



With Session Rate Limiting enabled, each subscriber only receives a certain number of sessions they can open in a set time period. If they exceed this limit, no new sessions will be allowed until the Time Interval elapses and the user can gain more sessions.

The default settings for Session Rate limiting are as follows:

Session Rate Limiting Disabled

Mean Rate	Sessions per Time Interval defined below. Default: 200
Burst Size	Sessions per Time Interval defined below. Default: 400
Time Interval	Seconds. Default: 60

The Burst Size is the maximum allowed when the subscriber comes onto the system initially.

The Mean Rate is the amount added to what is left after the time period elapses (up to a Maximum of the Burst Size)

The Time interval is how much time the subscriber is given to take sessions before a new allotment occurs.

Example: (Basic User)

User A Logs into the USG and is browsing the Web to 5 different sites in the time allotment (60 seconds default) and each of these pages have connections made to 5 servers. Each of these connections would be a separate session, so 25 sessions in all. Used 25 of the 400 (default) allowed. After the first minute User A is allowed 200 more sessions for the next minute. But adding those to the 375 (400 – 25) would put him over the maximum of 400. For the second minute User A is allowed 400 again.

Example: (Virus User)

User B logs into the NSE and starts browsing. User B doesn't know that he is infected with the W32.SOBIG.F Worm (for example). This virus scans full IP subnets to try and propagate itself. User B's system is scanning through full Class A subnets - 10.0.0.0 going through 500+ sessions in under a minute. Only the first 400 sessions will be allowed, then the NSE will drop all new sessions after the first 400 sessions until the Time Interval which allows the User to use 200 more sessions.

Our Default Values are very generous for any normal Usage that might occur. In going to www.yahoo.com, only 6 sessions were created for the whole main Yahoo page. The default settings should be fine if there are very few subscribers that are infected.



The issue is that when there are many infected subscribers, the available sessions can be used up very quickly. There are two ways to troubleshoot the issue:

1. Turn down the Mean Rate and the Burst Size. This will stop the traffic from each user more rapidly and allow legitimate users to continue to access normally, even if you adjust the settings to 50 for mean rate and 100 for Burst size.
2. Increase the Time Interval. The NSE's session cleanup happens about every 2 minutes so if the Time Interval is changed to 2-2.5 minutes (with the default or half the default session numbers) increases the number of sessions that would be cleaned up before new sessions are allowed to be handed out to each subscriber.