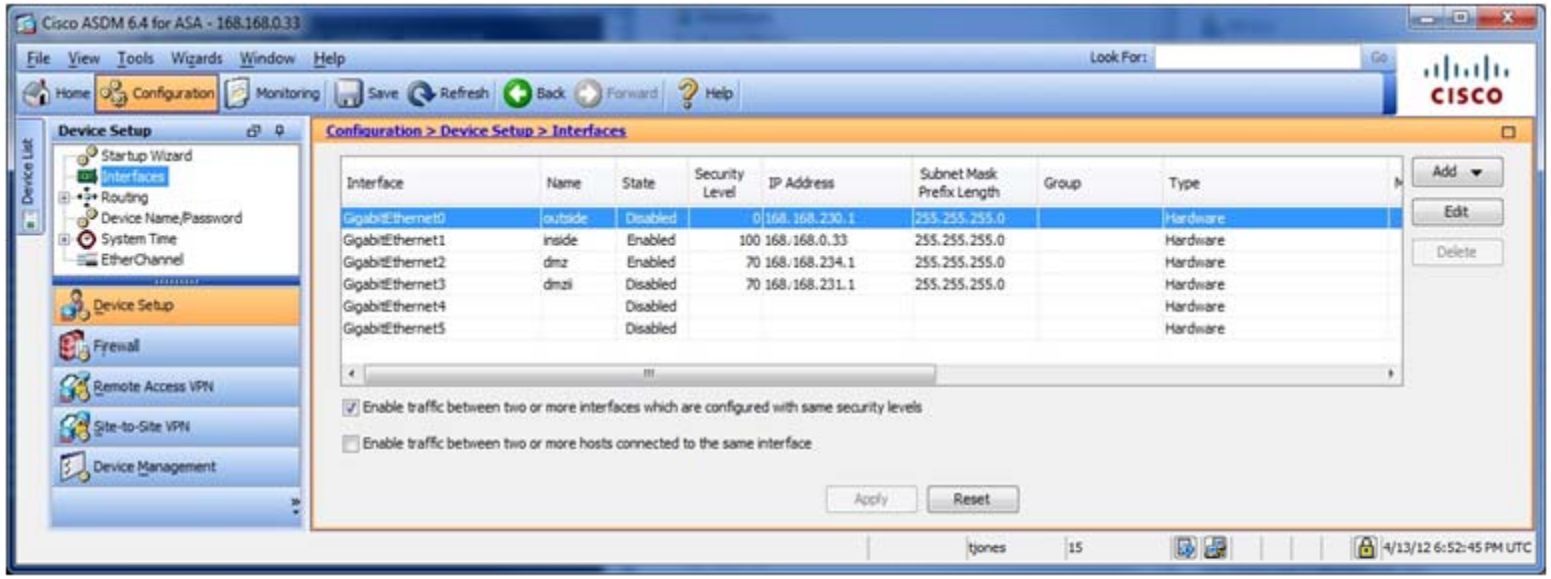
Cisco ASA Security Appliances

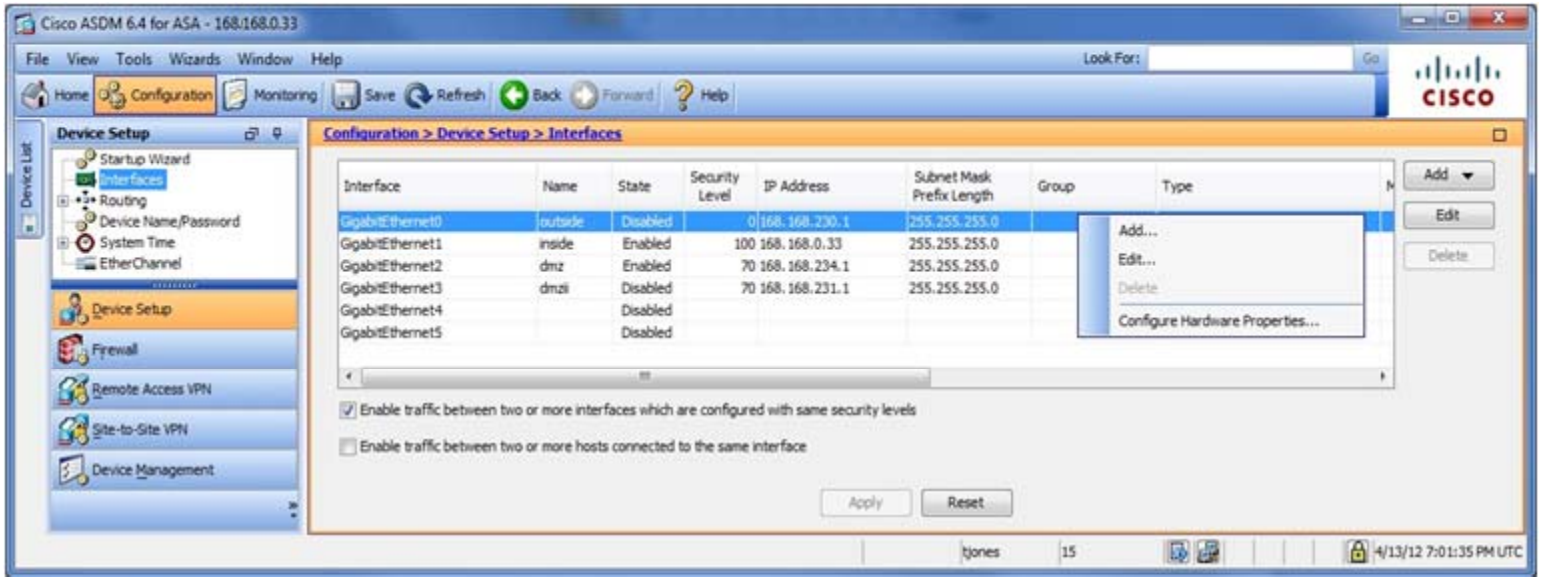
Cisco ASA Security Appliances

- The figure below is the configuration section for the Cisco ASDM v6.4.
- As can be seen, the interfaces are not configured with IPv6 addresses.



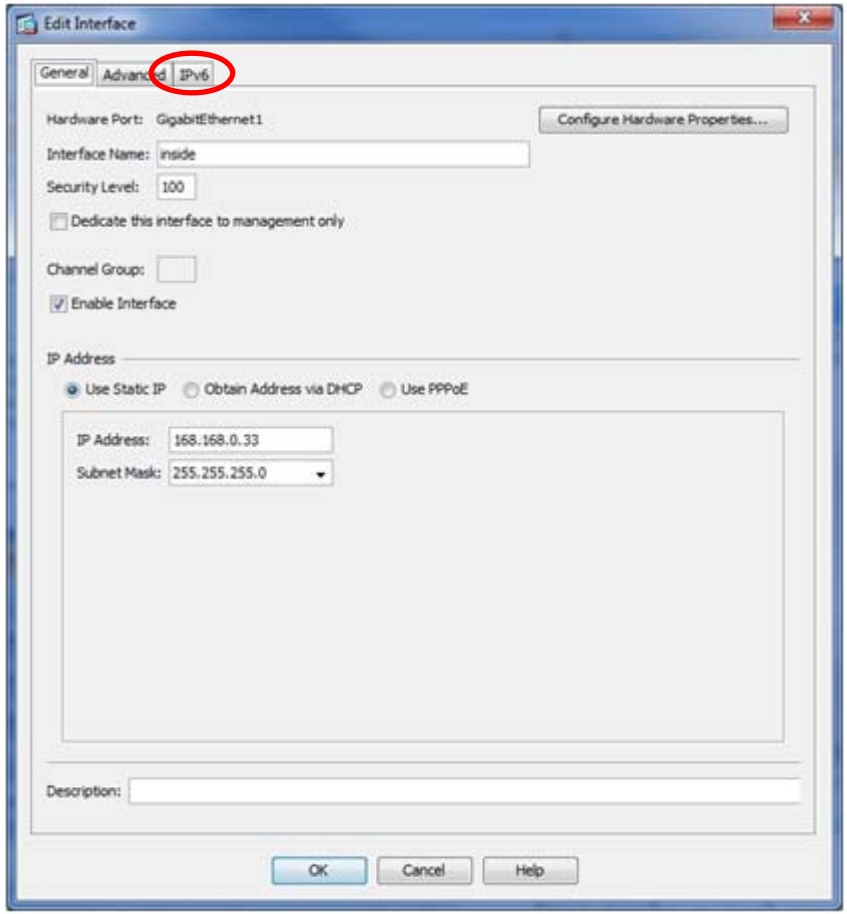
Cisco ASA – Configuration – Interfaces

- To edit an interface, right click on the interface and select Edit. (Or highlight the interface and choose the Edit button on the right).



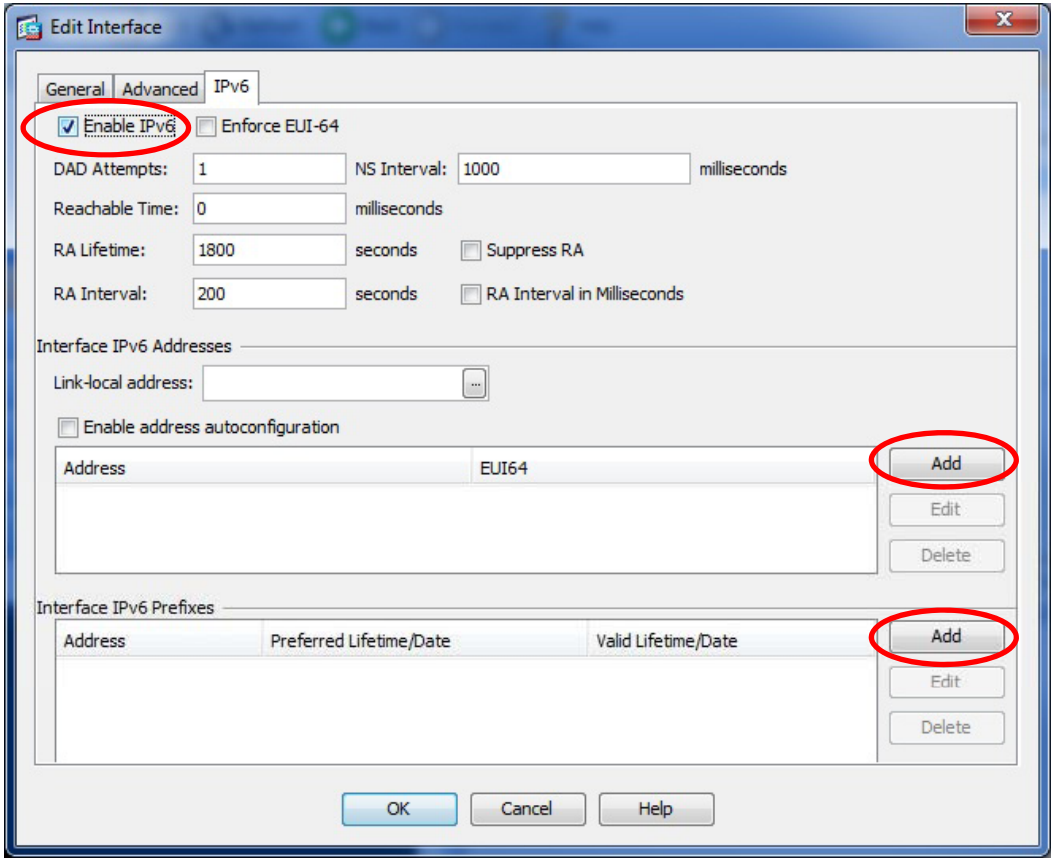
Cisco ASA – Edit Interfaces

- **When the Edit Interface dialog box appears, choose the IPv6 tab to edit the IPv6 settings for the interface. Here we are modifying the 'inside' interface GigabitEthernet1.**



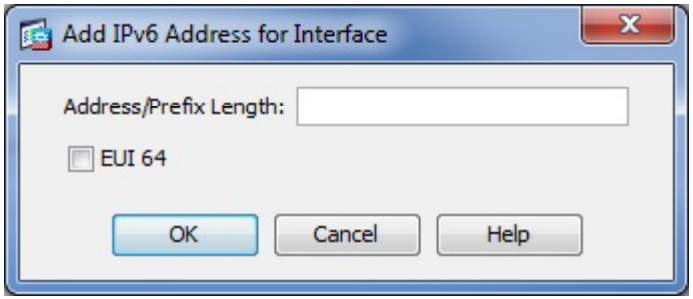
Cisco ASA - Edit Interfaces – IPv6

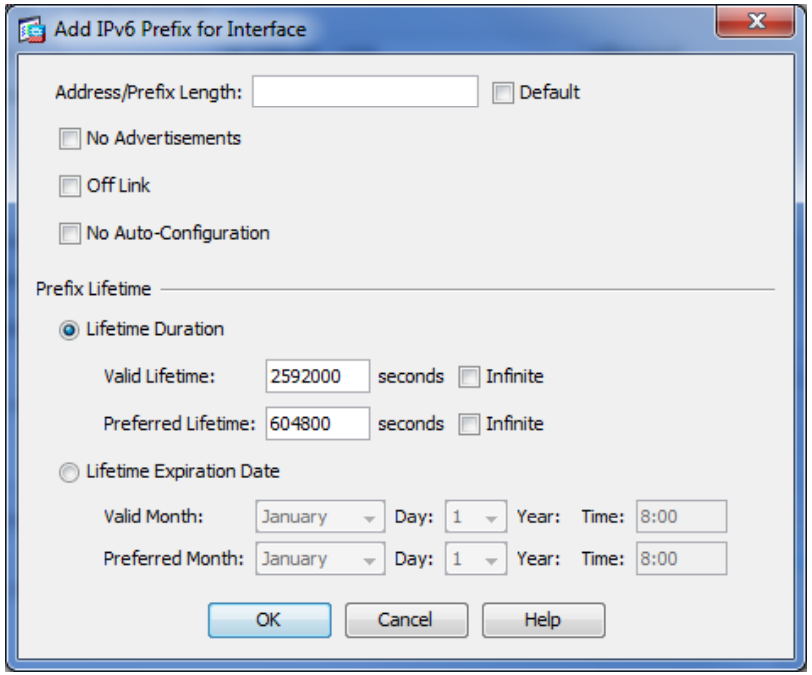
- First, check the checkbox for ‘Enable IPv6’
- Next, add both the Interface IPv6 Address and the Interface IPv6 Prefix.



Cisco ASA – Add IPv6 Address

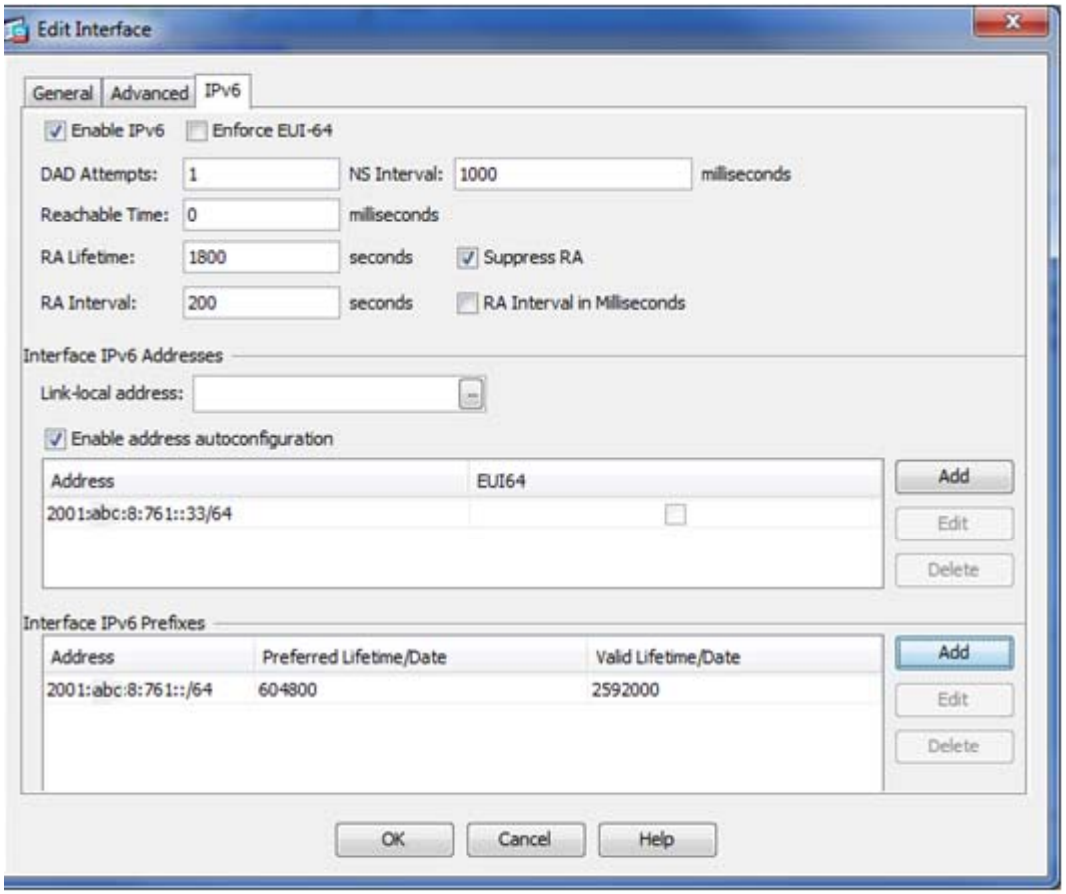
- The dialog box on the left is for adding an IPv6 address to the interface. If you want it to be an EUI-64 compliant.
- The dialog box on the right is to add an IPv6 prefix for the interface. IPv6 prefixes are included in IPv6 router advertisements.





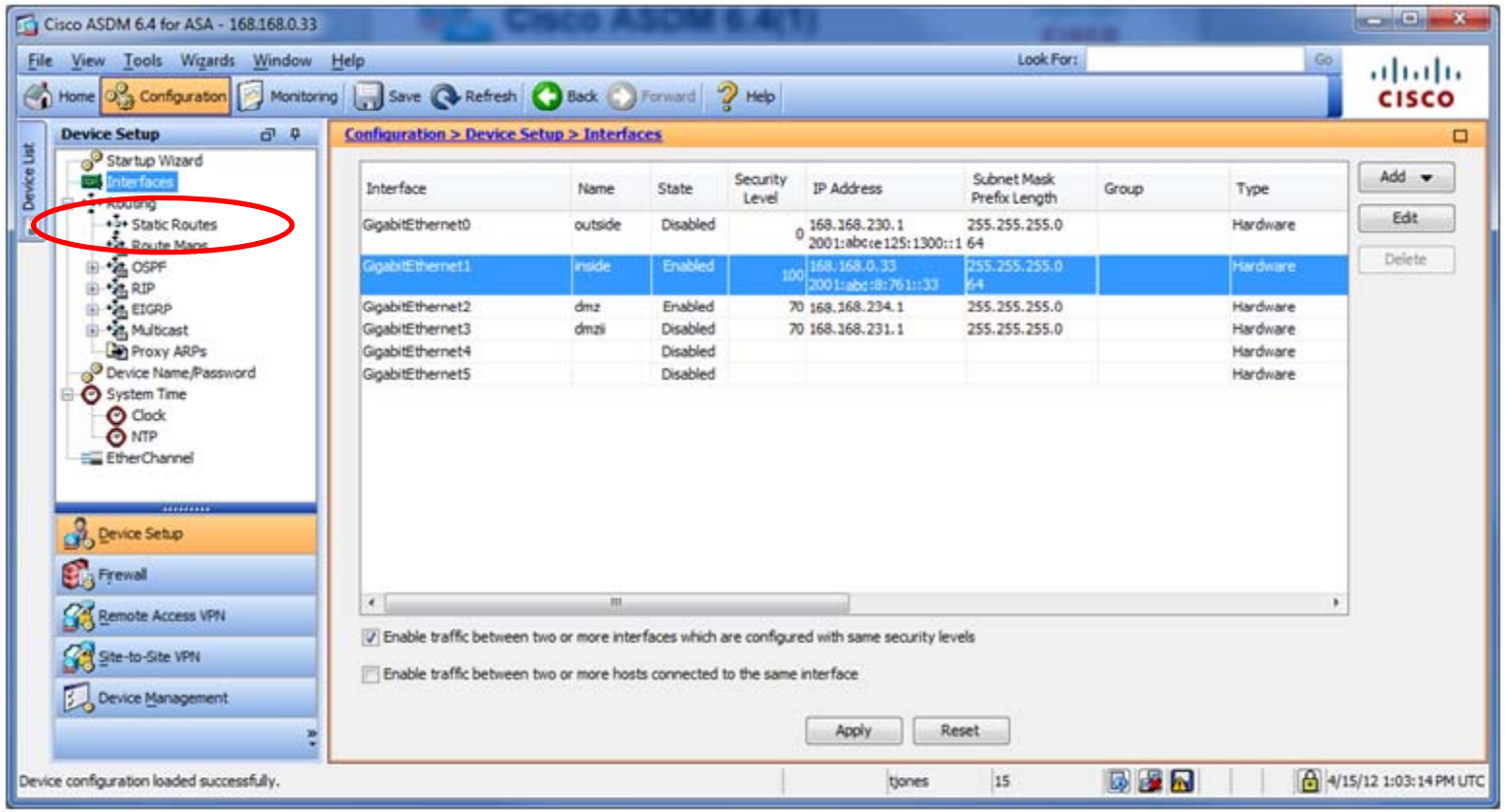
Cisco ASA – Edit Interfaces

- **After entering the information for the IPv6 address and prefix, the information is now set on the interface.**



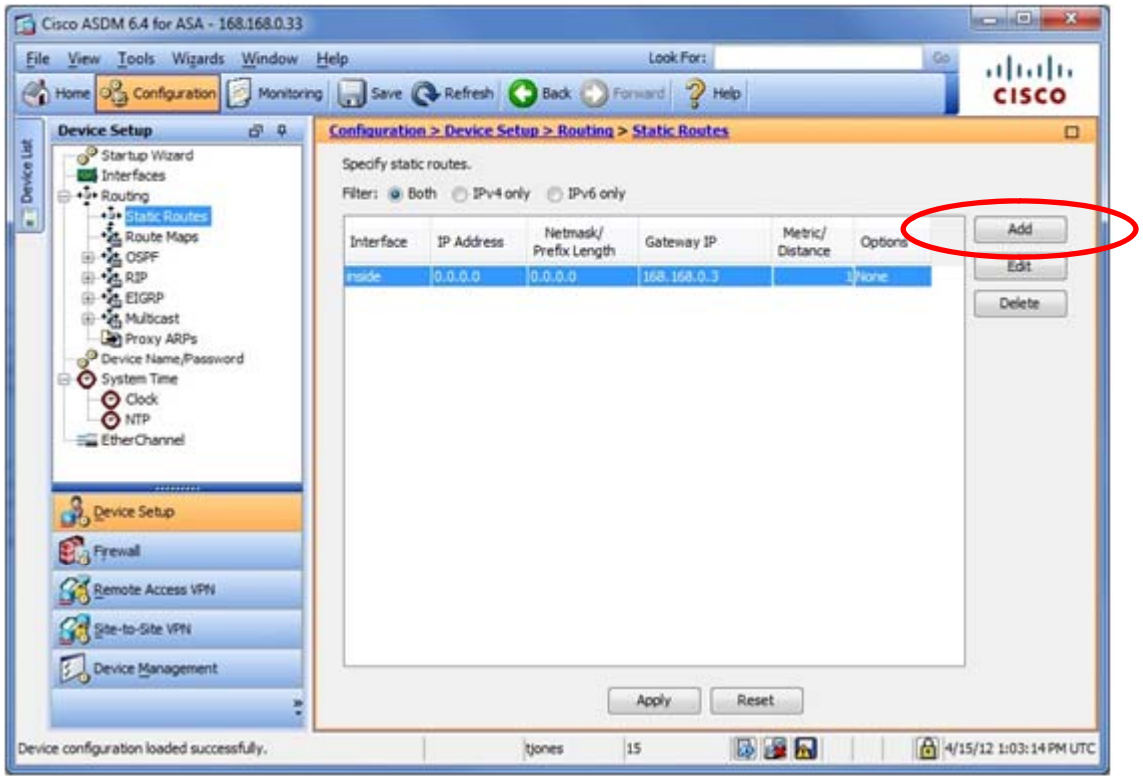
Cisco ASA – Routing IPv6

- **Now we need a default route. Select Static Routes under Routing from the Device Setup menu on the right.**



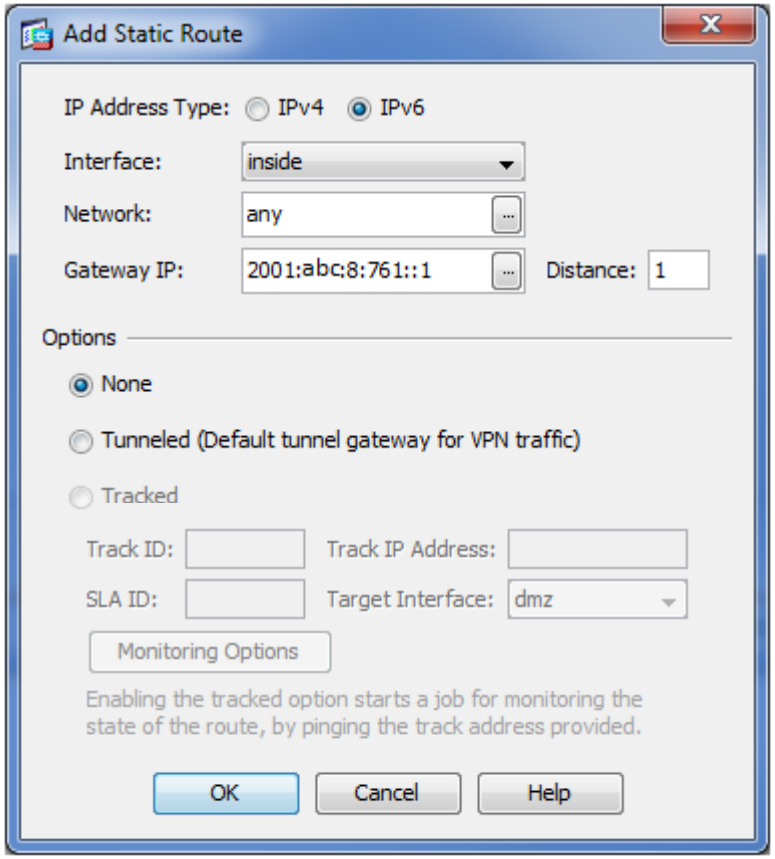
Cisco ASA - Routing

- **From the Static Routes dialog box, select the ‘Add’ button on the right.**



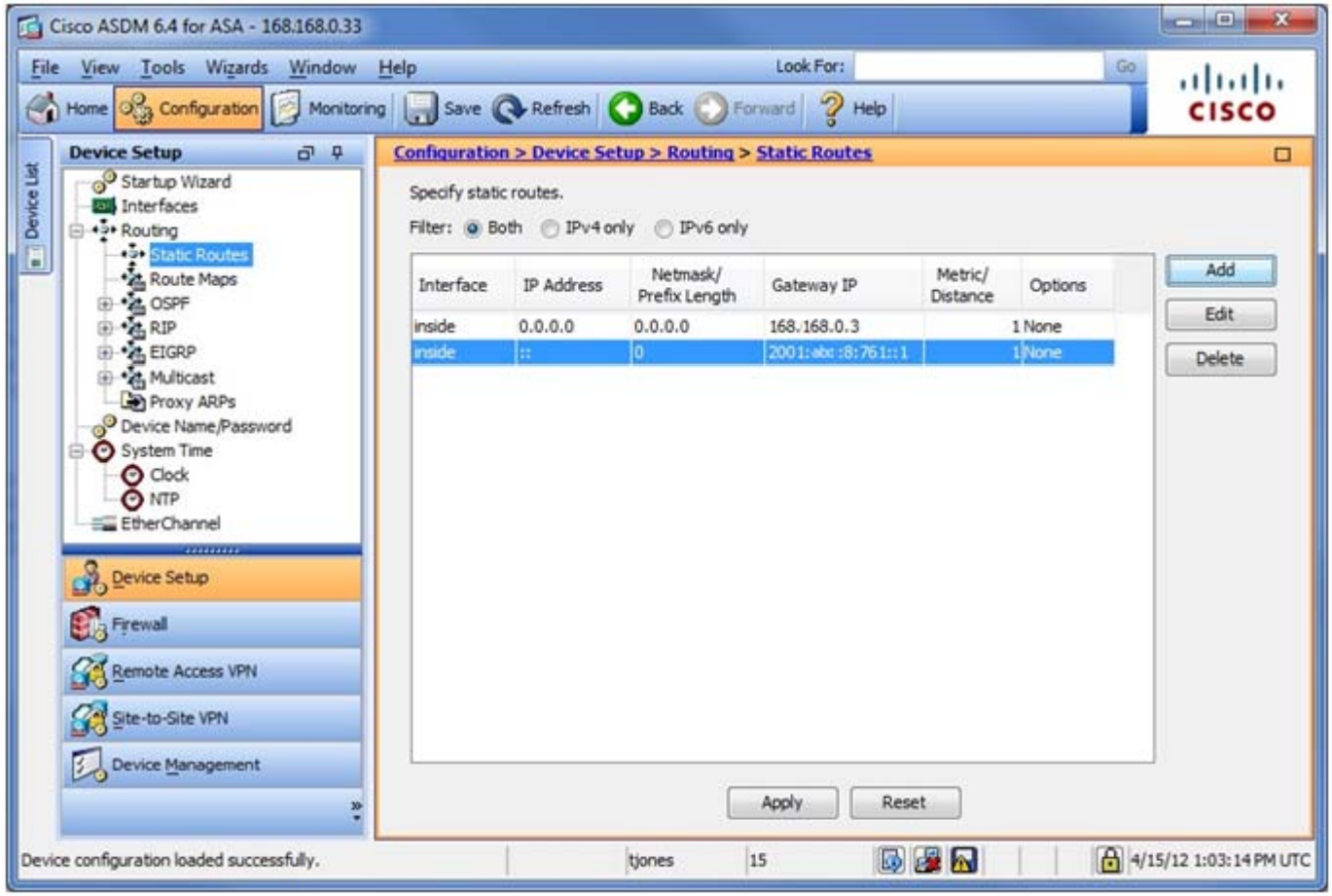
Cisco ASA – Routing – Add static

- **In the ‘Add Static Route’ dialog, select the address type as IPv6, then enter ‘any’ for the network and enter the IPv6 address for the ‘Gateway IP’.**



Cisco ASA – Routing – Add Default

- **Add the IPv6 default route.**

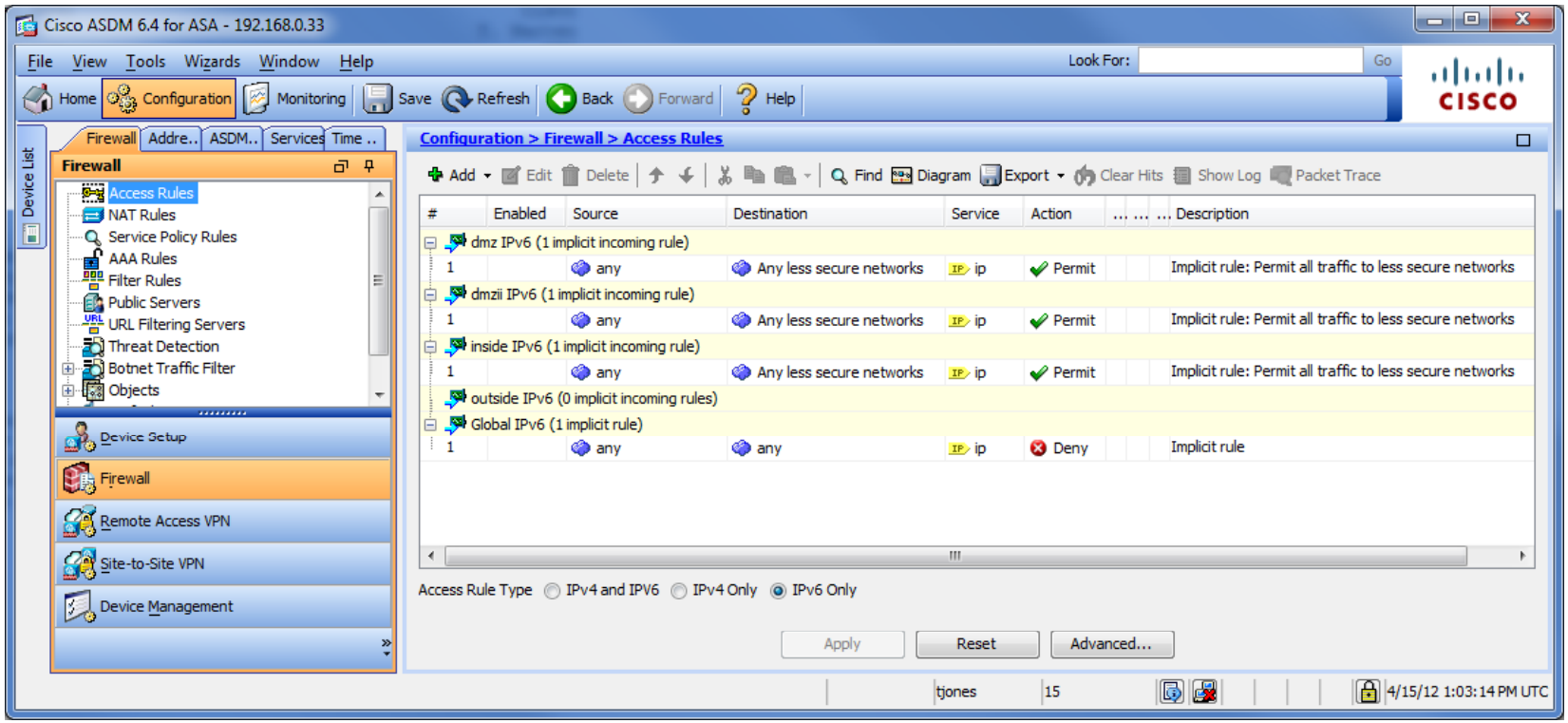


Cisco ASA – Firewall – Access Rules

- **Allow ICMP6 type/codes as provided in earlier slides.**

Cisco ASA – Firewall – Access Rules

- **Text**



Cisco ASA - CLI

- **Shown are the IPv6 commands in the configuration along with some interface, neighbor and route commands.**

```
Ciscoasa# show conf
...
interface GigabitEthernet0
 shutdown
 nameif outside
 security-level 0
 ip address 168.168.230.1 255.255.255.0
 ipv6 address 2001:abc:e125:1300::1/64
 ipv6 enable
!
interface GigabitEthernet1
 nameif inside
 security-level 100
 ip address 168.168.0.33 255.255.255.0
 ipv6 address 2001:abc:80:761::33/64
 ipv6 enable
 ipv6 nd suppress-ra
!
ipv6 route inside ::/0 2001:abc:80:761::1
...
```

```
ciscoasa# sh ipv6 interface inside
inside is up, line protocol is up
  IPv6 is enabled, link-local address is fe80::2aa:ff:fed3:3b01
  Global unicast address(es):
    2001:abc:80:0761::33, subnet is 2001:4700:8:761::/64
    2001:abc:80:0761:2aa:ff:fed3:3b01, subnet is 2001:abc:80:0761::/64
[AUTOCONFIG]
      valid lifetime 2591937 preferred lifetime 604737
  Joined group address(es):
    ff02::1
    ff02::2
    ff02::1:ff00:33
    ff02::1:ffd3:3b01
  ICMP error messages limited to one every 100 milliseconds
  ICMP redirects are enabled
  ND DAD is enabled, number of DAD attempts: 1
  ND reachable time is 30000 milliseconds
  Hosts use stateless autoconfig for addresses.

ciscoasa# sh ipv6 neighbor
IPv6 Address                                Age Link-layer Addr State Interface
fe80::4024:f4b1:d4f4:63e1                    72 0090.2785.2dd8  STALE inside
fe80::208:c7ff:fef3:178f                    227 0008.c7f3.178f  STALE inside
fe80::7075:69a0:27ed:fc8b                    30 001f.c609.fb4b  STALE inside
fe80::e77:1aff:feb4:f787                    195 0c77.1ab4.f787  STALE inside
fe80::1938:3e40:21a4:5910                    49 000c.290a.285d  STALE inside
fe80::c456:8215:63e7:a41                     72 0090.2785.2dd7  STALE inside
2001:abc:80:761:34a4:f840:e064:251f          30 001f.c609.fb4b  STALE inside
fe80::9da7:3498:db03:ec0e                    72 001f.c60a.06a1  STALE inside
fe80::7021:7002:1c46:6324                   395 000c.297a.68cf  STALE inside
fe80::219:e2ff:fea1:3c0b                    477 0019.e2a1.3c0b  STALE inside
fe80::14c0:1e85:24c3:7bc9                   146 000c.2900.99be  STALE inside

ciscoasa# sh ipv6 route

IPv6 Routing Table - 5 entries
Codes: C - Connected, L - Local, S - Static
L   2001:abc:80:761::33/128 [0/0]
     via ::, inside
C   2001:abc:80:761::/64 [0/0]
     via ::, inside
L   fe80::/10 [0/0]
     via ::, outside
     via ::, inside
L   ff00::/8 [0/0]
     via ::, outside
     via ::, inside
S   ::/0 [1/0]
     via 2001:abc:80:761::1, inside
```