# ASA 8.3(x) Dynamic PAT with Two Internal Networks and Internet Configuration Example

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# **Introduction**

This document provides a sample configuration for dynamic PAT on a Cisco Adaptive Security Appliance (ASA) that runs software version 8.3(1). <u>Dynamic PAT</u> translates multiple real addresses to a single mapped IP address by translating the real source address and source port to the mapped address and unique mapped port. Each connection requires a separate translation session because the source port differs for each connection.

# **Prerequisites**

# **Requirements**

Ensure that you meet these requirements before you attempt this configuration:

- Make sure the internal network has two networks located on the inside of the ASA:192.168.0.0/24—Network directly connected to the ASA.192.168.1.0/24—Network on the inside of the ASA, but behind another device (for example, a router).
- Make sure the internal users get PAT as follows:Hosts on the 192.168.1.0/24 subnet will get PAT to a spare IP address given by the ISP (10.1.5.5).Any other host behind the inside of the ASA will get PAT to the outside interface IP address of the ASA (10.1.5.1).

## **Components Used**

The information in this document is based on these software and hardware versions:

- Cisco Adaptive Security Appliance (ASA) with version 8.3(1)
- ASDM version 6.3(1)

**Note:** Refer to <u>Allowing HTTPS Access for ASDM</u> in order to allow the ASA to be configured by the ASDM.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

### **Conventions**

Refer to the Cisco Technical Tips Conventions for information on document conventions.

# **Configuration**

### **Network Diagram**

This document uses this network setup:



**Note:** The IP addressing schemes used in this configuration are not legally routable on the Internet. They are <u>RFC 1918</u> addresses, which have been used in a lab environment.

- ASA CLI Configuration
- ASDM Configuration

### **ASA CLI Configuration**

This document uses the configurations shown below.



ASA(config-obj)#exit ASA(config)#nat (inside,outside) source dynamic OBJ\_GENERIC\_ALL interface !--- The above statements are the equivalent of the !--- nat/global combination (as shown below) in v7.0(x), !--- v7.1(x), v7.2(x), v8.0(x), v8.1(x) and v8.2(x) ASA code: nat (inside) 1 0.0.0.0 0.0.0.0 global (outside) 1 interface !--- Creates an object called OBJ\_SPECIFIC\_192-168-1-0. !--- Any host IP facing the the 'inside' interface of the ASA !--- with an address in the 192.168.1.0/24 subnet will get PAT !--- to the 10.1.5.5 address, for internet bound traffic. ASA(config)#object network OBJ\_SPECIFIC\_192-168-1-0 ASA(config-obj)#subnet **192.168.1.0 255.255.255.0** ASA(config-obj)#exit ASA(config)#nat (inside,outside) source dynamic OBJ\_SPECIFIC\_192-168-1-0 10.1.5.5 !--- The above statements are the equivalent of the nat/global !--combination (as shown below) in v7.0(x), v7.1(x), v7.2(x), v8.0(x), !--- v8.1(x) and v8.2(x) ASA code: nat (inside) 2 192.168.1.0 255.255.255.0 global (outside) 2 10.1.5.5

#### ASA 8.3(1) Running Config

ASA#show run : Saved : ASA Version 8.3(1) ! hostname ASA enable password 8Ry2YjIyt7RRXU24 encrypted passwd 2KFQnbNIdI.2KYOU encrypted names ! !--- Configure the outside interface. ! interface GigabitEthernet0/0 nameif outside security-level 0 ip address 10.1.5.1 255.255.255.0 !--- Configure the inside interface. ! interface GigabitEthernet0/1 nameif inside securitylevel 100 ip address 192.168.0.1 255.255.255.0 ! interface GigabitEthernet0/2 shutdown no nameif no security-level no ip address ! interface GigabitEthernet0/3 shutdown no nameif no security-level no ip address ! interface Management0/0 shutdown no nameif no security-level no ip address management-only ! boot system disk0:/asa831-k8.bin ftp mode passive object network OBJ\_SPECIFIC\_192-168-1-0 subnet 192.168.1.0 255.255.255.0 object network OBJ\_GENERIC\_ALL subnet 0.0.0.0 0.0.0.0 pager lines 24 no failover icmp unreachable rate-limit 1 burst-size 1 asdm image disk0:/asdm-631.bin no asdm history enable arp timeout 14400 nat (inside, outside) source dynamic OBJ\_GENERIC\_ALL interface nat (inside,outside) source dynamic OBJ\_SPECIFIC\_192-168-1-0 10.1.5.5 route inside 192.168.1.0 255.255.255.0 192.168.0.254 1 route outside 0.0.0.0 0.0.0.0 10.1.5.2 timeout xlate 3:00:00 timeout conn 1:00:00 half-closed 0:10:00 udp 0:02:00 icmp 0:00:02 timeout sunrpc 0:10:00 h323 0:05:00 h225 1:00:00 mgcp 0:05:00 mgcp-pat 0:05:00 timeout sip 0:30:00 sip\_media 0:02:00 sip-invite 0:03:00 sip-disconnect 0:02:00 timeout sip-provisional-media 0:02:00 uauth 0:05:00 absolute timeout tcp-proxy-reassembly 0:01:00 dynamic-access-policy-record DfltAccessPolicy http server enable http 192.168.0.0 255.255.254.0 inside no snmp-server location no snmp-server contact snmp-server enable traps snmp authentication linkup linkdown coldstart crypto ipsec security-association lifetime seconds 28800 crypto ipsec security-association lifetime kilobytes 4608000 telnet timeout 5 ssh timeout 5 console timeout 0 threat-detection basic-threat threat-detection statistics access-list no threat-detection statistics tcp-intercept ! class-map inspection\_default match default-inspection-traffic ! ! policy-map type inspect dns preset\_dns\_map parameters message-length maximum

client auto message-length maximum 512 policy-map global\_policy class inspection\_default inspect dns preset\_dns\_map inspect ftp inspect h323 h225 inspect h323 ras inspect rsh inspect rtsp inspect esmtp inspect sqlnet inspect skinny inspect sunrpc inspect xdmcp inspect sip inspect netbios inspect tftp inspect ipoptions ! service-policy global\_policy global prompt hostname context Cryptochecksum:6fffbd3dc9cb863fd71c71244a0ecc5f : end

# **ASDM Configuration**

In order to complete this configuration through the ASDM interface, you must:

- 1. Add three network objects; this examples adds these network objects:OBJ\_GENERIC\_ALLOBJ\_SPECIFIC\_192-168-1-010.1.5.5
- 2. Create two NAT/PAT rules; this examples creates NAT rules for these network objects:OBJ\_GENERIC\_ALLOBJ\_SPECIFIC\_192-168-1-0

#### **Add Network Objects**

Complete these steps in order to add network objects:

1. Log in to ASDM, and choose **Configuration > Firewall > Objects > Network Objects/Groups**.

w Tools Wizards Window H	telp		Look For:		Go	սիսի
Configuration 🕞 Monito	ring 🔄 Save 🔇 Refres	h 🔾 Back 🕥	Forward 💡 Help			cisco
9 8 ×	Configuration > Firewall >	Objects > Netwo	rk Objects/Groups			
AA Rules	◆ Add • 🛒 Edt 🏥	Delete Q Where	Used			
Iter Rules Inic Servers						<u></u>
RL Filtering Servers	Piker:					ERterice
weat Detection	Name /1	IP Address	Netmask.	Description	Object	NAT Addres
bjects	E IPv4 Network Objects					
Vetwork Objects/Groups	- 🏈 any 🛛 0	0.0.0	0.0.0.0			
Service Objects/Groups	- M inside-network 1	92.168.0.0	255.255.255.0			
d Class Maps	- M outside-net 1	0.1.5.0	255.255.255.0			
Regular Expressions	- 3 192.168.0.233	92.168.0.233	255.255.255.255			
TCP Maps	IPv6 Network Objects					
e Ranges +	- 🔷 any 🔅		0			
Ace Setup			1			
wal						
note Access VPN						
to-Site VPN						
for Management						
vce management						

Choose Add > Network Object in order to add a network object.

📬 Cisco ASDM 6.3 for ASA - 192.168.0.	1				_ 🗆 🗙
File View Tools Wizards Window	Help		Look For	n l	60
Hone 🆧 Configuration 🔯 Mont	oring 🔛 Save 💽 Refresh 🛛	🔾 Back 🔘 I	Forward 🦻 Help		CISCO
Firewall 🗗 🖗 🗡	Configuration > Firewall > Ob	jects > Networ	k Objects/Groups		
AAA Rules	💠 Add 🔹 📑 Edit 👔 Dele	to Q. Where	Used		
- Public Servers	Network Object			and a second provide a second s	Filter (Clear)
	Network Object Group	tress	Netmask	Description	Object NAT Address
Dieds	E IPv4 Network Objects				
Network Objects/Groups	- 🏈 any 0.0.0	.0	0.0.0.0		
Service Objects/Groups	- M inside-network 192.1	68.0.0	255.255.255.0		
Cass Maps		5.0	255.255.255.0		
Regular Expressions	- 3 192.168.0.233 192.1	68.0.233	255.255.255.255		
TCP Maps	<ul> <li>IPv6 Network Objects</li> </ul>				
Time Ranges	🎱 any 💠		0		
Revice Setup					
Frewal					
Remote Access VPN					
Ste-to-Site VPN					
🔯 1 <u>9</u> 5					
Device Management					
:			Apply Res	et	

The Add Network Object dialog box

	🚰 Add Network Object						
	Name:	Name: OBJ_GENERIC_ALL					
	Туре:	Network	-				
	IP Address:	0.0.0.0					
	Netmask:	0.0.0.0	-				
	Description:						
	NAT		۲				
appears		OK Cancel Help					

3. Enter this information in the Add Network Object dialog box:Name of the network object. (This example uses *OBJ\_GENERIC\_ALL*.)Type of network object. (This example uses *Network*.)IP address for the network object. (This example uses *0.0.0.0*.)Netmask for the network object. (This example uses *0.0.0.0*.)

 Click **OK**. The network object is created and appears in the Network Objects/Groups list, as shown in this image:

📸 Cisco ASDM 6.3 for ASA - 192.168.0.	.1			
File View Tools Wizards Window	Help		Look	For:
Home 🍪 Configuration 🔯 Monit	coring 🔚 Save 🔇 Ref	resh 🔇 Back 🕥	Forward	
Firewall	Configuration > Firewal	I <mark>I &gt; Objects &gt; Netwo</mark> Delete Q Where	rk Objects/Groups Used	
URL Filtering Servers	Name / 1	IP Address	Netmask	Desi
Objects	- IPv4 Network Objects			
Network Objects/Groups	- 🏈 any	0.0.0.0	0.0.00	
- Service Objects/Groups	inside-network	192.168.0.0	255.255.255.0	
⊕- Class Maps	outside-net	10.1.5.0	255.255.255.0	
Inspect Maps     Page day Expressions	DBJ_GENER	0.0.0.0	0.0.00	
TCP Maps	- 💐 192.168.0.233	192.168.0.233	255.255.255.255	
Time Ranges	- IPv6 Network Objects			
	- 🏈 any	::	0	
Device Setup      Firewall      Device Management      *			Apply	Reset
			cisco 15	6

5. Repeat the previous steps in order to add a second network object, and click **OK**. This example uses these values:Name: *OBJ\_SPECIFIC\_192-168-1-0*Type: *Network*IP Address: *192.168.1.0*Netmask:

	薩 Add Netwo	ork Object 🛛 🗙
	Name:	OBJ_SPECIFIC_192-168-1-0
	Туре:	Network
	IP Address:	192.168.1.0
	Netmask:	255.255.255.0
	Description:	
	NAT	۲
		OK Cancel Help
5.255.255.0		

second object is created and appears in the Network Objects/Groups list, as shown in this image:

Cisco ASDM 6.3 for ASA - 192.168.0.1	1				_ O ×
File View Tools Wizards Window	Help		Look Fo	ri l	Go
Home 🔏 Configuration 📴 Monitor	oring 🔛 Save 🔇 Refr	esh 🔇 Back 🔘	Forward   🥐 Help		CISCO
Firewall @ P ×	Configuration > Firewall	> Objects > Netwo	rk Objects/Groups		
AAA Rules	🗣 Add 🔹 📑 Edit 🎁	Delete Q Where	Used		
Filter Rules		and the second			
URL Filtering Servers	Filter:				Fiter[Clear]
Threat Detection	Name /1	IP Address	Netmask.	Description	Object NAT Address
De Cobjects	E IPv4 Network Objects				
Network Objects/Groups	- 🥥 any	0.0.0.0	0.0.0.0		
Service Objects/Groups	- M inside-network	192.168.0.0	255.255.255.0		
Gass Maps	outside-net	10.1.5.0	255.255.255.0		
Regular Expressions	CEJ_GENER	0.0.0.0	0.0.0.0		
TCP Maps	- 4 192.168.0.233	192.168.0.233	255.255.255.255		
Time Ranges 💌	Loge OBJ_SPECIF	192.168.1.0	255.255.255.0		
0	IPv6 Network Objects				
Device Setup	- 🎱 any	11	0		
Firewal					
Remote Access VPN					
Ste-to-Site VPN					
🖏 1 <u>2</u> 5					
Device Management	1				
:			Apply Res	uet	

6. Repeat the previous steps in order to add a third network object, and click **OK**. This example uses these values:Name: *10.1.5.5*Type: *Host*IP Address:

Name:	10.1.5.5			
Туре:	Host			-
IP Address:	10.1.5.5			
Description:				
NAT				۲

network objects is created and appears in the Network Objects/Groups list.

🔞 Cisco ASDM 6.3 for ASA - 192.168.0.							
File View Tools Wizards Window	Help	Look For:					
Home 😪 Configuration 🔯 Monit	ring 🔚 Save 🔇 Refresh 🔇 Back 🚫 For	ward 💡 Help					
Firewall 교 무 ×	Firewall         Image: Optimized and the second secon						
AAA Rules	🗣 Add 👻 🗹 Edit 📋 Delete 🔍 Where Use	sd					
Public Servers	Filter:						
Threat Detection	Name / 1 IP Address	Netmask					
🖻 🙀 Objects	IPv4 Network Objects						
Network Objects/Groups	🎲 any 0.0.0.0	0.0.0.0					
Service Objects/Groups	- 📮 10.1.5.5 10.1.5.5	255.255.255.255					
Class Maps	- 🕰 inside-network 192.168.0.0	255.255.255.0					
Inspect Maps	- 🚔 outside-net 10.1.5.0	255.255.255.0					
TCP Maps		0.0.0.0					
Time Ranges	- 🖳 192.168.0.233 192.168.0.233	255.255.255.255					
	OBJ_SPECIF 192.168.1.0	255.255.255.0					
Device Setup	⊡ IPv6 Network Objects						
Firewall	any ::	0					

The Network Objects/Groups list should now include the three required objects necessary for the NAT rules to reference.

### **Create NAT/PAT Rules**

Complete these steps in order to create NAT/PAT rules:

1. Create the first NAT/PAT rule:In ASDM, choose **Configuration > Firewall > NAT Rules**, and click

Add.



The Add NAT Rule dialog box appears.

🚰 Add NAT Rule		×
Match Criteria: Original Packet		
Source Interface: Any	Destination Interface:	Any
Source Address: Any	Destination Address:	any
inside	Service:	any
Action: Translated Packet	Vame: inside P Address: 192.168.0.1 / 25	5.255.255.0
Source NAT Type: Static	Security Level:100 Port: GigabitEthernet0	/0
Source Address: Original	Destination Address:	Original 🛛 🖳
Fall through to interface PAT	Service:	Original 📰
Options		
🔽 Enable rule		
Translate DNS replies that match this r	ule	
Direction: Both		
Description:		
ОК	Cancel Help	

In the Match Criteria: Original Packet area of the Add NAT Rule dialog box, choose **inside** from the Source Interface drop-down list.

🚰 Add NAT Rule		×
Match Criteria: Original Packet		
Source Interface: inside	Destination Interface:	Any
Source Address: any	Destination Address:	any
	Service:	any
Action: Translated Packet		
Source NAT Type: Static		
Source Address: Original	Destination Address:	Original
Fall through to interface PAT	Service:	Original
Options		
Enable rule		
Translate DNS replies that match this rule		
Direction Both		
Direction: Both		
ОК С	ancel Help	

Click the browse (...) button located to the right of the Source Address text field. The Browse Original Source Address dialog box

appears.

Name 🖂	IP Address	Netmask	Description	Object NAT Addr
IPv4 Network Obje	ects			
- 🖳 10.1.5.5	10.1.5.5	255.255.255.255		
<b></b> OBJ_GE	0.0.0.0	0.0.0.0		
🙀 OBJ_SP	192.168.1.0	255.255.255.0		
- 🧼 any	0.0.0.0	0.0.0.0		

In the Browse Original Source Address dialog box, choose the first network object you

created. (For this example, choose **OBJ\_GENERIC\_ALL**.)Click **Original Source Address**, and click **OK**.The *OBJ\_GENERIC\_ALL* network object now appears in the Source Address field in the Match Criteria: Original Packet area of the Add NAT Rule dialog box.

薩 Add NAT Rule			×
Match Criteria: Ori	ginal Packet		
Source Interface:	inside 💌	Destination Interface:	Any
Source Address:	OBJ_GENERIC_ALL	Destination Address:	any 🖳
		Service:	any
Action: Translated	Packet		
Source NAT Type:	Static		
Source Address:	Original	Destination Address:	Original 📰
Fall through to	interface PAT	Service:	Original
Options			
🔽 Enable rule			
🔲 Translate DNS	replies that match this rule		
Direction: Both	T		
Description:			
			1
	<u> </u>	ancei Help	

In the Action: Translated Packet area of the Add NAT Rule dialog box, choose **Dynamic PAT (Hide)** from the Source NAT Type dialog box.

🚰 Add NAT Rule		×						
Match Criteria: Original Packet								
Source Interface: inside	Destination Interface:	Any						
Source Address: OBJ_GENERIC_ALL	Destination Address:	any …						
	Service:	any						
Action: Translated Packet								
Source NAT Type: Static								
Source Address: Static	Destination Address:	Original 👘						
Fall through to Dynamic	Service:	Original						
Options								
✓ Enable rule								
🦳 Translate DNS replies that match this rule								
Direction: Both								
Description:								
		1						
С	ancel Help							

Click the browse (...) button located to the right of the Source Address field.

付 Add NAT Rule			×
Match Criteria: Orig	ginal Packet		
Source Interface:	inside 🔹	Destination Interface:	Any
Source Address:	OBJ_GENERIC_ALL	Destination Address:	any
		Service:	any
Action: Translated	Packet		
Source NAT Type:	Dynamic PAT (Hide)		
Source Address:	Original	Destination Address:	Original 📰
Fall through to	interface PAT	Service:	Original 📰
Options			
🔽 Enable rule			
Translate DNS	replies that match this rule		
Direction: Both	<b>v</b>		
Description:			
	ок	Cancel Help	

The Browse Translated Source Address dialog box appears.

5 25		
5 25		
5 25		
	5.255.255.255	

In the Browse Translated Source Address dialog box, choose the **outside** interface object. (This interface has already been created because it is part of the original configuration.)Click **Translated Source Address**, and click **OK**.The outside interface now appears in the Source Address field in the Action: Translated Packet area on the Add NAT Rule dialog box.

🔂 Add NAT Rule			×					
Match Criteria: Ori	ginal Packet							
Source Interface:	inside 🔹	Destination Interface:	outside 💌					
Source Address:	OBJ_GENERIC_ALL	Destination Address:	any 🖳					
		Service:	any 🖳					
Action: Translated	Packet							
Source NAT Type:	Dynamic PAT (Hide)							
Source Address:	outside	Destination Address:	Original 🔤					
Fall through to	interface PAT	Service:	Original 📰					
Options								
🔽 Enable rule								
🔲 Translate DNS	replies that match this rule							
Direction: Both	<b>V</b>							
Description:								
	OK Cancel Help							

**Note:** The *Destination Interface* field also changes to the outside interface.Verify that the first completed PAT Rule appears as follows:In the Match Criteria: Original Packet area, verify these values:Source Interface = insideSource Address = OBJ\_GENERIC\_ALLDestination Address = anyService = anyIn the Action: Translated Packet area, verify these values:Source NAT Type = Dynamic PAT (Hide)Source Address = outsideDestination Address = OriginalService = OriginalClick **OK**.The first NAT rule appears in ASDM, as shown in this

image:

C	Configuration > Firewall > NAT Rules										
	💠 Add 🔹 🗹 Edit 👔 Delete 🗇 🗲 👗 🛍 🛍 - 🔍 Q. Find 🖭 Diagram 🥰 Packet Trace										
				Match Criteria: O	riginal Packet		Acti	on: Translated Pa	cket		
		Source Intf	Dest Intf	Source	Destination	Service	Source	Destination	Servic		
		inside	outside	ga OBJ_GENER	🤹 any	🤹 any	🔤 outside (P)	Original	Original		
	"Network Object" NAT (No rules)										
	4								E I		
'	-								<u> </u>		
					Apply	Reset					

2. Create the second NAT/PAT rule:In ASDM, choose Configuration > Firewall > NAT Rules, and click Add.In the Match Criteria: Original Packet area of the Add NAT Rule dialog box, choose inside from the Source Interface drop-down list.Click the browse (...) button located to the right of the Source Address field.The Browse Original Source Address dialog box appears.

,	Name ∆1	IP Address	Netmask	Description	Object NAT Addr
= IP	/4 Network Obje	cts			
	- 🔜 10.1.5.5	10.1.5.5	255.255.255.255		
	📲 OBJ_GE	0.0.0.0	0.0.0.0		
E	B OBJ_SP	192.168.1.0	255.255.255.0		
	🔇 🧼 any	0.0.0.0	0.0.0.0		
electe	ed Original Sourc	e Address			
electe	ed Original Sourc	e Address			

In the Browse Original Source Address dialog box, choose the second object you created. (For this example, choose **OBJ\_SPECIFIC\_192-168-1-0**.)Click **Original Source Address**, and click **OK**.The *OBJ\_SPECIFIC\_192-168-1-0* network object appears in the Source Address field in the Match Criteria: Original Packet area of the Add NAT Rule dialog box..In the Action: Translated Packet area of the Add NAT Rule dialog box, choose **Dynamic PAT** (**Hide**) from the Source NAT Type dialog box.Click the ... button located to the right of the Source Address field.The Browse Translated Source Address dialog box

ilter:				Filter Clear
Name 🛆 1	IP Address	Netmask	Description	Object NAT Addr
Original				
🚊 IPv4 Network Obje	cts			
💷 🖳 10. l . 5. 5	10.1.5.5	255.255.255.255		
Interfaces				
- 🔤 inside				
🔤 outside				
elected Translated Source	urce Address	.5.5		

In the Browse Translated Source Address dialog box, choose the **10.1.5.5** object. (This interface has already been created because it is part of the original configuration).Click **Translated Source Address**, and then click **OK**.The **10.1.5.5** network object appears in the Source Address field in the Action: Translated Packet area of the Add NAT Rule dialog box..In the Match Criteria: Original Packet area, choose **outside** from the Destination Interface drop-down list.**Note:** If you do not choose *outside* for this option, the destination interface will reference

Any.

🚰 Edit NAT Rule		×					
Match Criteria: Original Packet							
Source Interface: inside	Destination Interface:	outside					
Source Address:SPECIFIC_192-168-1-0	Destination Address:	any 🖳					
	Service:	any 🛄					
Action: Translated Packet							
Source NAT Type: Dynamic PAT (Hide)							
Source Address: 10.1.5.5	Destination Address:	Original 📰					
Fall through to interface PAT	Service:	Original 📰					
Options							
🔽 Enable rule							
Translate DNS replies that match this rule							
Direction: Both							
Description:							
ОК	Cancel Help						
/erify that the second completed NAT/PAT r	ule appears as follow	vs:In the Match Criteria:					

Original Packet area, verify these values:Source Interface = insideSource Address = OBJ\_SPECIFIC\_192-168-1-0Destination Address = outsideService = anyIn the Action: Translated Packet area, verify these values:Source NAT Type = Dynamic PAT (Hide)Source Address = 10.1.5.5Destination Address = OriginalService = OriginalClick **OK**.The completed NAT configuration appears in ASDM, as shown in this image:

Co	nfiguration > Firewall >	NAT Rules					
4	🕨 Add 👻 📝 Edit 📋 I	Delete 🕈 🗲	አ 🖻 💼 -	Q, Find 🔛 Dia	agram 📿 Packet	Trace	
Γ		Match Criteria: O	riginal Packet		Act	ion: Translated P	acket
Ľ	Source Intf Dest Intf	Source	Destination	Service	Source	Destination	Servic
	inside outside	B OBJ_GENER	🧐 any	🧼 any	outside (P)	Original	Original
	inside outside	C OBJ_SPECIF	🦚 any	🧇 any	🔜 10.1.5.5 (P)	Original	Original -
L	"Network Object" NAT (N	o rules)					
L							
I.							
I.							
I.							
	1						
E	1						-
			Apply	Reset			

3. Click the **Apply** button in order to apply the changes to the running configuration.

This completes the configuration of dynamic PAT on a Cisco Adaptive Security Appliance (ASA).

# **Verify**

Use this section to confirm that your configuration works properly.

The <u>Output Interpreter Tool</u> (<u>registered</u> customers only) (OIT) supports certain **show** commands. Use the OIT to view an analysis of **show** command output.

### Verifying Generic PAT Rule

- show local-host —Shows the network states of local hosts.ASA#show local-host Interface outside: 1 active, 2 maximum active, 0 denied local host: <125.252.196.170>, TCP flow count/limit = 2/unlimited TCP embryonic count to host = 0 TCP intercept watermark = unlimited UDP flow count/limit = 0/unlimited !--- The TCP connection outside address corresponds !--- to the actual destination of 125.255.196.170:80 Conn: TCP outside 125.252.196.170:80 inside 192.168.0.5:1051, idle 0:00:03, bytes 13758, flags UIO TCP outside 125.252.196.170:80 inside 192.168.0.5:1050, idle 0:00:04, bytes 11896, flags UIO Interface inside: 1 active, 1 maximum active, 0 denied local host: <192.168.0.5>, TCP flow count/limit = 2/unlimited TCP embryonic count to host = 0 TCP intercept watermark = unlimited UDP flow count/limit = 0/unlimited !--- The TCP PAT outside address corresponds to the !--- outside IP address of the ASA - 10.1.5.1. Xlate: TCP PAT from inside:192.168.0.5/1051 to outside:10.1.5.1/32988 flags ri idle 0:00:17 timeout 0:00:30 TCP PAT from inside:192.168.0.5/1050 to outside:10.1.5.1/17058 flags ri idle 0:00:17 timeout 0:00:30 Conn: TCP outside 125.252.196.170:80 inside 192.168.0.5:1051, idle 0:00:03, bytes 13758, flags UIO TCP outside 125.252.196.170:80 inside 192.168.0.5:1050, idle 0:00:04, bytes 11896, flags UIO
- <u>show conn</u> Shows the connection state for the designated connection type.ASA#show conn 2 in use, 3 most used TCP outside 125.252.196.170:80 inside 192.168.0.5:1051, idle 0:00:06, bytes 13758, flags UIO TCP outside 125.252.196.170:80 inside 192.168.0.5:1050, idle 0:00:01,

bytes 13526, flags UIO

• <u>show xlate</u> — Shows the information about the translation slots.ASA#show xlate 4 in use, 7 most used Flags: D - DNS, I - dynamic, r - portmap, s - static, I - identity, T - twice TCP PAT from inside:192.168.0.5/1051 to outside:10.1.5.1/32988 flags ri idle 0:00:23 timeout 0:00:30 TCP PAT from inside:192.168.0.5/1050 to outside:10.1.5.1/17058 flags ri idle 0:00:23 timeout 0:00:30

### Verifying Specific PAT Rule

- <u>show local-host</u> Shows the network states of local hosts.AsA#show local-host Interface outside: 1 active, 2 maximum active, 0 denied local host: <125.252.196.170>, TCP flow count/limit = 2/unlimited TCP embryonic count to host = 0 TCP intercept watermark = unlimited UDP flow count/limit = 0/unlimited !--- The TCP connection outside address corresponds to !--- the actual destination of 125.255.196.170:80. Conn: TCP outside 125.252.196.170:80 inside 192.168.1.5:1067, idle 0:00:07, bytes 13758, flags UIO TCP outside 125.252.196.170:80 inside 192.168.1.5:1066, idle 0:00:03, bytes 11896, flags UIO Interface inside: 1 active, 1 maximum active, 0 denied local host: <192.168.0.5>, TCP flow count/limit = 2/unlimited TCP embryonic count to host = 0 TCP intercept watermark = unlimited UDP flow count/limit = 0/unlimited !--- The TCP PAT outside address corresponds to an !--- outside IP address of 10.1.5.5. Xlate: TCP PAT from inside:192.168.1.5/1067 to outside:10.1.5.5/35961 flags ri idle 0:00:17 timeout 0:00:30 TCP PAT from inside:192.168.1.5/1066 to outside:10.1.5.5/23673 flags ri idle 0:00:17 timeout 0:00:30 Conn: TCP outside 125.252.196.170:80 inside 192.168.1.5:1067, idle 0:00:07, bytes 13758, flags UIO TCP outside 125.252.196.170:80 inside 192.168.1.5:1066, idle 0:00:07, bytes 13758, flags UIO TCP outside
- <u>show conn</u> Shows the connection state for the designated connection type.ASA#show conn 2 in use, 3 most used TCP outside 125.252.196.170:80 inside 192.168.1.5:1067, idle 0:00:07, bytes 13653, flags UIO TCP outside 125.252.196.170:80 inside 192.168.1.5:1066, idle 0:00:03, bytes 13349, flags UIO
- show xlate Shows the information about the translation slots.AsA#show xlate 3 in use, 9 most used Flags: D - DNS, I - dynamic, r - portmap, s - static, I - identity, T - twice TCP PAT from inside:192.168.1.5/1067 to outside:10.1.5.5/35961 flags ri idle 0:00:23 timeout 0:00:30 TCP PAT from inside:192.168.1.5/1066 to outside:10.1.5.5/29673 flags ri idle 0:00:23 timeout 0:00:30

# **Troubleshoot**

There is currently no specific troubleshooting information available for this configuration.

# **Related Information**

- <u>Cisco Adaptive Security Device Manager</u>
- <u>Cisco ASA 5500 Series Adaptive Security Appliances</u>
- Requests for Comments (RFCs) ▷
- Technical Support & Documentation Cisco Systems