CS581 (Computer & Network Security)

Lab-03

Group No.: 05
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Firewall

Place one computer on the outside interface and a server on inside interface of a Cisco firewall. Configure the firewall to block outside users from initiating any connection to the inside server except through TCP port 445. Turn on logging and submit copy of firewall config file and output of "show logging" as evidence that firewall is blocking all conversations initiated from outside except for file share. You may need to create a network share on the server and mount the shared folder from the client computer
http://web.calstatela.edu/faculty/egean/cs581/cisco-asa5505-firewall/

We are really sorry for this lab. We had some firewall router issues and we don't know **how flash memory has been erased from firewall router** and due to this problem, we were unable to perform this lab. I also asked professor regarding this issue and finally on Tuesday i.e. 11/17/2018, the firewall router issue been resolved and we did lab on same day when that issue was resolved. I will also submit the proof regarding our firewall problem and how it's been resolved so please don't consider this lab as delay.

We, Group No. 5, performed this lab in below steps:

Step 1: Firewall Router Setup [in further labs, if it happens then this step will be very useful]

Step 2: Inside Server Network Configuration

Step 3: Creation of Network Objects

Step 4: Interfaces Configuration

Step 5: Static Routes Configuration

Step 6: Configuration of NAT Rules

Step 7: Configuration of Access Rules

Step 8: Creating a network share and mounting the shared folder

Step 9: Logging screenshots

Step 10: Some Misc. Screenshots

Step 1: Firewall Router Setup

We did following steps to set up firewall router:

1. We connected the serial wire of firewall to our laptop.
2. Downloaded the putty software and connected the firewall router on COM3 from the laptop
3. Download Solarwind TFTP Server software.
4. Download asa831-k8.bin and asdm-743.bin
5. Copied asa831-k8.bin and asdm-743.bin to C:/TFTP-Root folder
6. Network Setting: IPV4 Configuration: IP Address: 192.168.1.1, Subnet Mask: 255.255.255.0, Gateway: 192.168.1.1
7. Firewall appeared first on putty as rommon mode
8. Below command was fired on rommon mode:

   ```
   rommon> ADDRESS=192.168.1.10
   rommon> SERVER=192.168.1.1
   rommon> GATEWAY=192.168.1.1
   rommon> PORT=Ethernet0/0
   ```

   and then

   ```
   rommon> tftp
   ```
9. Now, we are in ciscoasa> mode
10. Following configuration has been done on ciscoasm mode:

    ```
    ciscoasa> en
    ciscoasa# config t
    ciscoasa(config)# interface Ethernet0/0
    ciscoasa(config-if)# no switchport access vlan 2
    ciscoasa(config-if)# interface Ethernet0/0
    ciscoasa(config-if)# switchport access vlan 1
    ciscoasa(config-if)# exit
    ciscoasa(config)# interface vlan 1
    ciscoasa(config-if)# nameif inside
    ciscoasa(config-if)# security-level 100
    ciscoasa(config-if)# ip address 192.168.1.1 255.255.255.0
    ciscoasa(config-if)# no shut
    ciscoasa(config-if)# exit
    ciscoasa(config)# exit
    ciscoasa# copy tftp flash
    ```

    ⇨ IP: 192.168.1.1
    ⇨ Source: asa831-k8.bin
    ⇨ Destination: asa831-k8.bin

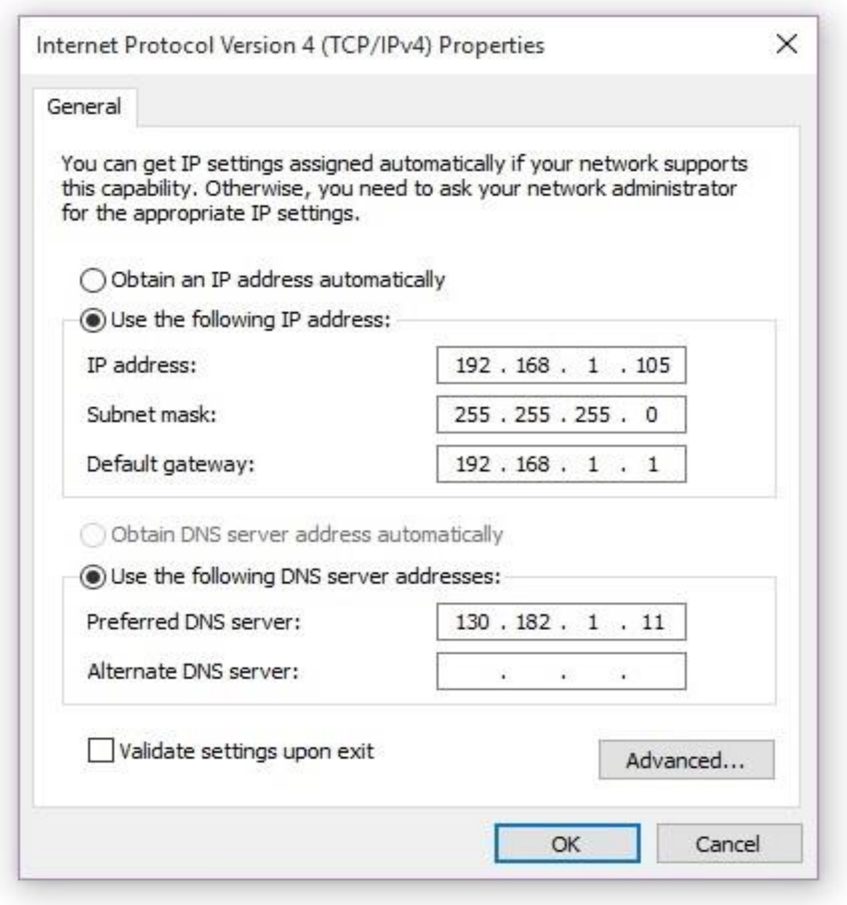
```
ciscoasa# copy tftp flash
        ⇨ IP: 192.168.1.1
        ⇨ Source: asdm-743.bin
        ⇨ Destination: asdm-743.bin
ciscoasa# config t
ciscoasa(config)# boot system disk0://asa831-k8.bin
ciscoasa(config)# asdm image disk0://asdm-743.bin
ciscoasa(config)# write memory
ciscoasa(config)# show running-config boot system
```

11. reload
12. show version

⇨ Hence, setup of firewall router done and asa-831-k8.bin and asdm-743.bin has been saved in firewall’s flash memory.

Step 2: Inside Server Network Configuration

Following screenshot shows the inside server network configuration and steps performed:



Internet Protocol Version 4 (TCP/IPv4) Properties

General

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

○ Obtain an IP address automatically

● Use the following IP address:

IP address: 192 . 168 . 1 . 105

Subnet mask: 255 . 255 . 255 . 0

Default gateway: 192 . 168 . 1 . 1

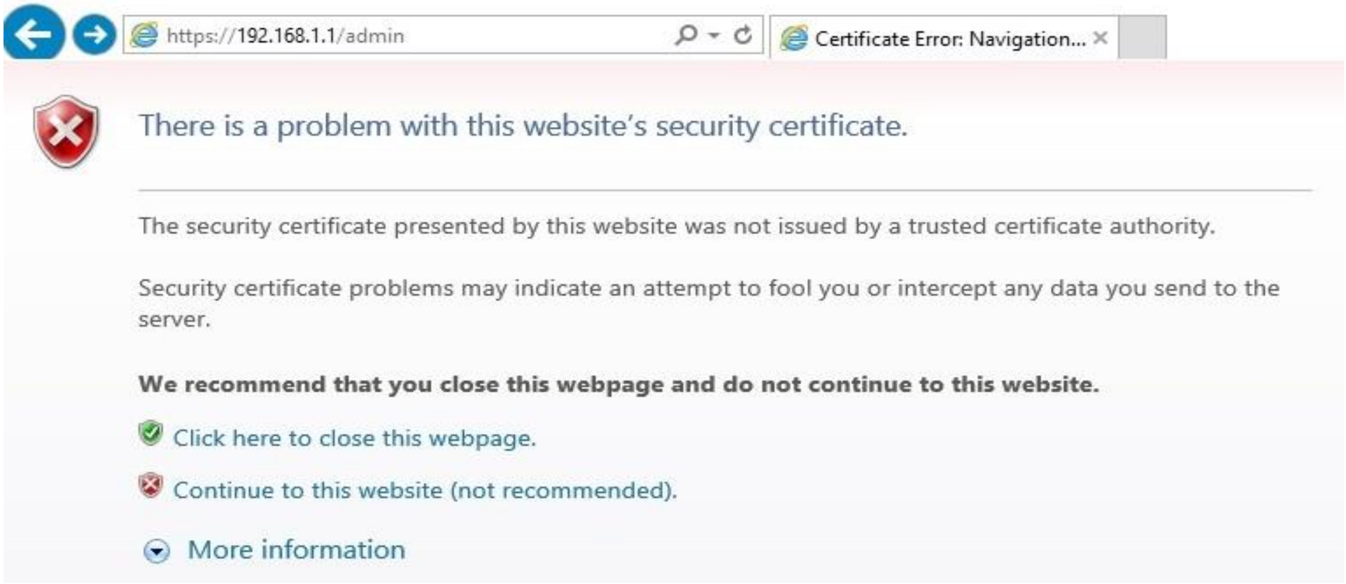
○ Obtain DNS server address automatically

● Use the following DNS server addresses:

Preferred DNS server: 130 . 182 . 1 . 11

Alternate DNS server: . . .

□ Validate settings upon exit



There is a problem with this website's security certificate.

The security certificate presented by this website was not issued by a trusted certificate authority.

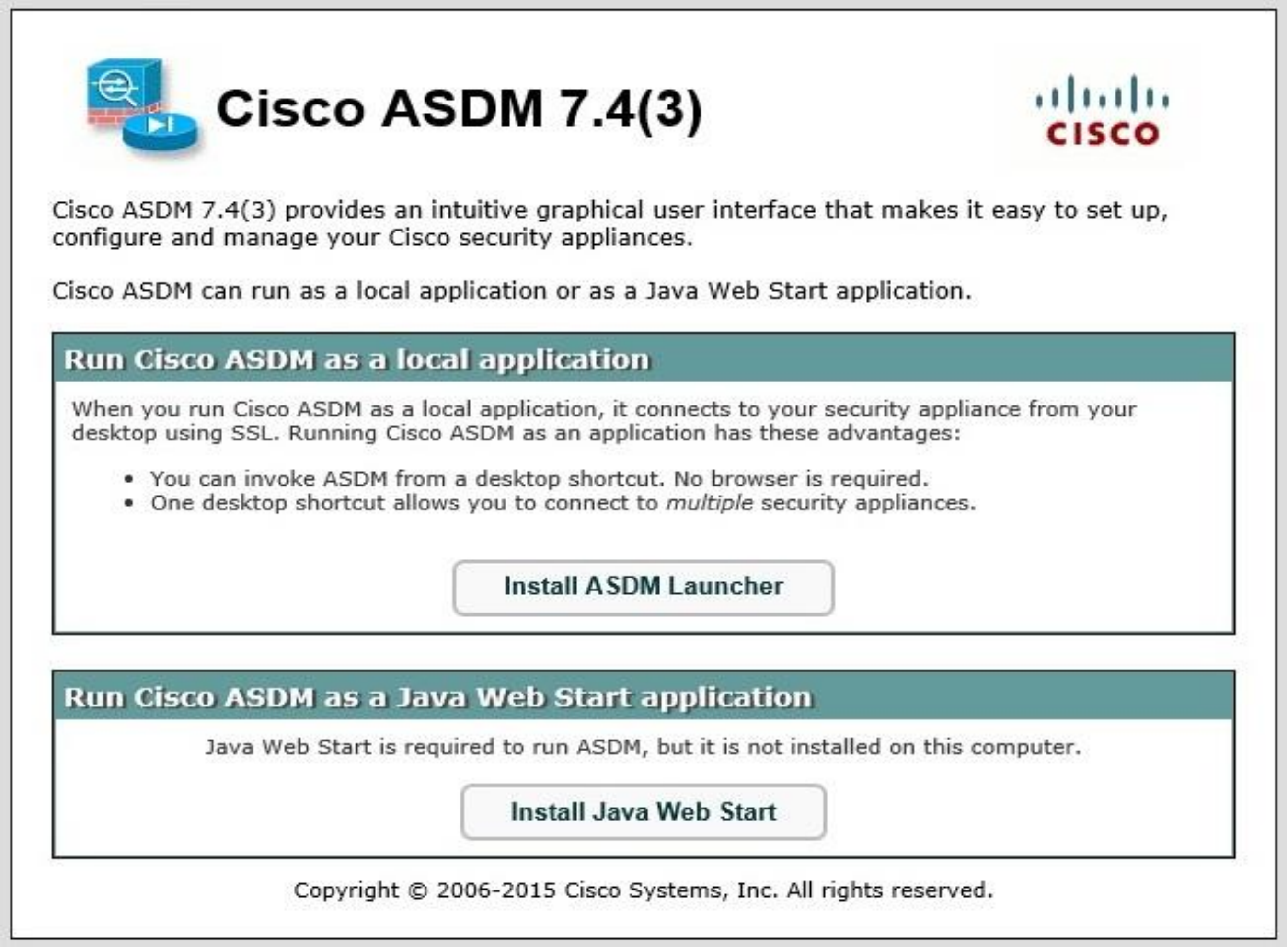
Security certificate problems may indicate an attempt to fool you or intercept any data you send to the server.

We recommend that you close this webpage and do not continue to this website.

Click here to close this webpage.

Continue to this website (not recommended).

More information



Cisco ASDM 7.4(3)

Cisco ASDM 7.4(3) provides an intuitive graphical user interface that makes it easy to set up, configure and manage your Cisco security appliances.

Cisco ASDM can run as a local application or as a Java Web Start application.

Run Cisco ASDM as a local application

When you run Cisco ASDM as a local application, it connects to your security appliance from your desktop using SSL. Running Cisco ASDM as an application has these advantages:

- You can invoke ASDM from a desktop shortcut. No browser is required.
- One desktop shortcut allows you to connect to *multiple* security appliances.

Run Cisco ASDM as a Java Web Start application

Java Web Start is required to run ASDM, but it is not installed on this computer.

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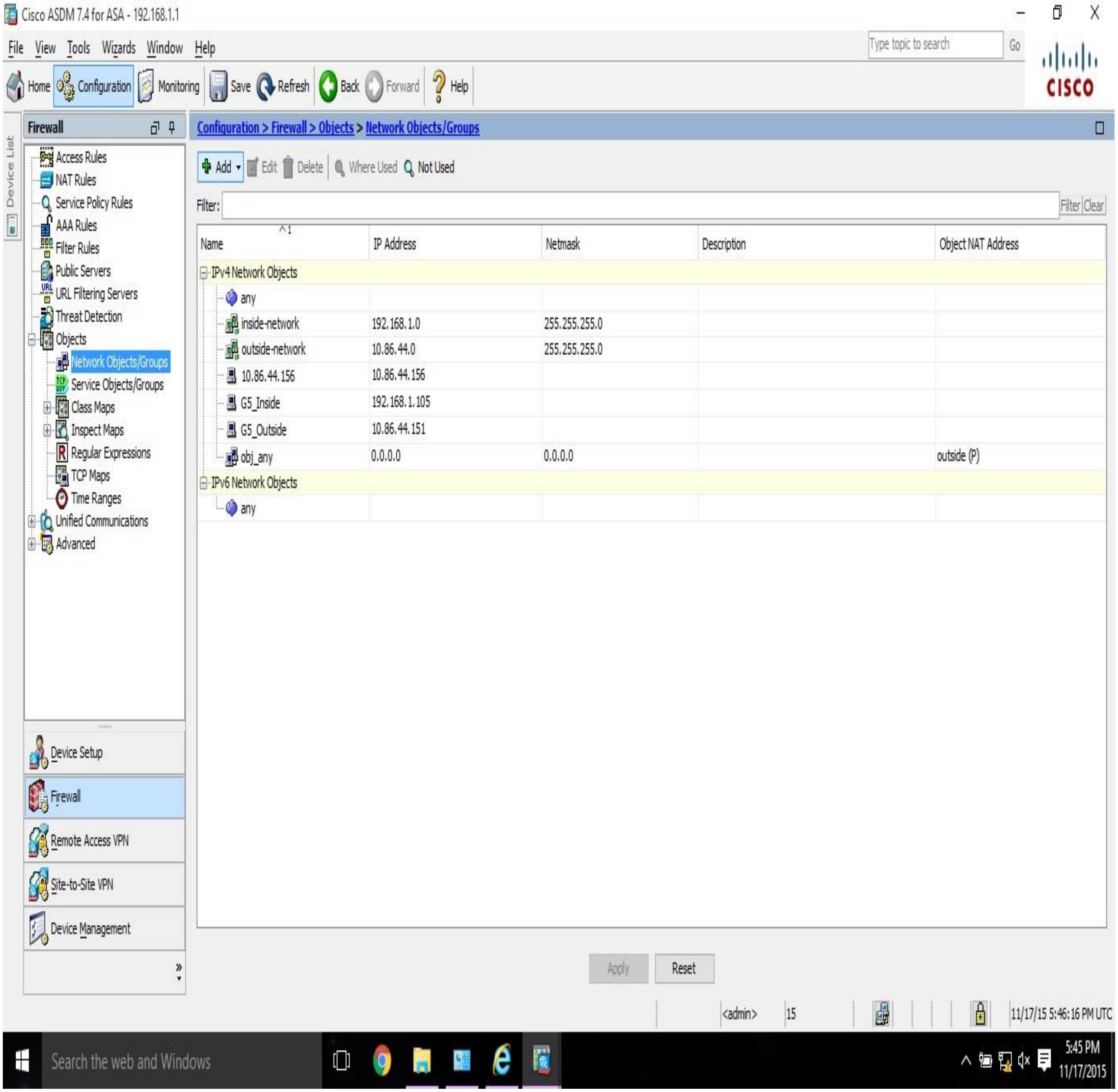
Step 3: Creation of Network Objects

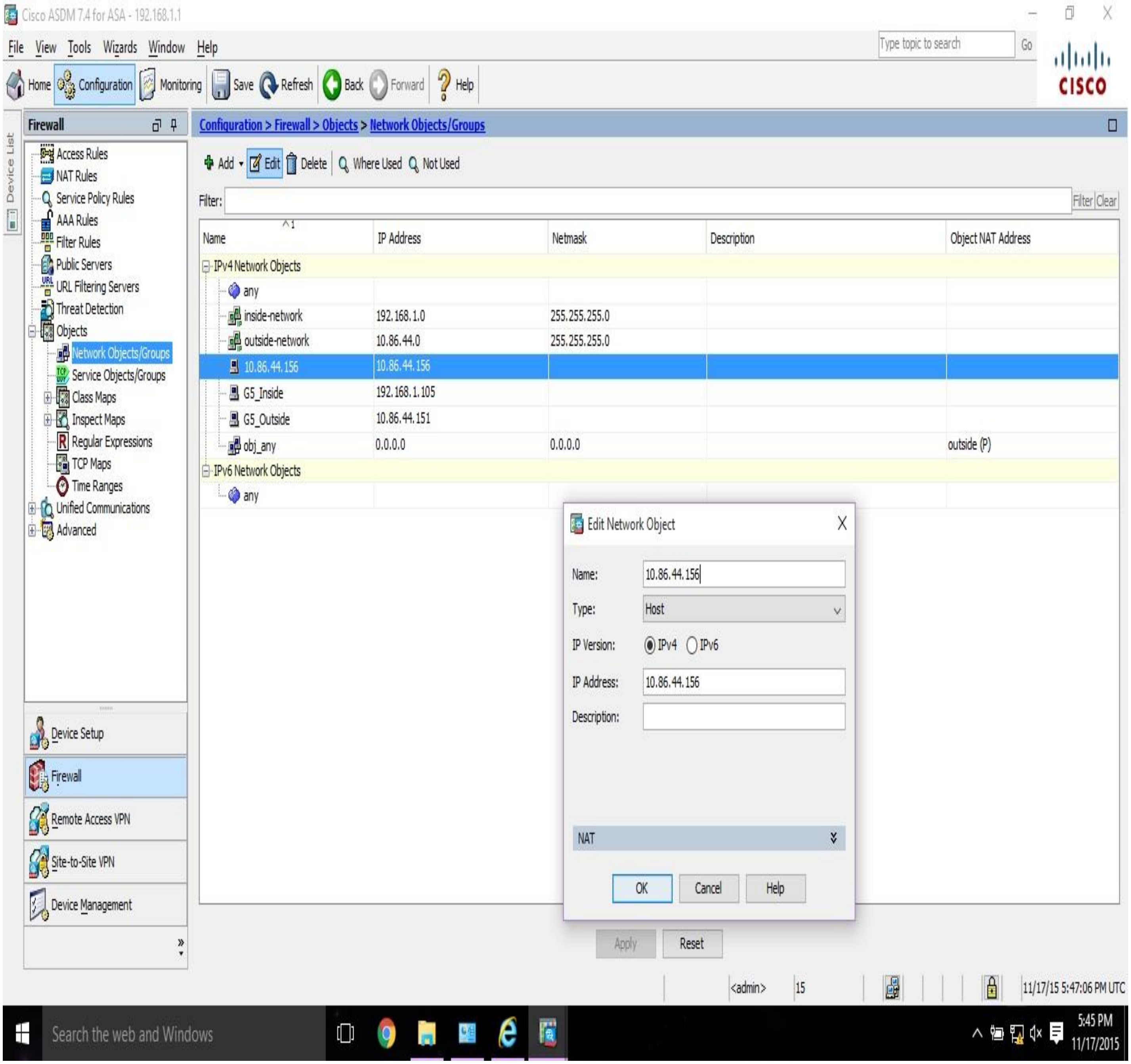
- All Network Objects



Configuration > Firewall > Objects > Network Objects/Groups

Name	IP Address	Netmask	Description	Object NAT Address
IPv4 Network Objects				
any				
inside-network	192.168.1.0	255.255.255.0		
outside-network	10.86.44.0	255.255.255.0		
10.86.44.156	10.86.44.156			
G5_Inside	192.168.1.105			
G5_Outside	10.86.44.151			
obj_any	0.0.0.0	0.0.0.0		outside (P)
IPv6 Network Objects				
any				

- Network Object Configuration of 10.86.44.156 (will used for file sharing)



Name	IP Address	Netmask	Description	Object NAT Address
IPv4 Network Objects				
any				
inside-network	192.168.1.0	255.255.255.0		
outside-network	10.86.44.0	255.255.255.0		
10.86.44.156	10.86.44.156			
G5_Inside	192.168.1.105			
G5_Outside	10.86.44.151			
obj_any	0.0.0.0	0.0.0.0		outside (P)
IPv6 Network Objects				
any				

Edit Network Object

Name: 10.86.44.156

Type: Host

IP Version: ● IPv4 ○ IPv6

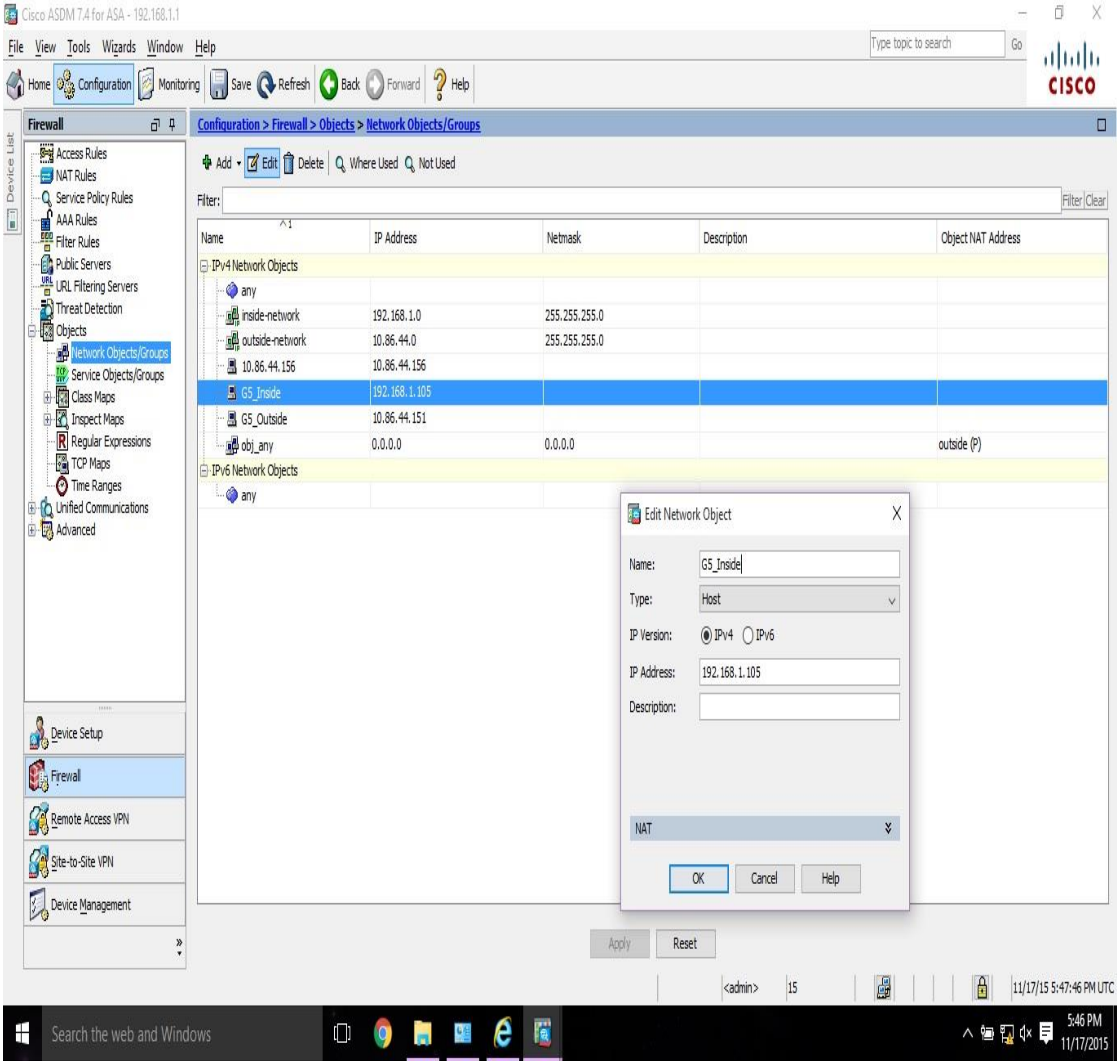
IP Address: 10.86.44.156

Description:

NAT

OK Cancel Help

- Network Object Configuration of G5_Inside (Laptop is working as Inside server)



Name	IP Address	Netmask	Description	Object NAT Address
IPv4 Network Objects				
any				
inside-network	192.168.1.0	255.255.255.0		
outside-network	10.86.44.0	255.255.255.0		
10.86.44.156	10.86.44.156			
G5_Inside	192.168.1.105			
G5_Outside	10.86.44.151			
obj_any	0.0.0.0	0.0.0.0		outside (P)
IPv6 Network Objects				
any				

Edit Network Object

Name: G5_Inside

Type: Host

IP Version: ● IPv4 ○ IPv6

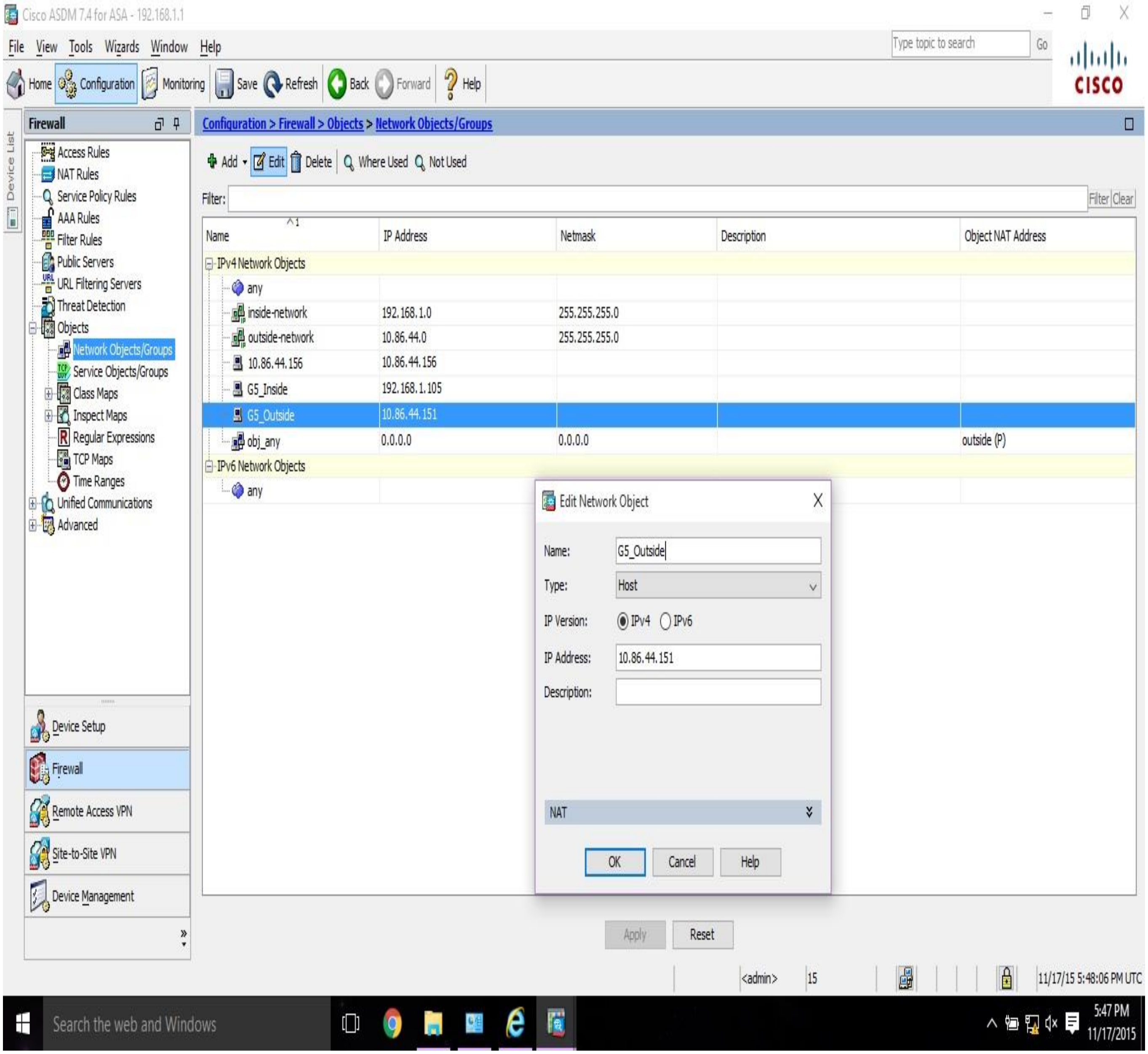
IP Address: 192.168.1.105

Description:

NAT

OK Cancel Help

- Network Object Configuration of G5_Outside (Desktop is working as outside)



Name	IP Address	Netmask	Description	Object NAT Address
IPv4 Network Objects				
any				
inside-network	192.168.1.0	255.255.255.0		
outside-network	10.86.44.0	255.255.255.0		
10.86.44.156	10.86.44.156			
G5_Inside	192.168.1.105			
G5_Outside	10.86.44.151			
obj_any	0.0.0.0	0.0.0.0		outside (P)
IPv6 Network Objects				
any				

Edit Network Object

Name: G5_Outside

Type: Host

IP Version: ● IPv4 ○ IPv6

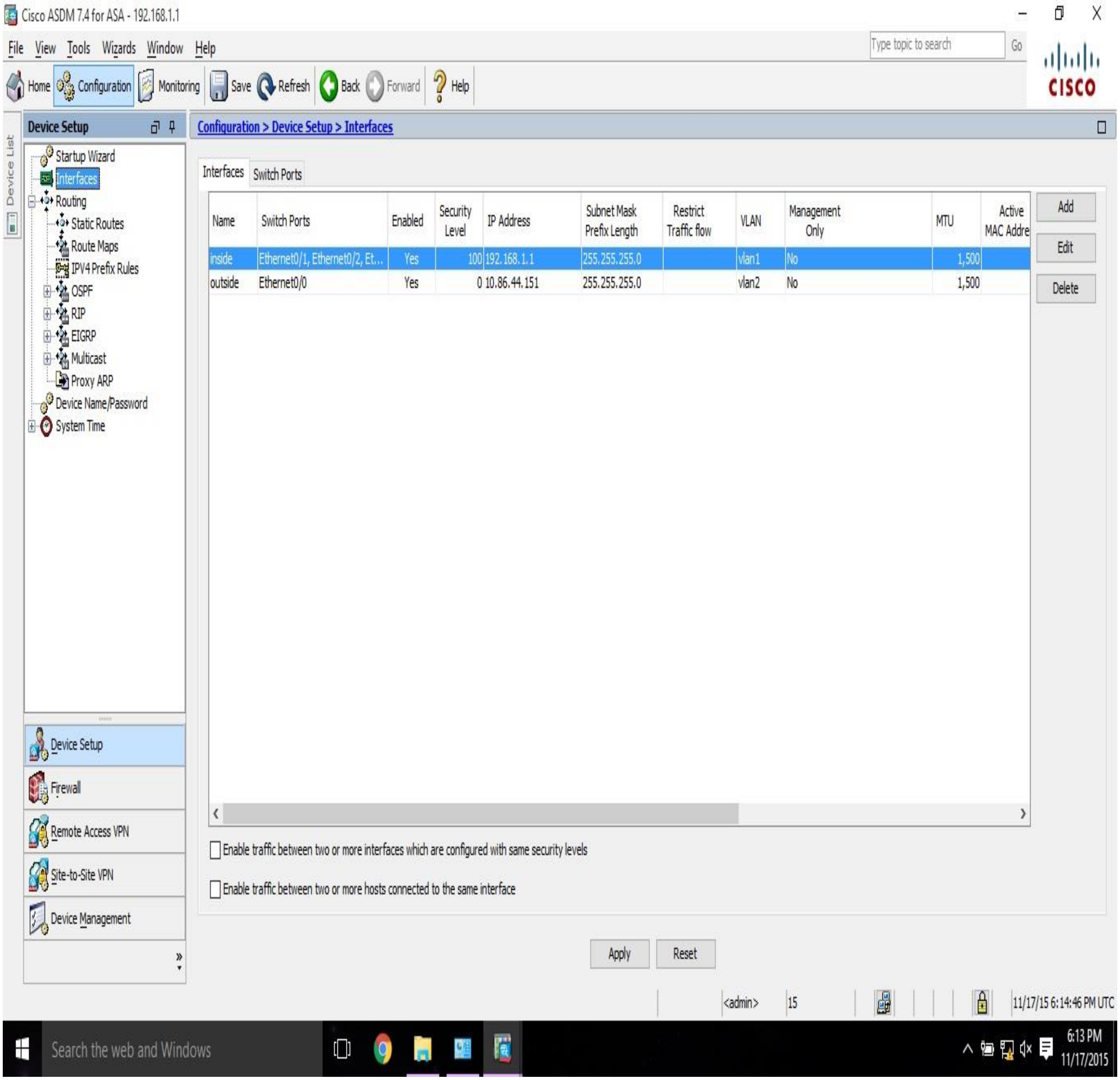
IP Address: 10.86.44.151

Description:

NAT

OK Cancel Help

Step 4: Interfaces Configuration



Configuration > Device Setup > Interfaces

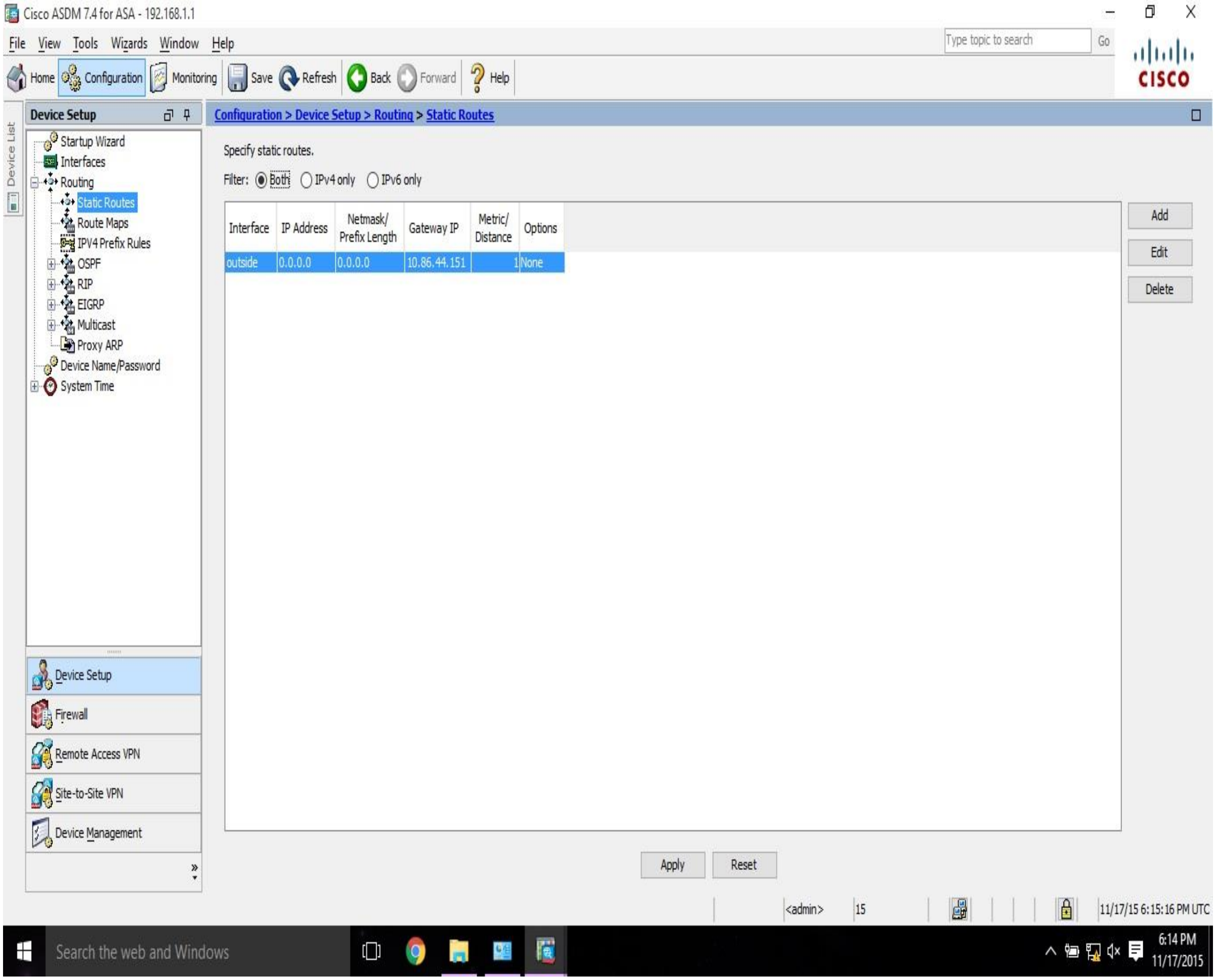
Interfaces | Switch Ports

Name	Switch Ports	Enabled	Security Level	IP Address	Subnet Mask Prefix Length	Restrict Traffic flow	VLAN	Management Only	MTU	Active MAC Addre
inside	Ethernet0/1, Ethernet0/2, Et...	Yes	100	192.168.1.1	255.255.255.0		vlan1	No	1,500	
outside	Ethernet0/0	Yes	0	10.86.44.151	255.255.255.0		vlan2	No	1,500	

□ Enable traffic between two or more interfaces which are configured with same security levels

□ Enable traffic between two or more hosts connected to the same interface

Step 5: Static Routes Configuration



Cisco ASDM 7.4 for ASA - 192.168.1.1

Configuration > Device Setup > Routing > Static Routes

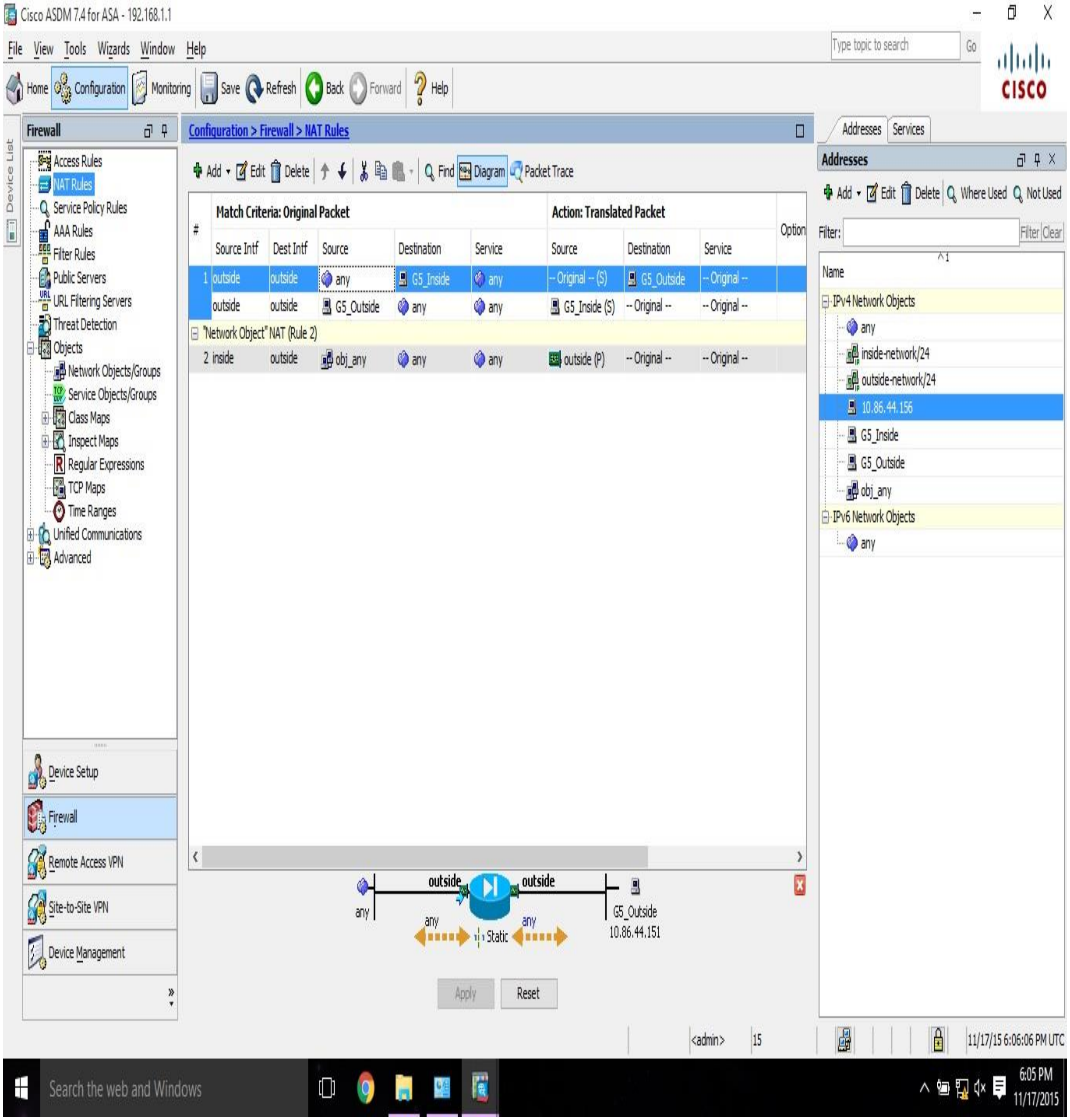
Specify static routes.

Filter: ● Both ○ IPv4 only ○ IPv6 only

Interface	IP Address	Netmask/ Prefix Length	Gateway IP	Metric/ Distance	Options
outside	0.0.0.0	0.0.0.0	10.86.44.151	1	None

Step 6: Configuration of NAT Rules

- outside (up: please check the screenshot as selected and in bottom, diagram is also shown)



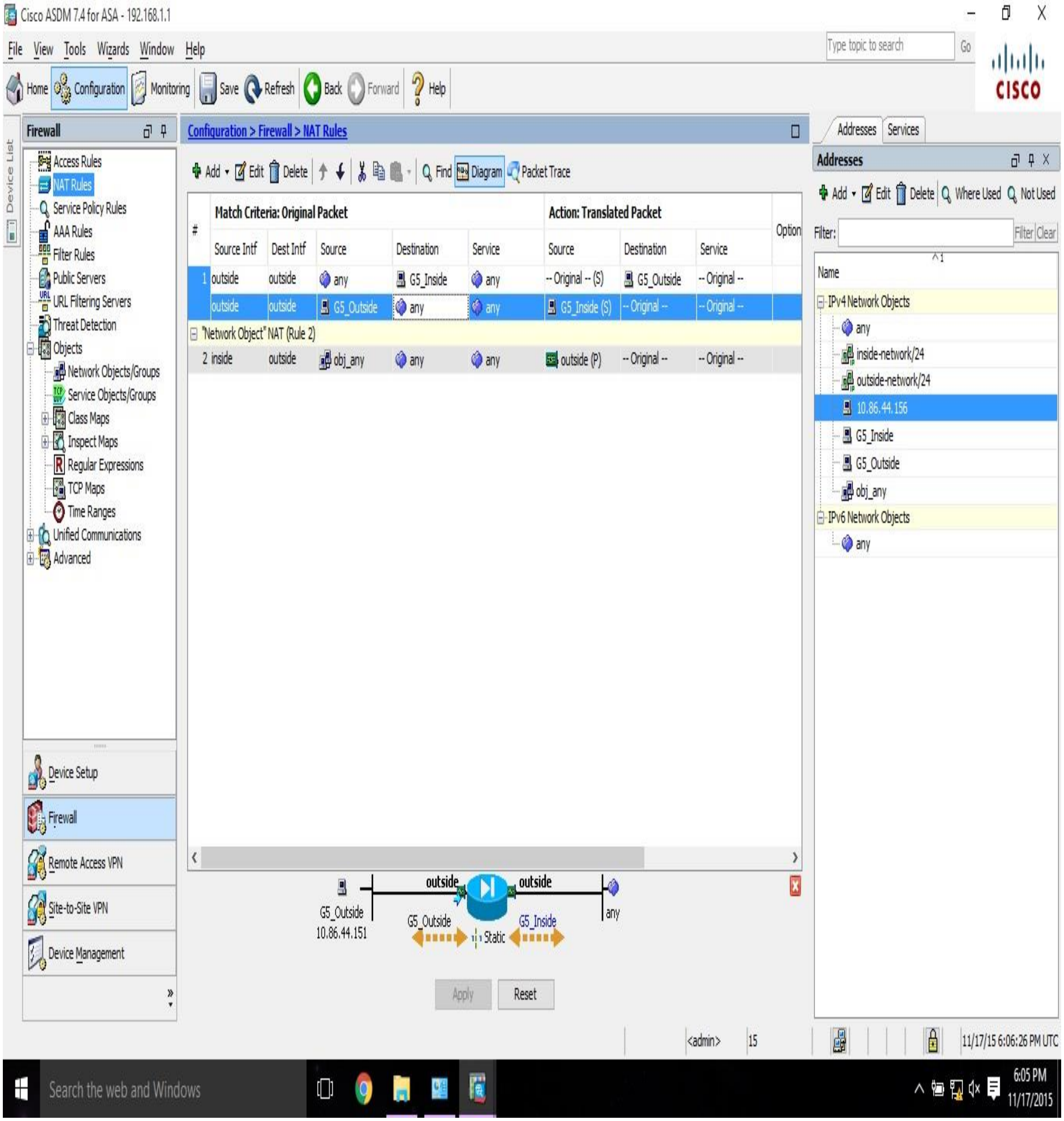
Configuration > Firewall > NAT Rules

#	Match Criteria: Original Packet					Action: Translated Packet			Option
	Source Intf	Dest Intf	Source	Destination	Service	Source	Destination	Service	
1	outside	outside	any	G5_Inside	any	-- Original -- (S)	G5_Outside	-- Original --	
	outside	outside	G5_Outside	any	any	G5_Inside (S)	-- Original --	-- Original --	
"Network Object" NAT (Rule 2)									
2	inside	outside	obj_any	any	any	outside (P)	-- Original --	-- Original --	

Addresses

Name
- IPv4 Network Objects
  - any
  - inside-network/24
  - outside-network/24
  - 10.86.44.156
  - G5_Inside
  - G5_Outside
  - obj_any
- IPv6 Network Objects
  - any

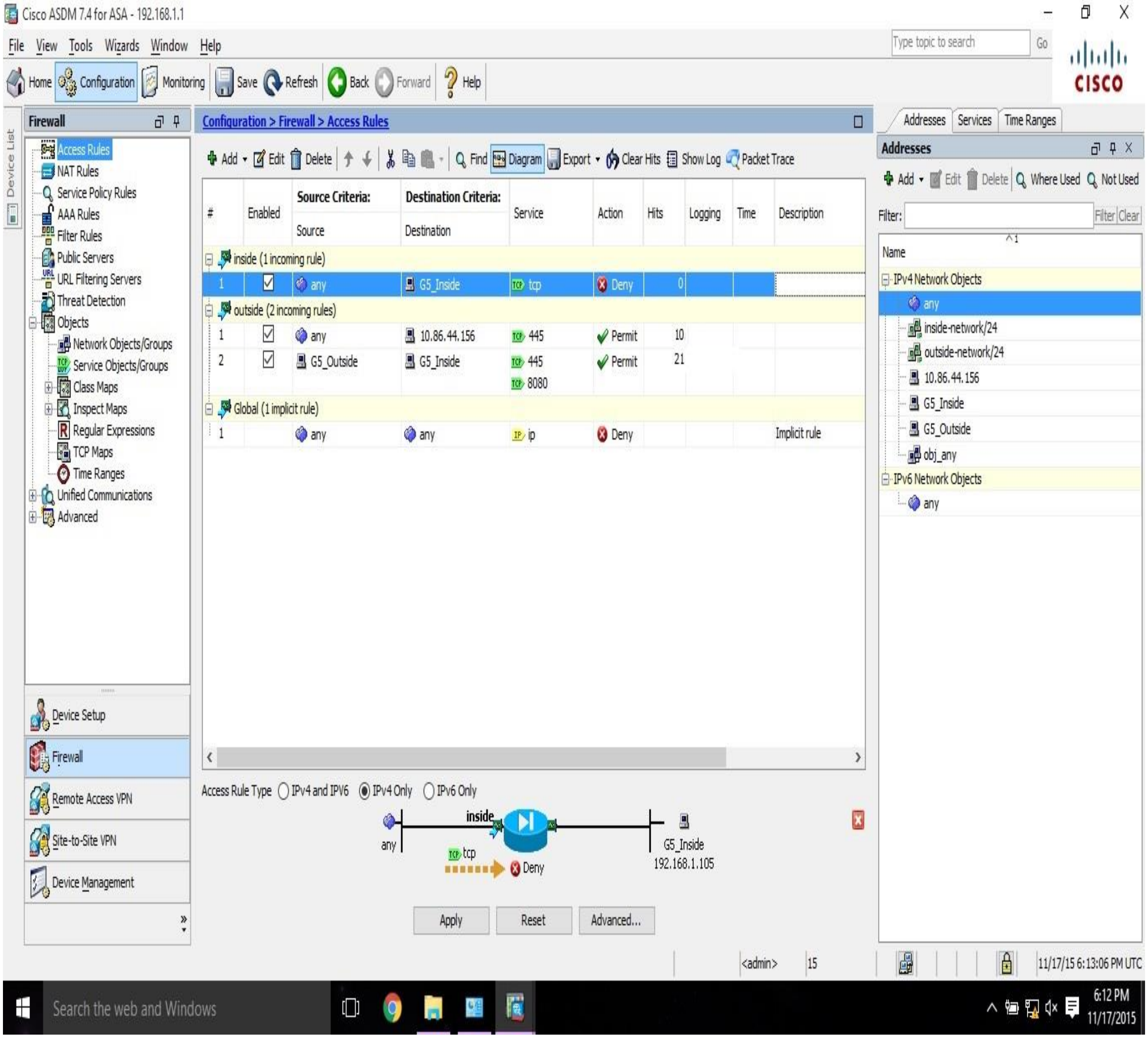
- outside (down: please check the screenshot as selected and in bottom, diagram is also shown)



Configuration > Firewall > NAT Rules

#	Match Criteria: Original Packet					Action: Translated Packet			Options
	Source Intf	Dest Intf	Source	Destination	Service	Source	Destination	Service	
1	outside	outside	any	G5_Inside	any	-- Original -- (S)	G5_Outside	-- Original --	
	outside	outside	G5_Outside	any	any	G5_Inside (S)	-- Original --	-- Original --	
"Network Object" NAT (Rule 2)									
2	inside	outside	obj_any	any	any	outside (P)	-- Original --	-- Original --	

Step 7: Configuration of Access Rules



#	Enabled	Source Criteria: Source	Destination Criteria: Destination	Service	Action	Hits	Logging	Time	Description
inside (1 incoming rule)									
1	☑	any	G5_Inside	tcp	Deny	0			
outside (2 incoming rules)									
1	☑	any	10.86.44.156	445	Permit	10			
2	☑	G5_Outside	G5_Inside	445 8080	Permit	21			
Global (1 implicit rule)									
1		any	any	ip	Deny				Implicit rule

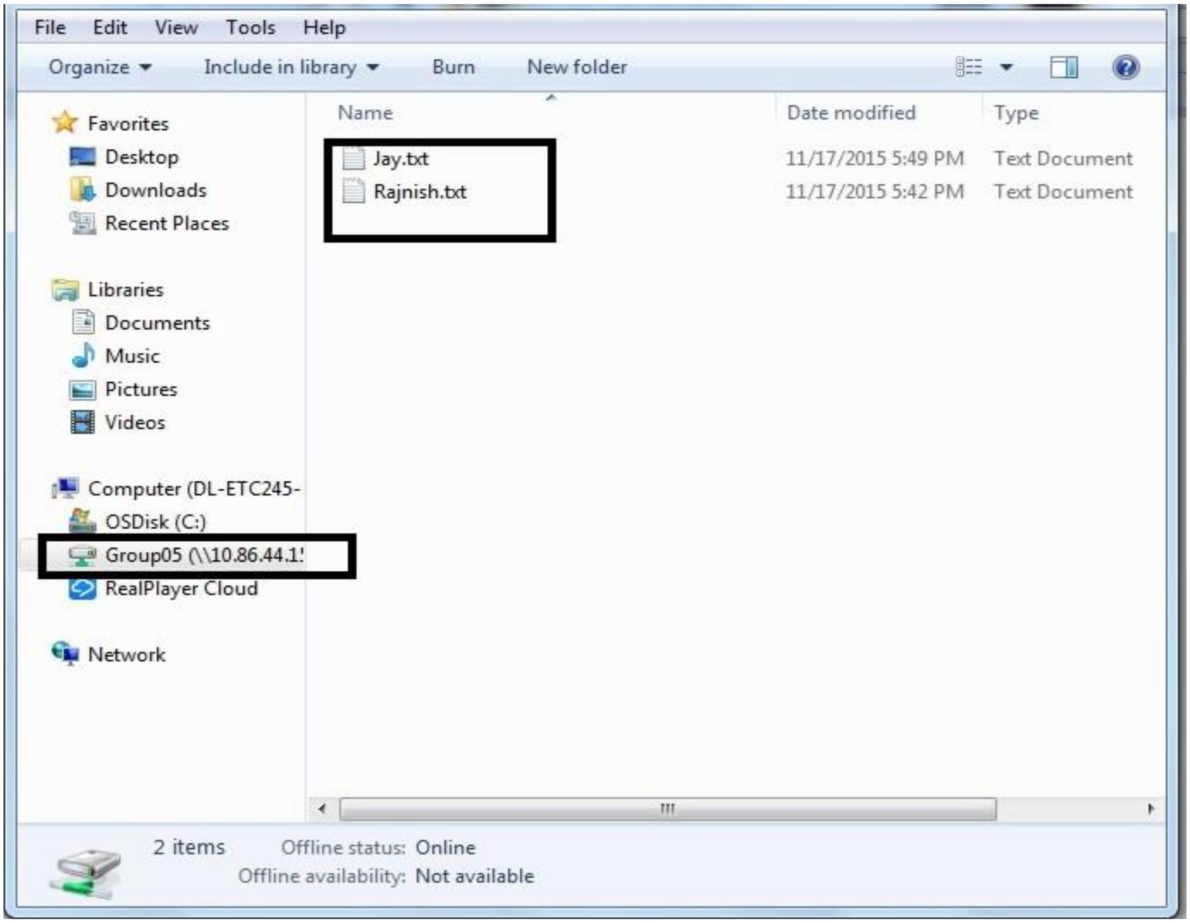
Access Rule Type ○ IPv4 and IPV6 ● IPv4 Only ○ IPv6 Only

Step 8: Creating a network share and mounting the shared folder

Steps:

- ⇨ telnet 10.86.44.156 445 from outside machine first
- ⇨ if it is logging then do the below navigations:
- Server side
    - ➢ Create a folder “Group05”
    - ➢ Right click on “Group05”
    - ➢ Properties
    - ➢ Select “Sharing” tab
    - ➢ Click “Share”
    - ➢ Give the permission as “Everyone”
    - ➢ Click “Done” -> Close
- Client side:
    - ➢ Open My Computer
    - ➢ Add a Network Location
    - ➢ Path: \\10.86.44.156\Group05

Below is the screenshot of mounted folder as named: **Group05**

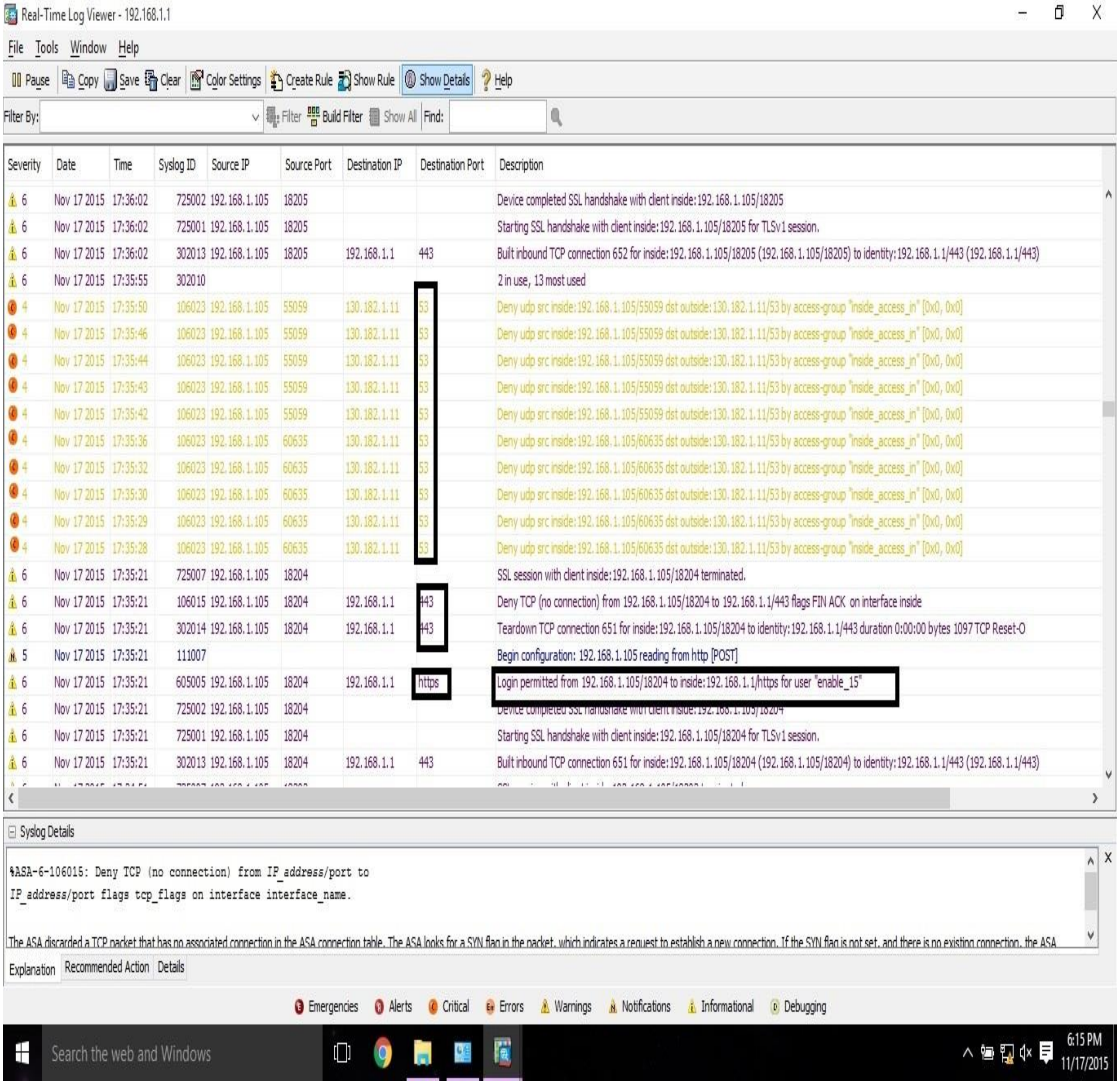


Name	Date modified	Type
Jay.txt	11/17/2015 5:49 PM	Text Document
Rajnish.txt	11/17/2015 5:42 PM	Text Document

2 items Offline status: Online

Offline availability: Not available

Step 9: Logging screenshots

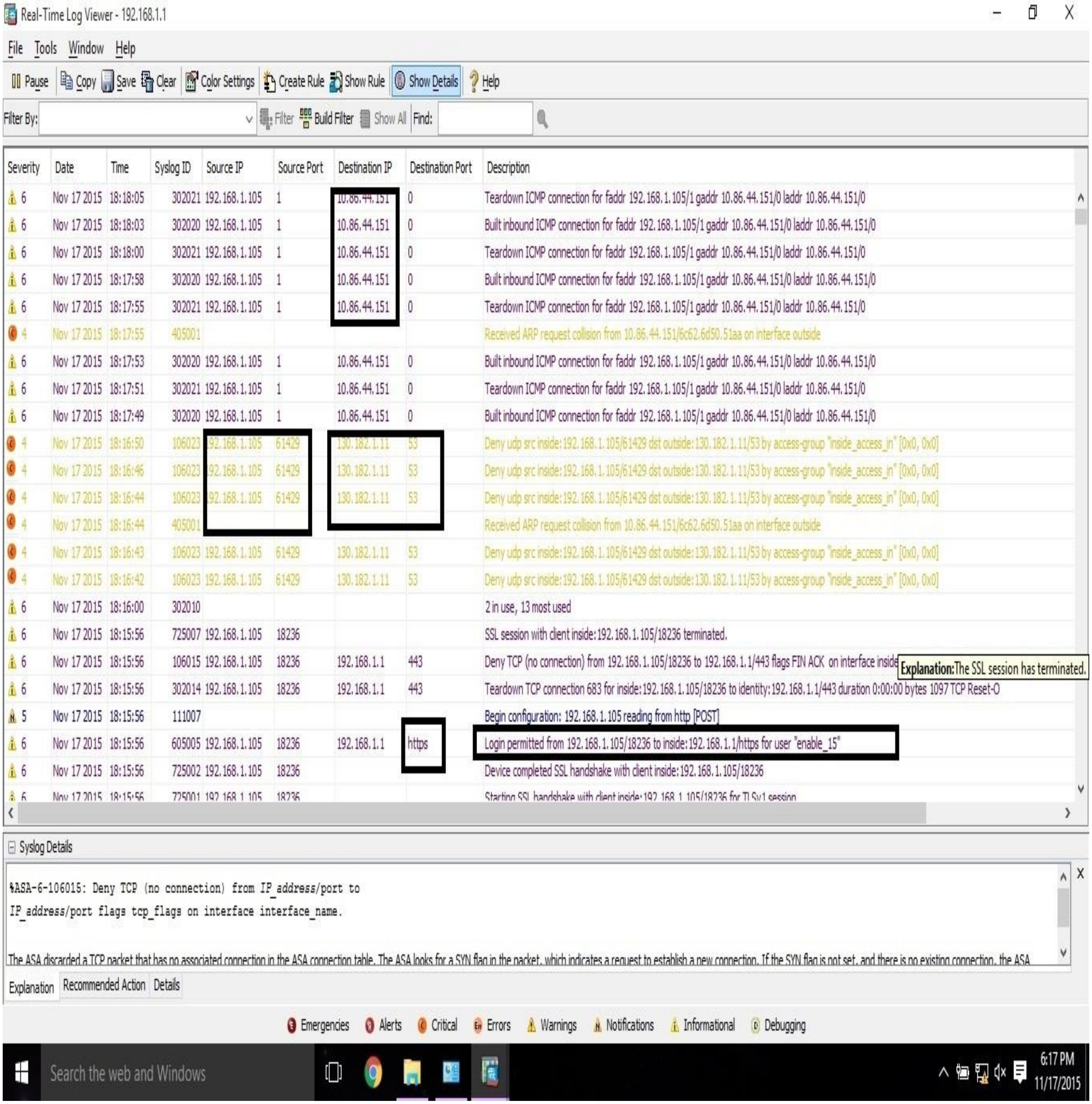

Real-Time Log Viewer - 192.168.1.1
File Tools Window Help
Pause Copy Save Clear Color Settings Create Rule Show Rule Show Details Help
Filter By: Filter Build Filter Show All Find:

Severity	Date	Time	Syslog ID	Source IP	Source Port	Destination IP	Destination Port	Description
6	Nov 17 2015	17:36:02	725002	192.168.1.105	18205			Device completed SSL handshake with client inside:192.168.1.105/18205
6	Nov 17 2015	17:36:02	725001	192.168.1.105	18205			Starting SSL handshake with client inside:192.168.1.105/18205 for TLSv1 session.
6	Nov 17 2015	17:36:02	302013	192.168.1.105	18205	192.168.1.1	443	Built inbound TCP connection 652 for inside:192.168.1.105/18205 (192.168.1.105/18205) to identity:192.168.1.1/443 (192.168.1.1/443)
6	Nov 17 2015	17:35:55	302010					2 in use, 13 most used
4	Nov 17 2015	17:35:50	106023	192.168.1.105	55059	130.182.1.11	53	Deny udp src inside:192.168.1.105/55059 dst outside:130.182.1.11/53 by access-group "inside_access_in" [0x0, 0x0]
4	Nov 17 2015	17:35:46	106023	192.168.1.105	55059	130.182.1.11	53	Deny udp src inside:192.168.1.105/55059 dst outside:130.182.1.11/53 by access-group "inside_access_in" [0x0, 0x0]
4	Nov 17 2015	17:35:44	106023	192.168.1.105	55059	130.182.1.11	53	Deny udp src inside:192.168.1.105/55059 dst outside:130.182.1.11/53 by access-group "inside_access_in" [0x0, 0x0]
4	Nov 17 2015	17:35:43	106023	192.168.1.105	55059	130.182.1.11	53	Deny udp src inside:192.168.1.105/55059 dst outside:130.182.1.11/53 by access-group "inside_access_in" [0x0, 0x0]
4	Nov 17 2015	17:35:42	106023	192.168.1.105	55059	130.182.1.11	53	Deny udp src inside:192.168.1.105/55059 dst outside:130.182.1.11/53 by access-group "inside_access_in" [0x0, 0x0]
4	Nov 17 2015	17:35:36	106023	192.168.1.105	60635	130.182.1.11	53	Deny udp src inside:192.168.1.105/60635 dst outside:130.182.1.11/53 by access-group "inside_access_in" [0x0, 0x0]
4	Nov 17 2015	17:35:32	106023	192.168.1.105	60635	130.182.1.11	53	Deny udp src inside:192.168.1.105/60635 dst outside:130.182.1.11/53 by access-group "inside_access_in" [0x0, 0x0]
4	Nov 17 2015	17:35:30	106023	192.168.1.105	60635	130.182.1.11	53	Deny udp src inside:192.168.1.105/60635 dst outside:130.182.1.11/53 by access-group "inside_access_in" [0x0, 0x0]
4	Nov 17 2015	17:35:29	106023	192.168.1.105	60635	130.182.1.11	53	Deny udp src inside:192.168.1.105/60635 dst outside:130.182.1.11/53 by access-group "inside_access_in" [0x0, 0x0]
4	Nov 17 2015	17:35:28	106023	192.168.1.105	60635	130.182.1.11	53	Deny udp src inside:192.168.1.105/60635 dst outside:130.182.1.11/53 by access-group "inside_access_in" [0x0, 0x0]
6	Nov 17 2015	17:35:21	725007	192.168.1.105	18204			SSL session with client inside:192.168.1.105/18204 terminated.
6	Nov 17 2015	17:35:21	106015	192.168.1.105	18204	192.168.1.1	443	Deny TCP (no connection) from 192.168.1.105/18204 to 192.168.1.1/443 flags FIN ACK on interface inside
6	Nov 17 2015	17:35:21	302014	192.168.1.105	18204	192.168.1.1	443	Teardown TCP connection 651 for inside:192.168.1.105/18204 to identity:192.168.1.1/443 duration 0:00:00 bytes 1097 TCP Reset-O
5	Nov 17 2015	17:35:21	111007					Begin configuration: 192.168.1.105 reading from http [POST]
6	Nov 17 2015	17:35:21	605005	192.168.1.105	18204	192.168.1.1	https	Login permitted from 192.168.1.105/18204 to inside:192.168.1.1/https for user "enable_15"
6	Nov 17 2015	17:35:21	725002	192.168.1.105	18204			Device completed SSL handshake with client inside:192.168.1.105/18204
6	Nov 17 2015	17:35:21	725001	192.168.1.105	18204			Starting SSL handshake with client inside:192.168.1.105/18204 for TLSv1 session.
6	Nov 17 2015	17:35:21	302013	192.168.1.105	18204	192.168.1.1	443	Built inbound TCP connection 651 for inside:192.168.1.105/18204 (192.168.1.105/18204) to identity:192.168.1.1/443 (192.168.1.1/443)

Syslog Details

```
%ASA-6-106015: Deny TCP (no connection) from IP_address/port to
IP_address/port flags tcp_flags on interface interface_name.
```

The ASA discarded a TCP packet that has no associated connection in the ASA connection table. The ASA looks for a SYN flag in the packet, which indicates a request to establish a new connection. If the SYN flag is not set, and there is no existing connection, the ASA



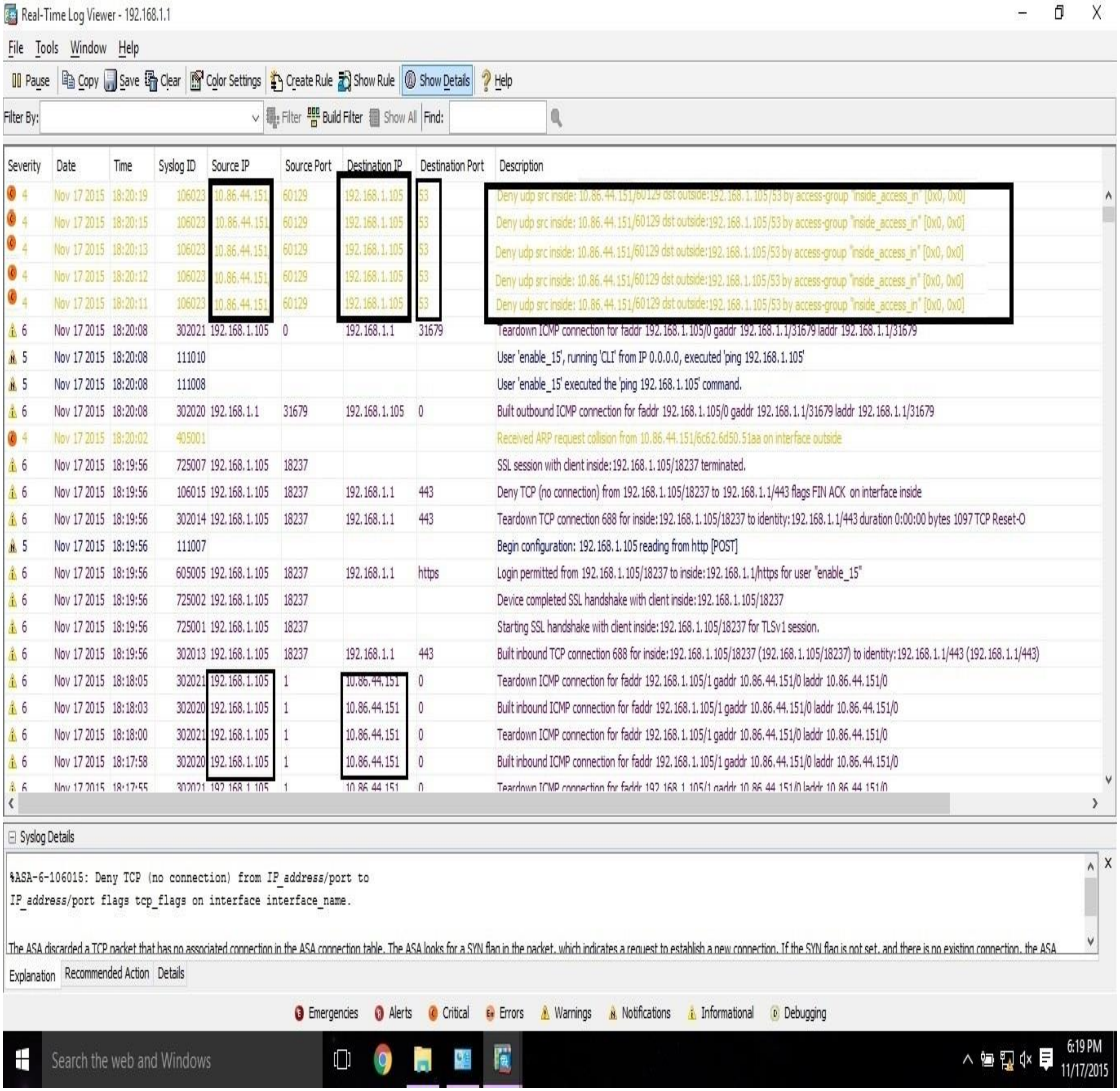
Severity	Date	Time	Syslog ID	Source IP	Source Port	Destination IP	Destination Port	Description
6	Nov 17 2015	18:18:05	302021	192.168.1.105	1	10.86.44.151	0	Teardown ICMP connection for faddr 192.168.1.105/1 gaddr 10.86.44.151/0 laddr 10.86.44.151/0
6	Nov 17 2015	18:18:03	302020	192.168.1.105	1	10.86.44.151	0	Built inbound ICMP connection for faddr 192.168.1.105/1 gaddr 10.86.44.151/0 laddr 10.86.44.151/0
6	Nov 17 2015	18:18:00	302021	192.168.1.105	1	10.86.44.151	0	Teardown ICMP connection for faddr 192.168.1.105/1 gaddr 10.86.44.151/0 laddr 10.86.44.151/0
6	Nov 17 2015	18:17:58	302020	192.168.1.105	1	10.86.44.151	0	Built inbound ICMP connection for faddr 192.168.1.105/1 gaddr 10.86.44.151/0 laddr 10.86.44.151/0
6	Nov 17 2015	18:17:55	302021	192.168.1.105	1	10.86.44.151	0	Teardown ICMP connection for faddr 192.168.1.105/1 gaddr 10.86.44.151/0 laddr 10.86.44.151/0
4	Nov 17 2015	18:17:55	405001					Received ARP request collision from 10.86.44.151/6c62.6d50.51aa on interface outside
6	Nov 17 2015	18:17:53	302020	192.168.1.105	1	10.86.44.151	0	Built inbound ICMP connection for faddr 192.168.1.105/1 gaddr 10.86.44.151/0 laddr 10.86.44.151/0
6	Nov 17 2015	18:17:51	302021	192.168.1.105	1	10.86.44.151	0	Teardown ICMP connection for faddr 192.168.1.105/1 gaddr 10.86.44.151/0 laddr 10.86.44.151/0
6	Nov 17 2015	18:17:49	302020	192.168.1.105	1	10.86.44.151	0	Built inbound ICMP connection for faddr 192.168.1.105/1 gaddr 10.86.44.151/0 laddr 10.86.44.151/0
4	Nov 17 2015	18:16:50	106023	192.168.1.105	61429	130.182.1.11	53	Deny udp src inside:192.168.1.105/61429 dst outside:130.182.1.11/53 by access-group "inside_access_in" [0x0, 0x0]
4	Nov 17 2015	18:16:46	106023	192.168.1.105	61429	130.182.1.11	53	Deny udp src inside:192.168.1.105/61429 dst outside:130.182.1.11/53 by access-group "inside_access_in" [0x0, 0x0]
4	Nov 17 2015	18:16:44	106023	192.168.1.105	61429	130.182.1.11	53	Deny udp src inside:192.168.1.105/61429 dst outside:130.182.1.11/53 by access-group "inside_access_in" [0x0, 0x0]
4	Nov 17 2015	18:16:44	405001					Received ARP request collision from 10.86.44.151/6c62.6d50.51aa on interface outside
4	Nov 17 2015	18:16:43	106023	192.168.1.105	61429	130.182.1.11	53	Deny udp src inside:192.168.1.105/61429 dst outside:130.182.1.11/53 by access-group "inside_access_in" [0x0, 0x0]
4	Nov 17 2015	18:16:42	106023	192.168.1.105	61429	130.182.1.11	53	Deny udp src inside:192.168.1.105/61429 dst outside:130.182.1.11/53 by access-group "inside_access_in" [0x0, 0x0]
6	Nov 17 2015	18:16:00	302010					2 in use, 13 most used
6	Nov 17 2015	18:15:56	725007	192.168.1.105	18236			SSL session with client inside:192.168.1.105/18236 terminated.
6	Nov 17 2015	18:15:56	106015	192.168.1.105	18236	192.168.1.1	443	Deny TCP (no connection) from 192.168.1.105/18236 to 192.168.1.1/443 flags FIN ACK on interface inside
6	Nov 17 2015	18:15:56	302014	192.168.1.105	18236	192.168.1.1	443	Teardown TCP connection 683 for inside:192.168.1.105/18236 to identity:192.168.1.1/443 duration 0:00:00 bytes 1097 TCP Reset-O
5	Nov 17 2015	18:15:56	111007					Begin configuration: 192.168.1.105 reading from http [POST]
6	Nov 17 2015	18:15:56	605005	192.168.1.105	18236	192.168.1.1	https	Login permitted from 192.168.1.105/18236 to inside:192.168.1.1/https for user "enable_15"
6	Nov 17 2015	18:15:56	725002	192.168.1.105	18236			Device completed SSL handshake with client inside:192.168.1.105/18236
6	Nov 17 2015	18:15:56	725001	192.168.1.105	18236			Starting SSL handshake with client inside:192.168.1.105/18236 for TLSv1 session

Explanation: The SSL session has terminated.

Syslog Details

```
%ASA-6-106015: Deny TCP (no connection) from IP_address/port to
IP_address/port flags tcp_flags on interface interface_name.
```

The ASA discarded a TCP packet that has no associated connection in the ASA connection table. The ASA looks for a SYN flag in the packet, which indicates a request to establish a new connection. If the SYN flag is not set, and there is no existing connection, the ASA



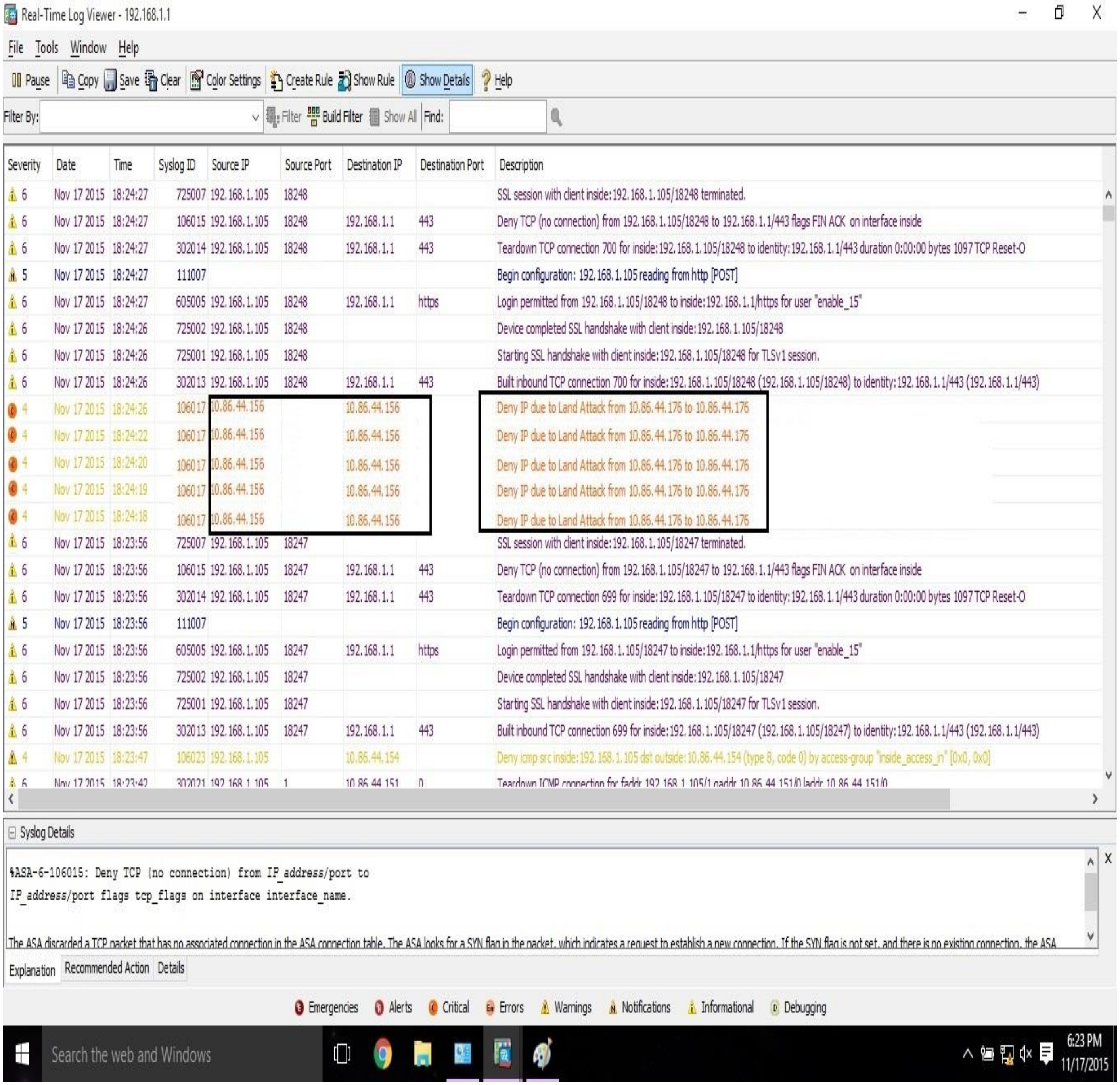
Severity	Date	Time	Syslog ID	Source IP	Source Port	Destination IP	Destination Port	Description
4	Nov 17 2015	18:20:19	106023	10.86.44.151	60129	192.168.1.105	53	Deny udp src inside: 10.86.44.151/60129 dst outside:192.168.1.105/53 by access-group "inside_access_in" [0x0, 0x0]
4	Nov 17 2015	18:20:15	106023	10.86.44.151	60129	192.168.1.105	53	Deny udp src inside: 10.86.44.151/60129 dst outside:192.168.1.105/53 by access-group "inside_access_in" [0x0, 0x0]
4	Nov 17 2015	18:20:13	106023	10.86.44.151	60129	192.168.1.105	53	Deny udp src inside: 10.86.44.151/60129 dst outside:192.168.1.105/53 by access-group "inside_access_in" [0x0, 0x0]
4	Nov 17 2015	18:20:12	106023	10.86.44.151	60129	192.168.1.105	53	Deny udp src inside: 10.86.44.151/60129 dst outside:192.168.1.105/53 by access-group "inside_access_in" [0x0, 0x0]
4	Nov 17 2015	18:20:11	106023	10.86.44.151	60129	192.168.1.105	53	Deny udp src inside: 10.86.44.151/60129 dst outside:192.168.1.105/53 by access-group "inside_access_in" [0x0, 0x0]
6	Nov 17 2015	18:20:08	302021	192.168.1.105	0	192.168.1.1	31679	Teardown ICMP connection for faddr 192.168.1.105/0 gaddr 192.168.1.1/31679 laddr 192.168.1.1/31679
5	Nov 17 2015	18:20:08	111010					User 'enable_15', running 'CLI' from IP 0.0.0.0, executed 'ping 192.168.1.105'
5	Nov 17 2015	18:20:08	111008					User 'enable_15' executed the 'ping 192.168.1.105' command.
6	Nov 17 2015	18:20:08	302020	192.168.1.1	31679	192.168.1.105	0	Built outbound ICMP connection for faddr 192.168.1.105/0 gaddr 192.168.1.1/31679 laddr 192.168.1.1/31679
4	Nov 17 2015	18:20:02	405001					Received ARP request collision from 10.86.44.151/6c62.6d50.51aa on interface outside
6	Nov 17 2015	18:19:56	725007	192.168.1.105	18237			SSL session with client inside:192.168.1.105/18237 terminated.
6	Nov 17 2015	18:19:56	106015	192.168.1.105	18237	192.168.1.1	443	Deny TCP (no connection) from 192.168.1.105/18237 to 192.168.1.1/443 flags FIN ACK on interface inside
6	Nov 17 2015	18:19:56	302014	192.168.1.105	18237	192.168.1.1	443	Teardown TCP connection 688 for inside:192.168.1.105/18237 to identity:192.168.1.1/443 duration 0:00:00 bytes 1097 TCP Reset-O
5	Nov 17 2015	18:19:56	111007					Begin configuration: 192.168.1.105 reading from http [POST]
6	Nov 17 2015	18:19:56	605005	192.168.1.105	18237	192.168.1.1	https	Login permitted from 192.168.1.105/18237 to inside:192.168.1.1/https for user "enable_15"
6	Nov 17 2015	18:19:56	725002	192.168.1.105	18237			Device completed SSL handshake with client inside:192.168.1.105/18237
6	Nov 17 2015	18:19:56	725001	192.168.1.105	18237			Starting SSL handshake with client inside:192.168.1.105/18237 for TLSv1 session.
6	Nov 17 2015	18:19:56	302013	192.168.1.105	18237	192.168.1.1	443	Built inbound TCP connection 688 for inside:192.168.1.105/18237 (192.168.1.105/18237) to identity:192.168.1.1/443 (192.168.1.1/443)
6	Nov 17 2015	18:18:05	302021	192.168.1.105	1	10.86.44.151	0	Teardown ICMP connection for faddr 192.168.1.105/1 gaddr 10.86.44.151/0 laddr 10.86.44.151/0
6	Nov 17 2015	18:18:03	302020	192.168.1.105	1	10.86.44.151	0	Built inbound ICMP connection for faddr 192.168.1.105/1 gaddr 10.86.44.151/0 laddr 10.86.44.151/0
6	Nov 17 2015	18:18:00	302021	192.168.1.105	1	10.86.44.151	0	Teardown ICMP connection for faddr 192.168.1.105/1 gaddr 10.86.44.151/0 laddr 10.86.44.151/0
6	Nov 17 2015	18:17:58	302020	192.168.1.105	1	10.86.44.151	0	Built inbound ICMP connection for faddr 192.168.1.105/1 gaddr 10.86.44.151/0 laddr 10.86.44.151/0
6	Nov 17 2015	18:17:55	302021	192.168.1.105	1	10.86.44.151	0	Teardown ICMP connection for faddr 192.168.1.105/1 gaddr 10.86.44.151/0 laddr 10.86.44.151/0

Syslog Details

```
%ASA-6-106015: Deny TCP (no connection) from IP_address/port to
IP_address/port flags tcp_flags on interface interface_name.
```

The ASA discarded a TCP packet that has no associated connection in the ASA connection table. The ASA looks for a SYN flag in the packet, which indicates a request to establish a new connection. If the SYN flag is not set, and there is no existing connection, the ASA

Explanation | Recommended Action | Details


Real-Time Log Viewer - 192.168.1.1
File Tools Window Help
Pause Copy Save Clear Color Settings Create Rule Show Rule Show Details Help
Filter By: Filter Build Filter Show All Find:

Severity	Date	Time	Syslog ID	Source IP	Source Port	Destination IP	Destination Port	Description
6	Nov 17 2015	18:24:27	725007	192.168.1.105	18248			SSL session with client inside:192.168.1.105/18248 terminated.
6	Nov 17 2015	18:24:27	106015	192.168.1.105	18248	192.168.1.1	443	Deny TCP (no connection) from 192.168.1.105/18248 to 192.168.1.1/443 flags FIN ACK on interface inside
6	Nov 17 2015	18:24:27	302014	192.168.1.105	18248	192.168.1.1	443	Teardown TCP connection 700 for inside:192.168.1.105/18248 to identity:192.168.1.1/443 duration 0:00:00 bytes 1097 TCP Reset-O
5	Nov 17 2015	18:24:27	111007					Begin configuration: 192.168.1.105 reading from http [POST]
6	Nov 17 2015	18:24:27	605005	192.168.1.105	18248	192.168.1.1	https	Login permitted from 192.168.1.105/18248 to inside:192.168.1.1/https for user "enable_15"
6	Nov 17 2015	18:24:26	725002	192.168.1.105	18248			Device completed SSL handshake with client inside:192.168.1.105/18248
6	Nov 17 2015	18:24:26	725001	192.168.1.105	18248			Starting SSL handshake with client inside:192.168.1.105/18248 for TLSv1 session.
6	Nov 17 2015	18:24:26	302013	192.168.1.105	18248	192.168.1.1	443	Built inbound TCP connection 700 for inside:192.168.1.105/18248 (192.168.1.105/18248) to identity:192.168.1.1/443 (192.168.1.1/443)
4	Nov 17 2015	18:24:26	106017	10.86.44.156		10.86.44.156		Deny IP due to Land Attack from 10.86.44.176 to 10.86.44.176
4	Nov 17 2015	18:24:22	106017	10.86.44.156		10.86.44.156		Deny IP due to Land Attack from 10.86.44.176 to 10.86.44.176
4	Nov 17 2015	18:24:20	106017	10.86.44.156		10.86.44.156		Deny IP due to Land Attack from 10.86.44.176 to 10.86.44.176
4	Nov 17 2015	18:24:19	106017	10.86.44.156		10.86.44.156		Deny IP due to Land Attack from 10.86.44.176 to 10.86.44.176
4	Nov 17 2015	18:24:18	106017	10.86.44.156		10.86.44.156		Deny IP due to Land Attack from 10.86.44.176 to 10.86.44.176
6	Nov 17 2015	18:23:56	725007	192.168.1.105	18247			SSL session with client inside:192.168.1.105/18247 terminated.
6	Nov 17 2015	18:23:56	106015	192.168.1.105	18247	192.168.1.1	443	Deny TCP (no connection) from 192.168.1.105/18247 to 192.168.1.1/443 flags FIN ACK on interface inside
6	Nov 17 2015	18:23:56	302014	192.168.1.105	18247	192.168.1.1	443	Teardown TCP connection 699 for inside:192.168.1.105/18247 to identity:192.168.1.1/443 duration 0:00:00 bytes 1097 TCP Reset-O
5	Nov 17 2015	18:23:56	111007					Begin configuration: 192.168.1.105 reading from http [POST]
6	Nov 17 2015	18:23:56	605005	192.168.1.105	18247	192.168.1.1	https	Login permitted from 192.168.1.105/18247 to inside:192.168.1.1/https for user "enable_15"
6	Nov 17 2015	18:23:56	725002	192.168.1.105	18247			Device completed SSL handshake with client inside:192.168.1.105/18247
6	Nov 17 2015	18:23:56	725001	192.168.1.105	18247			Starting SSL handshake with client inside:192.168.1.105/18247 for TLSv1 session.
6	Nov 17 2015	18:23:56	302013	192.168.1.105	18247	192.168.1.1	443	Built inbound TCP connection 699 for inside:192.168.1.105/18247 (192.168.1.105/18247) to identity:192.168.1.1/443 (192.168.1.1/443)
4	Nov 17 2015	18:23:47	106023	192.168.1.105		10.86.44.154		Deny icmp src inside:192.168.1.105 dst outside:10.86.44.154 (type 8, code 0) by access-group "inside_access_in" [0x0, 0x0]
6	Nov 17 2015	18:23:42	302021	192.168.1.105	1	10.86.44.151	0	Teardown ICMP connection for faddr 192.168.1.105/1 gaddr 10.86.44.151/0 laddr 10.86.44.151/0

Syslog Details

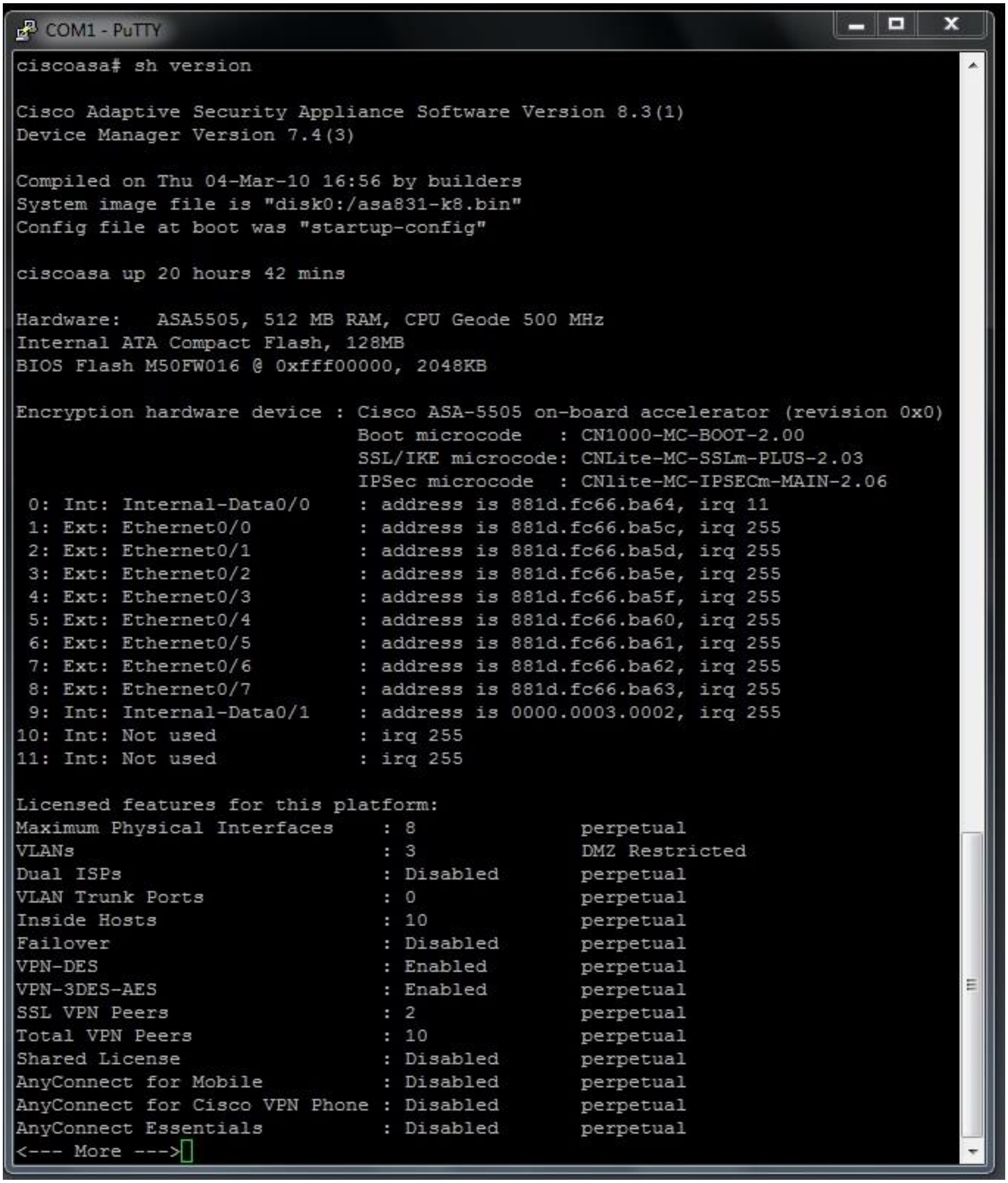
```
%ASA-6-106015: Deny TCP (no connection) from IP_address/port to
IP_address/port flags tcp_flags on interface interface_name.
```

The ASA discarded a TCP packet that has no associated connection in the ASA connection table. The ASA looks for a SYN flag in the packet, which indicates a request to establish a new connection. If the SYN flag is not set, and there is no existing connection, the ASA

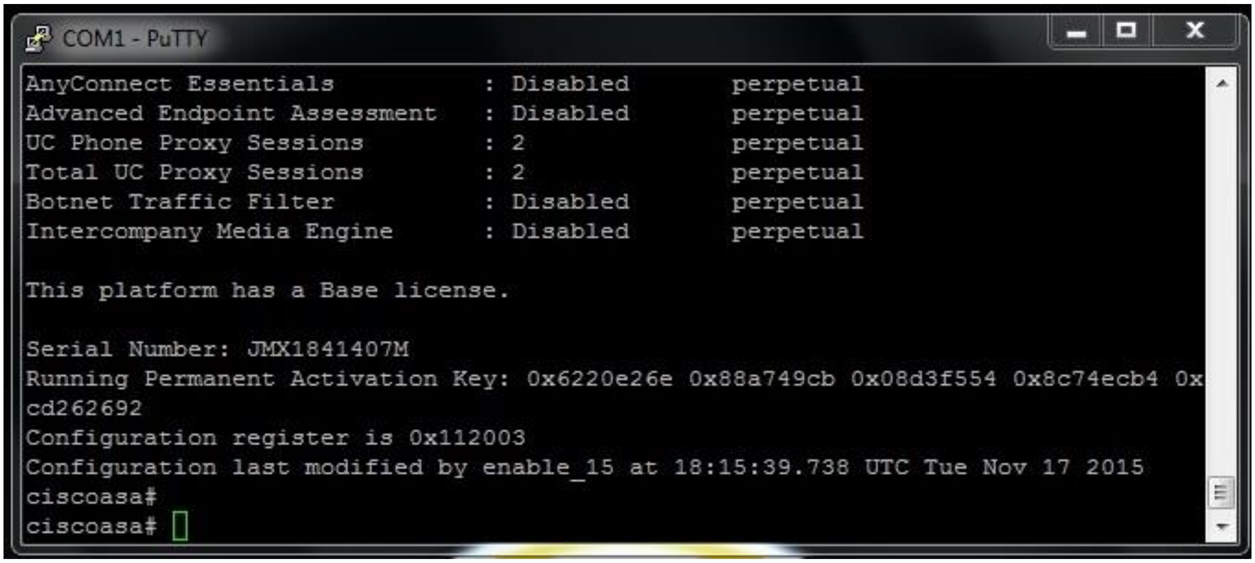
Step 10: Some Misc. screenshots

- Firewall Router’s Screenshots:

1. sh version

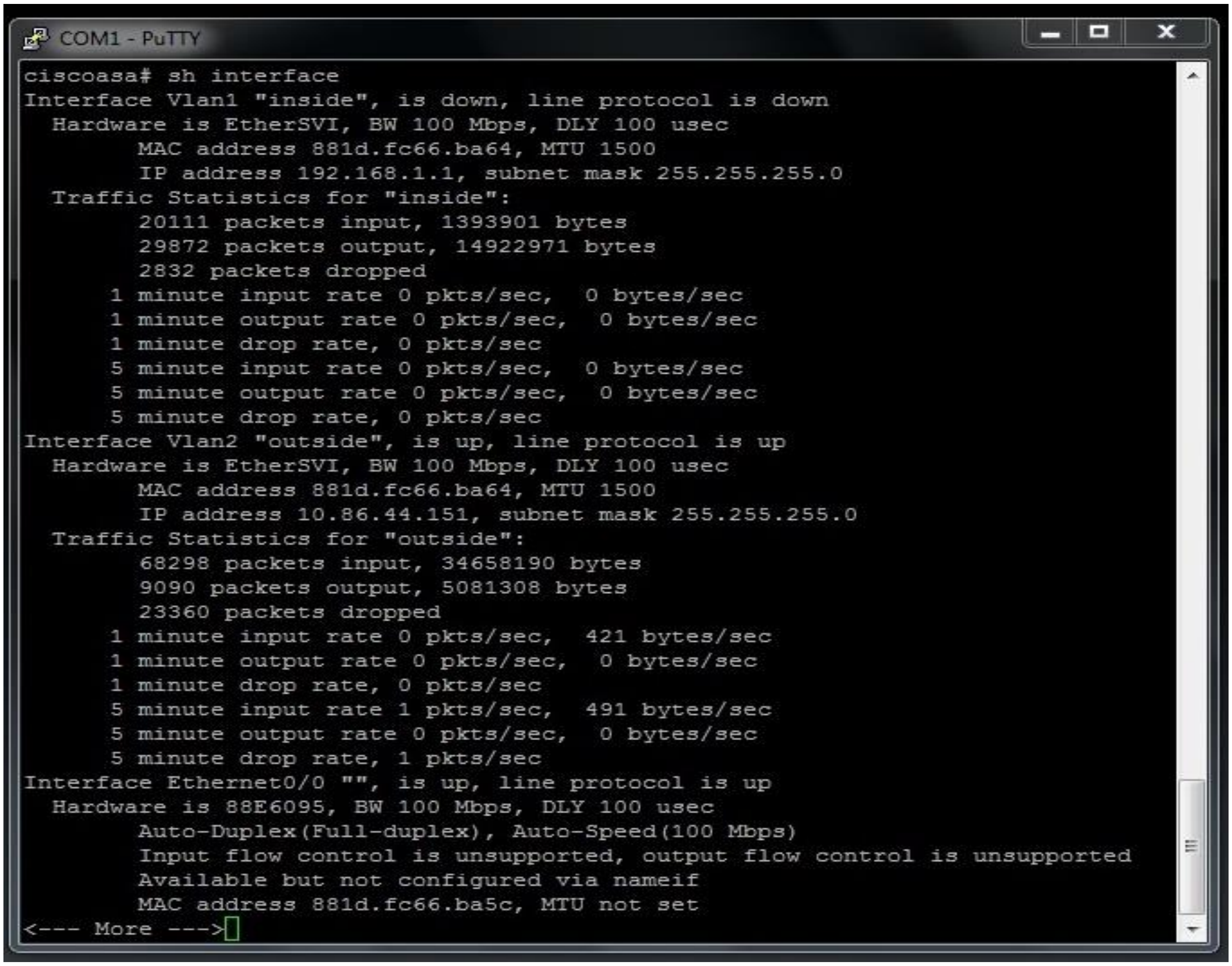


```
ciscoasa# sh version

Cisco Adaptive Security Appliance Software Version 8.3(1)
Device Manager Version 7.4(3)

Compiled on Thu 04-Mar-10 16:56 by builders
System image file is "disk0:/asa831-k8.bin"
Config file at boot was "startup-config"

ciscoasa up 20 hours 42 mins

Hardware:   ASA5505, 512 MB RAM, CPU Geode 500 MHz
Internal ATA Compact Flash, 128MB
BIOS Flash M50FW016 @ 0xfff00000, 2048KB

Encryption hardware device : Cisco ASA-5505 on-board accelerator (revision 0x0)
                             Boot microcode    : CN1000-MC-BOOT-2.00
                             SSL/IKE microcode: CNLite-MC-SSLm-PLUS-2.03
                             IPSec microcode   : CNlite-MC-IPSECm-MAIN-2.06
 0: Int: Internal-Data0/0    : address is 881d.fc66.ba64, irq 11
 1: Ext: Ethernet0/0         : address is 881d.fc66.ba5c, irq 255
 2: Ext: Ethernet0/1         : address is 881d.fc66.ba5d, irq 255
 3: Ext: Ethernet0/2         : address is 881d.fc66.ba5e, irq 255
 4: Ext: Ethernet0/3         : address is 881d.fc66.ba5f, irq 255
 5: Ext: Ethernet0/4         : address is 881d.fc66.ba60, irq 255
 6: Ext: Ethernet0/5         : address is 881d.fc66.ba61, irq 255
 7: Ext: Ethernet0/6         : address is 881d.fc66.ba62, irq 255
 8: Ext: Ethernet0/7         : address is 881d.fc66.ba63, irq 255
 9: Int: Internal-Data0/1    : address is 0000.0003.0002, irq 255
10: Int: Not used            : irq 255
11: Int: Not used            : irq 255

Licensed features for this platform:
Maximum Physical Interfaces    : 8              perpetual
VLANs                          : 3              DMZ Restricted
Dual ISPs                      : Disabled       perpetual
VLAN Trunk Ports               : 0              perpetual
Inside Hosts                   : 10             perpetual
Failover                       : Disabled       perpetual
VPN-DES                        : Enabled        perpetual
VPN-3DES-AES                   : Enabled        perpetual
SSL VPN Peers                  : 2              perpetual
Total VPN Peers                : 10             perpetual
Shared License                 : Disabled       perpetual
AnyConnect for Mobile          : Disabled       perpetual
AnyConnect for Cisco VPN Phone : Disabled       perpetual
AnyConnect Essentials          : Disabled       perpetual
<--- More --->
```

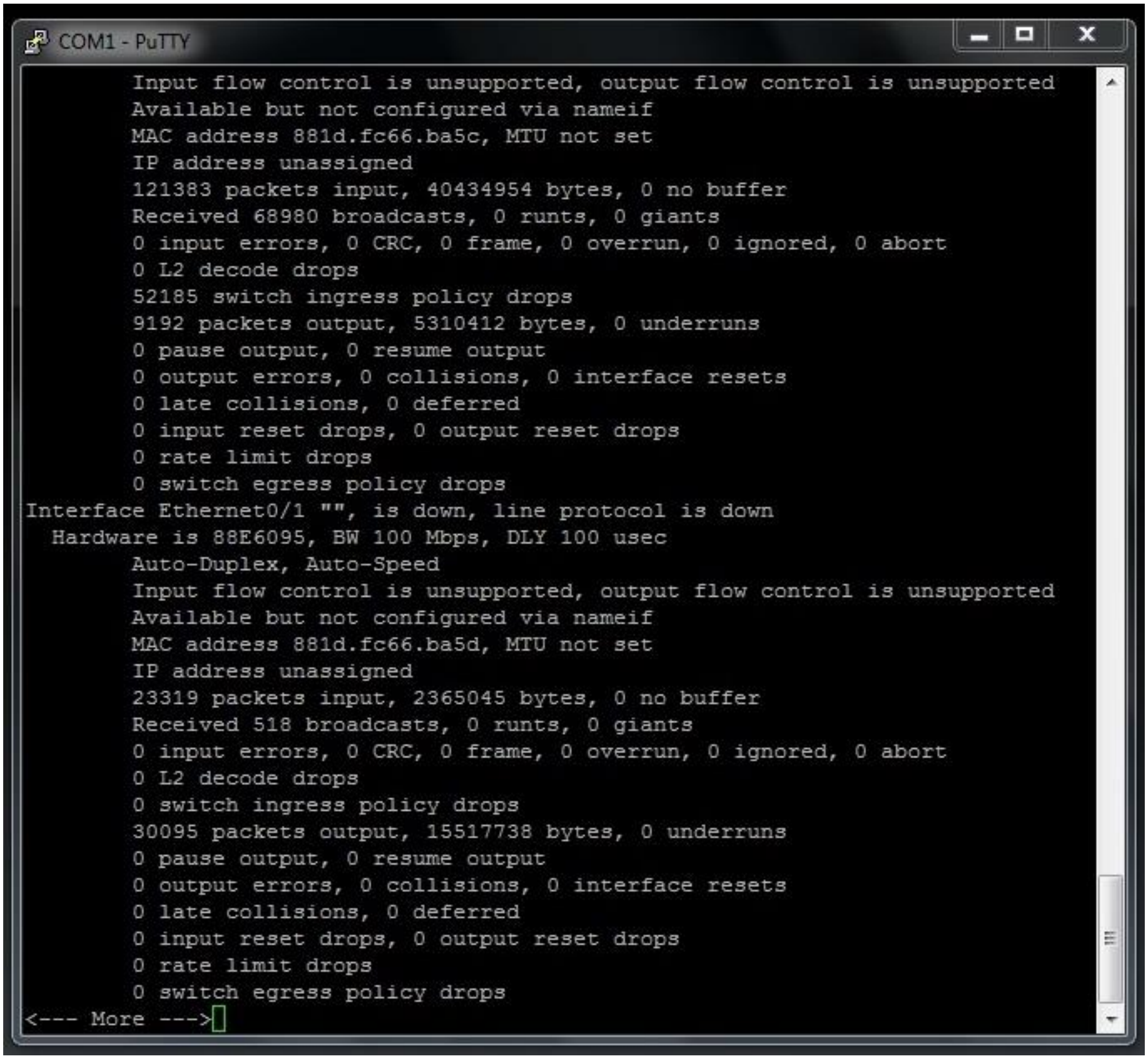


```
AnyConnect Essentials           : Disabled       perpetual
Advanced Endpoint Assessment    : Disabled       perpetual
UC Phone Proxy Sessions         : 2              perpetual
Total UC Proxy Sessions         : 2              perpetual
Botnet Traffic Filter           : Disabled       perpetual
Intercompany Media Engine       : Disabled       perpetual

This platform has a Base license.

Serial Number: JMX1841407M
Running Permanent Activation Key: 0x6220e26e 0x88a749cb 0x08d3f554 0x8c74ecb4 0x
cd262692
Configuration register is 0x112003
Configuration last modified by enable_15 at 18:15:39.738 UTC Tue Nov 17 2015
ciscoasa#
ciscoasa# 
```

2. sh interface



```
ciscoasa# sh interface
Interface Vlan1 "inside", is down, line protocol is down
  Hardware is EtherSVI, BW 100 Mbps, DLY 100 usec
        MAC address 881d.fc66.ba64, MTU 1500
        IP address 192.168.1.1, subnet mask 255.255.255.0
  Traffic Statistics for "inside":
        20111 packets input, 1393901 bytes
        29872 packets output, 14922971 bytes
        2832 packets dropped
      1 minute input rate 0 pkts/sec,  0 bytes/sec
      1 minute output rate 0 pkts/sec,  0 bytes/sec
      1 minute drop rate, 0 pkts/sec
      5 minute input rate 0 pkts/sec,  0 bytes/sec
      5 minute output rate 0 pkts/sec,  0 bytes/sec
      5 minute drop rate, 0 pkts/sec
Interface Vlan2 "outside", is up, line protocol is up
  Hardware is EtherSVI, BW 100 Mbps, DLY 100 usec
        MAC address 881d.fc66.ba64, MTU 1500
        IP address 10.86.44.151, subnet mask 255.255.255.0
  Traffic Statistics for "outside":
        68298 packets input, 34658190 bytes
        9090 packets output, 5081308 bytes
        23360 packets dropped
      1 minute input rate 0 pkts/sec,  421 bytes/sec
      1 minute output rate 0 pkts/sec,  0 bytes/sec
      1 minute drop rate, 0 pkts/sec
      5 minute input rate 1 pkts/sec,  491 bytes/sec
      5 minute output rate 0 pkts/sec,  0 bytes/sec
      5 minute drop rate, 1 pkts/sec
Interface Ethernet0/0 "", is up, line protocol is up
  Hardware is 88E6095, BW 100 Mbps, DLY 100 usec
        Auto-Duplex(Full-duplex), Auto-Speed(100 Mbps)
        Input flow control is unsupported, output flow control is unsupported
        Available but not configured via nameif
        MAC address 881d.fc66.ba5c, MTU not set
<--- More --->
```



```
        Input flow control is unsupported, output flow control is unsupported
        Available but not configured via nameif
        MAC address 881d.fc66.ba5c, MTU not set
        IP address unassigned
        121383 packets input, 40434954 bytes, 0 no buffer
        Received 68980 broadcasts, 0 runts, 0 giants
        0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
        0 L2 decode drops
        52185 switch ingress policy drops
        9192 packets output, 5310412 bytes, 0 underruns
        0 pause output, 0 resume output
        0 output errors, 0 collisions, 0 interface resets
        0 late collisions, 0 deferred
        0 input reset drops, 0 output reset drops
        0 rate limit drops
        0 switch egress policy drops
Interface Ethernet0/1 "", is down, line protocol is down
  Hardware is 88E6095, BW 100 Mbps, DLY 100 usec
        Auto-Duplex, Auto-Speed
        Input flow control is unsupported, output flow control is unsupported
        Available but not configured via nameif
        MAC address 881d.fc66.ba5d, MTU not set
        IP address unassigned
        23319 packets input, 2365045 bytes, 0 no buffer
        Received 518 broadcasts, 0 runts, 0 giants
        0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
        0 L2 decode drops
        0 switch ingress policy drops
        30095 packets output, 15517738 bytes, 0 underruns
        0 pause output, 0 resume output
        0 output errors, 0 collisions, 0 interface resets
        0 late collisions, 0 deferred
        0 input reset drops, 0 output reset drops
        0 rate limit drops
        0 switch egress policy drops
<--- More --->
```