



## Routing and Switching Essentials (Version 6.00) - RSE 6.0 Chapter 9 Exam

Below is the feedback on items for which you did not receive full credit. Some interactive items may not display your response.

Subscore: Domain Knowledge - Standard Score 

**9 A network administrator configures the border router with the command R1(config)# ip nat inside source list 4 pool corp . What is required to be configured in order for this particular command to be functional?**

| Correct Response | Your Response |
|------------------|---------------|
|------------------|---------------|

- ☐ an access list named corp that defines the private addresses that are affected by NAT
-  ☐ a NAT pool named corp that defines the starting and ending public IP addresses
- ☒ an access list numbered 4 that defines the starting and ending public IP addresses
- ☐ **ip nat outside** to be enabled on the interface that connects to the LAN affected by the NAT
- ☐ a VLAN named corp to be enabled and active and routed by R1

In order for the **ip nat inside source list 4 pool corp** command to work, the following procedure needs to be used beforehand:

Create an access list that defines the private IP addresses affected by NAT.

Establish a NAT pool of starting and ending public IP addresses by using the **ip nat pool** command.

Use the **ip nat inside source list** command to associate the access list with the NAT pool.

Apply NAT to internal and external interfaces by using the **ip nat inside** and **ip nat outside** commands.

This item references content from the following areas:


Routing and Switching Essentials

9.2.2 Configure Dynamic NAT

## 15 What is the major benefit of using NAT with Port Address Translation?

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| Correct<br>Response | Your<br>Response |
|---------------------|------------------|
|---------------------|------------------|

- ☐ It provides a pool of public addresses that can be assigned to internal hosts.
- ☒ It allows external hosts access to internal servers.
- ☐ It improves network performance for real-time protocols.
-  ☐ It allows many internal hosts to share the same public IPv4 address.

Port Address Translation (PAT) tracks IP flows of internal hosts using port numbers. By using port numbers to track flows, PAT allows many users to share a single public IPv4 address.

This item references content from the following areas:

Routing and Switching Essentials

9.2.3 Configure PAT

**17 A network administrator is configuring a static NAT on the border router for a web server located in the DMZ network. The web server is configured to listen on TCP port 8080. The web server is paired with the internal IP address of 192.168.5.25 and the external IP address of 209.165.200.230. For easy access by hosts on the Internet, external users do not need to specify the port when visiting the web server. Which command will configure the static NAT?**

**Correct Response      Your Response**

- ☒ R1(config)# **ip nat inside source static tcp 209.165.200.230 80 192.168.5.25 8080**
- ☐ R1(config)# **ip nat inside source static tcp 192.168.5.25 80 209.165.200.230 8080**
- ☐ R1(config)# **ip nat inside source static tcp 209.165.200.230 8080 192.168.5.25 80**
- ☒ R1(config)# **ip nat inside source static tcp 192.168.5.25 8080 209.165.200.230 80**

The IOS command for port forwarding configuration in global configuration mode is as follows:

**ip nat inside source { static { tcp | udp local-ip local-port global-ip global-port } }**

Where *local-ip* is the inside local address, *local-port* is the port on which the web server listens.

This item references content from the following areas:

Routing and Switching Essentials

9.2.4 Configure Port Forwarding

## 21 Question as presented:

Match the steps with the actions that are involved when an internal host with IP address 192.168.10.10 attempts to send a packet to an external server at the IP address 209.165.200.254 across a router R1 that is running dynamic NAT. (Not all options are used.)

step 1

step 2

step 3

step 4

step 5

R1 translates the IP address in the packets from 209.65.200.254 to 192.168.10.10.

R1 replaces the address 192.168.10.10 with a translated inside global address.

R1 checks the NAT configuration to determine if this packet should be translated.

R1 selects an available global address from the dynamic address pool.

The host sends packets that request a connection to the server at the address 209.165.200.254.



The translation of the IP addresses from 209.65.200.254 to 192.168.10.10 will take place when the reply comes back from the server.<br />

This item references content from the following areas:

Routing and Switching Essentials

9.2.2 Configure Dynamic NAT

### Your response:

Match the steps with the actions that are involved when an internal host with IP address 192.168.10.10 attempts to send a packet to an external server at the IP address 209.165.200.254 across a router R1 that is running dynamic NAT. (Not all options are used.)

step 1

step 2

step 3

step 4

step 5

R1 translates the IP address in the packets from 209.65.200.254 to 192.168.10.10.



step 5

R1 replaces the address 192.168.10.10 with a translated inside global address.

R1 selects an available global address from the dynamic address pool.



step 3

The host sends packets that request a connection to the server at the address 209.165.200.254.



step 1

If there is no translation entry for this IP address, R1 determines that the source address 192.168.10.10 must be translated.

