

## Configuring Connection Limits on Cisco ASA Firewalls - Protect from DoS

The Cisco ASA firewall offers excellent protection for Denial of Service attacks, such as SYN floods, TCP excessive connection attacks etc. Using the new Policy Framework functionality, the ASA administrator can configure granular controls for TCP Connection limits and timeouts. For example, we can control and limit the maximum number of simultaneous TCP and UDP connections that are allowed towards a specific host (or subnet), the maximum number of simultaneous embryonic connections allowed (for SYN flood attacks), the per-client max number of connections allowed etc.

### Configuration Example

**STEP1:** Identify the traffic to apply connection limits using a class map  
ASA(config)# access list CONNS-ACL extended permit ip any 10.1.1.1 255.255.255.255

```
ASA(config)# class-map CONNS-MAP
```

```
ASA(config-cmap)# match access-list CONNS-ACL
```

### **STEP2: Add a policy map to set the actions to take on the class map traffic**

```
ASA(config)# policy-map CONNS-POLICY
```

```
ASA(config-pmap)# class CONNS-MAP
```

! The following sets connection number limits

```
ASA(config-pmap-c)# set connection {[conn-max n] [embryonic-conn-max n]
```

```
[per-client-embryonic-max n] [per-client-max n] [random-sequence-number {enable | disable}]}
```

where the **conn-max** n argument sets the maximum number of simultaneous TCP and/or UDP connections that are allowed, between 0 and 65535.

The **embryonic-conn-max** n argument sets the maximum number of simultaneous embryonic connections allowed, between 0 and 65535.

The **per-client-embryonic-max** n argument sets the maximum number of simultaneous embryonic connections allowed per client, between 0 and 65535.

The **per-client-max** n argument sets the maximum number of simultaneous connections allowed per client, between 0 and 65535.

! The following sets connection timeouts

```
ASA(config-pmap-c)# set connection timeout {[embryonic hh:mm:ss] {tcp hh:mm:ss
```

```
[reset]} [half-closed hh:mm:ss] [dcd hh:mm:ss [max_retries]]}
```

### **STEP3: Apply the Policy on one or more interfaces or Globally**

```
ASA(config)# service-policy CONNS-POLICY {global | interface interface_name}
```

Source from: <http://www.cisco-tips.com/configuring-connection-limits-on-cisco-asa-firewalls-protect-from-dos/>