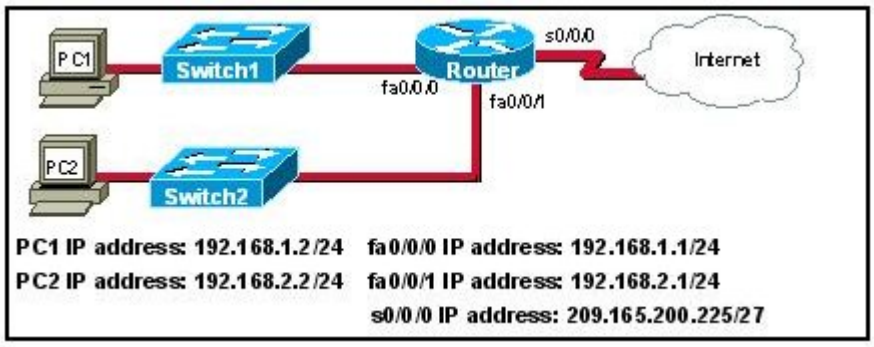
1



Refer to the exhibit. The network administrator creates a standard access control list t
192.168.1.0/24 network from reaching the 192.168.2.0/24 network while still permitt
networks. On which router interface and in which direction should it be applied?

- interface fa0/0/0, inbound
- interface fa0/0/0, outbound
- interface fa0/0/1, inbound
- interface fa0/0/1, outbound

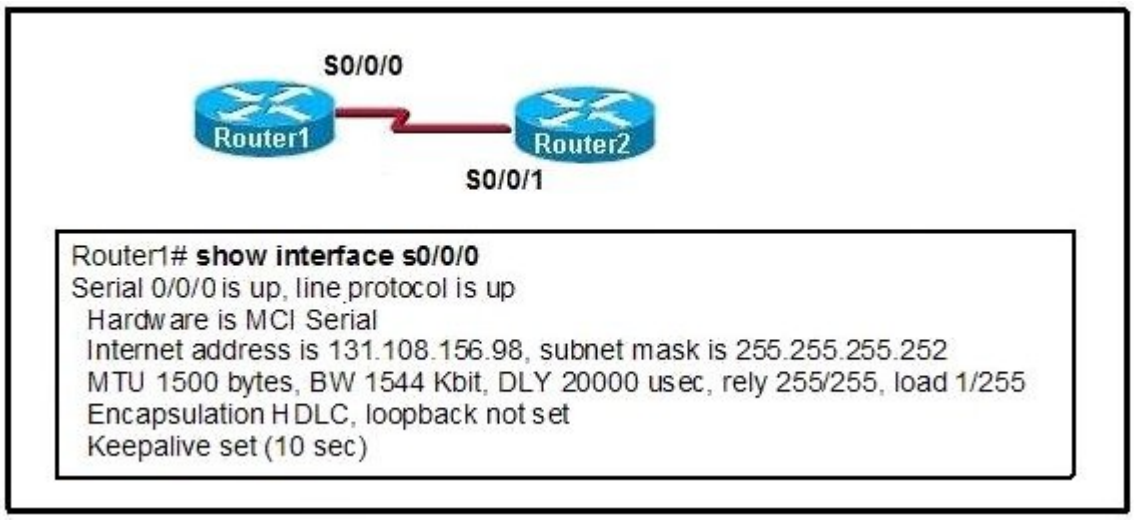
2 A network administrator is analyzing the data from a network performance baseline.
indicated in the baseline data?

- the IP addressing scheme of the network
- the most heavily used parts of the network
- congested areas of the network
- error rates in different parts of the network

3 A technician has been asked to run Cisco SDM one-step lockdown on the router of a
result of this process?

- Traffic is only forwarded from SDM-trusted Cisco routers.
- Security testing is performed and the results are saved as a text file stored in NVI
- The router is tested for potential security problems and any necessary changes ar
- All traffic entering the router is quarantined and checked for viruses before being

4



Refer to the exhibit. A technician issues the **show interface s0/0/0** command on R1 while troubleshooti network problem. What two conclusions can be determined by from the output shown? (Choose two.)

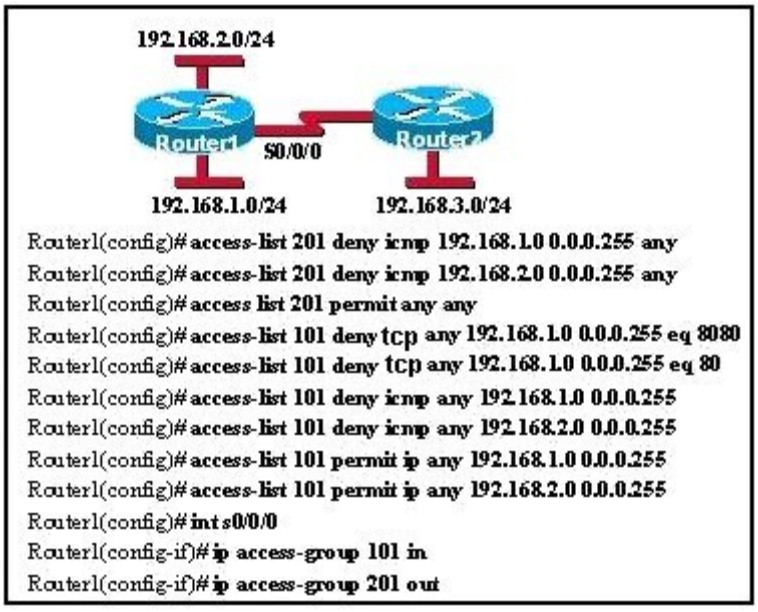
- ☐ The bandwidth has been set to the value of a T1 line.
- ☐ This interface should be configured for PPP encapsulation.
- ☐ There is no failure indicated in an OSI Layer 1 or Layer 2.
- ☐ The physical connection between the two routers has failed.
- ☐ The IP address of S0/0/0 is invalid, given the subnet mask being used.

---

5 Which three statements are true about creating and applying access lists? (Choose three.)

- ☐ Access list entries should filter in the order from general to specific.
- ☐ One access list per port per protocol per direction is permitted.
- ☐ Standard ACLs should be applied closest to the source while extended ACLs should be applied clos destination.
- ☐ There is an implicit deny at the end of all access lists.
- ☐ Statements are processed sequentially from top to bottom until a match is found.
- ☐ The **inbound** keyword refers to traffic entering the network from the router interface where the AC applied.

6




```
Router1(config)# access-list 201 deny icmp 192.168.1.0 0.0.0.255 any
Router1(config)# access-list 201 deny icmp 192.168.2.0 0.0.0.255 any
Router1(config)# access list 201 permit any any
Router1(config)# access-list 101 deny tcp any 192.168.1.0 0.0.0.255 eq 8080
Router1(config)# access-list 101 deny tcp any 192.168.1.0 0.0.0.255 eq 80
Router1(config)# access-list 101 deny icmp any 192.168.1.0 0.0.0.255
Router1(config)# access-list 101 deny icmp any 192.168.2.0 0.0.0.255
Router1(config)# access-list 101 permit ip any 192.168.1.0 0.0.0.255
Router1(config)# access-list 101 permit ip any 192.168.2.0 0.0.0.255
Router1(config)# int s0/0/0
Router1(config-if)# ip access-group 101 in
Router1(config-if)# ip access-group 201 out
```

Refer to the exhibit. Which statement correctly describes how Router1 processes an FTP request enterin interface s0/0/0, destined for an FTP server at IP address 192.168.1.5?

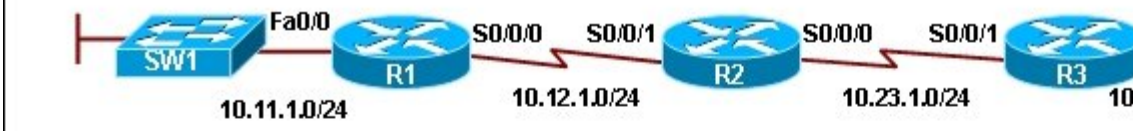
- It matches the incoming packet to the **access-list 201 permit any any** statement and allows the pacl the router.
- It reaches the end of ACL 101 without matching a condition and drops the packet because there is n **access-list 101 permit any any** statement.
- It matches the incoming packet to the **access-list 101 permit ip any 192.168.1.0 0.0.0.255** statemen ignores the remaining statements in ACL 101, and allows the packet into the router.
- It matches the incoming packet to the access-list 201 deny icmp 192.168.1.0 0.0.0.255 any statemen continues comparing the packet to the remaining statements in ACL 201 to ensure that no subsequer statements allow FTP, and then drops the packet.

---

7 A network administrator is instructing a technician on best practices for applying ACLs. Which suggestion should the administrator provide?

- Named ACLs are less efficient than numbered ACLs.
- Standard ACLs should be applied closest to the core layer.
- ACLs applied to outbound interfaces are the most efficient.
- Extended ACLs should be applied closest to the source that is specified by the ACL.

8




```
R1# show run
!
key chain RIP KEY
 key 1
 key-string cisco
!
int s0/0/0
 ip address 10.12.1.1 255.255.255.0
 ip rip authentication mode md5
 ip rip authentication key-chain
 RIP_KEY
!
router rip
 version 2
 network 10.11.1.0
 network 10.12.1.0
!
<output omitted>
```

```
R2# show run
!
no cdp run
no ip proxy-arp
no smtp-server
no ip directed-broadcast
!
int s0/0/0
 ip address 10.23.1.2 255.255.255.0
!
int s0/0/1
 ip address 10.12.1.2 255.255.255.0
!
router rip
 version 2
 network 10.12.1.0
 network 10.23.1.0
!
<output omitted>
```

```
R3# show ru
!
key chain R
 key 1
 key-string
!
int s0/0/1
 ip address
 ip rip aut
 ip rip aut
 RIP_KEY
!
router rip
 version 2
 network 10
 network 10
!
<output omi
```

Refer to the exhibit. RIPv2 has been configured on all routers in the network. Routers R1 and R3 do not receive RIP routing updates. On the basis of the provided configuration, what should be enabled on router R2 to remedy the problem?

- proxy ARP
- CDP updates
- SNMP services
- RIP authentication

9 When configuring a Frame Relay connection, what is the purpose of Inverse ARP?

- to assign a DLCI to a remote peer
- to disable peer requests from determining local Layer 3 addresses
- to negotiate LMI encapsulations between local and remote Frame Relay peers
- to create a mapping of DLCI to Layer 3 addresses that belong to remote peers

10 What effect would the Router1(config-ext-nacl)# **permit tcp 172.16.4.0 0.0.0.255 any eq www** comma when implemented inbound on the f0/0 interface?

- All TCP traffic is permitted, and all other traffic is denied.
- The command is rejected by the router because it is incomplete.
- All traffic from 172.16.4.0/24 is permitted anywhere on any port.
- Traffic originating from 172.16.4.0/24 is permitted to all TCP port 80 destinations.

11

```
Serial0/0/0 is up, line protocol is down
  Hardware is HD64570
  Internet address is 10.1.1.1/24
  MTU 1500 bytes, BW 1544 Kbit, DLY 20000 usec, rely 255/255, load 1/255
  Encapsulation PPP, loopback not set, keepalive set (10 sec)
  LCP Closed
  Closed: LEXCP, BRIDGECP, IPCP, CCP, CDPCP, LLC2, BACP
  <output omitted>
  Queueing strategy: weighted fair
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    0 packets input, 0 bytes, 0 no buffer
    Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
    0 packets output, 0 bytes, 0 underruns
    0 output errors, 0 collisions, 1 interface resets
    0 output buffer failures, 0 output buffers swapped out
    0 carrier transitions
    DCD=up  DSR=up  DTR=up  RTS=up  CTS=up
```

Refer to the exhibit. This serial interface is not functioning correctly. Based on the output shown, what i most likely cause?

- improper LMI type
- interface reset
- PPP negotiation failure
- unplugged cable

12

```
PVC Statistics for interface Serial0/0 (Frame Relay DTE)

          Active    Inactive    Deleted     Static
  Local       1           0          0          0
  Switched    0           0          0          0
  Unused      0           0          0          0

DLCI = 100, DLCI USAGE = LOCAL, PVC STATUS = ACTIVE, INTERFACE =
Serial0

  input pkts 1300          output pkts 1270         in bytes 22121000
  out bytes 21802000       dropped pkts 4           in FECN pkts 147
  in BECN pkts 192         out FECN pkts 259        out BECN pkts 214
  in DE pkts 12            out DE pkts 34
  out bcast pkts 107       out bcast bytes 19722
  pvc create time 00:25:50, last time pvc status changed 00:25:40
```

Refer to the exhibit. Which two conclusions can be drawn from the output shown? (Choose two.)

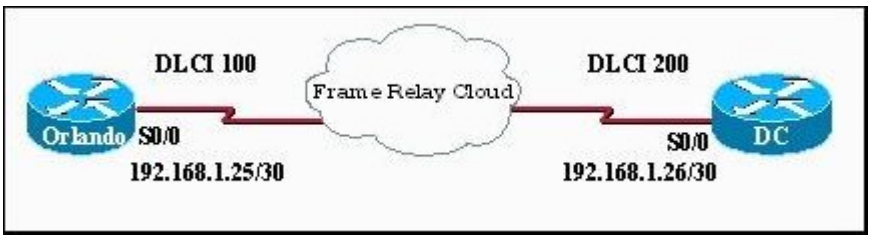
- This network is experiencing congestion.
- The Frame Relay connection is in the process of negotiation.
- Data is not flowing in this network.

- ☐ The network is discarding eligible packets.
- ☐ The DLCI is globally significant.

13 Which two statements are true about IPv6? (Choose two.)

- ☐ Security options are build into IPv6.
- ☐ IPv6 addresses require less router overhead to process.
- ☐ IPv6 can only be configured on an interface that does not have IPv4 on it.
- ☐ There is no way to translate between IPv4 addresses and IPv6 addresses.
- ☐ When enabled on a router, IPv6 can automatically configure link-local IPv6 addresses on all interfa

14



Refer to the exhibit. What is placed in the address field in the header of a frame that will travel from the office of ABC Company to the Orlando office?

- ○ MAC address of the Orlando router
- ○ MAC address of the DC router
- ○ 192.168.1.25
- ○ 192.168.1.26
- ○ DLCI 100
- ○ DLCI 200

15 What is a major characteristic of a worm?

- ○ malicious software that copies itself into other executable programs
- ○ tricks users into running the infected software
- ○ a set of computer instructions that lies dormant until triggered by a specific event
- ○ exploits vulnerabilities with the intent of propagating itself across a network

16 A technician is talking to a colleague at a rival company and comparing DSL transfer companies. Both companies are in the same city, use the same service provider, and h plan. What is the explanation for why Company A reports higher download speeds th

- ○ Company B has a higher volume of POTS voice traffic than Company A.
- ○ Company B shares the conection to the DSLAM with more clients than Compan
- ○ Company A only uses microfilters on branch locations.

- Company A is closer to the service provider.

17 What are the symptoms when the s0/0/0 interface on a router is attached to an operational CSU/DSU tha generating a clock signal, but the far end router on the point-to-point link has not been activated?

- **show controllers** indicates cable type DCE V.35. **show interfaces s0/0/0** indicates serial down, line protocol down.
- **show controllers** indicates cable type DCE V.35. **show interfaces s0/0/0** indicates serial up, line pr down.
- **show controllers** indicates cable type DTE V.35. **show interfaces s0/0/0** indicates serial up, line pr down.
- **show controllers** indicates cable type DTE V.35. **show interfaces s0/0/0** indicates serial down, line protocol down.

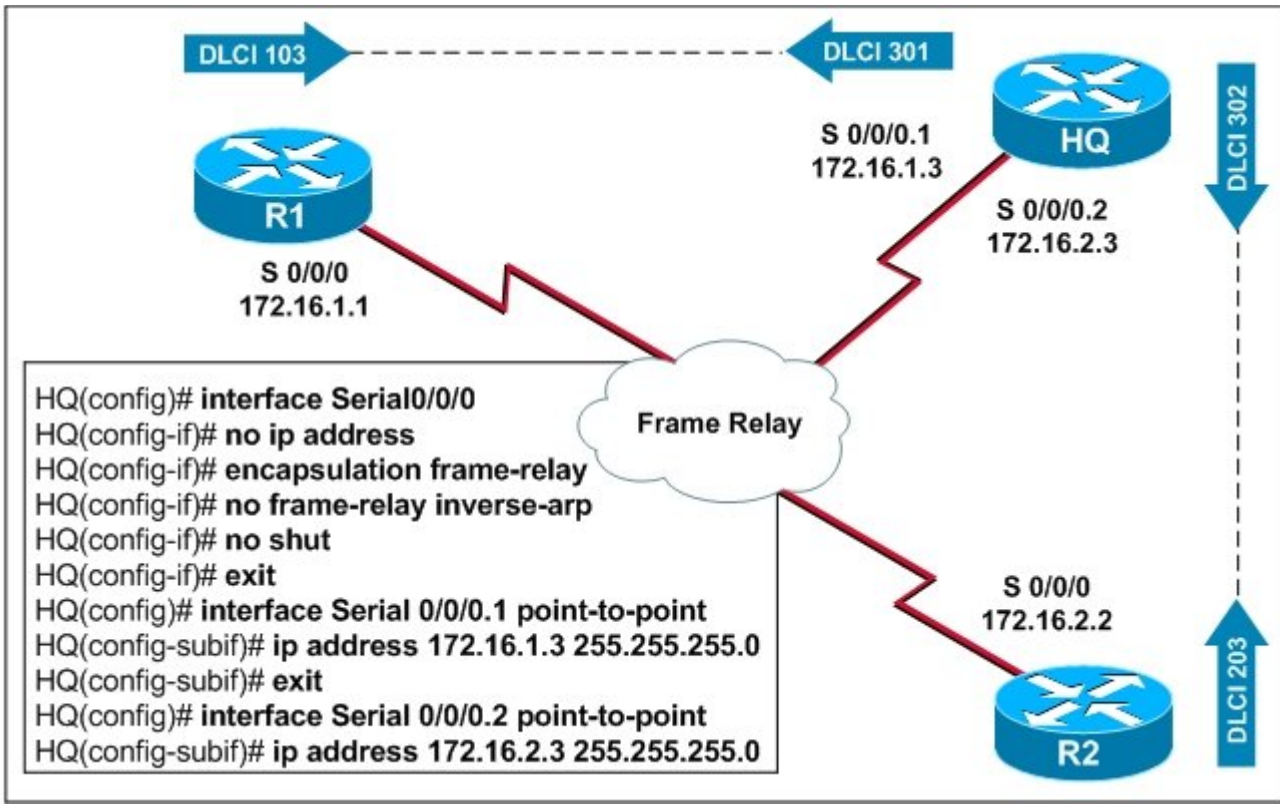
18 A system administrator must provide Internet connectivity for ten hosts in a small remote office. The IS assigned two public IP addresses to this remote office. How can the system administrator configure the r provide Internet access to all ten users at the same time?

- Configure DHCP and static NAT.
- Configure dynamic NAT for ten users.
- Configure static NAT for all ten users.
- Configure dynamic NAT with overload.

19 Which three functions are provided by the Local Management Interface used in Frame Relay networks? three.)

- exchange information about the status of virtual circuits
- map DLCIs to network addresses
- provide flow control
- provide error notification
- provide congestion notification
- send keepalive packets to verify operation of the PVC

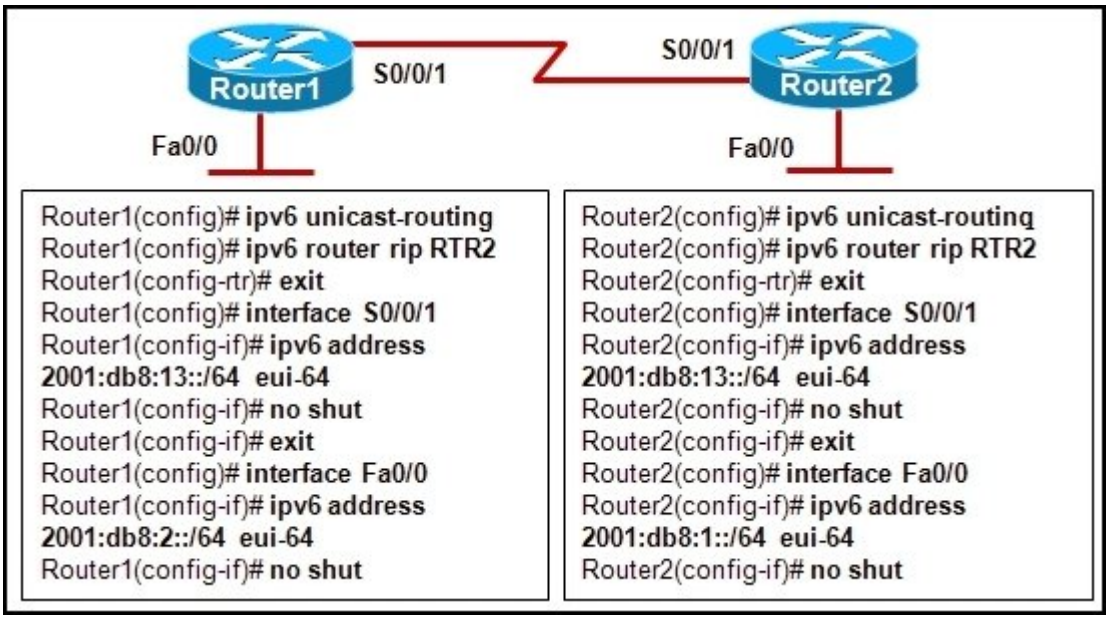
20



Refer to the exhibit. You are a network administrator who has been tasked with completing the Frame R topology that interconnects two remote sites. How should the point-to-point subinterfaces be configured to complete the topology?

- HQ(config-subif)#**frame-relay interface-dlci 103** on Serial 0/0/0.1
  HQ(config-subif)#**frame-relay interface-dlci 203** on Serial 0/0/0.2
- HQ(config-subif)#**frame-relay interface-dlci 301** on Serial 0/0/0.1
  HQ(config-subif)# **frame-relay interface-dlci 302** on Serial 0/0/0.2
- HQ(config-subif)#**frame-relay map ip 172.16.1.1 103 broadcast** on Serial 0/0/0.1
  HQ(config-subif)#**frame-relay map ip 172.16.2.2 203 broadcast** on Serial 0/0/0.2
- HQ(config-subif)#**frame-relay map ip 172.16.1.1 301 broadcast** on Serial 0/0/0.1
  HQ(config-subif)#**frame-relay map ip 172.16.2.2 302 broadcast** on Serial 0/0/0.2

21



Refer to the exhibit. A network administrator has issued the commands that are shown on Router1 and R
A later review of the routing tables reveals that neither router is learning the LAN network of the neighb
router. What is most likely the problem with the RIPng configuration?

- The serial interfaces are in different subnets.
- The RIPng process is not enabled on interfaces.
- The RIPng network command is not configured.
- The RIPng processes do not match between Router1 and Router2.

---

22 What are two LCP options that can be configured for PPP? (Choose two.)

- EAP
- CHAP
- IPCP
- CDPCP
- stacker

23

```
R1(config)# interface FastEthernet 0/0
R1(config-if)# ip address 10.0.1.254 255.255.255.0
R1(config-if)# exit
R1(config)# ip dhcp excluded
R1(config)# ip dhcp excluded-address 10.0.1.2 10.0.1.16
R1(config)# ip dhcp excluded-address 10.0.1.254
R1(config)# ip dhcp pool TEST
R1(dhcp-config)# network 10.0.1.0 255.255.255.0
R1(dhcp-config)# default-router 10.0.1.254
R1(dhcp-config)# dns-server 10.0.1.3
R1(dhcp-config)# domain-name netacad.net
```

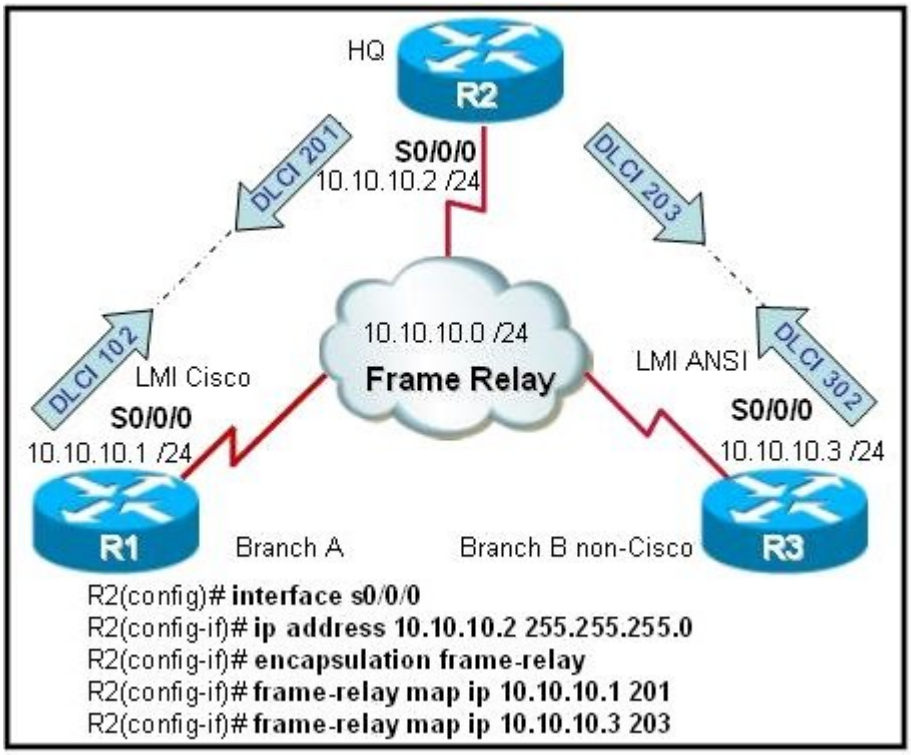
Refer to the exhibit. How is the TCP/IP configuration information specified by the **default-router** and **d server** commands made available?

- The TCP/IP information is forwarded to a 10.0.1.3 to be supplied to DHCP clients.
- The TCP/IP information is used by DNS clients to forward all data to the default gateway on R1 of
- The TCP/IP information is supplied to any DHCP client on the network connected to the FastEtherr interface of R1.
- The TCP/IP information is applied to each packet that enters R1 through the FastEthernet 0/0 interfa are hosts on the 10.0.1.0 /24 network except packets from addresses 10.0.1.2, 10.0.1.16, and 10.0.1.

24 Which three statements accurately describe a security policy? (Choose three.)

- It creates a basis for legal action if necessary.
- It defines a process for managing security violations.
- It defines acceptable and unacceptable use of network resources.
- The remote access policy is a component of the security policy that governs acceptable use of e-mai systems.
- It is kept private from users to prevent the possibility of circumventing security measures.
- It provides step-by-step procedures to harden routers and other network devices.

25

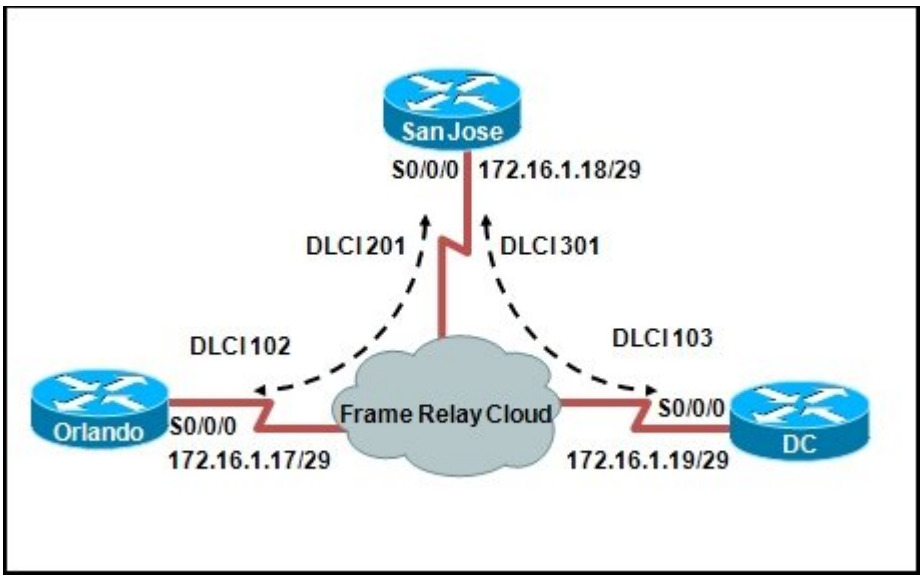


Refer to the exhibit. Branch A has a Cisco router. Branch B has a non-Cisco router set for IETF encapsu
After the commands shown are entered, R2 and R3 fail to establish the PVC. The R2 LMI is Cisco, and
LMI is ANSI. The LMI is successfully established at both locations. Why is the PVC failing?

- The PVC to R3 must be point-to-point.
- LMI types must match on each end of a PVC.
- The **ietf** parameter is missing from the **frame-relay map ip 10.10.10.3 203** command.
- The PVCs at R2 use different encapsulation types. A single port can only support one encapsulation

---

26



Refer to the exhibit. What is placed in the address field in the header of a frame that will travel from the router to the DC router?

- DLCI 103
- DLCI 301
- 172.16.1.18
- 172.16.1.19

27

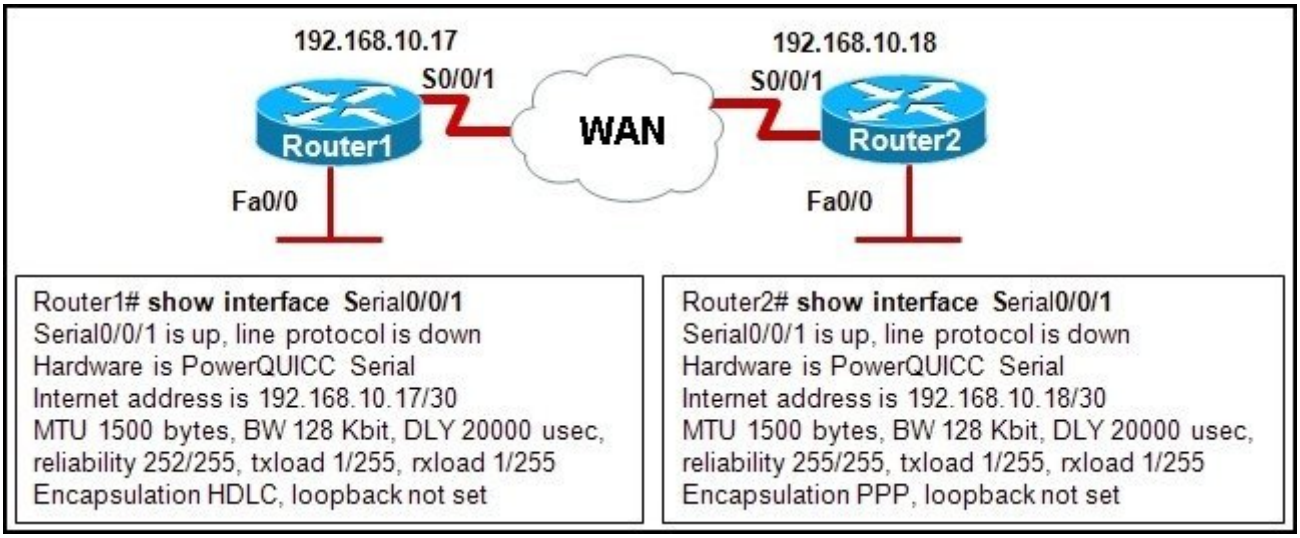
```
Router(config)# ip access-list extended Managers
Router(config-ext-nacl)# deny tcp 192.168.1.0 0.0.0.255 any eq telnet
Router(config-ext-nacl)# deny tcp 192.168.1.0 0.0.0.255 any eq www
Router(config-ext-nacl)# deny tcp 192.168.1.0 0.0.0.255 any eq ftp
```

Refer to the exhibit. What happens if the network administrator issues the commands shown when an AC called Managers already exists on the router?

- The commands overwrite the existing Managers ACL.
- The commands are added at the end of the existing Managers ACL.
- The network administrator receives an error stating that the ACL already exists.
- The commands will create a duplicate Managers ACL containing only the new commands being ent

---

28



Refer to the exhibit. From the output of the **show interface** commands, at which OSI layer is a fault ind

- application
- transport
- network
- data link
- physical

---

29 When configuring remote access to a router, what is the significance of the **no password** command on a line?

- Logins are prevented on that line.
- No password is required to log in to that line.
- The remote user is not allowed to change the password for that line.
- The remote user is prompted to change the line password after connecting to the router.

---

30 What functionality do access control lists provide when implementing dynamic NAT on a Cisco router?

- defines which addresses can be translated
- defines which addresses are assigned to a NAT pool
- defines which addresses are allowed out of the router
- defines which addresses can be accessed from the inside network

---

---

46 An administrator is unable to receive e-mail. While troubleshooting the problem, the ping the local mail server IP address successfully from a remote network and can suc server name to an IP address via the use of the **nslookup** command. At what OSI laye likely to be found?

- physical layer
- data link layer
- network layer
- application layer

47 What will be the result of adding the command **ip dhcp excluded-address 172.16.4.1 172.16.4.5** to the configuration of a local router that has been configured as a DHCP server?

- Traffic that is destined for 172.16.4.1 and 172.16.4.5 will be dropped by the router.
- Traffic will not be routed from clients with addresses between 172.16.4.1 and 172.16.4.5.
- The DHCP server function of the router will not issue the addresses between 172.16.4.1 and 172.16
- The router will ignore all traffic that comes from the DHCP servers with addresses 172.16.4.1 and 172.16.4.5.

48 Because of a remote-procedure call failure, a user is unable to access an NFS server. At what layer of th model does this problem occur?

- network layer
- data link layer
- physical layer
- application layer

49 Which three guidelines would help contribute to creating a strong password policy? (Choose three.)

- [ ] Once a good password is created, do not change it.
- [ ] Deliberately misspell words when creating passwords.
- [ ] Create passwords that are at least 8 characters in length.
- [ ] Use combinations of upper case, lower case, and special characters.
- [ ] Write passwords in locations that can be easily retrieved to avoid being locked out.
- [ ] Use long words found in the dictionary to make passwords that are easy to remember.

50

```
<output omitted>
!
username sdm privilege 15 password 0 sdm
!
ip http server
ip http authentication local
ip http secure-server
ip http timeout-policy idle 600 life 86400 requests 10000
!
<output omitted>
!
line con 0
line aux 0
line vty 0 4
 privilege level 15
 login local
 transport input none
```

Refer to the exhibit. A network administrator is trying to configure a router to use SDM but it is not fun correctly. What could be the problem?

- The username and password are not configured correctly.
- The authentication method is not configured correctly.
- The HTTP timeout policy is not configured correctly.
- The vtys are not configured correctly.

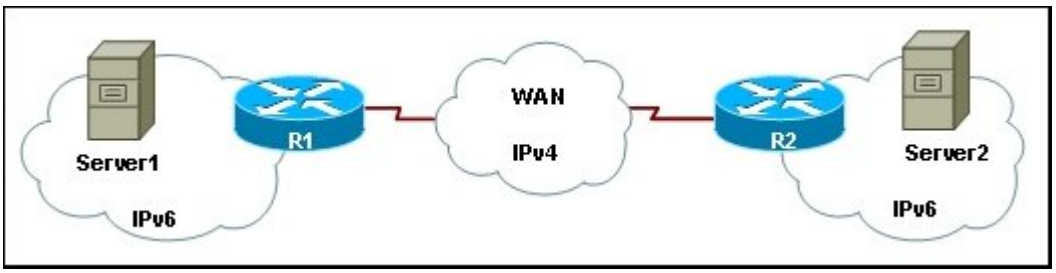
51

```
<output omitted>
ip dhcp pool 172Network
network 172.16.1.128 255.255.255.128
default-router 172.16.1.1
dns-server  172.16.1.2
!
interface FastEthernet0/0
ip address 172.16.1.1 255.255.255.128
duplex auto
speed auto
!
<output omitted>
```

Refer to the exhibit. A host that is connected to Fa0/0 is unable to acquire an IP address dynamically fro DHCP server. The output of the **debug ip dhcp server** command shows "DHCPD: there is no address p 172.16.1.1". What is the problem?

- The default router for the 172Network pool is incorrect.
- The 172.16.1.1 address is already configured on Fa0/0.
- The pool of addresses for the 172Network pool is incorrect.
- The **ip helper-address** command should be implemented on the Fa0/0 interface.

52



Refer to the exhibit. Company ABC expanded its business and recently opened a new branch office in a country. IPv6 addresses have been used for the company network. The data servers Server1 and Server2 applications which require end-to-end functionality, with unmodified packets that are forwarded from th to the destination. The edge routers R1 and R2 support dual stack configuration. What solution should b deployed at the edge of the company network in order to successfully interconnect both offices?

- a new WAN service supporting only IPv6
- NAT overload to map inside IPv6 addresses to outside IPv4 address
- a manually configured IPv6 tunnel between the edge routers R1 and R2
- static NAT to map inside IPv6 addresses of the servers to an outside IPv4 address and dynamic NA rest of the inside IPv6 addresses