

CCNA 2 Chapter 11 v5.0 Exam Answers 2015 (100%)

1. Typically, which network device would be used to perform NAT for a corporate environment?
 - DHCP server
 - host device
 - router
 - server
 - switch

2. What is the group of public IPv4 addresses used on a NAT-enabled router known as?
 - outside local addresses
 - inside local addresses
 - inside global addresses
 - outside global addresses

3. When NAT is employed in a small office, which address type is typically used for hosts on the local LAN?
 - private IP addresses
 - global public IP addresses
 - Internet-routable addresses
 - both private and public IP addresses

4. Which version of NAT allows many hosts inside a private network to simultaneously use a single inside global address for connecting to the Internet?
 - PAT
 - static NAT
 - dynamic NAT
 - port forwarding

5. Which type of NAT maps a single inside local address to a single inside global address?
 - dynamic
 - static
 - port address translation
 - overloading

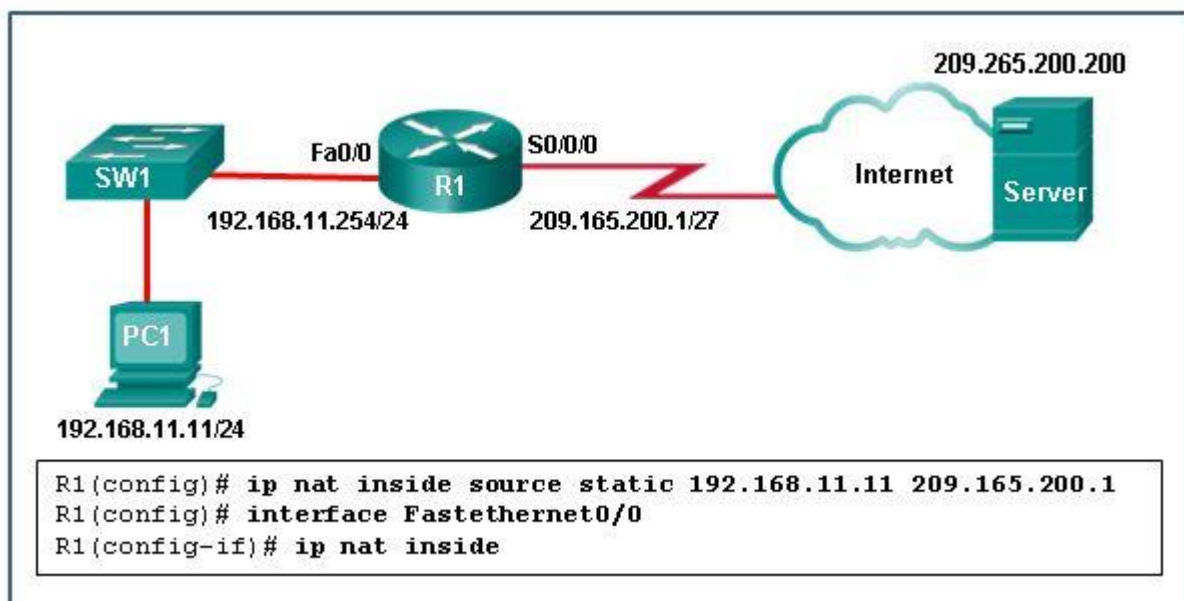
6. Several key servers in an organization must be directly accessible from the Internet. What addressing policy should be implemented for these servers?

- Use dynamic NAT to provide addresses for the servers.
- Place all of the servers in their own Class C private subnet.
- Use DHCP to assign addresses from the pool of Class B addresses.
- **Assign static internal addresses and public external addresses to each of the servers.**

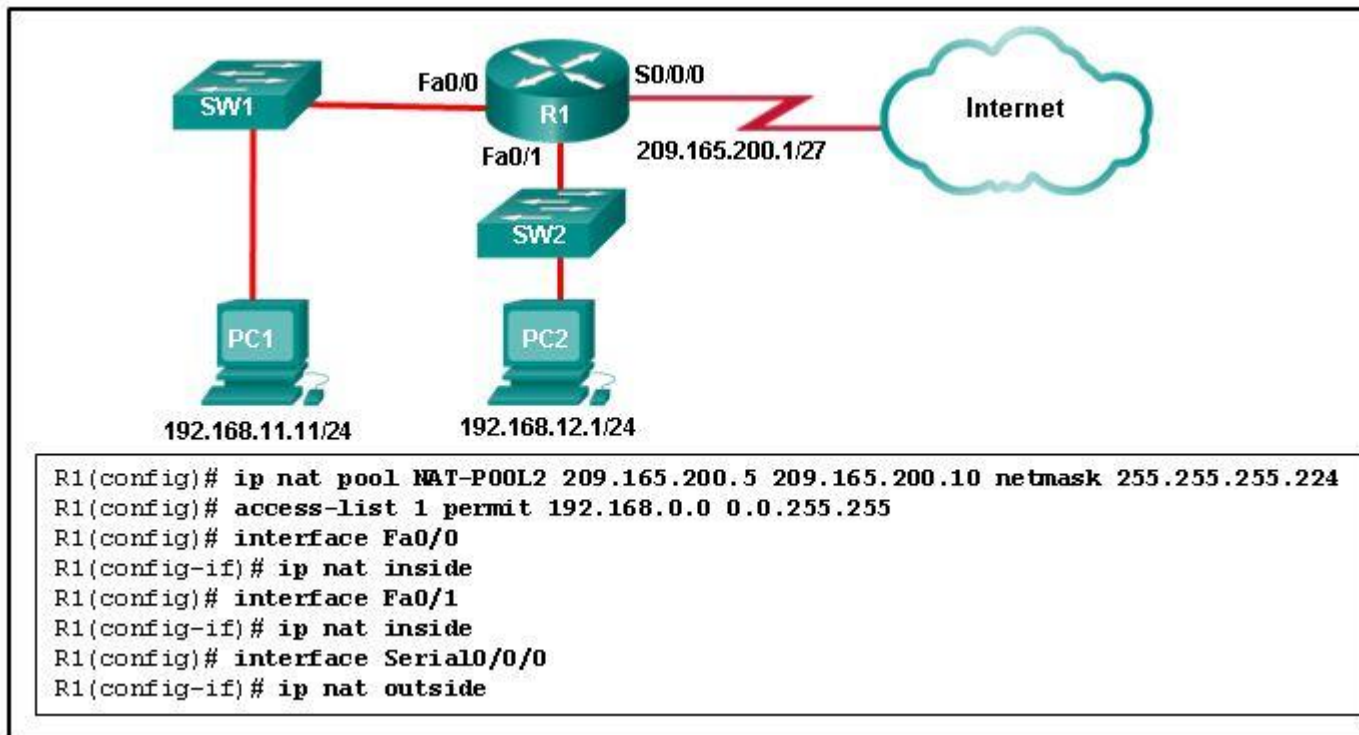
7. What is a disadvantage of NAT?

- **There is no end-to-end addressing.**
- The router does not need to alter the checksum of the IPv4 packets.
- The internal hosts have to use a single public IPv4 address for external communication.
- The costs of readdressing hosts can be significant for a publicly addressed network.

8. Refer to the exhibit. What has to be done in order to complete the static NAT configuration on R1?



- R1 should be configured with the command ip nat inside source static 209.165.200.1 192.168.11.11.
 - R1 should be configured with the command ip nat inside source static 209.165.200.200 192.168.11.11.
 - **Interface S0/0/0 should be configured with the command ip nat outside.**
 - Interface Fa0/0 should be configured with the command no ip nat inside.
9. Refer to the exhibit. R1 is configured for NAT as displayed. What is wrong with the configuration?



- Access-list 1 is misconfigured.
- **NAT-POOL2 is not bound to ACL 1.**
- Interface Fa0/0 should be identified as an outside NAT interface.
- The NAT pool is incorrect.

10. Which statement accurately describes dynamic NAT?

- It always maps a private IP address to a public IP address.
- **It provides an automated mapping of inside local to inside global IP addresses.**
- It provides a mapping of internal host names to IP addresses.
- It dynamically provides IP addressing to internal hosts.

11. 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?

- **a NAT pool named corp that defines the starting and ending public IP addresses**
- an access list named corp that defines the private addresses that are affected by NAT
- 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

12. When dynamic NAT without overloading is being used, what happens if seven users attempt to access a public server on the Internet when only six addresses are available in the NAT pool?

- No users can access the server.
- **The request to the server for the seventh user fails.**
- All users can access the server.
- The first user gets disconnected when the seventh user makes the request.

13. A network engineer has configured a router with the command `ip nat inside source list 4 pool corp overload`. Why did the engineer use the overload option?

- **The company has more private IP addresses than available public IP addresses.**
- The company needs to have more public IP addresses available to be used on the Internet.
- The company router must throttle or buffer traffic because the processing power of the router is not enough to handle the normal load of external-bound Internet traffic.
- The company has a small number of servers that should be accessible by clients from the Internet.

14. Refer to the exhibit. What will be the effect of entering the command that is shown in the exhibit on R2 as part of the dynamic NAT configuration?

```
R2(config)# ip nat inside source list 1 pool NAT-POOL1
```

- It will define a pool of addresses for translation.
- It will identify an inside NAT interface.
- **It will bind NAT-POOL1 with ACL 1.**
- It will define the source ACL for the external interface.

15. Which configuration would be appropriate for a small business that has the public IP address of 209.165.200.225/30 assigned to the external interface on the router that connects to the Internet?

- **access-list 1 permit 10.0.0.0 0.255.255.255**
ip nat inside source list 1 interface serial 0/0/0 overload
- access-list 1 permit 10.0.0.0 0.255.255.255
ip nat pool comp 192.0.2.1 192.0.2.8 netmask 255.255.255.240
ip nat inside source list 1 pool comp
- access-list 1 permit 10.0.0.0 0.255.255.255
ip nat pool comp 192.0.2.1 192.0.2.8 netmask 255.255.255.240
ip nat inside source list 1 pool comp overload

- access-list 1 permit 10.0.0.0 0.255.255.255
- ip nat pool comp 192.0.2.1 192.0.2.8 netmask 255.255.255.240
- ip nat inside source list 1 pool comp overload
- ip nat inside source static 10.0.0.5 209.165.200.225

16. What are two required steps to configure PAT? (Choose two.)

- Define a pool of global addresses to be used for overload translation.
- Define a standard access list denying the addresses that should be translated.
- Define the range of ports to be used.
- Identify the inside interface.
- Define a standard access list that allow the outside global addresses to be used.

17. Refer to the exhibit. What is the purpose of the command marked with an arrow shown in the partial configuration output of a Cisco broadband router?

```
interface FastEthernet 0/0
ip address 10.10.10.1 255.255.255.0
ip nat inside
no cdp enable
hold-queue 32 in
hold-queue 100 out
!
interface FastEthernet 0/1
ip address dhcp
ip nat outside
no cdp enable
!
ip classless
ip http server
!
ip nat inside source list 102 interface fastethernet 0/1 overload
access-list 102 permit ip 10.10.10.0 0.0.0.255 any ←
no cdp run
!
```

- defines which addresses can be translated
- defines which addresses are allowed into the router
- defines which addresses are assigned to a NAT pool
- defines which addresses are allowed out of the router

18. What is the purpose of port forwarding?

- Port forwarding allows an external user to reach a service on a private IPv4 address that is located inside a LAN.
- Port forwarding allows users to reach servers on the Internet that are not using standard port numbers.
- Port forwarding allows an internal user to reach a service on a public IPv4 address that is located outside a LAN.

- Port forwarding allows for translating inside local IP addresses to outside local addresses.

19. What is a characteristic of unique local addresses?

- They allow sites to be combined without creating any address conflicts.
- They are designed to improve the security of IPv6 networks.
- Their implementation depends on ISPs providing the service.
- They are defined in RFC 3927.

20. Refer to the exhibit. Based on the output that is shown, what type of NAT has been implemented?

```
R1# show ip nat translations
Pro Inside global      Inside local  Outside local  Outside global
tcp 209.165.200.225:1405 10.6.15.2:1405 209.165.202.141:80 209.165.202.141:80
tcp 209.165.200.225:1406 10.6.15.1:1406 198.51.100.3:80    198.51.100.3:80
```

- dynamic NAT with a pool of two public IP addresses
- PAT using an external interface
- static NAT with one entry
- static NAT with a NAT pool

21. Refer to the exhibit. The NAT configuration applied to the router is as follows:

```
ERtr(config)# access-list 1 permit 10.0.0.0 0.255.255.255
```

```
ERtr(config)# ip nat pool corp 209.165.201.6 209.165.201.30 netmask
255.255.255.224
```

```
ERtr(config)# ip nat inside source list 1 pool corp overload
```

```
ERtr(config)# ip nat inside source static 10.10.10.55 209.165.201.4
```

```
ERtr(config)# interface gigabitethernet 0/0
```

```
ERtr(config-if)# ip nat inside
```

```
ERtr(config-if)# interface serial 0/0/0
```

```
ERtr(config-if)# ip nat outside
```

Based on the configuration and the output shown, what can be determined about the NAT status within the organization?

```
ERtr# show ip nat statistics
Total translations: 1 (1 static, 0 dynamic; 0 extended)
Outside interfaces:
  Serial0/0/0
Inside interfaces:
  GigabitEthernet0/0
Hits: 0 Misses: 0
Expired translations: 0
Dynamic mappings:
-- Inside Source
access-list 1 pool corp refCount 0
  pool NAT-POOL1: netmask 255.255.255.224
    start 209.165.201.6 end 209.165.201.30
    type generic, total addresses 25, allocated 0 (0%), misses 0
```

- NAT is working.
- Static NAT is working, but dynamic NAT is not.
- Dynamic NAT is working, but static NAT is not.
- **Not enough information is given to determine if both static and dynamic NAT are working.**

22. 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 option are used.)

R1 translates the IP address in the packets from 209.65.200.254 to 192.168.10.10.
step 5
step 2
step 4
step 1
step 3

23. Open the PT Activity. Perform the tasks in the activity instructions and then answer the question.

What problem is causing PC-A to be unable to communicate with the Internet?

- The static route should not reference the interface, but the outside address instead.
- This router should be configured to use static NAT instead of PAT.
- The ip nat inside source command refers to the wrong interface.
- The access list used in the NAT process is referencing the wrong subnet.
- **The NAT interfaces are not correctly assigned.**