

This document provides a rough guideline for choosing the right Astaro Security Gateway appliance for different scenarios. As performance may vary based on user characteristics, application usage, security configurations and other factors, Astaro cannot guarantee specific performance results.

Average performance numbers represent throughput values achievable with a typical traffic mix, maximum numbers represent throughput achievable under optimal conditions, e.g. with large packet sizes*.

Astaro Security Gateway Hardware Appliances

Performance Numbers						
Model	ASG120	ASG 220	ASG 320	ASG 425	ASG 525	ASG 625
FW (Mbps) avg/max	200/200	1,2 /2,2Gbps	2 /3,4 Gbps	1,4 /4 Gbps	2 /5,5 Gbps	3,3/10 Gbps
VPN AES (Mbps) avg/max	99/188	260/380	300/450	340/500	360/530	400/580
IPS (Mbps) avg/max	60/120	120/280	190/450	130/550	216/800	248/1.100
IM/P2P (Mbps) avg/max	56 / 200	120 / 494	180 / 556	164 / 606	180/612	200 / 672
HTTP Proxy (Mbps) avg ³⁾	90	550	650	700	800	850
UTM (Mbps) avg	35	65	125	135	200	350
RED (Mbps) max	50	80	120	160	280	360
RED appliances (#) UTM/FW ¹⁾	10/25	20/80	40/130	50/190	90/380	150/500
AAPs (#) avg ¹⁾	4	8	16	32	64	128
WAF (Mbps)	85	230	240	275	320	365
Web Requests – AV scanned ²⁾ (Req./s)	200	775	1.400	1.500	1.800	2.200
Emails scanned ²⁾³⁾ (max emails/h)	30.000	52.000	78.000	130.000	200.000	250.000
Emails seen ²⁾ (max emails/h)	250.000	400.000	600.000	1.200.000	1.500.000	2.200.000

1) recommended

2) Numbers are for single scan, throughput will decrease by 20-25%% when activating dual scan

3) When activating additional features overall throughput will decrease roughly by the following percentage:
Wireless Security: 5-10%, WAF: 10%, URL Filter: 10-15%, IPS: 60-70%

Maximum Connections						
Model	ASG120	ASG 220	ASG 320	ASG 425	ASG 525	ASG 625
New TCP connections/sec	940	6.400	12.500	14.700	17.800	18.300
Concurrent TCP connections	90.000	300.000	600.000	1.000.000	1.700.000	2.500.000
Concurrent IPSec VPN Tunnels	25	125	400	600	1.000	1.500
Concurrent SSL VPN Tunnels	20	35	65	100	200	250

* For detailed information please refer to the "Astaro Security Gateway - Performance Test Methodology" document.

Maximum recommended users

The following numbers for maximum users are based on average usage. Please see the final section for more details.

Max. Users ¹⁾	10	50	150	350	1000	2500	5000				
Essential Firewall	ASG 110/120	80	ASG 220	300	ASG 320	800	ASG 425	1500	ASG 525	3500	ASG 625
Mail Security	ASG 110	ASG 120									
Web Security											
Network Security											
Full Guard	10	25	75	200	600	1300	2000				

1) All numbers also include users connected via RED or wireless access points
When activating additional features number of users will decrease roughly by the following percentage:
Wireless Security: 5-10%, WAF: 10%, URL Filter: 10-15%, IPS: 60-70%

Astaro Security Gateway Software Appliances

The following table provides a rough guideline for choosing a typical system configuration when installing Astaro Security Gateway Software on Intel-compatible PCs or servers. Shown user numbers are average values for normal user traffic.

Typical System Configuration						
CPU	<ul style="list-style-type: none"> VIA (1.5 GHz) Celeron (1.2 GHz) 	<ul style="list-style-type: none"> Pentium 4 (2.8 GHz) Celeron Dual Core (2.2 GHz) 	<ul style="list-style-type: none"> Pent. Dual-Core (2.8 GHz) Core 2 Duo (2.4 GHz) 	<ul style="list-style-type: none"> Core 2 Duo (3 GHz) Xeon (2.8 GHz) 	<ul style="list-style-type: none"> 2 * Dual Core Xeon (2.33 GHz) 2 * Xeon (3.2 GHz) 	<ul style="list-style-type: none"> 2 * Quad Core Xeon (3 GHz)
Memory	1 GB	1 GB	2 GB	4 GB	6 GB	8 GB
Max. FW Users	80	300	800	1500	3500	5000
Max. Mail Users	70	275	750	1300	3300	4500
Max. Web Users	40	140	330	850	2300	3800
Max. UTM Users	25	70	200	600	1300	2500

Average Usage vs. Power Usage

All recommended user numbers are based on average email, web and firewall usage with parameters outlined within the table below. If usage significantly exceeds traffic of an average user (i.e. is a "Power user") then you should choose an appliance with higher capacity according to the following rule:

- If at least 3 items apply in "Power User" column use unit with next higher capacity
- If at least 5 items apply in "Power User" column use unit with 2 levels higher capacity

	Average User	Power User
Email Usage (per 10 h working day)		
Number of received emails in IN-Box	Up to 50	> 50
Number of large emails	Up to 3 emails ~ attachments 500KB	> 3 emails and/or ~ attachments 1MB
Encrypted emails	Up to 10% of all emails	> 10%
Web Usage (per 10 h working day)		
Downloads per user and day	Up to 4	> 4
Web Usage	Equally spread throughout the day	Many peaks
Web Applications	Mostly Webmail / Google / News	"Power Users" (schools, universities, business applications)
Instant Messaging	10-15 text messages/day	Extensive use of VOIP features and file transfer
Peer-To-Peer	Infrequent downloads mostly IT department related (i.e. software updates)	Continuous and frequent sharing of data (i.e. software distribution, live feeds)
FW/VPN Usage		
IPS in use	No	Yes
Number of VPN tunnels per user	up to 0,5	> 0.5