



Deployment Mode						Licensing	ASG Hardware Spec							
Model	Forward Proxy			ASG paired with Malware Analysis Suggested MAA ²	Dedicated PxC Manager Recommended Max ProxyClients	Licensed Connection Count	Storage Capacity		CPU Cores	Memory	Available slots and preinstalled cards	On-board Network Ports		Power Supply
	Employee Count	Recommended Internet BW	Maximum Internet BW				Drives	Total (GB)				Bypass	Other	
S200-30-500	500	50-60 Mbps	120 Mbps	MAA-S400-10	10,000	2,500	2	1,000	4	16GB	1 open slot	2 x 1000BT	2 x 1000BT	Single
S200-30-1000	1,000	50-60 Mbps	120 Mbps	MAA-S400-10	10,000	5,000	2	1,000	4	16GB	1 open slot	2 x 1000BT	2 x 1000BT	Single
S200-30-2500	2,500	50-60 Mbps	120 Mbps	MAA-S400-10	10,000	12,500	2	1,000	4	16GB	1 open slot	2 x 1000BT	2 x 1000BT	Single
S200-40-1000	1,000	100-125 Mbps	250 Mbps	MAA-S400-10	15,000	5,000	2	1,000	4	16GB	1 open slot	2 x 1000BT	2 x 1000BT	Single
S200-40-2500	2,500	100-125 Mbps	250 Mbps	MAA-S400-10	15,000	12,500	2	1,000	4	16GB	1 open slot	2 x 1000BT	2 x 1000BT	Single
S400-20-1000	1,000	100-150 Mbps	300 Mbps	MAA-S400-10	15,000	5,000	3	3,000	6 ³	24GB	2 open slots	2 x 1000BT	2 x 1000BT	Redundant
S400-20-2500	2,500	100-150 Mbps	300 Mbps	MAA-S400-10	15,000	12,500	3	3,000	6 ³	24GB	2 open slots	2 x 1000BT	2 x 1000BT	Redundant
S400-20-5000	5,000	100-150 Mbps	300 Mbps	MAA-S400-10	15,000	25,000	3	3,000	6 ³	24GB	2 open slots	2 x 1000BT	2 x 1000BT	Redundant
S400-30-5000	5,000	250-320 Mbps	500 Mbps	MAA-S400-10	27,000	25,000	6	6,000	6 ³	48GB	2 open slots	2 x 1000BT	2 x 1000BT	Redundant
S400-30-10K	10,000	250-320 Mbps	500 Mbps	MAA-S400-10	27,000	50,000	6	6,000	6 ³	48GB	2 open slots	2 x 1000BT	2 x 1000BT	Redundant
S400-30-15K	15,000	250-320 Mbps	500 Mbps	MAA-S400-10	27,000	75,000	6	6,000	6 ³	48GB	2 open slots	2 x 1000BT	2 x 1000BT	Redundant
S400-40-10K	10,000	500-600 Mbps	1000 Mbps	MAA-S400-10	35,000	50,000	8	8,000	8 ³	72GB	2 open slots	2 x 1000BT	2 x 1000BT	Redundant
S400-40-15K	15,000	500-600 Mbps	1000 Mbps	MAA-S400-10	35,000	75,000	8	8,000	8 ³	72GB	2 open slots	2 x 1000BT	2 x 1000BT	Redundant
S400-40-25K	25,000	500-600 Mbps	1000 Mbps	MAA-S400-10	35,000	125,000	8	8,000	8 ³	72GB	2 open slots	2 x 1000BT	2 x 1000BT	Redundant
S500-10-10K	10,000	500-600 Mbps	1200 Mbps	MAA-S400-10	45,000	50,000	8	8,000	10 ³	96GB	2 open slots	2 x 10GBT	2 x 10GBT ¹	Redundant
S500-10-15K	15,000	500-600 Mbps	1200 Mbps	MAA-S400-10	45,000	15,000	8	8,000	10 ³	96GB	2 open slots	2 x 10GBT	2 x 10GBT ¹	Redundant
S500-10-25K	25,000	500-600 Mbps	1200 Mbps	MAA-S400-10	45,000	125,000	8	8,000	10 ³	96GB	2 open slots	2 x 10GBT	2 x 10GBT ¹	Redundant
S500-20-25K	25,000	1000-1200 Mbps	2000 Mbps	MAA-S500-10	45,000	125,000	16	16,000	20 ³	128GB	5 open slots	2 x 10GBT	2 x 10GBT ¹	Redundant
S500-20-35K	35,000	1000-1200 Mbps	2000 Mbps	MAA-S500-10	45,000	175,000	16	16,000	20 ³	128GB	5 open slots	2 x 10GBT	2 x 10GBT ¹	Redundant
S500-20-50K	50,000	1000-1200 Mbps	2000 Mbps	MAA-S500-10	45,000	250,000	16	16,000	20 ³	128GB	5 open slots	2 x 10GBT	2 x 10GBT ¹	Redundant

¹ S500 also has 2 x 1000BT ports for BMC and mgmt

² Please note that performance on the MAA system is based on Sample Tasks. Sending a sample to multiple iVM profiles for analyses will reduce overall samples being analyzed by a factor of that multiple. For example, a single binary sent to a single iVM will accommodate 12,000 sample analyses per day against 12,000 samples (binaries). A single binary sent to three iVM profiles will result in 12,000 sample analyses per day but only against 4,000 samples (binaries).

³ The processor supports hyper-threading which results in the ASG CPU monitoring showing the CPU count as double this core count

These guidelines provide sizing based on a standard workload for ASG appliances. Actual sizing may vary significantly depending on customer workload requirements.
Employee Count

The total number of employees that use the system. Employees may have multiple systems. This number assumes that 100% of desktops have web connections open at any moment, though up to 80% are used for background tasks. Adjust this recommended number if internet usage is higher, for example adoption of Cloud Applications. For limits on the number of systems that can use the appliance concurrently refer to "Licensing".

Recommended Internet Bandwidth

Typical bandwidth range, at 70% peak CPU load with complex policies, 40% SSL, ICAP, content filtering, access logging and limited streaming content.

Maximum Internet Bandwidth

Maximum client-side throughput for ASG at 70% peak CPU with basic features and no SSL decryption.

NOTE: Include the appropriate additional options for all models.

- Include the BCSI licenses for appliances that require web filtering
- Include the Flash streaming licenses where appropriate
- Include the Web Application Protections subscription where appropriate
- Include the CachePulse subscription where appropriate

Suggested MAA

Recommended Malware Analysis System based on Forward Proxy deployment profile.

Recommended Max ProxyClients Managed

Maximum number of ProxyClient instances connecting to and serviced by a Client Manager, regardless of the features enabled on the ProxyClient (filtering, acceleration or both), at 50% CPU utilization. Updates can be posted to all clients in a two-hour window.

Licensing

ASGs are licensed based on total connections, derived from employee count multiplied by 5. Max Internet Bandwidth and Employee Count are suggested values based on the physical capacity of the system.

How to Use Employee Count

Users are a recommended number assuming 5 open inbound TCP connections per user to the ASG. The measurement is instantaneous and concurrent. It is not based on the average over any time interval. The administrator can configure the ASG to either bypass new connections when the license limit is exceeded, or to delay them until another connection is dropped. The default is to delay (queue them) until a connection is available

EXAMPLE 1: Secure Web Gateway Project with Content Analysis

- Organization has 2500 employees, all with Internet access
- One Internet gateway with 45Mbps connectivity
- Requires redundancy and room for growth over 3 years at 30% annually

Deployment Mode				
Model	Forward Proxy			ASG paired with Malware Analysis
	Employee Count	Recommended Internet BW	Maximum Internet BW	Suggested MAA
S200-30-U500	500	50-60 Mbps	120 Mbps	MAA-S400-10
S200-30-U1000	1,000	50-60 Mbps	120 Mbps	MAA-S400-10
S200-30-U2500	2,500	50-60 Mbps	120 Mbps	MAA-S400-10
S200-40-U1000	1,000	100-125 Mbps	250 Mbps	MAA-S400-10
S200-40-U2500	2500	100-125 Mbps	250 Mbps	MAA-S400-10
S400-20-1000	1,000	100-150 Mbps	300 Mbps	MAA-S400-10
S400-20-2500	2,500	100-150 Mbps	300 Mbps	MAA-S400-10
S400-20-5000	5,000	100-150 Mbps	300 Mbps	MAA-S400-10
S400-30-5000	5,000	250-320 Mbps	500 Mbps	MAA-S400-10
S400-30-10K	10,000	250-320 Mbps	500 Mbps	MAA-S400-10
S400-30-15K	15,000	250-320 Mbps	500 Mbps	MAA-S400-10

Customer requires 2500 users so only consider U2500 versions or higher.

At 30% growth over 3 years, they will need 45Mbps x (1.3 x 1.3 x 1.3) = 98.9Mbps at yr 3.

The customer could purchase either any of the high lighted options, the S200-30 can be upgraded later to S200-40 through software upgrade.

Alternatively, the S400-20 offers additional advantages in more redundant HW and ability to scale to higher user capacity as well.

To meet the redundancy requirement, the quote should include two identical appliances.

EXAMPLE 2: Secure Gateway Cluster

- A customer requires Threat protection at the Internet gateway, starting at 300Mbps, growing 25% annually over the next 4 years for 10,000 users
- The solution must be fault tolerant to survive against a single point of failure.
- The customer values upgradeability to support corporate Cloud/SaaS initiatives.
- The customer is sensitive to price and has budget constraints.

Deployment Mode				
Model	Forward Proxy			ASG paired with Malware Analysis
	User Count	Recommended Internet BW	Maximum Internet BW	Suggested MAA
S400-20-1000	1,000	100-150 Mbps	300 Mbps	MAA-S400-10
S400-20-2500	2,500	100-150 Mbps	300 Mbps	MAA-S400-10
S400-20-5000	5,000	100-150 Mbps	300 Mbps	MAA-S400-10
S400-30-5000	5,000	250-320 Mbps	500 Mbps	MAA-S400-10
S400-30-10K	10,000	250-320 Mbps	500 Mbps	MAA-S400-10
S400-30-15K	15,000	250-320 Mbps	500 Mbps	MAA-S400-10
S400-40-10K	10,000	500-600 Mbps	1000 Mbps	MAA-S400-10
S400-40-15K	15,000	500-600 Mbps	1000 Mbps	MAA-S400-10
S400-40-25K	25,000	500-600 Mbps	1000 Mbps	MAA-S400-10
S500-10-10K	10,000	500-600 Mbps	1200 Mbps	MAA-S400-10
S500-10-15K	15,000	500-600 Mbps	1200 Mbps	MAA-S400-10
S500-10-25K	25,000	500-600 Mbps	1200 Mbps	MAA-S400-10
S500-20-25K	25,000	1000-1200 Mbps	2000 Mbps	MAA-S500-10
S500-20-35K	35,000	1000-1200 Mbps	2000 Mbps	MAA-S500-10
S500-20-50K	50,000	1000-1200 Mbps	2000 Mbps	MAA-S500-10

Option 1: A straightforward approach is to look for an appliance that can support 750Mbps and at least 10K users, and double (2N) the footprint to provide fault tolerance.
This would be: 2x ASG-S500-20-U25K

Option 2: A cluster (N+1) of three appliances (S400-40 or S500-10 at 500Mbps) with at least 10K users in the N units would work:
3x ASG-S400-40-10K (or SG-S500-10-10K)

Option 3: Another option that meets the requirements is to cluster four ASG-S400-30-5000s:
4x ASG-S400-30-5000U

In this case, the cluster (3+1) of S400-30-5000s is the least expensive solution, and provides flexibility for future upgrade paths, either by adding another S400-30 to the cluster for incremental throughput or upgrading the S400-30s to S400-40s if significant expansion is necessary. It also allows for user/connection capacity upgrade as needed for varying traffic needs.

Account for the load balancing mechanism into this analysis, if appropriate.