kg) (AC power supply); 13.7 lb (6.2 kg) (DC power supply)	14.92 lb (6.77 kg) (AC power supply)	16.82 lb (7.63 kg) with single AC power supply, 18.86 lb (8.55 Kg) with dual AC power supply	

Additional Information

For more information, please visit the following sites:

Cisco ASA 5500-X Series Next-Generation Firewalls Q&A:
http://www.cisco.com/en/US/products/ps6120/prod_qandas_list.html

Cisco ASA Next-Generation Firewall Services:
http://www.cisco.com/en/US/products/ps12521/index.html

Cisco ASA 5500-X Series Next-Generation Firewalls webpage:
http://www.cisco.com/go/asa

Cisco ASA 5500 Series IPS Solution: http://www.cisco.com/en/US/prod/collateral/vpndevc/ps5729/ps5713/ps4077/data_sheet_c78_459036.pdf

Cisco IPS Solutions: http://www.cisco.com/go/ips

Cisco AnyConnect Secure Mobility Solution:
http://www.cisco.com/en/US/netsol/ns1049/index.html

Cisco Security Manager: http://www.cisco.com/go/csmanager

Cisco Prime Security Manager: http://www.cisco.com/go/prsm

Cisco IPS Manager Express: http://www.cisco.com/go/ime

Cisco Adaptive Security Device Manager: http://www.cisco.com/go/asdm

Cisco Security Intelligence Operations: http://tools.cisco.com/security/center/home.x

Cisco Cloud Web Security:
http://www.cisco.com/web/products/security/cloud_web/index.html

Cisco Prime Security Manager: http://www.cisco.com/go/prsm