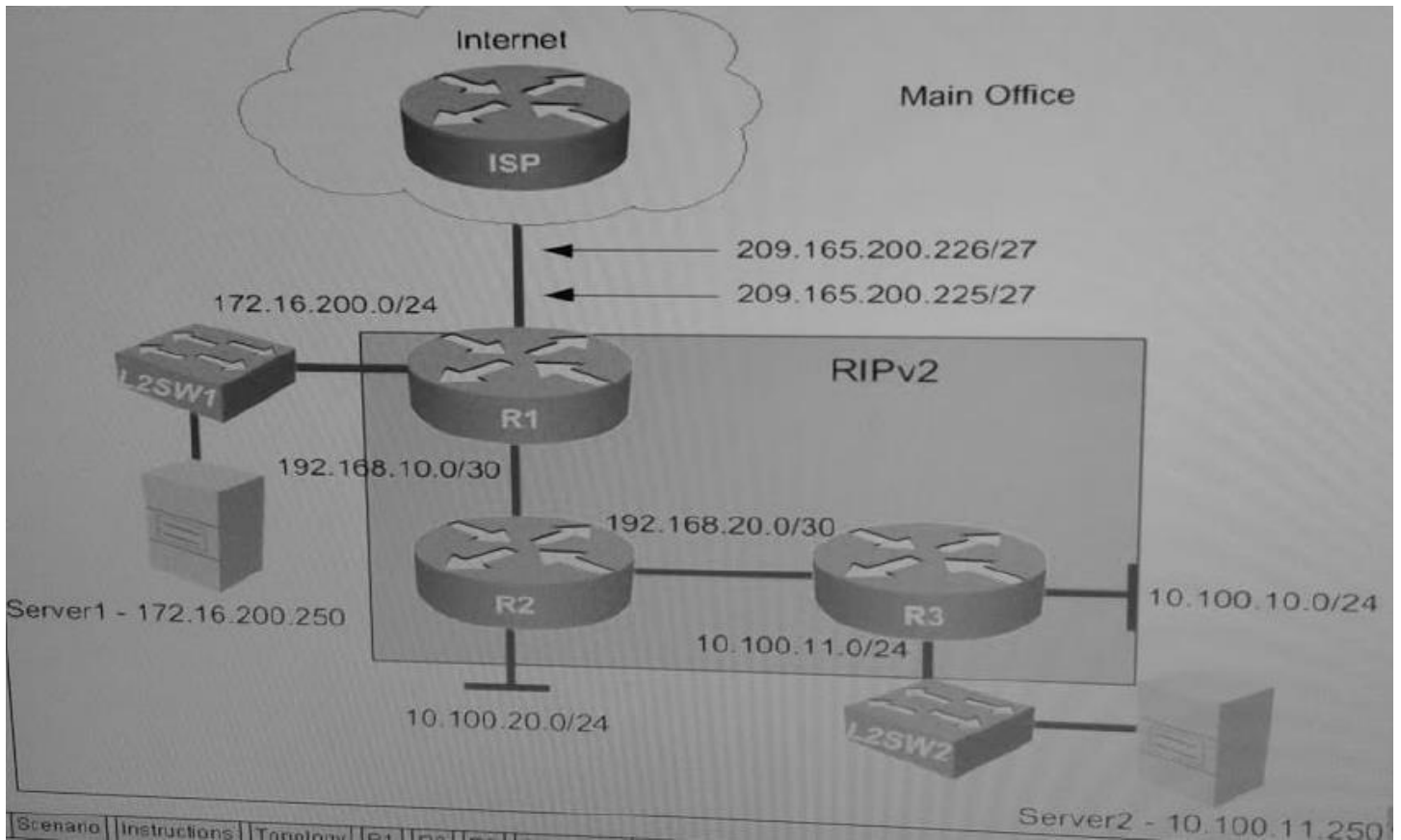


# DHCP Sim



1. Examine the DHCP configuration between R2 and R3, R2 is configured as the DHCP server and R3 as the client. What is the reason R3 is not receiving the IP address via DHCP?
  - A. On R3, DHCP is not enabled on the interface that is connected to R2.
  - B. On R3, the interface that is connected to R2 is in shutdown condition.
  - C. On R2, the interface that is connected to R3 is in shutdown condition.
  - D. On R2, the network statement in the DHCP pool configuration is incorrectly configured.

Answer: **A**

Explanation/show commands:

```
R2
no aaa pvc
aaa snmp-timeout 180
!
!
ip dhcp excluded-address 192.168.20.1
ip dhcp pool DHCPASSIGNR3
network 192.168.20.0 255.255.255.252
!
!
ip cef
no ipv6 cef
multilink bundle-name authenticated
!

R3
!
!
interface Loopback0
ip address 192.168.250.3 255.255.255.255
!
interface Ethernet0/0
description ***Link to LAN***
ip address 10.100.10.1 255.255.255.0
!
interface Ethernet0/1
description ***Link to R2***
no ip address
!
interface Ethernet0/2
description ***Link to Server2 Segment***
ip address 10.100.11.1 255.255.255.0
!
interface Ethernet0/3
no ip address
shutdown
!
```

2. R1 router clock is synchronized with ISP router. R2 is supposed to receive NTP updates from R1. But you observe that R2 clock is not synchronized with R1. What is the reason R2 is not receiving NTP updates from R1?
- A. R1 router Ethernet interface that is connected to R2 is placed in shutdown condition.
  - B. R2 router Ethernet interface that is connected to R1 is placed in shutdown condition.
  - C. The NTP server command not configured on R2 router.
  - D. The IP address that is used in the NTP configuration on R2 router is incorrect.

Answer: **B**

Explanation/show commands:

No picture showed to us.

3. Why applications that are installed on PC's in R2 LAN network 10.100.20.0/24 are unable to communicate with server1?
- A. A standard ACL statement that is configured on R1 is blocking the traffic sourced from R2 LAN network.
  - B. A standard ACL statement that is configured on R1 is blocking the traffic sourced from Server1 network.
  - C. A standard ACL statement that is configured on R2 is blocking the traffic sourced from Server1 network.
  - D. A standard ACL statement that is configured on R2 is blocking the traffic sourced from R2 LAN network.

Answer: **C**

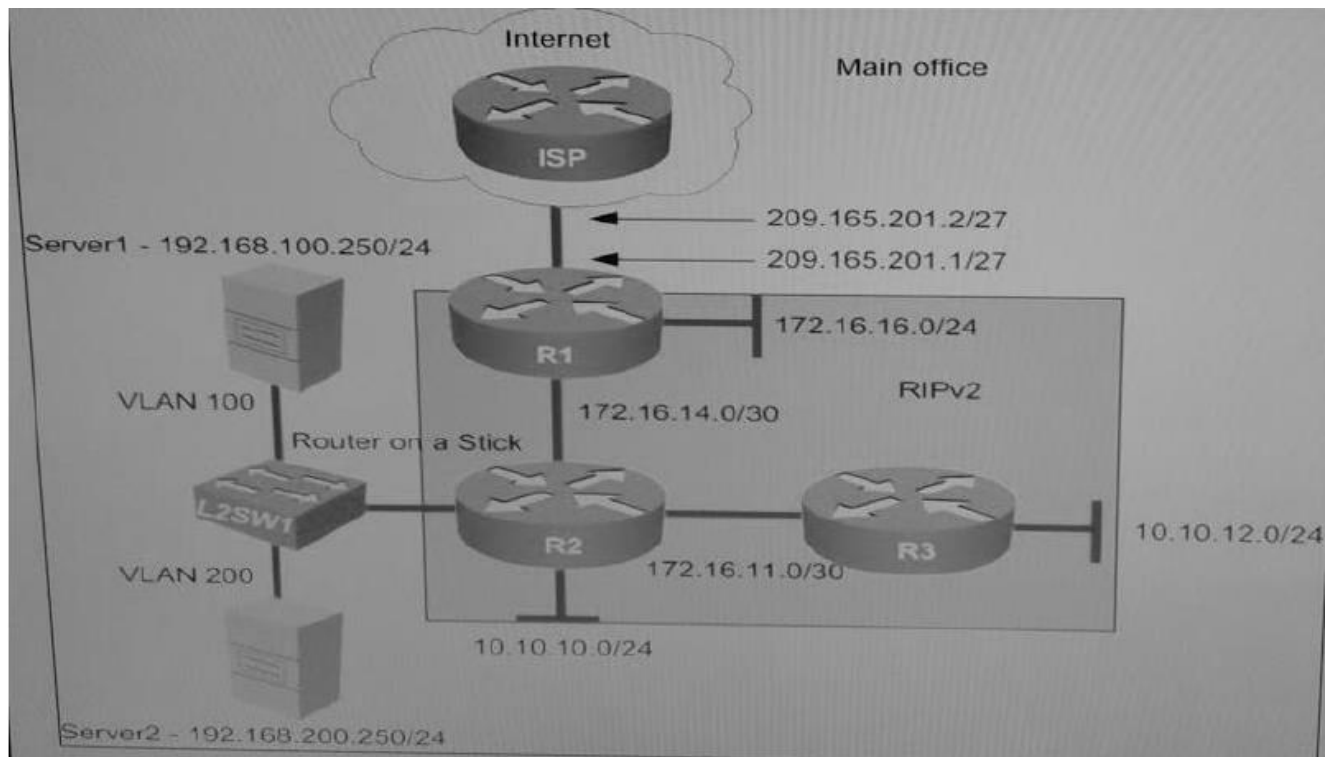
Explanation/show commands:

```
R2
!
ip access-list standard SERVERIBLOCK
deny 172.16.200.0 0.0.0.255
permit any
```

```
R2
!
!
!
interface Loopback0
 ip address 192.168.250.2 255.255.255.255
!
interface Ethernet0/0
 description ***Link to R3***
 ip address 192.168.20.1 255.255.255.252
!
interface Ethernet0/1
 no ip address
!
interface Ethernet0/2
 description ***Link to R1***
 ip address 192.168.10.2 255.255.255.252
 ip access-group SERVERIBLOCK in
```



# RIPv2 Sim



- Router R1 connects the main office to internet, and routers R2 and R3 are internal routers
- NAT is enabled on Router R1
- The routing protocol that is enabled between R1, R2 and R3 is RIPv2
- R1 sends default route into RIPv2 for internal routers to forward internet traffic to R1
- Server1 and Server 2 are placed in VLAN 100 and 200 respectively, and are still running on stick

Configuration with router R2.

You have console access on R1, R2, R3 and L2SW1 devices.

Use only show commands to troubleshoot the issues.

1. Server1 and Server2 are unable to communicate with the rest of the network. Your initial check with system administrators shows that IP address settings are correctly configured on the server side. What could be an issue?
  - A. The VLAN encapsulation is misconfigured on the router subinterfaces.
  - B. The Router is missing subinterface configuration.
  - C. The Trunk is not configured on the L2SW1 switch.
  - D. The IP address is misconfigured on the primary router interface.

Answer: **A**

Explanation/show command:

```
R2
interface Ethernet0/1.100
description ***Link to Server1 Segment***
encapsulation dot1Q 200
ip address 192.168.100.1 255.255.255.0
!
interface Ethernet0/1.200
description ***Link to Server2 Segment***
encapsulation dot1Q 100
ip address 192.168.200.1 255.255.255.0
/6
```

2. Users in the main office complain that they are unable to reach internet sites. You observe that internet traffic that is destined towards ISP router is not forwarded correctly on Router R1. What could be an issue?

Ping to Internet server shows the following results from R1:

```
R1#ping 209.165.200.225
```

Type escape sequence to abort.

Sending 5, 100-byte ICMP Echos to 209.165.200.225, timeout is 2 seconds:

.....

Success rate is 0 percent (0/5)

- A. The next hop router address for the default route is incorrectly configured.
- B. Default route pointing to ISP router is not configured on Router R1.
- C. Default route pointing to ISP router is configured with AD of 225.
- D. Router R1 configured as DHCP client is not receiving default route via DHCP from ISP router.

Answer: **B**

Explanation/show command:

```
R1
interface Ethernet0/2
description ***Link to R2***
ip address 172.16.14.1 255.255.255.252
ip nat inside
ip virtual-reassembly in
!
interface Ethernet0/3
no ip address
shutdown
!
router rip
version 2
network 172.16.0.0
default-information originate
no auto-summary
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
ip nat inside source list LOCAL interface Ethernet0/0 overload
ip route 10.10.10.0 255.255.255.0 172.16.14.2 200
```

3. Examine R2 configuration, the traffic that is destined to R3 LAN network sourced from Router R2 is forwarded to R1 instead R3. What could be an issue?

```
R2#traceroute 10.10.12.1 source 10.10.10.1
```

Type escape sequence to abort.

Tracing the route to 10.10.12.1

VRF info: (vrf in name/id, vrf out name/id)

```
1 172.16.14.1 0 msec 1 msec 0 msec
```

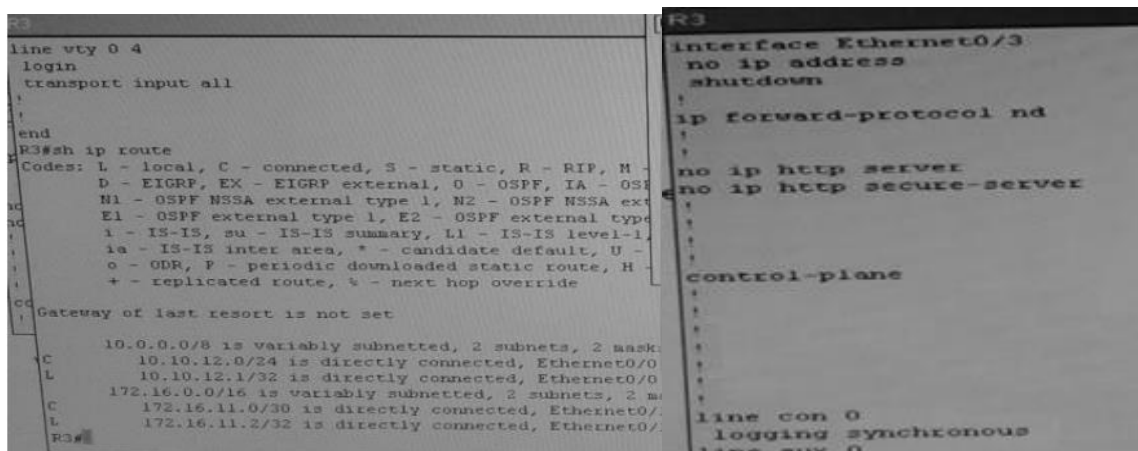
```
2 172.16.14.1 !H !H *
```

R2#

- A. RIPv2 enabled on R3, but R3 LAN network that is not advertised into RIPv2 domain.
- B. RIPv2 routing updates are suppressed between R2 and R3 using passive interface feature.
- C. RIPv2 not enabled on R3.
- D. No issue that is identified; this behavior is normal since default route propagated into RIPv2 domain by Router R1.

Answer: C

Explanation/show command:



4.

What is the correct statement below after examining the R1 routing table?

- A. Traffic that is destined to 10.10.10.0/24 from R1 LAN network uses static route instead RIPv2 Because the static route AD that is configured is less than the AD of RIPv2
- B. Traffic that is destined to 10.10.10.0/24 from R1 LAN network uses RIPv2 instead of static route Because the static route AD that is configured is higher than the AD of RIPv2
- C. Traffic that is destined to 10.10.10.0/24 from R1 LAN network uses static route instead of RIPv2 But the traffic is forwarded to the ISP instead of the internal network
- D. Traffic that is destined to 10.10.10.0/24 from R1 LAN network uses RIPv2 instead of static route Because the static route AD that is configured is 255

Answer: B

Explanation/show command:

```
R1
interface Ethernet0/2
  description ***Link to R2***
  ip address 172.16.14.1 255.255.255.252
  ip nat inside
  ip virtual-reassembly in
!
interface Ethernet0/3
  no ip address
  shutdown
!
router rip
  version 2
  network 172.16.0.0
  default-information originate
  no auto-summary
!
ip forward-protocol nd
!
!
no ip http server
no ip http secure-server
ip nat inside source list LOCAL interface Ethernet0/0 overload
ip route 10.10.10.0 255.255.255.0 172.16.14.2 200
```

Hope this will help us all!

PenPineappleApplePen-

Credits to my source. Thank you btw.