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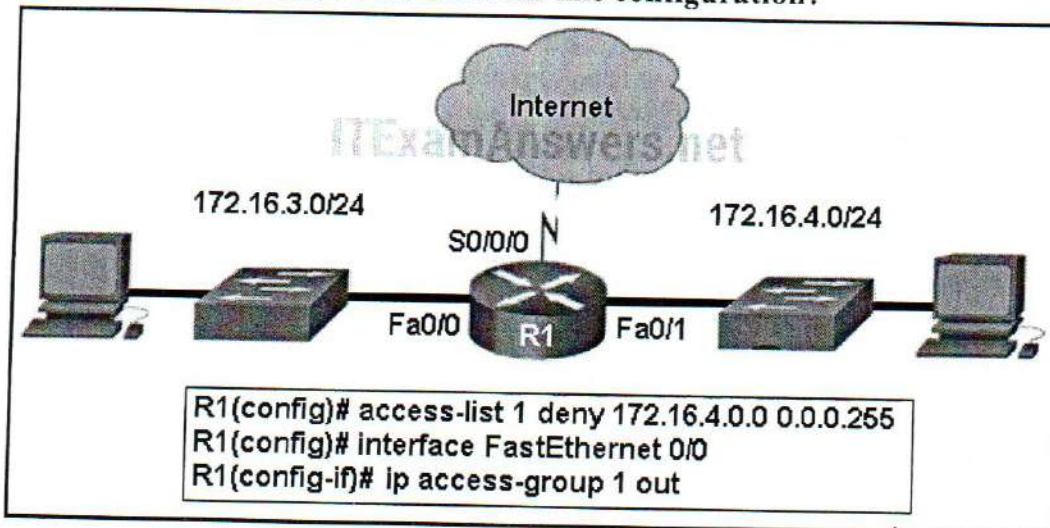
- **Fill in the blank.**

When a router receives a packet, it examines the destination address of the packet and looks in the ..... to determine the best path to use to forward the packet.

- **What are two benefits of NAT? (Choose two.)**

- It makes troubleshooting routing issues easier.
- It saves public IP addresses.
- It makes tunneling with IPsec less complicated.
- It adds a degree of privacy and security to a network.
- It increases routing performance.

- **Refer to the exhibit. An ACL was configured on R1 with the intention of denying traffic from subnet 172.16.4.0/24 into subnet 172.16.3.0/24. All other traffic into subnet 172.16.3.0/24 should be permitted. This standard ACL was then applied outbound on interface Fa0/0. Which conclusion can be drawn from this configuration?**



- Only traffic from the 172.16.4.0/24 subnet is blocked, and all other traffic is allowed.
- An extended ACL must be used in this situation.
- All traffic will be blocked, not just traffic from the 172.16.4.0/24 subnet.
- The ACL should be applied to the FastEthernet 0/0 interface of R1 inbound to accomplish the requirements.
- The ACL should be applied outbound on all interfaces of R1.

- **What is a disadvantage of NAT?**

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

- **What single summary network and mask will contains all of the following networks?**

192.168.17.0/24

192.168.19.0/24

192.168.18.0/24

192.168.16.0/24

Network/mask: .....

- **Refer to the exhibit. Refer to the exhibit. Which address or addresses represent the inside global address?**

```
Router1(config)# ip nat inside source static 192.168.0.100 209.165.20.25
Router1(config)# interface serial0/0/0
Router1(config-if)# ip nat inside
Router1(config-if)# ip address 10.1.1.2 255.255.255.0
Router1(config)# interface serial 0/0/2
Router1(config-if)# ip address 209.165.20.25 255.255.255.0
Router1(config-if)# ip nat outside
```

- 192.168.0.100
- 209.165.20.25
- 10.1.1.2
- any address in the 10.1.1.0 network

- **When dynamic NAT without overloading is being used, what happens if seven users attempt to access a public server on the Internet when only eight 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.

- **What is defined by the Access-list command when configuring dynamic NAT?**

- the range of external IP addresses that internal hosts are permitted to access
- the pool of available NAT servers
- the range of internal IP addresses that are translated
- the pool of global address.

- **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
```

.....

- **Fill in the blank.**

Type a command to exclude the first fifteen useable IP addresses from a DHCPv4 address pool of the network 10.0.15.0/24.

Router(config)# ip dhcp .....

- **Which DHCPv4 message will a client send to accept an IPv4 address that is offered by a DHCP server?**

- unicast DHCPACK
- broadcast DHCPACK
- unicast DHCPREQUEST
- broadcast DHCPREQUEST

- **An administrator issues the commands:**

Router(config)# interface g0/1

Router(config-if)# ip address dhcp

**What is the administrator trying to achieve?**

- configuring the router to act as a DHCPv4 server
- configuring the router to obtain IP parameters from a DHCPv4 server
- configuring the router to act as a relay agent
- configuring the router to resolve IP address conflicts

- **Which address is required in the command syntax of a standard ACL?**

- source port number
- destination port number
- source IP address
- destination IP address

- **What single access list statement matches all of the following networks?**

192.168.16.0

192.168.17.0

192.168.18.0

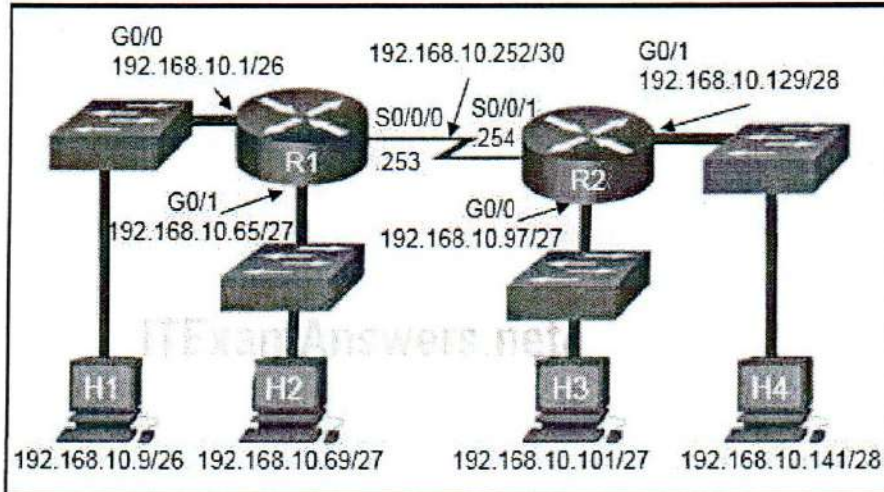
192.168.19.0

- access-list 10 permit 192.168.16.0 0.0.3.255
- access-list 10 permit 192.168.16.0 0.0.0.255
- access-list 10 permit 192.168.16.0 0.0.15.255
- access-list 10 permit 192.168.0.0 0.0.15.255

- **Which two statements are generally considered to be best practices in the placement of ACLs? (Choose two.)**

- Place standard ACLs close to the source IP address of the traffic.
- Place extended ACLs close to the destination IP address of the traffic.
- Place extended ACLs close to the source IP address of the traffic.
- Place standard ACLs close to the destination IP address of the traffic.
- For every inbound ACL placed on an interface, there should be a matching outbound ACL.

- Refer to the exhibit. Which command would be used in a standard ACL to allow only devices on the network attached to R1 G0/0 interface to access the networks attached to R2?



- access-list 1 permit 192.168.10.0 0.0.0.63
  - access-list 1 permit 192.168.10.96 0.0.0.31
  - access-list 1 permit 192.168.10.0 0.0.0.255
  - access-list 1 permit 192.168.10.128 0.0.0.63
- If a router has three interfaces and is routing both IPv4 and IPv6 traffic, how many ACLs could be created and applied to it?
    - 6
    - 8
    - 12
    - 16
  - A router has used the OSPF protocol to learn a route to the 172.16.32.0/19 network. Which command will implement a backup floating static route?
    - ip route 172.16.0.0 255.255.240.0 s0/0/0 200
    - ip route 172.16.32.0 255.255.224.0 s0/0/0 200
    - ip route 172.16.32.0 255.255.224.0 s0/0/0 100
    - ip route 172.16.0.0 255.255.240.0 s0/0/0 100
  - Refer to the following output. What is the significance of the 4 match(es) statement?
 

```
R1# <output omitted>
    10 permit 192.168.1.56 0.0.0.7
    20 permit 192.168.1.64 0.0.0.63 (4 match(es))
    30 deny any (8 match(es))
```

    - Four packets have been denied that have been sourced from any IP address.
    - Four packets have been denied that are destined for net: 192.168.1.64.
    - Four packets have been allowed through the router to reach the destination network of 192.168.1.64/26.
    - Four packets have been allowed through the router from net: 192.168.1.64.

- **What type of route allows a router to forward packets even though its routing table contains no specific route to the destination network?**
  - dynamic route
  - destination route
  - generic route
  - default route
  
- **Why would a floating static route be configured with an administrative distance that is higher than the administrative distance of a dynamic routing protocol that is running on the same router?**
  - to load-balance the traffic
  - to act as a gateway of last resort
  - to be the priority route in the routing table
  - to be used as a backup route
  
- **Which type of static route that is configured on a router uses only the next-hop ip address?**
  - recursive static route
  - directly connected static route
  - fully specified static route
  - default static route
  
- **A network administrator has entered a static route to an Ethernet LAN that is connected to an adjacent router. However, the route is not shown in the routing table. Which command would the administrator use to verify that the exit interface is up?**
  - show ip protocols
  - show ip route
  - show ip interface brief
  - tracert
  
- **A network administrator configures the port security feature on a switch. The security policy specifies that each access port should allow up to two MAC addresses. When the maximum number of MAC addresses is reached, a frame with the unknown source MAC address is dropped and a no notification will be sent to the syslog server and the violation counter increments. Which security violation mode should be configured for each access port?**
  - restrict
  - protect
  - warning
  - shutdown
  
- **A network administrator configures an ACL with: Router(config)# access-list 10 permit 172.16.32.0 0.0.15.255. Which IPv4 range matches the ACE?**

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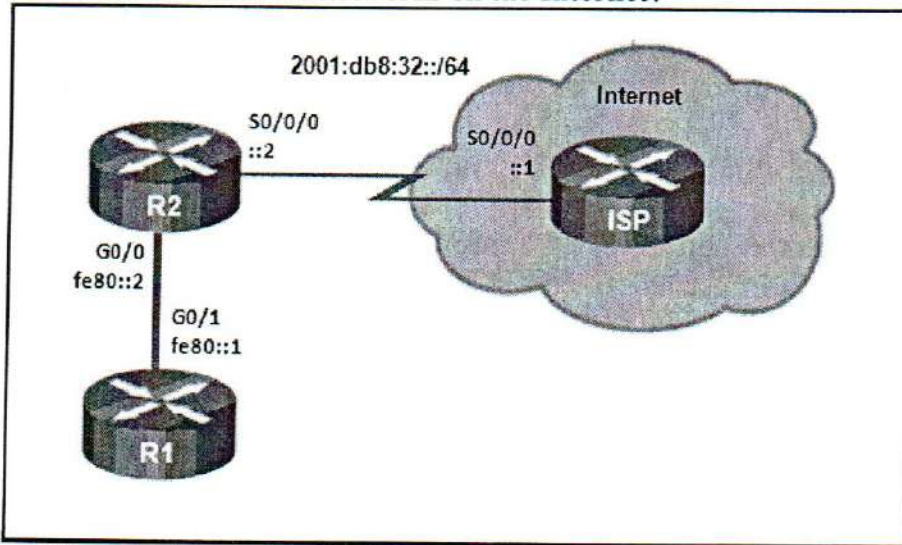
- **What is the quickest way to remove a single ACE from a named ACL?**
  - Use the no access-list command to remove the entire ACL, then recreate it without the ACE.
  - Copy the ACL into a text editor, remove the ACE, then copy the ACL back into the router.
  - Use the no keyword and the sequence number of the ACE to be removed.
  - Create a new ACL with a different number and apply the new ACL to the router interface.
  
- **What network prefix and prefix-length combination is used to create a default static that will match any IPv6 destination?**

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- **An administrator has configured an access list on R1 to allow SSH administrative access from host 172.16.1.100. Which command correctly applies the ACL?**
  - R1(config-line)# access-class 1 in
  - R1(config-if)# ip access-group 1 in
  - R1(config-if)# ip access-group 1 out
  - R1(config-line)# access-class 1 out
  
- **What is the effect of configuring an ACL with only ACEs that deny traffic?**
  - The ACL will permit any traffic that is not specifically denied.
  - The ACL will block all traffic.
  - The ACL must be applied inbound only.
  - The ACL must be applied outbound only.
  
- **What are two benefits of NAT? (Choose two.)**
  - It makes troubleshooting routing issues easier.
  - It provides a privacy and security to a network.
  - It saves public IP addresses.
  - It makes tunneling with IPsec less complicated.
  - It increases routing performance.
  
- **What is two advantage of static routing over dynamic routing?**
  - Static routing scales well with expanding networks.
  - Static routing uses fewer router resources than dynamic routing.
  - Static routing requires very little knowledge of the network for correct implementation.
  - Static routing is relatively easy to configure for large networks.
  
- **Which advantage does Cut-Through switching method have compared with Store-and-Forward switching method?**

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- **When a Cisco switch receives untagged frames on a 802.1Q trunk port, which VLAN ID is the traffic switched to by default?**
  - unused VLAN ID
  - native VLAN ID
  - data VLAN ID
  - management VLAN ID
  
- **What is the effect of using the switchport port-security command?**
  - enables port security globally on the switch
  - automatically shuts an interface down if applied to a trunk port
  - detects the first MAC address in a frame that comes into a port and places that MAC address in the MAC address table
  - enables port security on an interface
  
- **Which two characteristics match extended range VLANs? (Choose two.)**
  - VLAN IDs exist between 1006 to 4094.
  - CDP can be used to learn and store these VLANs.
  - VLANs are initialized from flash memory.
  - They are commonly used in small networks.
  - They are saved in the running-config file by default.
  
- **What is a disadvantage of using dynamic routing protocols?**
  - They are only suitable for simple topologies.
  - Their configuration complexity increases as the size of the network grows.
  - They require administrator intervention when the pathway of traffic changes.
  - They send messages about network status insecurely across networks by default.
  
- **Which two requirements are used to determine if a route can be considered as an ultimate route in a router's routing table? (Choose two.)**
  - contain subnet mask
  - be a default route
  - contain the exit interface
  - be a classful network entry
  - contain a next-hop IP address
  
- **Which type of static route that is configured on a router uses only the exit interface?**
  - recursive static route
  - directly connected static route
  - fully specified static route
  - default static route

- Refer to the exhibit. Which default static route command would allow R1 to reach all unknown networks on the Internet?



- R1(config)# ipv6 route 2001:db8:32::/64 G0/0
  - R1(config)# ipv6 route ::/0 G0/0 fe80::2
  - R1(config)# ipv6 route 2001:db8:32::/64 G0/1 fe80::2
  - R1(config)# ipv6 route ::/0 G0/1 fe80::2
- Which command is used to remove all VLANs from a switch?
    - delete all vlan.dat
    - delete flash:vlan.dat
    - no vlan all
    - no switchport access vlan all