

**Designing & Troubleshooting Open Standard Networks -Rav Edition-**

Number: HP0-Y32  
Passing Score: 670  
Time Limit: 150 min  
File Version: 1.0



**Exam A****QUESTION 1**

A heterogeneous network has Cisco Catalyst switches and HP 5400 zl switches. The network administrator is hardening spanning tree protocol (STP). Where would the

Select a location for each feature. (You can select the same location more than once.)

**Q: BPDU protection**

(select one from dropdown list)

- Edge ports
- Ports on root switches
- Routed ports

**Q: Root guard**

(select one from dropdown list)

- Edge ports
- Ports on root switches
- Routed ports

**Q: BPDU filter**

(select one from dropdown list)

- Edge ports
- Ports on root switches
- Routed ports

**Q: BPDU guard**

(select one from dropdown list)

- Edge ports
- Ports on root switches
- Routed ports

- A. 

---

Protection on Edge - BPDU Guard on Edge - Root Guard on Ports on root Switches - BPDU Filter on Routed ports

---
- B.
- C.
- D.

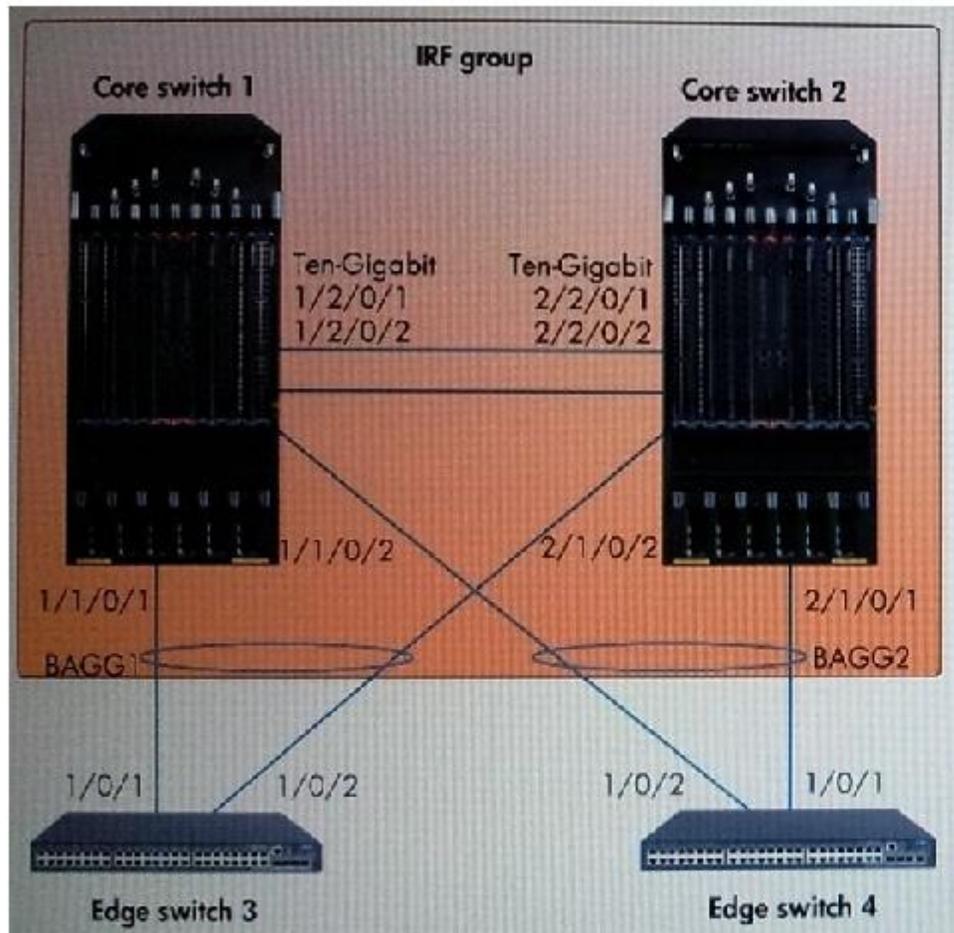
**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 2**



In the network shown in the exhibit, all switch-to-switch links should carry VLANs 1 through 4. The core switches are an IRF group. The IRF group should be the default gateway for all VLANs traffic to other segments of the network.

Select the most likely problem for each symptom.

**Q: Endpoints in VLAN 2 throughout the network experience problems.**

(select one)

- Misconfigured IP helper address
- MSTP not blocking loops correctly
- Incorrect VLAN tagging

**Q: Only endpoints in VLAN 2 connected to edge switch 3 experience problems.**

(select one)

- Misconfigured IP helper address
- MSTP not blocking loops correctly
- Incorrect VLAN tagging

- A. End Points in Vlan 2 : Misconfigured IP Helper
- B. Edge Swtich 3 : Incorrect VLAN Tagging
- C.
- D.

**Correct Answer:** AB

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 3

Refer to the exhibit.

Exhibit: Portion of config for a switch

```
ip access-list standard "1"  
 10 permit 10.1.3.0 0.255.255.255  
interface vlan 2  
  ip access-group 1 out  
  ip address 10.1.2.1 255.255.255.0
```

A network administrator has configured an access control list (ACL) on an HP 8200 zl switch. The desired behavior is as follows:

- Devices in 10.1.3.0/24 can reach devices in 10.1.2.0/24.
- Devices in 10.1.2.0/24 can reach other devices in 10.1.2.0/24.
- No other devices can reach devices in 10.1.2.0/24.

The exhibit shows the configuration. The ACL does not exhibit the desired behavior.

- A. The ACL should be reconfigured with different wildcard bits.
- B. The ACL should have a deny any entry at the end.
- C. The ACL should be applied as a VLAN ACL.
- D. The ACL should be applied as an inbound ACL.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 4

Refer to the exhibit.

Exhibit: Portion of config for Cisco switch

```
router ospf 1
 log-adjacency-changes
 network 10.1.0.0 0.0.0.255 area 0
 nsf ietf restart-interval 120
```

A network includes Cisco and HP routing switches. The network runs Open Shortest Path First (OSPF). The network administrator has shown in the exhibit. One of the Cisco device's neighbors is an HP 7500 switch. Assume that the switches have established full adjacency with each other for OSPF graceful restart.

How can the network administrator configure the HP 7500 switch to interoperate with the graceful restart configuration of the Cisco device?

- A. Configure the graceful restart helper list.
- B. Enable out-of-band resynchronization and link local signaling.
- C. Set the graceful restart time to match the Cisco device's time.
- D. Enable the opaque LSA capability.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 5**

## Exhibit: Command output

```
crypto key generate rsa usage-keys modulus 1024
ip ssh version 2
line vty 0 4
  transport input ssh
  login local
  exit
username manager privilege 15 password mysecret

HP 5800 switch

radius scheme system
  server-type extended
  primary authentication 127.0.0.1 1645
  primary accounting 127.0.0.1 1646
  user-name-format without-domain
#
domain system
  access-limit disable
  state active
  idle-cut disable
  self-service-url disable
#
user-group system
#
public-key local create rsa
ssh server enable
user-interface vty 0 4
  protocol inbound ssh
  quit
local-user manager
  password cipher mysecret
  service-type ssh
  authorization-attribute level 3
  quit
```

A network administrator is setting up secure management in a heterogeneous network that includes both Cisco Catalyst 3750 switches and HP 5800 switches. The administrator has already configured the Cisco Catalyst 3750 switch and for an HP 5800 switch. Which additional step should the network administrator complete on the HP switch so that it is secure?

- A. Set the privilege level to 3 on the VTY interfaces.
- B. Set the authentication-mode to scheme on the VTY.
- C. Set the privilege level to 15 on the VTY interfaces.
- D. Set the SSH version to 2.

**Correct Answer:** D  
**Section:** (none)  
**Explanation**

**Explanation/Reference:**

#### QUESTION 6

A network administrator is configuring a heterogeneous network that includes both Cisco Catalyst 3750 switches and HP 5800 switches. The network must identify each other.

Which protocols must the switches run to meet this goal?

- A. CDP on the HP 5800 switches and the Cisco 3750 switches
- B. LLDP on the HP 5800 switches and on the Cisco 3750 switches
- C. NDP on the HP 5800 switches and CDP on the Cisco 3750 switches
- D. CDP on the HP 5800 switches and LLDP on the Cisco 3750 switches

**Correct Answer:** B  
**Section:** (none)  
**Explanation**

**Explanation/Reference:**

#### QUESTION 7

Which benefit does a preempt delay for Virtual Routing Redundancy Protocol (VRRP) offer?

- A. Conflicts between VRRP group members with the same priority do not cause issues.
- B. The VRRP group can establish itself more quickly during the initial configuration.
- C. A former master can converge its routing table before it takes over again as master.
- D. A standby router does not become master when the master has a momentary loss of connectivity.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 8**

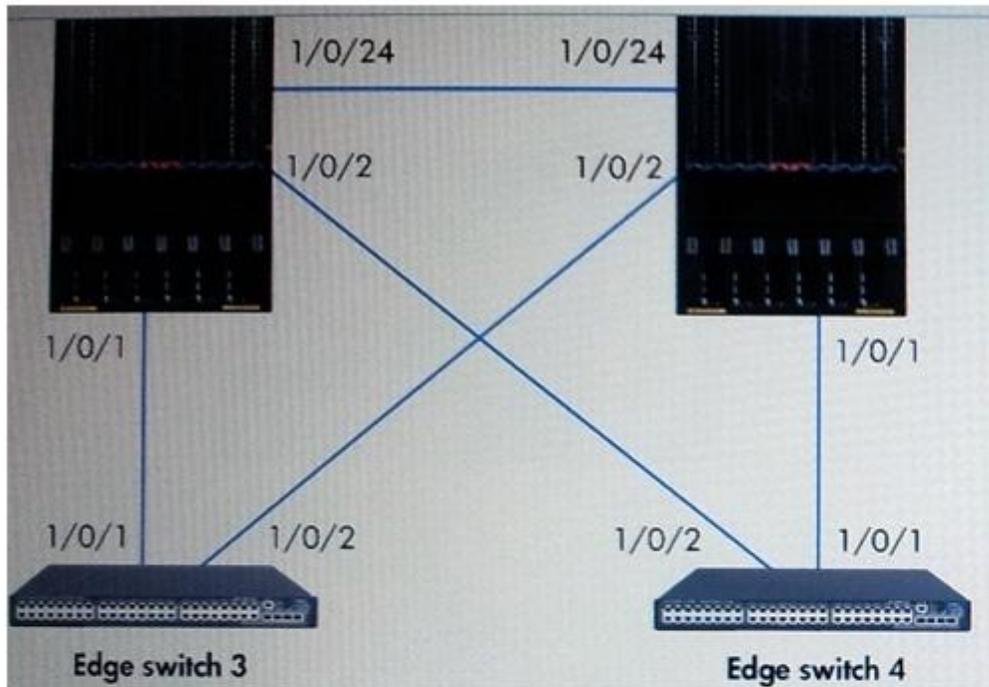


Exhibit 2: Command output

```
<EdgeswitchB>display stp instance 0 brief
MSTID    Port                Role    STP State    Protection
  0       GigabitEthernet1/0/1  ROOT   FORWARDING   NONE
  0       GigabitEthernet1/0/2  ALTE   DISCARDING   NONE
<EdgeSwitch3>display stp instance 1 brief
MSTID    Port                Role    STP State    Protection
  1       GigabitEthernet1/0/1  MAST   FORWARDING   NONE
  1       GigabitEthernet1/0/2  ALTE   DISCARDING   NONE
<EdgeSwitch3>display stp instance 2 brief
MSTID    Port                Role    STP State    Protection
  2       GigabitEthernet1/0/1  MAST   FORWARDING   NONE
  2       GigabitEthernet1/0/2  ALTE   DISCARDING   NONE
```

Users on a particular floor report slow connections. The network administrator suspects that the switch (Edge Switch 3) might not be using both of its

Based on the information shown in the exhibits, what is one setting that the network administrator should check to fix this problem?

- A. path cost method on Edge Switch 3
- B. core switches' STP instance priorities, which should make a different switch root in each instance
- C. MSTP region settings on Edge Switch 3
- D. path costs on Edge Switch 3's port 1/0/1 (also path costs on port 1/0/24 on Core Switch 1)

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 9**

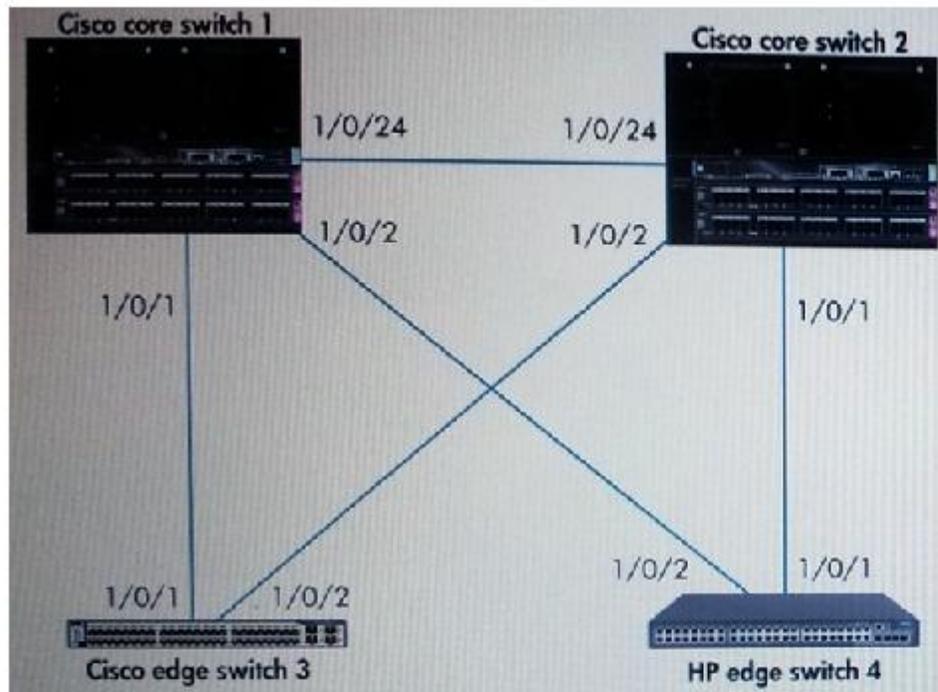


Exhibit 2: Portion of confias for switches

```

Cisco core switch 1
spanning-tree mode rapld-pvst
spanning-tree pathcost method long
spanning-tree vlan 1-2 priority root primary
spanning-tree vlan 3-4 priority root secondary
interface gigabitethernet 1/0/1
switchport mode trunk
switchport trunk native vlan 2
switchport trunk allowed vlan 1-4
  
```

```

Cisco edge switch 3
spanning-tree mode rapid
spanning-tree pathcost *MISSING*
interface gigabitethern *MISSING*
switchport mode trunk *MISSING*
switchport trunk nativ *MISSING*
switchport trunk allow *MISSING*
  
```

```
Cisco core switch 2
spanning-tree mode rapid-pvst
spanning-tree pathcost method long
spanning-tree vlan 1-2 priority root secondary
spanning-tree vlan 3-4 priority root primary
interface gigabitethernet 1/0/1
switchport mode trunk
switchport trunk native vlan 2
switchport trunk allowed vlan 1-4
```

```
HP edge switch
stp enable
stp pathcost-standard *MISSING*
interface GigabitEther*MISSING*
port link-type trunk *MISSING*
port trunk pvid vlan *MISSING*
port trunk permit vla*MISSING*
interface GigabitEther*MISSING*
port link-type trunk *MISSING*
port trunk pvid vlan *MISSING*
port trunk permit vla*MISSING*
stp instance 0 cost 1
```

In Exhibit 1, all links are GigabitEthernet links, and only two edge switches are shown. The network includes Cisco Catalyst 4500 switches, Cisco Catalyst 3750 switches, and HP 5500 switches. Each switch has a single port shown for that switch. Other ports that you see in Exhibit 1 have the same configuration as the single port shown for that switch. Spanning tree settings that are not shown are the default settings.

How can the network administrator enhance the efficiency of the design?

HP Edge Switch

STP Pathcost-Standard Dot1t

Interface GigabitEthernet 1/0/2  
STP Instance 0 Cost 15000

- A. Ensure the most efficient traffic flow by raising the priority on the core switches (or lowering the priority for HP 5500 switches).
- B. Introduce load balancing by setting the port cost on the HP 5500 GigabitEthernet 1/0/2 port to 10000 (in instance 0).
- C. Ensure that Cisco edge switches can implement the uplink fast feature by setting their path cost calculation method to short.
- D. Prevent core traffic from passing through an edge switch by setting the port cost on the GigabitEthernet 1/0/24 port on the core switches to 10000 (in VLANs 2, 3, and 4).

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 10**

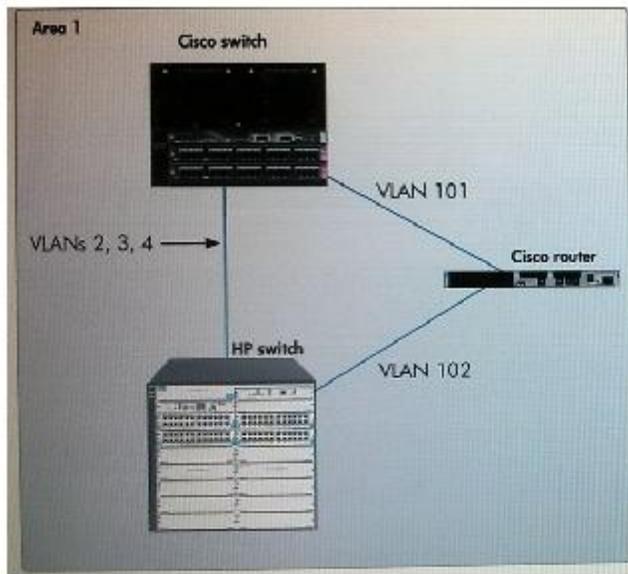


Exhibit 2: Portion of confias for Cisco devices

```
Cisco router
interface gigabitethernet 0/1
 ip address 10.0.1.1 255.255.255.252
interface gigabitethernet 1/1
 ip address 10.1.1.1 255.255.255.252
interface gigabitethernet 1/2
 ip address 10.1.1.5 255.255.255.252
router ospf 1
 network 10.0.0.0 0.0.255.255 area 0
 network 10.1.0.0 0.0.7.255 area 1
 area 1 stub no-summary
```

```
Cisco switch
interface vlan 2
 ip address 10.1.2.1 255.255.255.0
interface vlan 3
 ip address 10.1.3.1 255.255.255.0
interface vlan 4
 ip address 10.1.4.1 255.255.255.0
interface vlan 101
 ip address 10.1.1.2 255.255.255.252
router ospf 1
 network 10.1.0.0 0.0.7.255 area 1
 area 1 stub
```

A network administrator is adding an HP switch to a network with existing Cisco Catalyst 4500 switches and a Cisco router. The network implements Open Shortest Path First (OSPF) on VLANs 2 and 102 but not VLANs 3 and 4. The network administrator wants the HP switch to redistribute routes from

Which changes does the network administrator need to implement on the existing Cisco router and switches for this configuration to succeed?

- A. Enable the advertisement of summary routes in area 1 on the Cisco router.
- B. Enable redistribution of external routes in OSPF.
- C. Configure VLANs 3 and 4 as a passive interface on the Cisco switch.
- D. Configure area 1 as a not so stubby area (NSSA).

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 11**

Exhibit: Command output

```
Switch(corrfig)# show interface 2
```

```
Status and counters - Port counters for port 2
```

```
Name :
MAC Address      : 0024a8-e5a9fe
Link status      : up
Totals (since boot or last clear) :
  Bytes Rx       : 1,033,484,145          Bytes Tx       : 2,222,260
  Unicast Rx     : 1488                  Unicast Tx     : 1585
  Bcast/Mcast Rx : 118,091,347          Bcast/Mcast Tx : 2729
Errors (since boot or last clear) :
  Fcs Rx        : 11                    Drops Tx       : 0
  Alignment Rx  : 8                     Collisions Tx  : 24
  Runts Rx      : 0                     Late Colln Tx  : 21
  Giants Rx     : 12                    Excessive Colln : 0
  Total Rx Errors : 31                  Deferred Tx    : 0
Others (since boot or last clear) :
  Discard Rx    : 0                     Out Queue Len  : 0
  Unknown Protos : 0
Rates (5 minute weighted average) :
  Total Rx (bps) : 380792                Total Tx (bps) : 243744
  Unicast Rx (Pkts/sec) : 0              Unicast Tx (Pkts/sec) : 0
  B/Mcast Rx (Pkts/sec) : 0              B/Mcast Tx (Pkts/sec) : 0
  Utilization Rx : 00.38 %                Utilization Tx : 00.24 %
```

A network administrator is troubleshooting connectivity issues. The network administrator views the port statistics and sees the output shown in the exhibit. Several issues are identified.

What are two of the issues? (Select two.)

- A. Fiber cable is connected incorrectly to this port (or the connected port).
- B. The connected device has a faulty NIC.
- C. The connected device is using half duplex.
- D. A VLAN on this port includes too many devices spread over too large an area.
- E. A VLAN on this port has a loop in the topology.

**Correct Answer:** BC  
**Section:** (none)  
**Explanation**

**Explanation/Reference:**

#### QUESTION 12

Refer to the exhibit.

Exhibit: Portion of config

```
smart-link group 1
port GigabitEthernet 1/0/1 master
port GigabitEthernet 1/0/2 slave
preemption mode role
smart-link group 2
port GigabitEthernet 1/0/2 master
port GigabitEthernet 1/0/1 slave
preemption mode role
```

The network administrator wants an HP 5830 switch to carry VLANs 1 and 3 on GigabitEthernet 1/0/1 and to carry VLANs 2 and 4 on GigabitEthernet 1/0/2 during normal operation.

Which step must the network administrator complete?

- A. Map smart link group 1 to the Layer 3 VLAN 1 and VLAN 3 interfaces. Map smart link group 2 to the Layer 3 VLAN 2 and VLAN 4 interfaces.
- B. Map VLANs 1 and 3 to MSTP instance 1. Map VLANs 2 and 4 to MSTP instance 2. Map MSTP instance 1 to smart link group 1 and MSTP instance 2 to smart link group 2.
- C. Map VLAN 1 and VLAN 3 to smart link group 1. Map VLAN 2 and VLAN 4 to smart link group 2.
- D. Map smart link group 1 to the Layer 2 VLAN 1 and VLAN 3 interfaces. Map smart link group 2 to the Layer 2 VLAN 2 and VLAN 4 interfaces.

**Correct Answer:** B  
**Section:** (none)  
**Explanation**

**Explanation/Reference:**

#### QUESTION 13

A network administrator is troubleshooting a unidirectional fiber link that does not come up. What is the first step that the network administrator should complete?

- A. Replace one of the transceivers.
- B. Swap the transmit and receive fibers at one side of the connection.
- C. Connect one of the transceivers to a known good transceiver on the same switch using a bidirectional fiber cable.
- D. Swap the transmit and receive fibers at both sides of the connection.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 14

Exhibit: Portion of config

```
acl number 2001
 rule 10 permit source 10.1.3.0 0.0.0.255
interface vlan-interface2
 ip address 10.1.2.1 255.255.255.0
 packet-filter 2001 inbound
```

A network administrator has configured an access control list (ACL) on an HP 10500 switch. The desired behavior is as follows:

- Devices in 10.1.3.0/24 can reach devices in 10.1.2.0/24.
- Devices in 10.1.2.0/24 can reach other devices in 10.1.2.0/24.
- No other devices can reach devices in 10.1.2.0/24.

The exhibit shows the configuration. The ACL permits traffic that should be denied. What is the problem?

- A. The ACL should be applied as a VLAN ACL
- B. The ACL should be an extended ACL; the rules should specify the IP protocol, the current sources, and 10.1.2.0 0.0.0.255 for the destinations.
- C. The ACL should be applied as an outbound ACL.

D. The ACL should have a rule that denies all traffic at the end.

**Correct Answer:** A

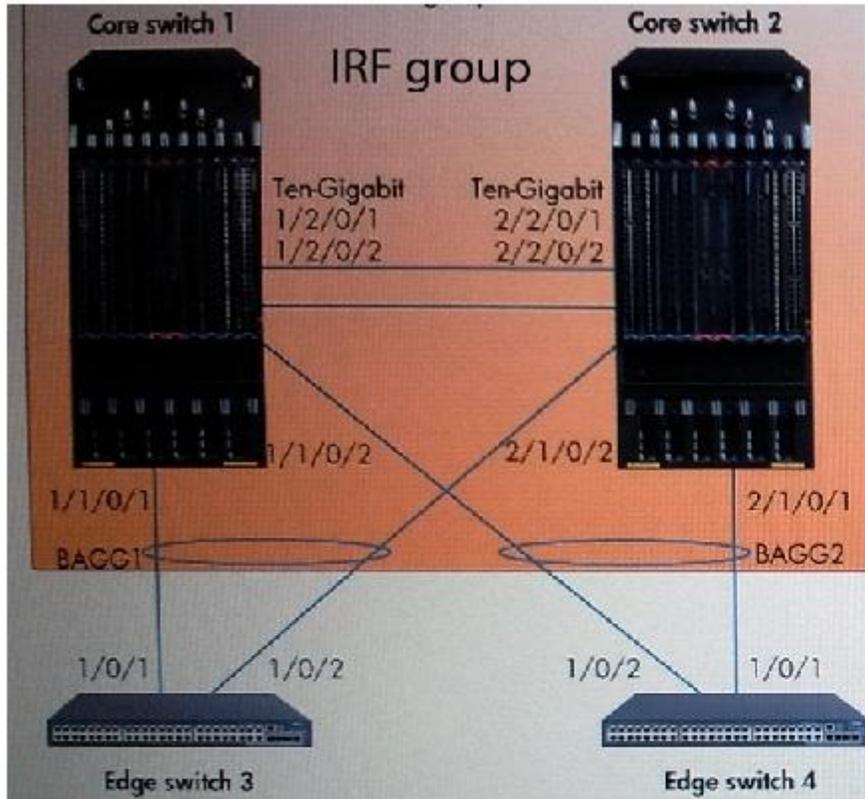
**Section:** (none)

**Explanation**

**Explanation/Reference:**

This is I'm not sure off i feel all answers are wrong :P

**QUESTION 15**



In the network shown in the exhibit, all switch-to-switch links should carry VLANs 1 through 4. The core switches are an IRF group. The IRF group acts as the default gateway for the network and the internet. Some endpoints are having connectivity problems.

Select the most likely problem for each symptom.

Question:

**All users connected to edge switch 3 cannot receive connectivity:**

Select one of answers:

- Routing issue
- Link aggregation issue

Question:

**All users can reach only resources in their own subnets.**

Select one of answers:

- Routing issue
- Link aggregation issue

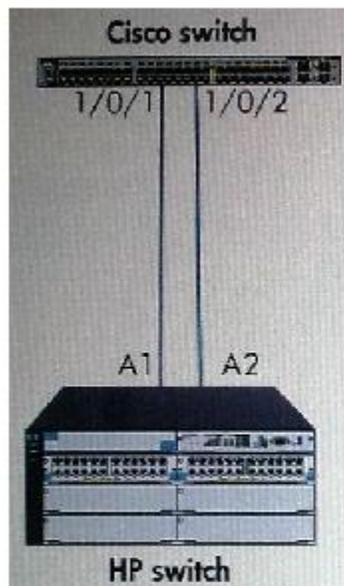
- A. All Users on Edge 3 : Link Aggregation
- B. All Users can reach own resources : Routing Issue

**Correct Answer:** AB  
**Section:** (none)  
**Explanation**

**Explanation/Reference:**

### QUESTION 16

Exhibit: Network topology



A network administrator wants to configure a link aggregation between a Cisco Catalyst 3750 switch and an HP 5400 zl switch. Assume that the physical interfaces are already configured. Which two configuration commands are required on the HP switch?

```
HP_Switch(config) # trunk A1-A2 trk1 lacp
Cisco_Switch(config)# interface Port-channel 1
```

For the link to establish successfully, how must the network administrator finish configuring the Cisco switch?

- A. Associate GigabitEthernet interfaces 1/0/1 and 1/0/2 with port-channel 1 in *on* mode. Set the lacp method to *passive* mode.
- B. Associate GigabitEthernet interfaces 1/0/1 and 1/0/2 with port-channel 1 in *on* mode.
- C. Associate GigabitEthernet interfaces 1/0/1 and 1/0/2 with port-channel 1 in *passive* mode.
- D. Associate GigabitEthernet interfaces 1/0/1 and 1/0/2 with port-channel 1 in *active* mode.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 17**

Refer to the exhibits.

Exhibit 1: Network topology

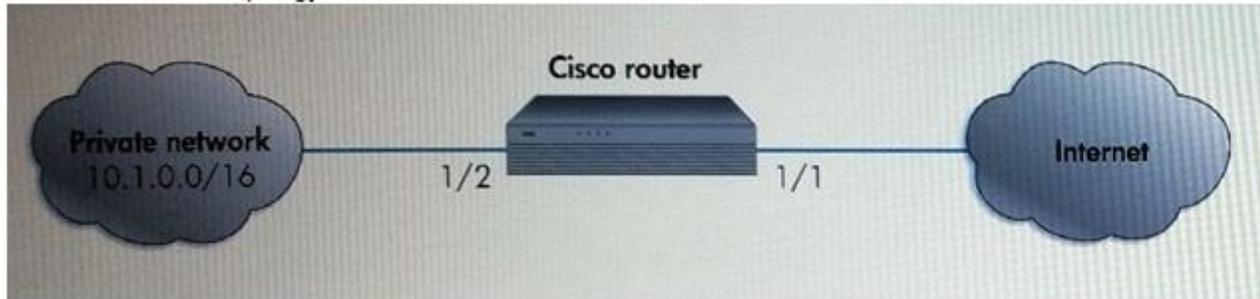


Exhibit 2: Portion of confio for HP router

```
HP router
interface gigabitethernet 1/1
 ip address 172.16.1.1 255.255.255.252
interface gigabitethernet 1/2
 ip address 10.1.1.1 255.255.255.252
access-list 2001
 rule 10 permit source 172.16.1.1 0.0.0.0
 rule 20 deny source any
access-list 2002
 rule 10 permit 10.1.1.0 0.0.0.255
 rule 20 deny source any
```

A company is implementing Network Address Translation (NAT) on the HP MultiService Router (MSR) 50-40 shown in Exhibit 1. The router should translate the source on the internet. Exhibit 2 shows a portion of the configuration.

- A. Configure outbound NAT on ACL 2001 on GigabitEthernet 1/1.
- B. Configure inbound NAT on ACL 2001 on GigabitEthernet 1/2.
- C. Configure inbound NAT on ACL 2002 on GigabitEthernet 1/2.
- D. Configure outbound NAT on ACL 2002 on GigabitEthernet 1/1.

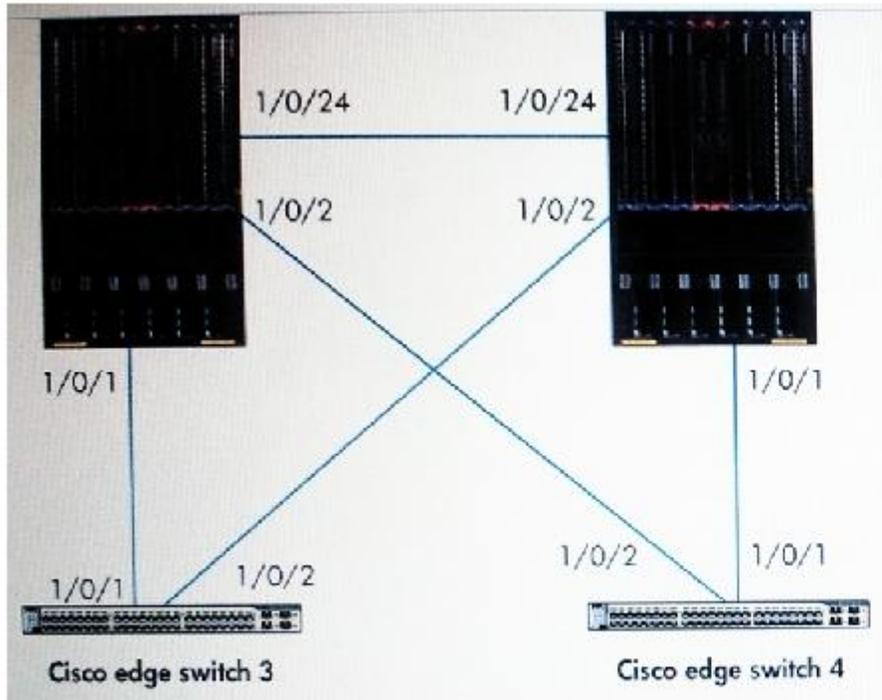
**Correct Answer: D**

**Section: (none)**

**Explanation**

Explanation/Reference:

QUESTION 18



This heterogeneous network includes two HP 10500 core switches and several Cisco Catalyst 3750 switches at the edge. Which design provides the fastest failover the

- A. Configure MSTP on the HP switches and the Cisco switches.
- B. Configure MSTP on the HP switches. Configure PVST+ on the Cisco switches, which do not support MSTP. On each Cisco switch raise the cost for half of the VLAN
- C. Implement IRF on the HP switches. Use link aggregation groups to connect the Cisco switches to the HP core switches.
- D. Configure MSTP on the HP switches. Configure PVST+ on the Cisco switches, which do not support MSTP. Leave the default port costs.

**Correct Answer:** C  
**Section:** (none)  
**Explanation**

**Explanation/Reference:**

#### QUESTION 19

A heterogeneous network includes Cisco Catalyst 3750 switches and HP 5500 switches. The switches implement Multiple Spanning Tree Protocol (MSTP). The network switch links support the correct VLANs. The network administrator wants to minimize potential for misconfiguration and also to avoid performance impacts.

What is the best solution?

- A. Allow all VLANs on each switch-to-switch link.
- B. Configure VLAN Trunk Protocol (VTP) on the Cisco and the HP switches.
- C. Allow only the required VLANs on each switch-to-switch link.
- D. Configure GARP VLAN Registration Protocol (GVRP) on the Cisco and the HP switches.

**Correct Answer:** D  
**Section:** (none)  
**Explanation**

**Explanation/Reference:**

#### QUESTION 20

A company is adding two HP 10500 switches to a network with Cisco switches. Several of the Cisco switches use stateful Failover of Network Address Translation (SNAT). The network administrator wants to obtain similar benefits on the HP switches. Which HP feature would meet this requirement?

- A. Virtual Redundant Router Protocol (VRRP) with load-balancing enabled
- B. Intelligent Redundancy Framework (IRF)
- C. Hot Standby Router Protocol (HSRP)

D. Virtual Redundant Router Protocol (VRRP) with tracking enabled

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 21

Refer to the exhibit.

Exhibit: Portion of config for a switch

```
traffic classifier dot1p6
  if-match dot1p 6
traffic behavior dscp40
  mark dscp 40
qos policy Policy1
  classifier dot1p6 behavior dscp40
interface GigabitEthernet 1/0/1
  qos apply policy Policy1 in
```

The exhibit shows the configuration for one port. The configuration for other ports is the same. Port settings that are not shown are at their factory default settings.

A company has Voice over IP (VoIP) phones that send traffic tagged with 802.1p value 6. These phones connect to HP 5500 switches. The switches should use the 802.1p Code-Point (DSCP) value. The network administrator has configured policies to meet these requirements. However, the voice quality is poor, and the network administrator

Based on the settings shown in the exhibit, what is the problem?

- A. QoS has not been activated on the switch's ports.
- B. The QoS policy does not properly select the traffic.
- C. The edge ports that connect to the high priority devices do not trust QoS.
- D. The QoS policy has not been applied to the correct interface.

**Correct Answer:** C

**Section:** (none)

## Explanation

### Explanation/Reference:

#### QUESTION 22

Refer to the exhibit.

Exhibit: Portion of configs for switches

```
Switch 1
ospf 1
 area 0
  network 10.1.0.0 0.0.31.255
 area 1
  network 10.1.32.0 0.0.31.255
interface vlan 10
 ip address 10.1.33.1 255.255.255.252
 ospf cost 10
```

```
Switch 2
ospf 1
 area 1
  network 10.1.32.0 0.0.3.255
  stub
interface vlan 10
 ip address 10.1.33.2 255.255.255.252
 ospf cost 20
```

Switch 1 and Switch 2 are connected using VLAN 10. The switches can ping each other on that VLAN. However, they are not learning Open Shortest Path First (OSPF)

What is the causing this problem?

- A. Switch 1 has different cost parameters than Switch 2.
- B. Switch 1 and Switch 2 have different networks defined for area 1.
- C. Switch 1 has different areas than Switch 2.
- D. Switch 2 defines area 1 as a stub area, and Switch 1 does not.

**Correct Answer: D**

**Section: (none)**  
**Explanation**

**Explanation/Reference:**

### QUESTION 23

Refer to the exhibit.

Exhibit: Command output

```
<Switch>display qos policy interface gigabit 1/0/1
```

```
Interface: GigabitEthernet1/0/1
```

```
Direction: inbound
```

```
Policy: voice high
```

```
Classifier: voice
```

```
Operator: AND
```

```
Rule(s) : If-match acl 2001
```

```
          If-match acl 2002
```

```
Behavior: high
```

```
Marking:
```

```
  Remark dot1p COS 6
```

```
Marking:
```

```
  Remark dscp cs6
```

```
<Switch>display acl 2001
```

```
Basic acl 2001, named Voicevlan5, 2 rules,
```

```
ACL's step is 5
```

```
rule 0 permit source 10.5.0.0 0.0.0.255
```

```
rule 5 deny
```

```
<Switch>display acl 2002
```

```
Basic ACL 2002, named Voicevlan6, 2 rules,
```

```
ACL's step is 5
```

```
rule 0 permit source 10.6.0.0 0.0.0.255
```

```
rule 5 deny
```

A company has a Voice over IP (VoIP) solution. The network administrator has configured QoS policies on HP 5500 switches. The policies should select VoIP traffic and place it in a high priority queue. The voice quality is poor, and the network administrator suspects that edge switches are not applying QoS in the proper manner.

Based on the information shown in the exhibit, what is the problem?

- A. The "high" traffic behavior should not include both 802.1p and DiffServ statements.
- B. One of the ACLs is misconfigured.
- C. The QoS policy is not applied in the correct direction.
- D. The "voice" traffic class does not use the correct operator.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 24**

Refer to the exhibits

Exhibit 1: Network topology

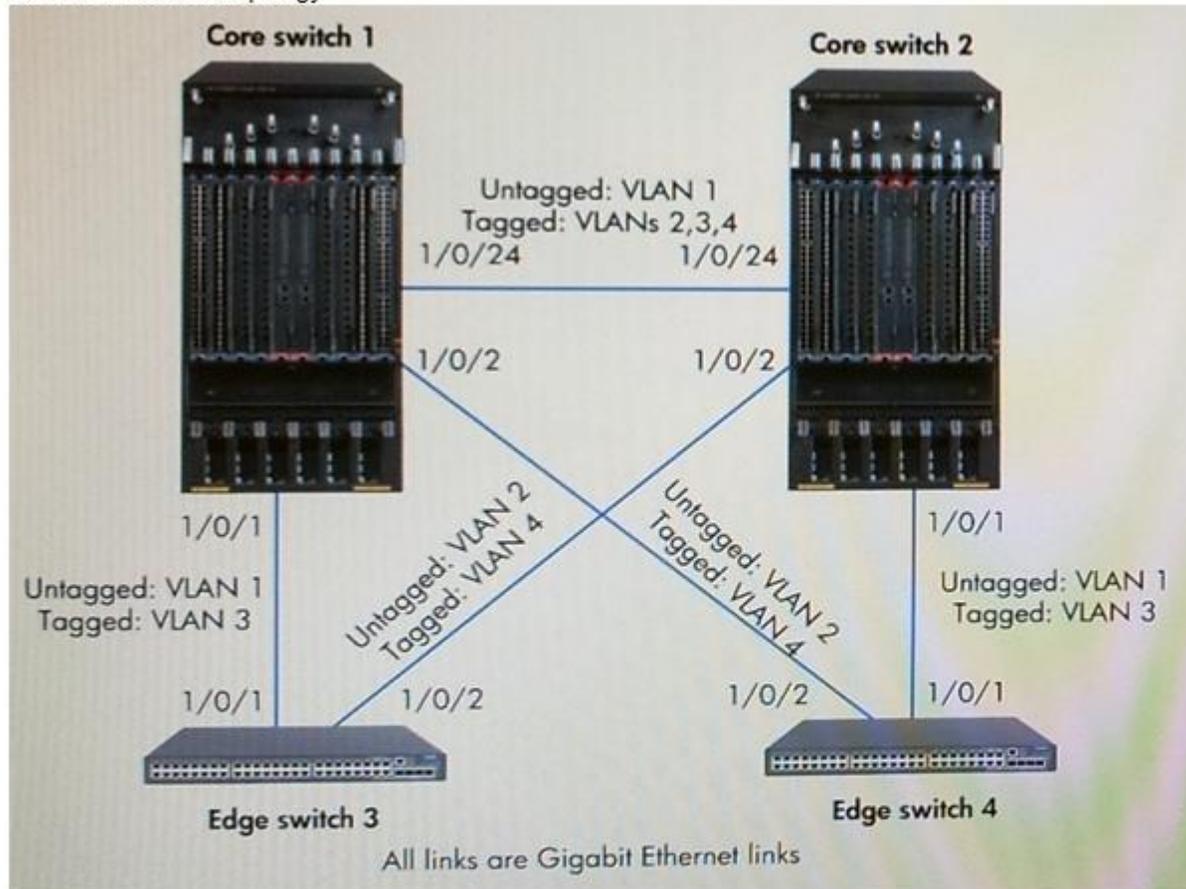


Exhibit 2: Portion of config for switches

```

Coreswitch1
#
 stp instance 0 root primary
 stp instance 1 root primary
 stp instance 2 root secondary
 stp enable
 stp region-configuration
 region-name hp
  
```

```

EdgeswitchB
 stp enable
 stp region-configuration
 region-name hp
 instance 1 vlan 2
 instance 2 vlan 3 to 4
 active region-configuration
  
```

```
instance 1 vlan 2
instance 2 vlan 3 to 4
active region-configuration
#
interface vlan-interface1
ip address 10.1.1.1 255.255.255.0
vrrp vrid 1 virtual-ip 10.1.1.254
vrrp vrid 1 priority 254
#
interface vlan-interface2
ip address 10.1.2.1 255.255.255.0
vrrp vrid 2 virtual-ip 10.1.2.254
vrrp vrid 2 priority 254
#
interface vlan-interface3
ip address 10.1.3.1 255.255.255.0
vrrp vrid 3 virtual-ip 10.1.3.254
#
interface vlan-interface4
ip address 10.1.4.1 255.255.255.0
vrrp vrid 4 virtual-ip 10.1.4.254
```

Coreswitch2

```
#
stp instance 0 root secondary
stp instance 1 root secondary
stp instance 2 root primary
stp enable
stp region-configuration
region-name hp
instance 1 vlan 2
instance 2 vlan 3 to 4
active region-configuration
#
interface vlan-interface1
ip address 10.1.1.2 255.255.255.0
vrrp vrid 1 virtual-ip 10.1.1.254
#
interface vlan-interface2
ip address 10.1.2.2 255.255.255.0
vrrp vrid 2 virtual-ip 10.1.2.254
#
interface vlan-interface3
ip address 10.1.3.2 255.255.255.0
vrrp vrid 3 virtual-ip 10.1.3.254
vrrp vrid 3 priority 254
..
```

Edgeswitch4

```
stp enable
stp region-configuration
region-name hp
instance 1 vlan 2
instance 2 vlan 3 to 4
active region-configuration
```

```
#  
interface vlan-interface4  
ip address 10.1.4.2 255.255.255.0  
vrrp vrid 4 virtual-ip 10.1.4.254  
vrrp vrid 4 priority 254
```

Exhibit 1 shows the topology for a network with redundant core switches. The network administrator has configured the switches as shown in Exhibit 2. Some users in the link between the core switches failed.

Why did the redundancy solution fail to function properly?

- A. Preempt mode for VRRP is enabled by default, and the backup VRRP router took over improperly while MSTP converged.
- B. The VRIDs did not match across the VLAN interfaces, which prevented the VRRP domain from establishing.
- C. VRRP was configured on the correct VLANs but was not activated, so failover did not occur.
- D. The reconverged spanning tree topology blocked some links that were the only ones carrying a particular VLAN.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 25**

Refer to the exhibit.

Exhibit: Command output

```
<Router>display nat statistics
total PAT session table count: 0
total NO-PAT session table count: 0
total SERVER session table count: 2
total STATIC session table count: 0
total FRAGMENT session table count: 0

active PAT session table count: 0
active NO-PAT session table count: 0
active FRAGMENT session table count: 0

<Router>display nat all
NAT address-group information:
  There are currently 1 nat address-group(s)
  1      : from 172.16.1.100      to 172.16.1.100

NAT bound information:
  There are currently 2 nat bound rule(s)
  Interface: GigabitEthernet0/1
    Direction: outbound ACL: 2002  Address-group: 1    NO-PAT: Y

  Interface: GigabitEthernet0/1
    Direction: outbound ACL: 2001  Address-group: ---  NO-PAT: N

NAT server in private network information:
  There are currently 2 internal server(s)
  Interface: GigabitEthernet0/1, Protocol: 6(tcp)
    Global:      172.16.1.1 : 443
    Local :      10.1.2.100 : 443

  Interface: GigabitEthernet0/1, protocol: 6(tcp)
    Global:      172.16.1.1 : 80 (www)
    Local :      10.1.2.100 : 80 (www)
```

The network administrator updates the IP address of a Web server. The network administrator then reconfigures the HP-MSR50-40's Network Address Translation (NAT) hosts on the internet cannot reach the server. The exhibit shows the output for `display` command.

What is a logical next step?

- A. Verify that the IP addresses and ports in the `nat server` command are correct.
- B. Verify that NAT is enabled globally.
- C. Verify that the `nat server` command is applied to the correct interface.
- D. Verify the syntax and order of rules in ACL 2002.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 26**

Refer to the exhibits.

Exhibit 1: Network topology

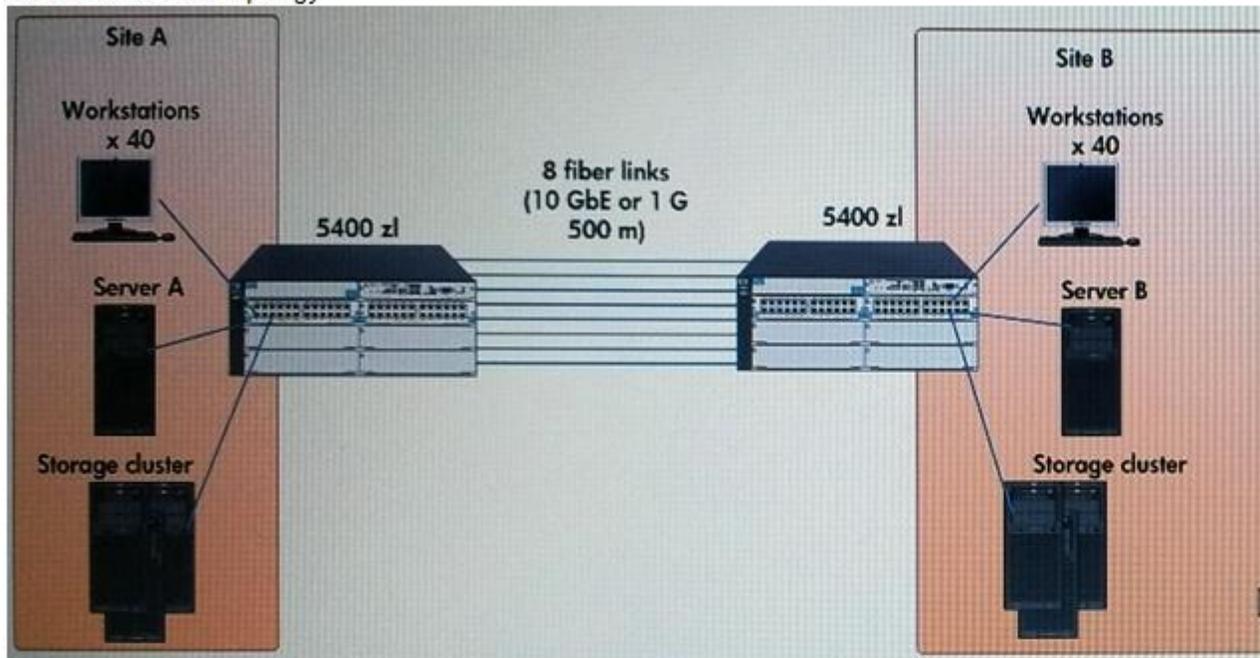


Exhibit 2: Traffic flow and utilization

Traffic type	Traffic Direction	Average Utilization	Burst Utilization	Notes
Storage	Site A to Site B	200 Mbps	2000 Mbps	Long Bursts
Storage	Site B to Site A	200 Mbps	2000 Mbps	Long Bursts
Video	Site A to Site B	50 Mbps per stream	50 Mbps per stream	
Video	Site B to Site A	50 Mbps per stream	50 Mbps per stream	
Workstation Receive Rate (All traffic types)	Site to site	70 Mbps	75 Mbps	Short Bursts
Workstation Transmit Rate (All traffic types)	Site to site	5 Mbps	10 Mbps	Short Bursts
Workstation storage	Local site	5 Mbps	50 Mbps	Long Bursts

A customer asks a network solution designer to design the link between two 5400 zl switches. Exhibit 1 shows eight fiber pairs available. Exhibit 2 shows the traffic volume

- A single TCP stream replicates storage between the sites.
- Every workstation at both sites is always receiving a high-bandwidth multicast video stream (50 MBps) from the single multicast server at the other site.
- Server A is always transmitting 10 streams to Site B.
- Server B is always transmitting 10 streams to Site A.
- Each workstation transmits unicast traffic to its own site's storage system.
- The workstations never communicate directly with one another.
- The sites compose a single Layer 2 network which uses Internet Group Management Protocol (IGMP) and Rapid Spanning Tree Protocol (RSTP).

The customer has these strict requirements:

- The site-to-site link is the lowest cost solution that meets other needs.
- The site-to-site link must have a 1:1 subscription of traffic.
- At least one fiber link can break without causing dropped traffic.

Based on these requirements, what is the most appropriate solution?

- A. two link aggregations, each with 2-10GB links
- B. two link aggregations, each with 4GB links
- C. one link aggregation of 2-10GB links
- D. one 10GB link

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

#### **QUESTION 27**

What is one reason to add a Differentiated Services Code Point (DSCP) to a frame with a non-zero 802.1p value?

- A. The priority needs to be preserved over a Frame Relay connection.
- B. An IPv6 device needs to trust the priority.
- C. The traffic requires higher priority than 802.1p allows.

D. An upstream switch needs to trust the priority.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 28

Refer to the exhibit

Exhibit: Command output

```
switch# show Interface 4
```

```
status and counters - Port counters for port 4
```

```
Name :
MAC Address      : 001c2e-1970fc
Link status      : up
Totals (since boot or last clear) :
  Bytes Rx       : 1,010,442,989
  Unicast Rx     : 59
  Bcast/Mcast Rx : 5,826,401
Errors (Since boot or last clear) :
  FCS Rx        : 0
  Alignment Rx  : 0
  Runt Rx       : 0
  Giants Rx     : 0
  Total Rx Errors : 0
Others (since boot or last clear) :
  Discard Rx    : 0
  Unknown Protos : 0
Rates (5 minute weighted average) :
  Total Rx (bps) : 27319464
  Unicast Rx (Pkts/sec) : 1
  B/Mcast Rx (Pkts/sec) : 17227
  Utilization Rx : 02.73 %
  Bytes TX      : 1,023,213,435
  Unicast Tx   : 518
  Bcast/Mcast TX : 5,899,769
  Drops Tx     : 0
  Collisions Tx : 0
  Late Colln Tx : 0
  Excessive Colln : 0
  Deferred Tx  : 0
  Out Queue Len : 0
  Total Tx (bps) : 27655416
  Unicast Tx (Pkts/sec) : 6
  B/Mcast Tx (Pkts/sec) : 17443
  Utilization Tx : 02.76 %
```

```
switch# show interface 4
```

```
status and counters - Port counters for port 4
```

status and counters - Port counters for port 4

```
Name :
MAC Address      : 001c2e-1970fc
Link status      : up
Totals (since boot or last clear) :
  Bytes Rx       : 4,088,837,059
  Unicast Rx     : 28,855
  Bcast/Mcast Rx : 303,200,856
Errors (since boot or last clear) :
  FCS Rx        : 0
  Alignment Rx  : 0
  Runts Rx      : 0
  Giants Rx     : 0
  Total Rx Errors : 0
Others (since boot or last clear) :
  Discard Rx    : 0
  Unknown Protos : 0
Rates (5 minute weighted average) :
  Total Rx (bps) : 748859248
  Unicast Rx (Pkts/sec) : 6
  B/Mcast Rx (Pkts/sec) : 489421
  Utilization Rx : 74.88 %
  Bytes Tx      : 320,293,340
  Unicast Tx    : 4229
  Bcast/Mcast Tx : 306,347,887
  Drops Tx     : 0
  Collisions Tx : 0
  Late Colln Tx : 0
  Excessive Colln : 0
  Deferred Tx  : 0
  Out Queue Len : 0
  Total Tx (bps) : 754950608
  Unicast Tx (Pkts/sec) : 13
  B/Mcast Tx (Pkts/sec) : 493492
  Utilization Tx : 75.49 %
```

A network administrator is troubleshooting connectivity issues. The network administrator collects the statistics with a four-minute (interval on a switch-to-switch port. T problem.

What is one of the issues?

- A. A VLAN on this port has a loop in the topology
- B. The fiber cable on this port is not connected correctly
- C. The connected device is using half duplex
- D. The connected device has a speed or a duplex mismatch

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

QUESTION 29

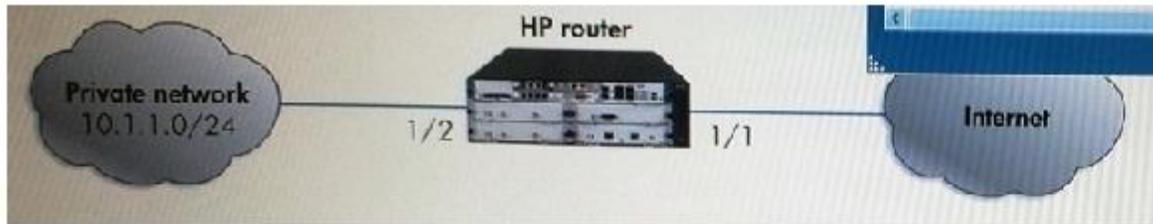


Exhibit 2: Portion of config

```
nat address-group 1 172.16.1.100 172.16.1.100
acl number 2001
  rule 10 permit source 10.1.0.0 0.0.3.255
  rule 20 deny source any
acl number 2002
  rule 10 permit source 10.1.2.100 0.0.0.0
  rule 20 deny source any
interface GigabitEthernet 1/1
ip address 172.16.1.1 255.255.255.0
nat outbound 2001
nat outbound 2002 address-group 1 no-pat
nat server protocol tcp global 10.1.2.100 www inside 172.16.1.100 www
nat server protocol tcp global 10.1.2.100 443 Inside 172.16.1.100 443
```

When a company updates the IP addresses of its Web server, the network administrator must reconfigure the Network Address Translation (NAT) policies for forwarding reach the server.

- A. The global and the private IP addresses are mixed up.
- B. The wrong ACL is selecting traffic from the server.
- C. The "nat outbound 2002" entry is applied to the wrong interface.
- D. The "nat outbound 2002" entry should not use the "no-pat" option.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 30**

A network administrator has associated subnet 10.1.2.0/25 with VLAN 2. What is the maximum number of endpoints for this VLAN?

- A. 63
- B. 126
- C. 128
- D. 510

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 31**

A heterogeneous network includes Cisco Catalyst 3750 switches and HP 5500 switches. The switches implement PVST+. The network administrator wants to minimize

What is the best solution?

- A. Allow all VLANs on each switch-to-switch link.
- B. Configure VTP on the Cisco and the HP switches.
- C. Configure GVRP on the Cisco and the HP switches.
- D. Allow only the required VLANs on each switch-to-switch link.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 32**

Several users on the same floor report that they cannot receive IP addresses and connect to the network. The IT staff member thinks that a connection has failed between relay services. Which test and result would help to validate this hypothesis?

- A. The staff member connects an endpoint with a correct static IP address to a port in the correct VLAN and pings the default gateway. The ping succeeds.
- B. The staff member establishes a console session with the default gateway and pings the DHCP server. The ping fails.
- C. The staff member connects an endpoint with a correct static IP address to a port in the correct VLAN and pings the default gateway. The ping fails.
- D. The staff member establishes a console session with the edge switch and pings the DHCP server. The ping succeeds.

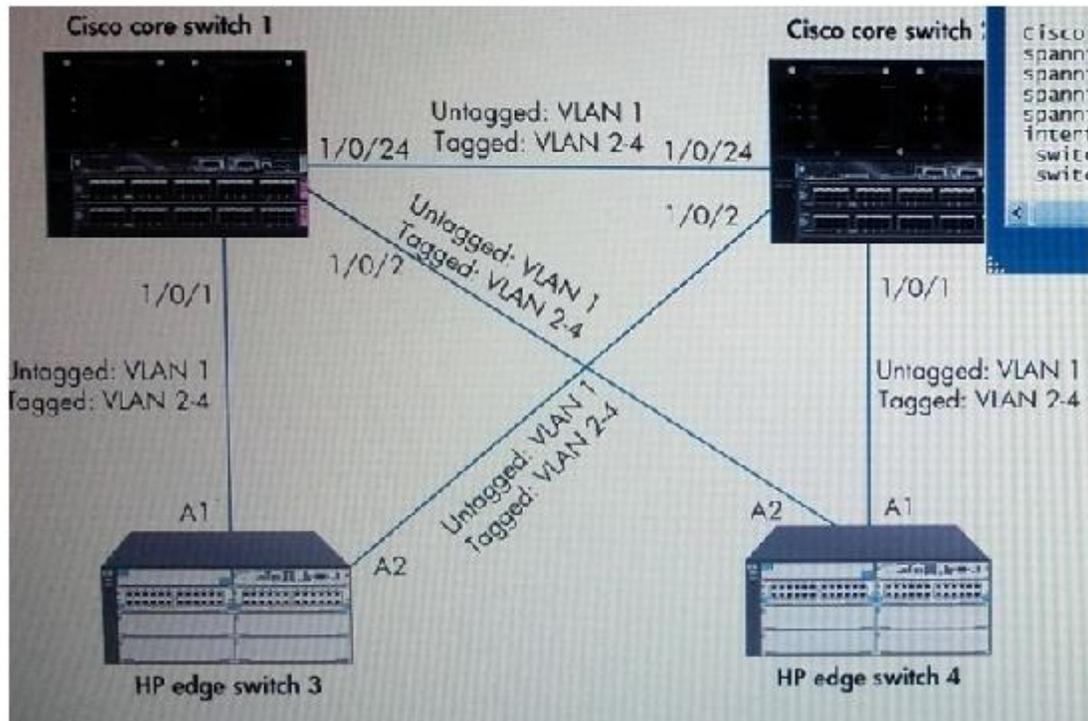
**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 33**



## Exhibit 2: Portion of configs for switches

```
Cisco core switch 1
spanning-tree mode rapid-pvst
spanning-tree pathcost method long
spanning-tree vlan 1-2 priority root primary
spanning-tree vlan 3-4 priority root secondary
interface gigabitethernet 1/0/1
  switchport mode trunk
  switchport trunk allowed vlan 1-4

Cisco core switch 2
spanning-tree mode rapid-pvst
spanning-tree pathcost method long
spanning-tree vlan 1-2 priority root secondary
spanning-tree vlan 3-4 priority root primary
interface gigabitethernet 1/0/1
  switchport mode trunk
  switchport trunk allowed vlan 1-4

HP edge switch 3
vlan 1
  name "DEFAULT_VLAN"
  untagged A1-A3
  no untagged A4-A24
  exit
vlan 2
  name "VLAN2"
  untagged A4-A5
  tagged A1-A2
  exit
vlan 3
  name "VLAN3"
  untagged A6-A16
  tagged A1-A2
  exit
vlan 4
  name "VLAN4"
  untagged A17-A24
  tagged A1-A2
  exit
```

In Exhibit 1, all links are GigabitEthernet links, and only two edge switches are shown. This heterogeneous network has Cisco Catalyst 4500 switches at the core and HP switches at the edge. Each switch has a single port on each switch. Other ports that you see in Exhibit 1 have the same configuration as the single port shown for that switch. Spanning tree configurations that are not shown are on the HP 5400 zl switches.

What is true of the links on Cisco Core Switch 2?

- A. PVST+ blocks all VLANs on two ports, and no loops occur.
- B. PVST+ does not block either link in any VLANs, and a loop occurs in all VLANs.
- C. PVST+ blocks only VLAN 1 on two ports. A loop occurs in VLAN 2, 3, and 4.
- D. PVST+ blocks VLAN 1 and 2 on two ports, and no loops occur.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 34

Refer to the exhibit.

Exhibit Command output

```
[Switch1]display irf topology
                Topology info
-----
Switch  IRF-Port1      IRF-Port2      Belong To
Link    neighbor      Link    neighbor
1       TIMEOUT      --        DIS        --        0023-89d9-c4dd
```

```
[switch2]display irf topology
                Topology info
-----
Switch  IRF-Port1      IRF-Port2      Belong To
Link    neighbor      Link    neighbor
2       TIMEOUT      --        DIS        --        0023-89d9-c399
```

A network administrator is establishing an HP Intelligent Resilient Framework (IRF) group between two HP 5830 switches. The group does not establish correctly.

Based on the output shown in the exhibit, what is the problem?

- A. The IRF members have conflicting member IDs or domain IDs.
- B. The IRF port configuration has not been activated on one of the switches.
- C. The numbering for connected IRF ports is incorrect.
- D. The physical ports assigned to the logical IRF ports have incompatible speeds.

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 35**

## Exhibit 1: Command output (Switch 1)

```
<Switch1>display ospf brief
      OSPF Process 1 with Router ID 10.1.255.1
      OSPF Protocol information

RouterID: 10.1.255.1   Router Type: ABR
Route Tag: 0
Multi-VPN-Instance is not enabled
OSPF Protocol Hot standby capable
Applications supported: MPLS Traffic-Engineering
SPF-Schedule-interval: 5
LSA generation interval: 5
LSA arrival interval: 1000
Transmit pacing: interval: 20 count: 3
Default ASE parameters: Metric: 1 Tag: 1 Type: 2
Route Preference: 10
ASE Route Preference: 100
SPF computation count: 3
RFC 1583 Compatible
Graceful restart interval: 120
Area count: 2 Nssa Area count: 0
Exchange/Loading Neighbors: 0

Area: 0.0.0.0          (MPLS TE not enabled)
Authtype: None Area flag: Normal
SPF scheduled count: 3
Exchange/Loading Neighbors: 0

Interface: 10.1.100.1 (vlan-interface100)
Cost: 1      State: BDR      Type: Broadcast      MTU: 1500
Priority: 1
Designated Router: 10.1.100.2
Backup Designated Router: 10.1.100.1
Timers: Hello 10, Dead 40, Poll 40, Retransmit 5, Transmit Delay 1

Interface: 10.1.255.1 (LoopBack1)
Cost: 0      State: Loopback Type: PTP      MTU: 1536
Timers: Hello 10, Dead 40, Poll 40, Retransmit 5, Transmit Delay 1

Area: 0.0.0.1          (MPLS TE not enabled)
Authtype: None Area flag: Normal
SPF scheduled count: 3
Exchange/Loading Neighbors: 0
```

```
Interface: 10.1.1.1 (vlan-interfacel)
Cost: 1          State: DR          Type: Broadcast    MTU: 1500
Priority: 1
Designated Router: 10.1.1.1
Backup Designated Router: 0.0.0.0
Timers: Hello 10, Dead 40, Poll 40, Retransmit 5, Transmit Delay 1
```

Exhibit 2: Command output (Switch 3)

```
<Switch3>display ospf brief

      OSPF Process 1 with Router id 10.1.255.3
      OSPF Protocol Information
RouterID: 10.1.255.3      Router Type:
Route Tag: 0
Multi-VPN-Instance is not enabled
Applications supported: mpls Traffic-Engineering
ISPF is not enabled
SPF-schedule-interval: 5
LSA generation interval: 5
LSA arrival interval: 1000
Transmit pacing: interval: 20 count: 3
Default ASE parameters: Metric: 1 Tag: 1 Type: 2
Route Preference: 10
ASE Route Preference: 150
SPF computation count: 8
RFC 1583 Compatible
Graceful restart interval: 180
Area count: 1 Nssa Area count: 0
Exchange/Loading Neighbors: 0

Area: 0.0.0.0      (MPLS TE not enabled)
Authtype: None Area flag: Normal
SPF scheduled count: 8
Exchange/Loading Neighbors: 0

Interface: 10.1.100.3 (vlan-interfacel00)
Cost: 1          State: DR          Type: Broadcast    MTU: 1500
Priority: 1
Designated Router: 10.1.100.3
Backup Designated Router: 0.0.0.0
Timers: Hello 20, Dead 80, Poll 80, Retransmit 5, Transmit Delay 1

Interface: 10.1.255.3 (LoopBack0)
Cost: 0          State: Loopback    Type: PTP          MTU: 1536
Timers: Hello 20, Dead 80, Poll 80, Retransmit 5, Transmit Delay 1
```

```
Interface: 10.1.3.1 (vlan-interface3)
Cost: 1          State: DR          Type: Broadcast    MTU: 1500
Priority: 1
Designated Router: 10.1.3.1
Backup Designated Router: 0.0.0.0
Timers: Hello 20, Dead 80, Poll 80, Retransmit 5, Transmit Delay 1
```

A company has a network that implements Open Shortest Path First (OSPF). Switch 1 is not learning OSPF routes from Switch 3. The switches connect on VLAN 100. The exhibits show the output for the `display ospf brief` command on both switches.

What is causing the problem?

- A. The ASE preferences do not match.
- B. The graceful restart intervals do not match.
- C. The hello timers do not match.
- D. The router types do not match.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 36

A company is adding two HP 10500 switches to a network with Cisco switches. Several of the Cisco switches use Cisco Gateway Load Balancing Protocol (GLBP). The HP switches must support GLBP. Which HP features would meet this requirement? (Select two.)

- A. Virtual Redundant Router Protocol (VRRP) with load-balancing enabled
- B. Hot Standby Router Protocol (HSRP)
- C. Virtual Redundant Router Protocol (VRRP) (with the default mode)
- D. Intelligent Redundancy Framework (IRF)

E. Virtual Redundant Router Protocol (VRRP) with tracking enabled

**Correct Answer:** AD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 37**

Refer to the exhibit.

Exhibit: Command output

```
<HPRouter>display bgp peer

BGP local router ID : 10.2.255.1
Local AS number : 1
Total number of peers : 1          Peers in established state : 0

Peer          AS      MsgRcvd   MsgSent   OutQ     PrefRcv Up/Down    State
10.0.255.1    2001      0         0         0         0 00:01:28 Active

<HPRouter>display bgp peer verbose

Peer: 10.0.255.1      Local: 10.2.255.1
Type: EBGp link
BGP version 4, remote router ID 0.0.0.0
BGP current state: Active
BGP current event: ConnOpenFailed
BGP last state: Connect

Received: Total 0 messages, Update messages 0
Sent: Total 0 messages, Update messages 0
Maximum allowed prefix number: 4294967295
Threshold: 75%
Minimum time between advertisement runs is 30 seconds
Optional capabilities:
Route refresh capability has been enabled
Peer Preferred value: 0

<HPRouter>ping 10.0.255.1
PING 10.0.255.1: 56 data bytes, press CTRL_C to break
Reply from 10.0.255.1: bytes=56 sequence=1 ttl=255 time=1 ms

<HPRouter>display bgp routing

Total Number of Routes: 1

BGP Local router ID is 10.1.255.1
Status codes: * - valid, ^ - VPN best, > - best, d - damped,
              h - history, i - internal, s - suppressed, S - Stale
              origin : i - IGP, e - EGP, ? - incomplete

Network          NextHop    MED      LocPrf    Prefval    Path/Ogn
* > 10.2.0.0/16  0.0.0.0    0                0          i
```

A company has a new internet service provider (ISP). The network administrator is configuring external Border Gateway Protocol (BGP) on the company HP MSR5(W0

Based on the information shown in the exhibit, what is the problem?

- A. The HP router and ISP router cannot establish a BGP session, most likely because they are using different AS numbers.
- B. The HP router does not have the correct routing policies and is filtering out advertised and received routes.
- C. The HP router can reach the ISP router, but it does not recognize the next hops for the routes that the ISP router advertises.
- D. The HP router and ISP router cannot establish a BGP session, most likely because ebgp multihop is not enabled.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 38**

Refer to the exhibits.

Exhibit 1: Network topology

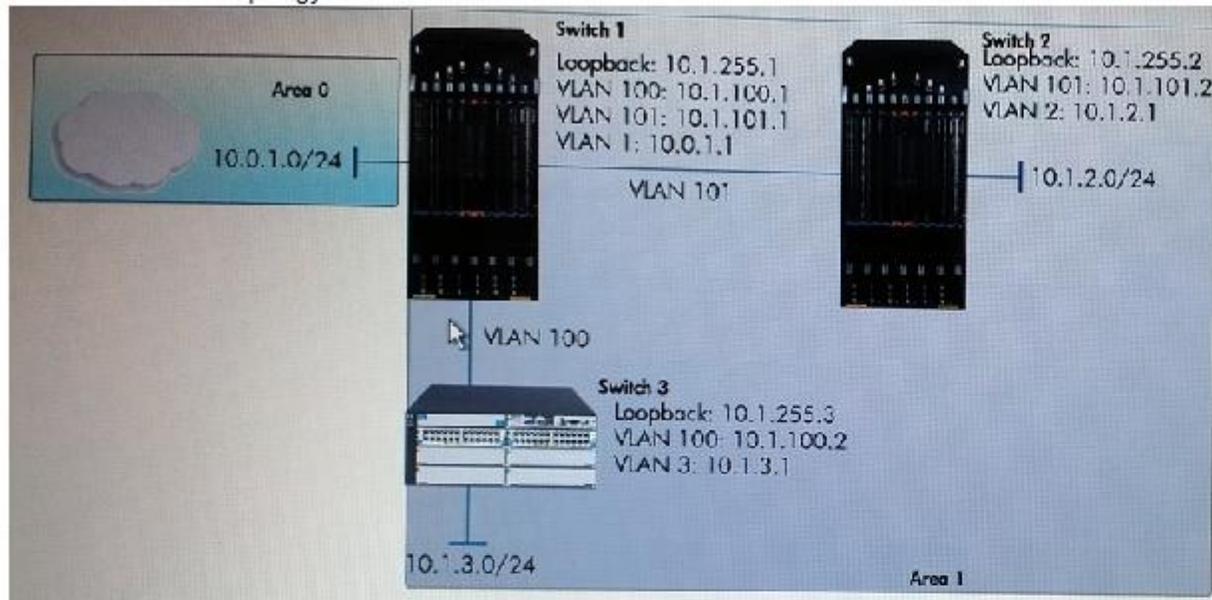


Exhibit 2: Command output

```
Switch3# show ip ospf neighbor
```

```
OSPF Neighbor information
```

Router id	Pri	IP Address	NbIfstate	State	Rxmt QLen	Hello Events	State
-----							

```
Switch3# show ip ospf statistics
```

```
OSPF interface statistics
```

IP Address	Total Tx	Total Rx	Total Errors
10.1.3.1	2	0	0
10.1.100.2	2	0	0

A network administrator is testing a new network and finds that endpoints in VLAN 3 cannot reach services in other VLANs. Based on the information shown in the exhibit, what is the cause of the problem?

- A. the area type assigned to area 1 on both switches
- B. the route summarization settings on switch 1
- C. the authentication settings on both switches
- D. the status of the link between switch 1 and switch 3
- E. the network id assigned under area 1

**Correct Answer:** AC

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 39

A network administrator is configuring HP Intelligent Management Center (IMC) to discover devices in a heterogeneous network with HP and Cisco devices. The devices have community strings "mycompanyRO" and "mycompanyRW" for the community strings. Which task must the network administrator complete to discover the devices?

- A. Create an SNMP template with the appropriate settings.
- B. Create a SOAP template with the appropriate settings.
- C. Configure the ARP-based auto discovery method.
- D. Configure a Telnet template with the appropriate settings.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 40

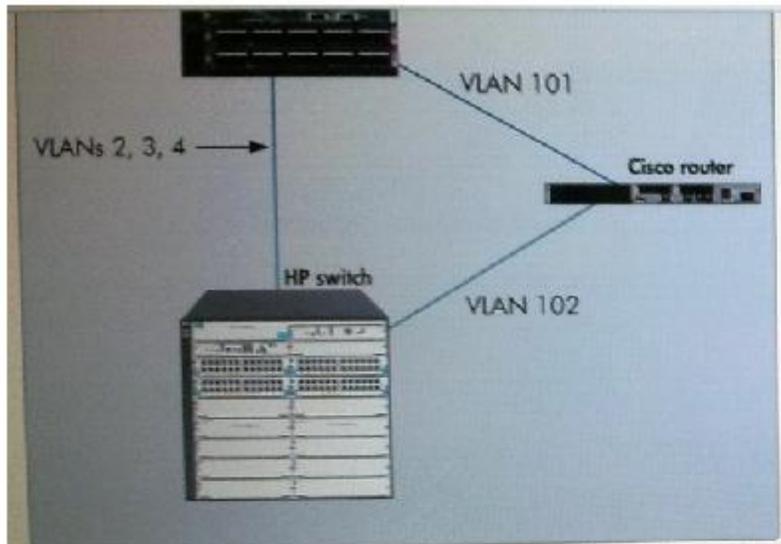


Exhibit 2: Portion of configs for switches

```
Cisco switch
interface vlan 2
 ip address 10.1.2.1 255.255.255.0
interface vlan 3
 ip address 10.1.3.1 255.255.255.0
interface vlan 4
 ip address 10.1.4.1 255.255.255.0
interface vlan 101
 ip address 10.1.1.2 255.255.255.252
router ospf 1
 network 10.1.0.0 0.0.7.255 area 1
 area 1 stub
```

```
HP switch
interface vlan 2
 ip address 10.1.2.2 255.255.255.*MISSING*
 ip ospf area 1
interface vlan 3
 ip address 10.1.3.2 255.255.255.*MISSING*
 ip ospf area 1
interface vlan 4
 ip address 10.1.4.2 255.255.255.*MISSING*
 ip ospf area 1
interface vlan 102
 ip address 10.1.1.6 255.255.255.*MISSING*
 ip ospf area 1
router ospf
 area 1 stub
```

The network administrator is adding an HP switch to a network with existing Cisco Catalyst 4500 switches and a Cisco router. The network implements Open Shortest Path First (OSPF) on the HP switch such that it can achieve adjacency with the Cisco devices.

The network administrator now wants to prevent the Cisco switch and HP switch from establishing adjacency in VLANs 3 and 4, but both switches should still advertise their respective networks. To meet this requirement, how should the network administrator configure the HP switch?

- A. Apply a route map to OSPF; the map denies 10.1.3.0/24 and 10.1.4.0/24.
- B. Remove OSPF from VLANs 3 and 4.
- C. Disable OSPF hellos on VLANs 3 and 4.
- D. Configure VLANs 3 and 4 as ospf passive interfaces.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 41

A network administrator wants to configure a link aggregation between a Cisco Catalyst 3750 switch and an HP 5400 zl switch. For each setting in the link aggregation, links. (Select three)

- A. Link speed - Must match
- B. Duplex mode - Must match
- C. Type of link aggregation (LACP) - Must match
- D. Link speed - May be different
- E. Duplex mode - May be different
- F. Type of link aggregation (LACP) - May be different

**Correct Answer:** ABF

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 42

Refer to the exhibits.

Exhibit 1 : Network topology



Exhibit 2: Portion of confia for Cisco router

```
Cisco router
interface gigabitethernet 1/1
 ip address 172.16.1.1 255.255.255.252
 ip nat outside
interface gigabitethernet 1/2
 ip address 10.1.1.1 255.255.255.252
 ip nat inside
access-list 10 permit 172.16.1.1 0.0.0.0
access-list 20 permit 10.1.0.0 0.0.255.255
```

A company is implementing Network Address Translation (NAT) on the Cisco router. The NAT configuration should enable devices in 10.1.0.0/16 to use the router's IP a configuration.

Which command does the network administrator enter?

- A. `ip nat inside source list 10 interface gigabitethernet 1/1 overload`
- B. `ip nat inside source list 20 interface gigabitethernet 1/2`
- C. `ip nat inside source list 20 interface gigabitethernet 1/1 overload`
- D. `ip nat inside source list 20 interface gigabitethernet 1/2 overload`

**Correct Answer: C**

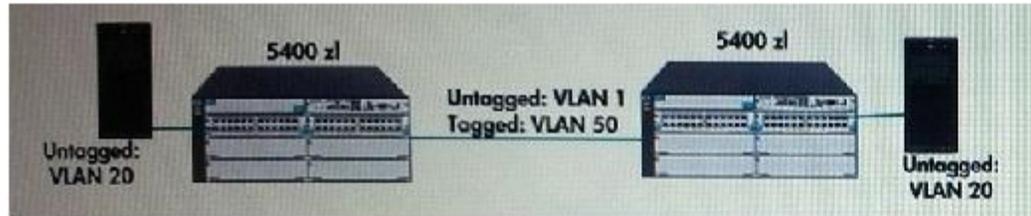
**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 43**

Refer to the exhibit.



A customer has two HP 5400 zl switches connected with a 1 Gbps full duplex link. The servers in VLAN 20 shown in the exhibit are sending 1518 byte frames to each other over the 1GB link.

- All switch-to-switch traffic is routed over the switch-to-switch link.
- All other management protocols are turned off on this link to remove noise.

The server ports are showing a 99% utilization for transmit and receive traffic. The customer is experiencing transmit drops on the switch-to-switch link. How can the network be reconfigured to resolve this issue?

- Remove VLAN 1 from the switch-to-switch link and configure VLAN 50 as the untagged VLAN for this link.
- Place the traffic in a high priority queue by selecting and marking it with 802.1p value 7.
- Enable flow control on the switch-to-switch link.
- Reconfigure the system to be in different VLANs so that routing will work.

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 44**

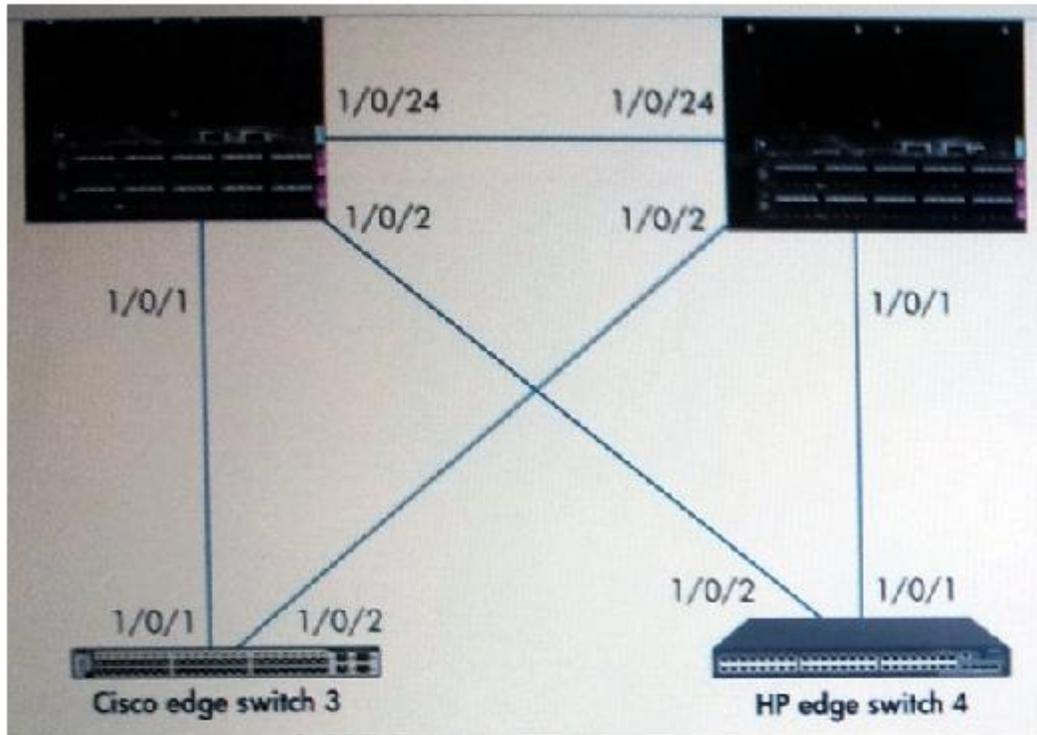


Exhibit 2: Portion of confias for switches

<pre> Cisco core switch 1 spanning-tree mode rapid pvst spanning-tree pathcost method long spanning-tree vlan 1-2 priority root primary spanning-tree vlan 1-4 priority root secondary Interface gigabitethernet 1/0/1 switchport mode trunk switchport trunk native vlan 2 switchport trunk allowed vlan 1-4         </pre>	<pre> Cisco edge switch 3 spanning-tree mode rapid interface gigabitethernet *MISSING* switchport mode trunk switchport trunk native switchport trunk allowed         </pre>
--	--

```
Cisco core switch 2
spanning-tree mode rapid-pvst
spanning-tree pathcost method long
spanning-tree vlan 1-2 priority root secondary
spanning-tree vlan 3-4 priority root primary
interface gigabitethernet 1/0/1
  switchport mode trunk
  switchport trunk native vlan 2
  switchport trunk allowed vlan 1-4

HP edge switch 4
stp enable
interface gigabitethernet *MISSING*
  port link-type trunk
  port trunk pvid vlan 2
  port trunk permit vlan
```

In Exhibit 1, all links are GigabitEthernet links. Exhibit 2 shows the configuration for one port on each switch. Other ports that you see in Exhibit 1 have the same configuration that are not shown are at their factory default settings.

How should the network administrator change the configuration to ensure better operation for the network shown in the exhibits?

- A. The network administrator should configure the short pathcost method on the Cisco core switches so that all switches are using consistent path costs path cost
- B. The network administrator should specify VLAN 1 as the native VLAN on all links to prevent loops from occurring.
- C. The network administrator should enable the PVST+/MSTP compatibility feature on all Cisco switches to avoid broadcast storms.
- D. The network administrator should configure the long pathcost method on the Cisco edge switch to ensure that it can take advantage of the uplink fast capabilities.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 45**

Refer to the exhibit.

Exhibit: Commands

```
Cisco(config)# interface gigabit 1/0/1
Cisco(config-if)# switchport trunk encapsulation dot1q
Cisco(config-if)# switchport mode trunk
Cisco(config-if)# switchport trunk native vlan 10
```

```
[HP] interface GigabitEthernet 1/0/1
[HP-gigabitethernet1/0/1] port link-type trunk
[HP-gigabitethernet1/0/1] port trunk pvid vlan 10
```

A network administrator is establishing a link between a Cisco Catalyst 3750 switch and an HP 5500 switch. The Cisco switch and the HP switch support VLANs 1, 10, 20, and 30. GigabitEthernet 1/0/1 on the HP switch are operating at the default settings. The network administrator enters the commands shown in the exhibit.

The network administrator wants the links to carry untagged traffic in VLAN 10, tagged traffic in VLANs 20 and 30, and no other traffic. Which additional steps must the

- A. On the Cisco switch port, specify IDs 20 and 30 as allowed VLANs; explicitly remove VLAN 1.
- B. On the Cisco switch port, specify IDs 10, 20, and 30; explicitly as allowed VLANs.
- C. On the HP switch port, allow VLANs 20 and 30.
- D. On the HP switch port, allow VLANs 10, 20, and 30; explicitly remove VLAN 1.
- E. On the HP switch port, allow VLANs 10, 20, and 30.

**Correct Answer:** BD

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 46

A network administrator is troubleshooting OSPF routing on an HP 10500 switch. How can the network administrator Change the severity level for OSPF-related logs the

- A. Use the `info-center trapbuf fer` command to change the channel assigned to the logbuffer.

- B. Use the `info-center channel` command to reconfigure the channel associated with the logbuffer with the appropriate settings.
- C. Use the `info-center logbuffer` command to change the channel assigned to the logbuffer.
- D. Use the `info-center source` command to change the settings for the appropriate module and logbuffer channel.

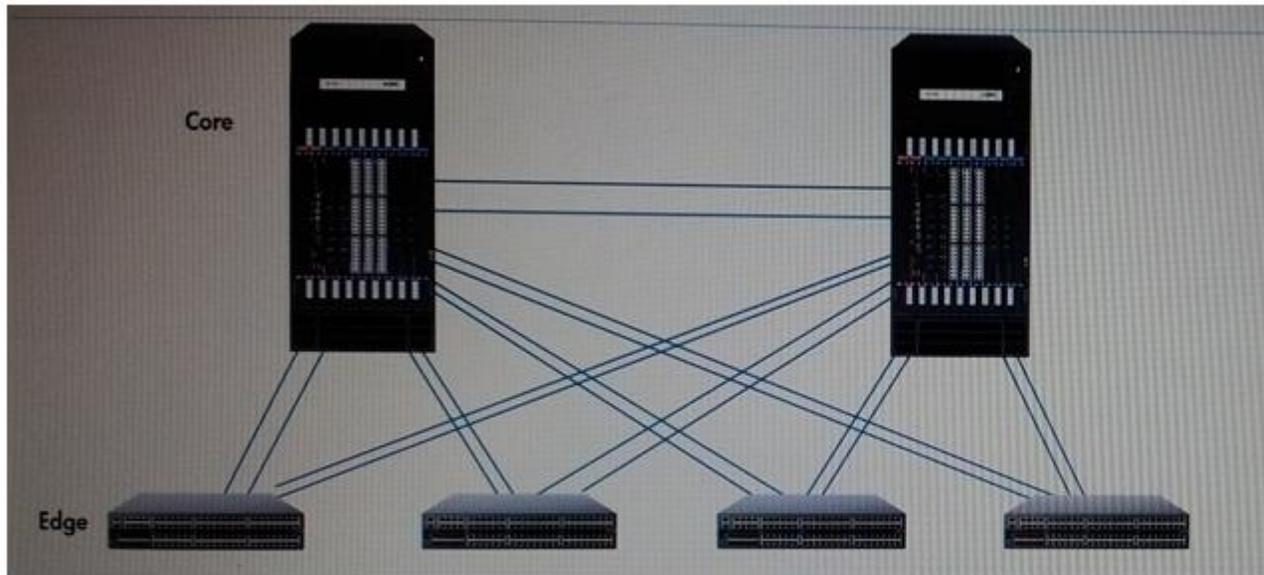
**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 47



The core switches implement HP Intelligent Resilient Framework (IRF), and the edge switches connect to them over link aggregations.

A network administrator is attempting to use link aggregations in the most efficient way. When might the network administrator need to change the algorithm that the switch uses (source and destination IP address)?

- A. whenever the endpoints communicate with servers in different subnets
- B. whenever the network administrator choose to use dynamic LACP to set up the link aggregation
- C. whenever the edge switches, as well as the core switches, implement IRF
- D. whenever traffic is routed between the edge and the core switches

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 48

A network administrator is configuring HP Intelligent Management Center (IMC) to discover devices in a heterogeneous network with HP and Cisco devices. The network recommended discovery strategy for this type of environment?

- A. network segment-based
- B. IPsec VPN-Based
- C. ARP-Based
- D. routing-based

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 49

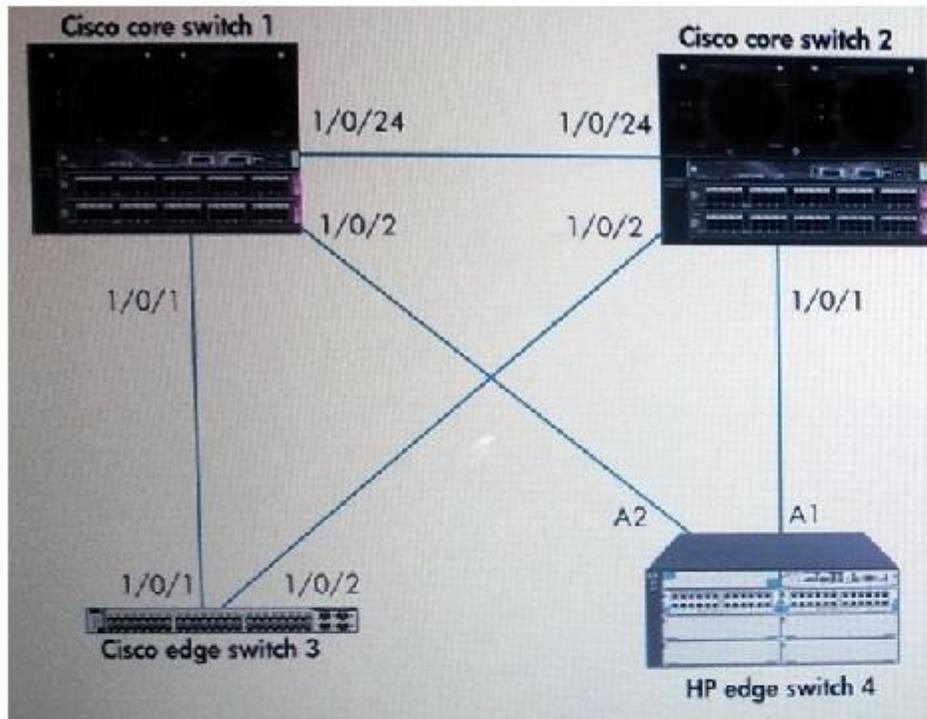


Exhibit 2: Portion of configs for core switches

```
Cisco core switch 1
spanning-tree mode rapid-pvst
spanning-tree vlan 2-3 priority root primary
spanning-tree vlan 4-5 priority root secondary
interface gigabitethernet 1/0/1
switchport mode trunk
switchport trunk native vlan 2
switchport trunk allowed vlan 2-5
```

```
Cisco core switch 2
spanning-tree mode rapid-pvst
spanning-tree vlan 2-3 priority root secondary
spanning-tree vlan 4-5 priority root primary
interface gigabitethernet 1/0/1
switchport mode trunk
switchport trunk native vlan 2
switchport trunk allowed vlan 2-5
```

In Exhibit 1, all links are GigabitEthernet links. Exhibit 2 shows the configuration for only one port on each switch. However, other ports that are shown for the switch in Exhibit 1 are at their factory default settings.

A network includes Cisco Catalyst 4500 switches at the core and Cisco Catalyst 3750 switches at the edge. A network administrator has enabled spanning tree on all switches. The network administrator then connects the switches as shown in the exhibit.

What happens?

- A. Port 1/0/2 on switch 1 forwards traffic. Port 1/0/1 on switch 2 blocks traffic.
- B. Both Port 1/0/2 on switch 1 and Port 1/0/1 on switch 2 forward traffic, causing a network loop.
- C. Port 1/0/2 on switch 1 blocks traffic. Port 1/0/1 on switch 2 forwards traffic.
- D. Port 1/0/2 on switch 1 forwards traffic in VLANs 2 and 3 and blocks other traffic. Port 1/0/1 on switch 2 forwards traffic in VLANs 4 and 5 and blocks other traffic.

**Correct Answer:** A

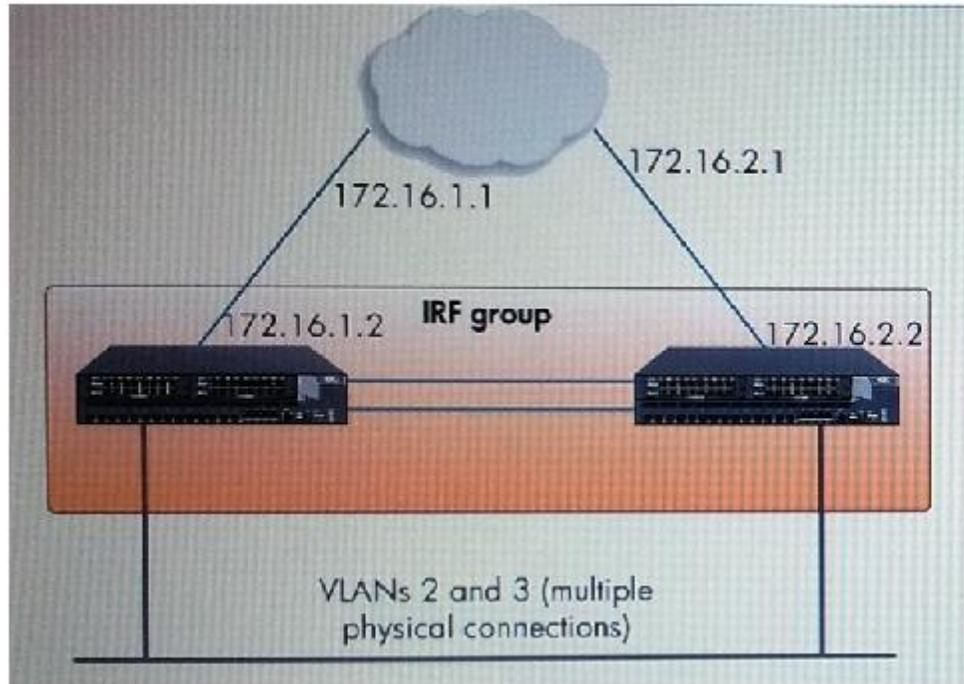
**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 50**

Network topology



```
HP IRF group
interface GigabitEthernet 1/0/24
  port access vlan 101
interface GigabitEthernet 2/0/24
  port access vlan 102
interface vlan 2
  ip address 10.1.2.1 255.255.255.0
interface vlan 3
  ip address 10.1.3.1 255.255.255.0
interface vlan 101
  ip address 172.16.1.2 255.255.255.252
interface vlan 102
  ip address 172.16.2.2 255.255.255.252
ip route 0.0.0.0 0 172.16.1.1
ip route 0.0.0.0 0 172.16.2.1 100
nqa entry uplink test
  type icmp-echo
  destination ip 10.0.1.1
  frequency 300
  probe timeout 300
reaction 1 checked-element probe-fail threshold-type consecutive 5 action
track 1 nqa entry uplink test reaction 1
nqa schedule uplink test start-time now lifetime forever
```

The IRF group reaches the upstream network through two next-hop routers, 172.16.1.1 (primary) and 172.16.2.1 (secondary). The network administrator wants to ensure problem occurs upstream on the primary next-hop router. What can the network administrator do?

- A. Apply track 1 to the default route through 172.16.1.1.
- B. Apply track 1 to the GigabitEthernet 1/0/24 port.
- C. Configure VRRP on VLANs 101 and apply track 1 to the member with the higher VRRP priority.
- D. Configure VRRP on VLANs 2 and 3. Apply track 1 to the member with higher VRRP priority in each VLAN.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 51**

During troubleshooting, a network administrator develops an implementation plan to fix an issue. What should this plan include?

- A. a questionnaire that helps the network administrator find out information about the customer environment
- B. a test to determine whether a particular hypothesis about the problem is correct
- C. a list of show and display commands to discover the cause of the problem
- D. a process to avoid potential side effects of the solution

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 52**

Exhibit 1: Network topology

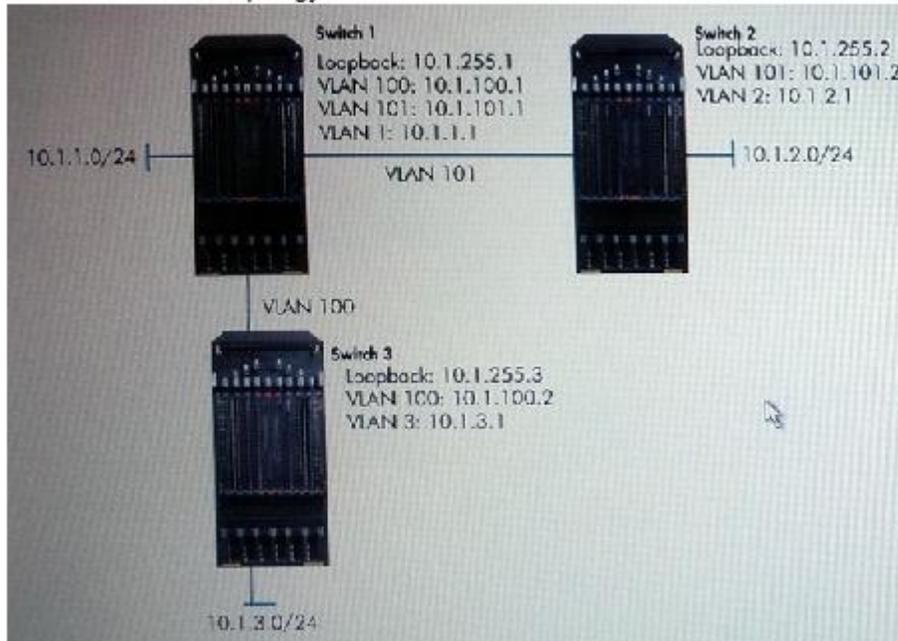


Exhibit 2: Command outputs

```
<Switch1> display ip routing
Routing Tables: Public
  Destinations : 11      Routes : 11
```

Destination/Mask	Proto	Pre	Cost	NextHop	Interface
10.1.1.0/24	Direct	0	0	10.1.1.1	Vlan1
10.1.1.1/32	Direct	0	0	127.0.0.1	InLoop0
10.1.2.0/24	RIP	100	1	10.1.101.2	Vlan101
10.1.100.0/24	Direct	0	0	10.1.100.1	Vlan100
10.1.100.1/32	Direct	0	0	127.0.0.1	InLoop0
10.1.101.0/24	Direct	0	0	10.1.101.1	Vlan101
10.1.101.1/32	Direct	0	0	127.0.0.1	InLoop0
10.1.255.1/32	Direct	0	0	127.0.0.1	InLoop0
10.1.255.2/32	RIP	100	1	10.1.101.2	Vlan101
127.0.0.0/8	Direct	0	0	127.0.0.1	InLoop0
127.0.0.1/32	Direct	0	0	127.0.0.1	InLoop0

```
[switch3-rip-1]display ip routing
Routing Tables: Public
  Destinations : 6      Routes : 6
```

Destination/Mask	Proto	Pre	Cost	NextHop	Interface
10.1.3.0/24	Direct	0	0	10.1.3.1	Vlan3
10.1.3.1/32	Direct	0	0	127.0.0.1	InLoop0
10.1.100.0/24	Direct	0	0	10.1.100.2	Vlan100
10.1.100.2/32	Direct	0	0	127.0.0.1	InLoop0
127.0.0.0/8	Direct	0	0	127.0.0.1	InLoop0
127.0.0.1/32	Direct	0	0	127.0.0.1	InLoop0

A company has added a new routing switch, Switch 3, to the network. Exhibit 1 shows this network. After the installation, users report that they cannot reach services i checks several settings. Exhibit 2 shows the output.

What is a likely problem?

- A. Switch 3 is not configured for RIP version 2 as the other switches are.
- B. Switch 3 is not implementing RIP on the correct networks.
- C. Switch 3 needs IP routes to loopback IP addresses of the other switches.
- D. Switch 3 has not been configured with the correct RIP authentication settings.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 53

A network administrator has configured an access control list (ACL) on an HP 8200 zl switch that should allow users to reach specific resources. Users report problems traffic is matching the correct ACL and rule. How can the network administrator find this information?

- A. View statistics for the ACL with the `show statistics` command and look for hits.
- B. View the ACL with the `show access-list` command and look for hits.
- C. View one of the physical ports in the VLAN to which the ACL is applied with the `show interface` command and look for hits.

D. View the VLAN interface to which the ACL is applied with the `show interface` command and look for hits.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 54**

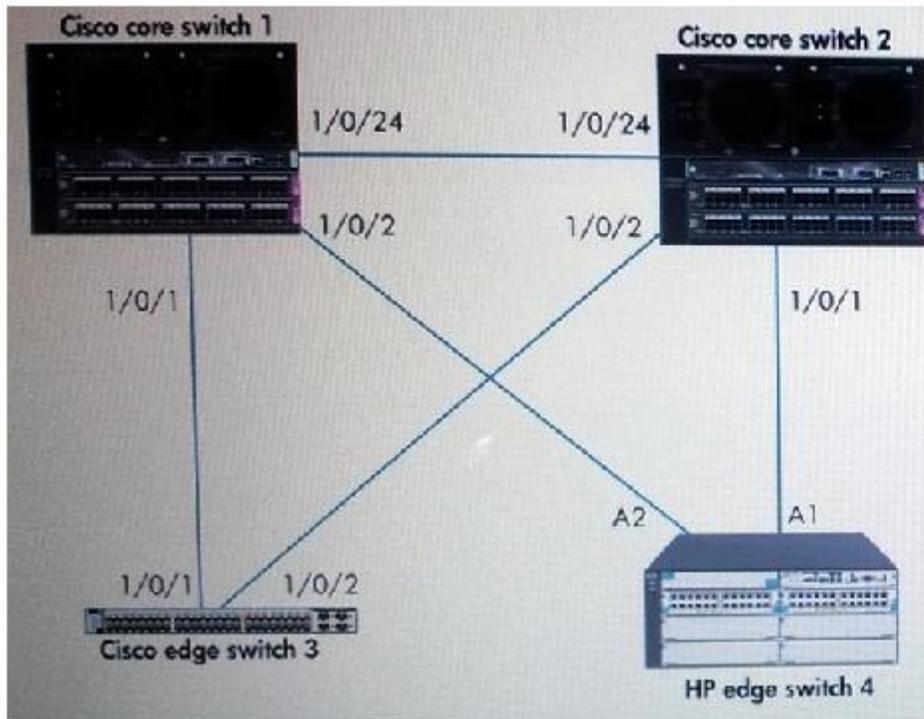


Exhibit 2: Portion of configs for core switches

```
Cisco core switch 1
spanning-tree mode rapid-pvst
spanning-tree vlan 1-2 priority root primary
spanning-tree vlan 3-4 priority root secondary
interface gigabitethernet 1/0/1
  switchport mode trunk
  switchport trunk native vlan 2
  switchport trunk allowed vlan 1-4
```

```
Cisco core switch 2
spanning-tree mode rapid-pvst
spanning-tree vlan 1-2 priority root secondary
spanning-tree vlan 3-4 priority root primary
interface gigabitethernet 1/0/1
  switchport mode trunk
  switchport trunk native vlan 2
  switchport trunk allowed vlan 1-4
```

In Exhibit 1, all links are GigabitEthernet links. Exhibit 2 shows the configuration for one port on each switch. Other ports that you see in Exhibit 1 have the same configuration. Ports that are not shown are at their factory default settings.

A network includes Cisco Catalyst 4500 switches at the core and Cisco Catalyst 3750 switches at the edge. A network administrator enables spanning tree on a new switch. The administrator then connects the switch as shown in the exhibit.

What happens?

- A. Port 1/0/2 on switch 1 forwards traffic. Port 1/0/1 on switch 2 forwards traffic.
- B. Both Port 1/0/2 on switch 1 and Port 1/0/1 on switch 2 forward traffic, causing a network loop.
- C. Port 1/0/2 on switch 1 blocks traffic. Port 1/0/1 on switch 2 forwards traffic.
- D. Port 1/0/2 on switch 1 forwards traffic in VLANs 1 and 2 and blocks other traffic. Port 1/0/1 on switch 2 forwards traffic in VLANs 3 and 4 and blocks other traffic.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 55

What is the purpose of Network Address Translation (NAT) Domain Name Service (DNS) maps on HP Comware-based routers?

- A. When the HP router performs source NAT for internal endpoints, NAT DNS maps allow the router to respond to all of the endpoints' DNS queries directly.
- B. When the HP router performs destination NAT for internal servers, NAT DNS maps help internal endpoints reach the servers at the correct private IP address.
- C. When the HP router performs destination NAT for internal servers, NAT DNS maps allow the router to advertise a different hostname for each server to the public DNS.
- D. When the HP router performs many-to-many source NAT for internal endpoints, NAT DNS maps allow the router to forward the endpoints' DNS queries to different servers.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:****QUESTION 56**

While troubleshooting a problem with Multiple Spanning Tree Protocol (MSTP), the network administrator finds that an HP 5500EI switch is using the wrong region name to resolve. The `display stp` command shows the old region name still in use.

What is the correct procedure to fix this problem?

- A. Shut down STP, change the name, and then restart STP
- B. Activate the region configuration after changing the region name.
- C. Remove the current region name and then configure the correct name.
- D. Shut down the switch-to-switch links, shut down STP, change the name, and then restart STP.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:****QUESTION 57**

A company has a Voice over IP (VoIP) solution. The network administrator has configured QoS policies on HP 5400 zl switches to select VoIP traffic and assign it to a high priority queue. The network administrator suspects that the switches are not applying QoS in the proper manner. The network administrator enters a show command on one of the switches and displays the following output:

Based on this result, what are two logical steps to take? (Select two.)

- A. Verify that the QoS policy action statements are correct.
- B. Verify that the QoS policy is applied correctly.
- C. Verify that the traffic class match statements are correct.
- D. Verify the configuration of the DSCP map.

- E. Verify that the ports have the correct priority configurations.

**Correct Answer:** BC

**Section:** (none)

**Explanation**

**Explanation/Reference:**

### QUESTION 58

Refer to the exhibit.

Exhibit: Command output

```
ciscoswitch1#show standby brief
                P indicates configured to preempt.

Interface      Grp    Pri    P    State    Active        Standby        Virtual IP
v1100          1      254    P    Active   local         10.1.100.2     10.1.100.254
v1101          1      100           Standby  10.1.101.2   local         10.1.101.254

ciscoswitch2#show standby brief
                P indicates configured to preempt.

Interface      Grp    Pri    P    State    Active        Standby        Virtual IP
v1100          1      100           Standby  10.1.100.1   local         10.1.100.254
v1101          1      254    P    Active   local         10.1.101.1     10.1.101.254
```

The exhibit shows the configuration for two Cisco switches in a heterogeneous network with Cisco and HP switches. The network administrator is now configuring a route that should be one of the Cisco switches' IP addresses in VLAN 100. The network administrator wants to ensure the best failover in case either Cisco switch fails.

What is the correct configuration on the HP switch?

- A. `ip route-static 10.1.0.0 16 10.1.100.1`  
`ip route-static 10.1.0.0 16 10.1.100.2 preference 100`
- B. `ip route-static 10.1.0.0 16 10.1.100.1`
- C. `ip route-static 10.1.0.0 16 10.1.100.1`  
`ip route-static 10.1.0.0 16 10.1.100.2`

D. `ip route-static 10.1.0.0 16 10.1.100.254`

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 59**

Refer to the exhibit.

Exhibit 1: Network topology  
All links are GigabitEthernet links.

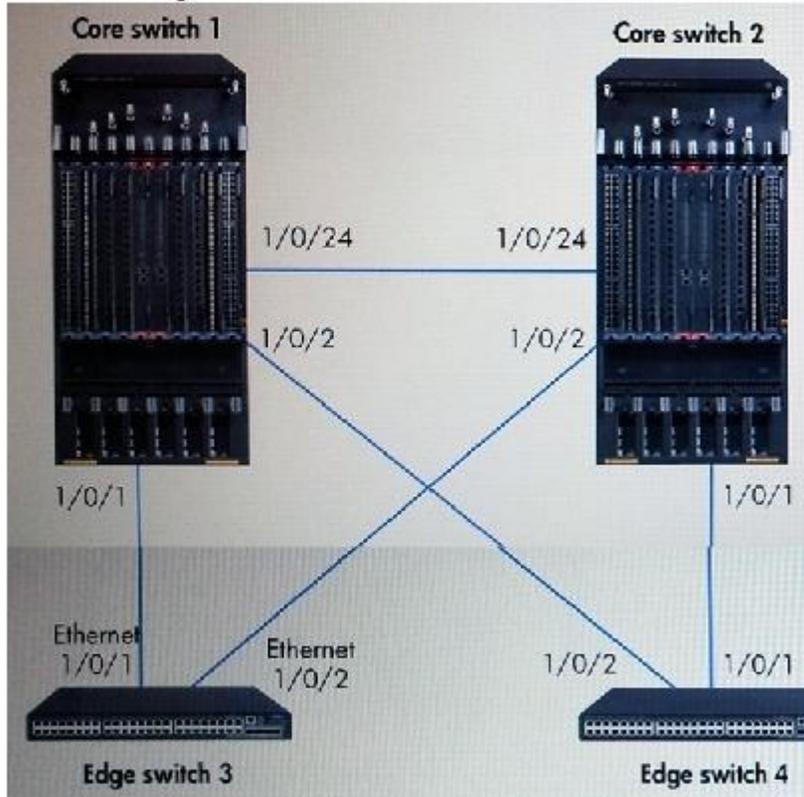


Exhibit 2: Command output

```
<Switch1> display ospf routing
```

OSPF Process 1 with Router ID 10.1.255.1  
 Routing Tables

Routing for Network

Destination	Cost	Type	NextHop	AdvRouter	Area
10.1.1.0/24	1	Stub	10.1.1.1	10.1.255.1	0.0.0.0
10.1.2.0/24	2	Stub	10.1.101.2	10.1.255.2	0.0.0.1
10.1.255.1/32	0	Stub	10.1.255.1	10.1.255.1	0.0.0.1
10.1.255.2/32	1	Stub	10.1.101.2	10.1.255.2	0.0.0.1
10.1.100.0/24	1	Stub	10.1.100.1	10.1.255.1	0.0.0.1
10.1.101.0/24	1	Transit	10.1.101.1	10.1.255.2	0.0.0.1

Total Nets: 6  
 Intra Area: 6    Inter Area: 0    ASE: 0    NSSA: 0

<Switch1>display ospf peer

OSPF Process 1 with Router ID 10.1.255.1  
 Neighbor Brief information

Area: 0.0.0.0

Router ID	Address	Pri	Dead-Time	interface	state
10.0.255.2	10.1.1.2	1	32	vlan1	Full/BDR

Area: 0.0.0.1

Router ID	Address	Pri	Dead-Time	interface	state
10.1.255.2	10.1.101.2	1	32	vlan101	Full/DR

When the link between the Gigabit 1/0/24 ports on the core switches shown in Exhibit 1 fails, all traffic begins to pass through Switch 3. Switch 3 is an older switch. If that the link to Switch 2 is selected instead of the link to Switch 3?

- A. Configure the pathcost on the Core Switch 1 1/0/2 link to 25000.
- B. Configure the reference bandwidth on all switches to 1000.
- C. Configure a consistent pathcost method on all switches.
- D. Configure the pathcost on the Edge Switch 4 1/0/2 link to 15000.

**Correct Answer: D**

**Section: (none)**

**Explanation**

**Explanation/Reference:****QUESTION 60**

Refer to the exhibit.

Exhibit: Portion of config for a switches

```
Cisco switch
interface GigabitEthernet1/0/1
 no switchport
 ip address 10.1.1.1 255.255.255.0
 ip ospf bfd
 ip ospf message-digest-key 1 md5 password
router ospf 1
 bfd all-interfaces
 network 10.1.0.0 0.0.3.255 area 0
 area 0 authentication message-digest

HP switch 1 (10500)
interface 1/0/1
 port access vlan 100
interface vlan 100
 ip address 10.1.1.2 255.255.255.0
 ospf authentication-mode simple cipher password
 ospf bfd enable
ospf 1
 area 0
 network 10.1.0.0 0.0.3.255 area 0

HP switch 2 (10500)
interface 1/0/1
 port access vlan 100
interface vlan 100
 ip address 10.1.1.3 255.255.255.0
 ospf authentication-mode md5 1 cipher password
 ospf bfd enable
ospf 1
 area 0
 network 10.1.0.0 0.0.0.255 area 0
 network 10.1.10.0 0.0.0.255 area 0

HP switch 3 (8200 zl)
vlan 100
 name "VLAN100"
 untagged A1
 exit
interface vlan 100
 ip address 10.1.1.4 255.255.255.0
 ip ospf area 0
 ip ospf md5-auth-key-chain password
router ospf
 area 0
```

A network administrator is adding several HP switches to a network with existing Cisco equipment, which implement-Open Shortest Path First (OSPF). The network administrator has the configuration shown in the exhibit.

Assume that the VLAN 100 connections are up. Which switches have been correctly configured and can achieve adjacency with their Cisco switch neighbor? (Select two)

- A. HP Switch 1 Cannot achieve adjacency
- B. HP Switch 1 Can achieve adjacency

- C. HP Switch 2 Cannot achieve adjacency
- D. HP Switch 2 Can achieve adjacency
- E. HP Switch 3 Cannot achieve adjacency
- F. HP Switch 3 Can achieve adjacency

**Correct Answer:** ACF

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 61**

Refer to the exhibits.

Exhibit 1: Network topology

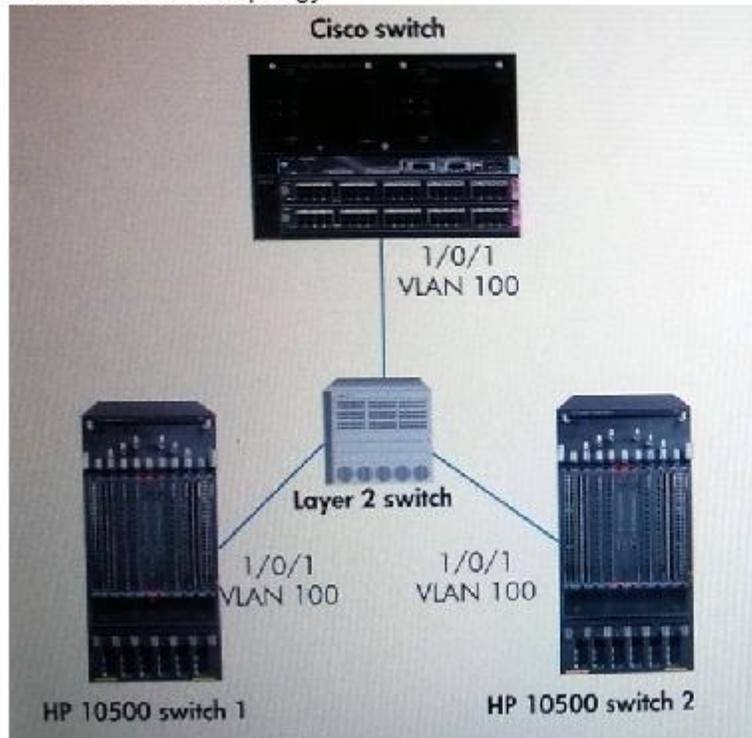


Exhibit 2: Portion of config for the Cisco switch

```
cisco switch

interface vlan 100
 ip address 10.1.1.1 255.255.255.0
 ip ospf bfd
 ip ospf message-digest-key 1 md5 password
interface vlan 2
 ip address 10.1.2.1 255.255.255.0
router ospf 1
 bfd all-interfaces
 network 10.1.0.0 0.0.3.255 area 0
 area 0 authentication message-digest
 nsf ietf restart-interval 200
 passive-interface vlan 2
```

The network administrator is adding two HP routing switches to a network with existing Cisco equipment. The network implements Open Shortest Path First (OSPF). Existing Cisco Catalyst 4500 switch connects. The routing switches also connect to other subnets, which are not shown. Exhibit 2 shows the OSPF configuration on the Cisco switch.

The network administrator wants to ensure that routes quickly reconverge if one of the 1/0/1 links on HP switches fail. Assume that the network administrator has configured the Cisco switch. What is the correct configuration on the HP switches?

- A. Enable OSPF BFD on the VLAN 100 interface.
- B. Enable non-standard graceful restart in the OSPF configuration.
- C. Enable IETF-standard graceful restart and opaque LSAs in the OSPF configuration.
- D. Enable silent interface on VLAN 100.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 62**

Refer to the exhibit

Exhibit: Portion of config for switches

```
cisco Catalyst
vlan 10
vlan 20
interface gigabitethernet 1/0/1
  switchport mode access
  switchport access vlan 10
```

```
HP 5400 zl
vlan 10
  untagged A1-A24
vlan 20
  voice vlan
```

A network administrator is setting up support for Voice over IP (VoIP) phones in a heterogeneous network with Cisco Catalyst switches and HP 5400 zl switches. The VLANs that connect through the phones, need to transmit traffic in VLAN 10. The exhibit shows the current configuration for edge ports (for the other Cisco edge ports, assume they are configured as trunk ports).

Which tasks must the network administrator complete? (Select two.)

- A. Define the voice VLAN globally on Cisco switches.
- B. Configure the Cisco edge ports as trunk ports.
- C. Configure VLAN 20 as a voice VLAN on the Cisco switch edge ports.
- D. Configure VLAN 20 as a voice VLAN on the HP 5400 zl edge ports.
- E. Assign VLAN 20 as a tagged VLAN on HP 5400 zl edge ports.

**Correct Answer:** CE

**Section:** (none)

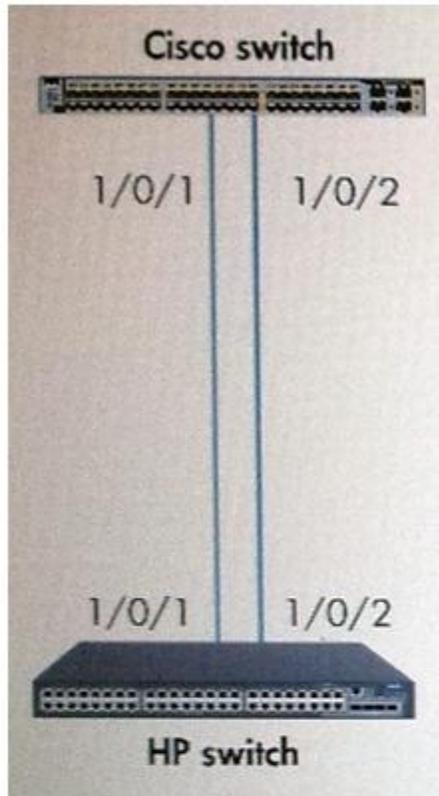
**Explanation**

**Explanation/Reference:**

**QUESTION 63**

Refer to the exhibit.

Exhibit : Network topology



A network administrator wants to configure a link aggregation between a Cisco Catalyst 3750 switch and an HP 5500 switch. Assume that the physical interfaces are configured. Which two commands are required on the HP switch?

```
[EP_Switch] interface Bridge-aggregation 1
[HP_Switch-Brddge-Aggregation1] interface gigabitethernet 1/0/1
[HP_Switch-GigabitEthernet1/0/1] port link-aggregation group 1
[HP_Switch-GigabitEthernet1/0/1] interface gigabitethernet 1/0/2
[HP_Switch-GigabitEthernet1/0/2] port link-aggregation group 1
```

```
Cisco_Switch (config)# interface Portchannel 1
```

For the link to establish successfully, how must the network administrator finish configuring the Cisco switch?

- A. Associate GigabitEthernet interfaces 1/0/1 and 1/0/2 with port-channel 1 in *on* mode.
- B. Associate GigabitEthernet interfaces 1/0/1 and 1/0/2 with port-channel 1 in *on* mode. Set the lacp method to *active* mode
- C. Associate GigabitEthernet interfaces 1/0/1 and 1/0/2 with port-channel 1 in *passive* mode.
- D. Associate GigabitEthernet interfaces 1/0/1 and 1/0/2 with port-channel 1 in *active* mode.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 64**

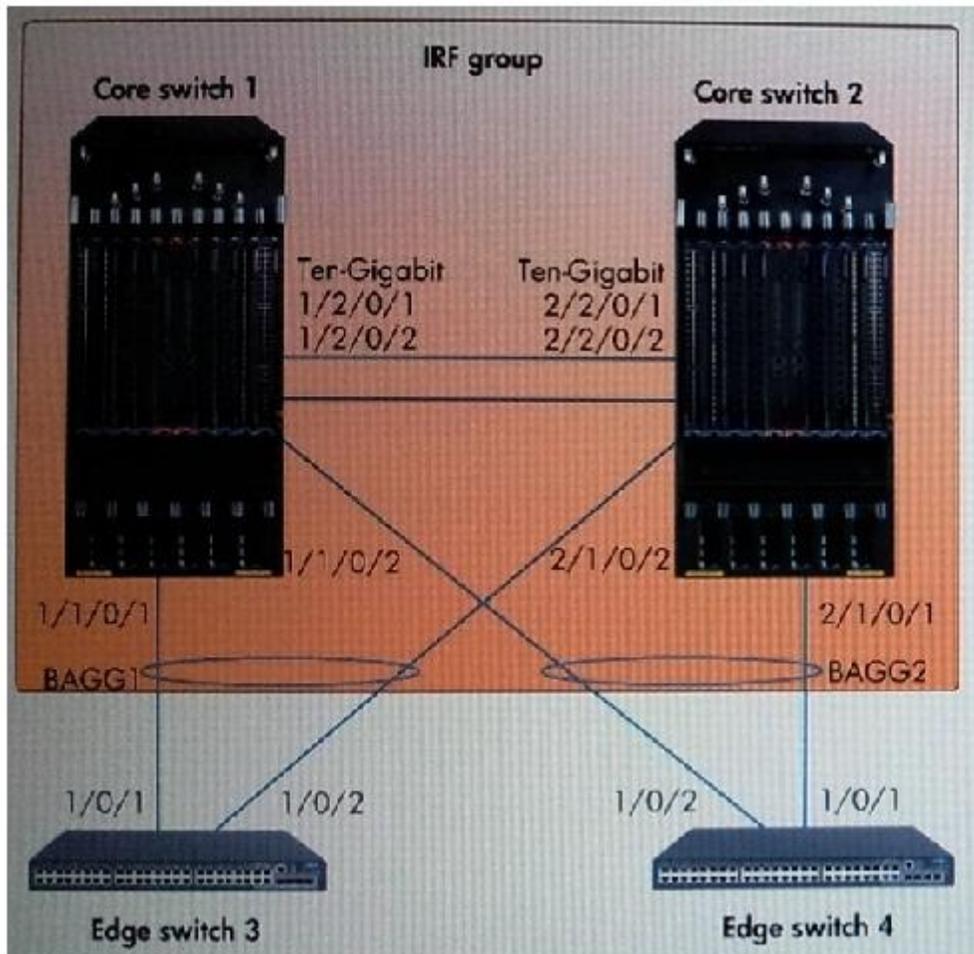


Exhibit 2: Command output

```
<IRF> display irf
Switch  Role  Priority  CPU-Mac      Description
*+1     Master  1        0023-893c-3b14  -----
```

```
-----
* indicates the device is the master.
+ indicates the device through which the user logs in.
```

```
The Bridge MAC of the IRF is: 0023-893c-3b13
Auto upgrade           : yes
Mac persistent         : 6 min
Domain ID              : 0
```

```
<IRF>display mad verbose
Current mad status: Detect
Excluded ports(configurable):
Excluded ports(can not be configured):
  Ten-GigabitEthernet1/2/0/1
  Ten-GigabitEthernet1/2/0/2
MAD ARP disabled.
MAS enabled aggregation port:
  Bridge-Aggregation1
  Bridge-Aggregation2
MAD BFD disabled.
```

```
<IRF>display irf
Switch  Role  Priority  CPU-Mac      Description
*+2     Master  1        0023-893c-4b37  -----
```

```
-----
* indicates the device is the master.
+ indicates the device through which the user logs in.
```

```
The Bridge mac of the irf is: 0023-893c-3b13
Auto upgrade           : yes
Mac persistent         : 6 min
Domain ID              : 0
```

```
<IRF>display mad verbose
Current MAD status: Detect
Excluded ports(configurable):
Excluded ports(can not be configured):
  Ten-GigabitEthernet2/2/0/1
  Ten-GigabitEthernet2/2/0/2
MAD ARP disabled.
MAD enabled aggregation port:
  Bridge-Aggregation1
  Bridge-Aggregation2
MAD BFD disabled.
```

Users throughout a site lose access to the internet and also to local network resources. The network administrator discovers that the IRF link failed. The network admin

Based on the information shown in the exhibits, what is causing the problem?

- A. Multi-Access Detection (MAD) excluded the core-to-core link on which MAD messages were carried, causing problems in recovering the group.
- B. Multi-Access Detection (MAD) shut down several ports. The correct ports were not excluded, so users lost connectivity.
- C. Multi-Access Detection (MAD) did not take effect, so both members tried to respond to ARP requests and route traffic.
- D. Multi-Access Detection (MAD) was enabled on both members, so it shut down the link aggregations entirely.

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 65**

Refer to the exhibit.

Exhibit: Command output

```
<Coreswitch>display link-aggregation summary

Aggregation interface Type:
BAGG -- Bridge-Aggregation, RAGG --Route-Aggregation
Aggregation Mode: S -- Static, D -- Dynamic
Loadsharing Type:Shar -- Loadsharing, Nons -- Non-LoadSharing
Actor system ID: 0x8000, 0023-89d9-c4dc

AGG      AGG      Partner ID   Select   Unselect   Share
Interface Mode                               Ports    Ports      Type
-----
BAGG1    S        none         1        1          Shar

<EdgeSwitch>display link-aggregation summary
Aggregation interface Type:
BAGG -- Bridge-Aggregation, RAGG --Route-Aggregation
Aggregation Mode: S -- Static, D -- Dynamic
Loadsharing Type:Shar -- Loadsharing, Nons -- Non-LoadSharing
Actor system ID: 0x8000, 0023-89d9-c398

AGG      AGG      Partner ID   Select   Unselect   Share
Interface Mode                               Ports    Ports      Type
-----
BAGGI    S        none         1        1          Shar
```

A network administrator is troubleshooting a link aggregation between two HP 7500 switches. The exhibit shows the output for a display command on both switches. W

- A. Ensure that the bridge aggregation interface is enabled on the core switch.
- B. Check the bridge aggregation mode on the core switch; it should be dynamic.
- C. Look for incompatible VLAN settings on the bridge interface on the core switch and on the edge switch.
- D. Look for issues with one of the physical cables and make sure that the ports are enabled.

**Correct Answer: D**

**Section: (none)**  
**Explanation**

**Explanation/Reference:**

**QUESTION 66**

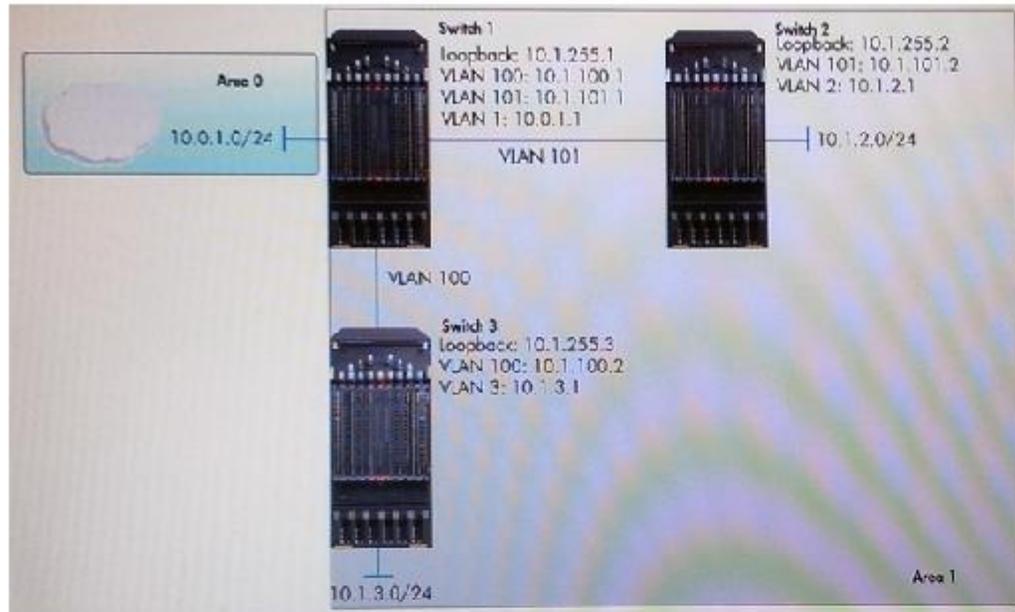


Exhibit 2: Command output from Switch 1

```
<Switch1> display ospf routing
```

```
OSPF Process 1 with Router ID 10.1.255.1
Routing Tables
```

```
Routing for Network
```

Destination	Cost	Type	NextHop	AdvRouter	Area
10.0.1.0/24	1	Transit	10.0.1.1	10.1.255.1	0.0.0.0
10.1.2.0/24	2	Stub	10.1.101.2	10.1.255.2	0.0.0.1
10.1.255.1/32	0	Stub	10.1.255.1	10.1.255.1	0.0.0.1
10.1.255.2/32	1	Stub	10.1.101.2	10.1.255.2	0.0.0.1
10.1.100.0/24	1	Stub	10.1.100.1	10.1.255.1	0.0.0.1
10.1.101.0/24	1	Transit	10.1.101.1	10.1.255.2	0.0.0.1

```
Total Nets: 6
```

```
Intra Area: 6 Inter Area: 0 ASE: 0 NSSA: 0
```

```
<Switch1>display ospf peer
```

```
OSPF Process 1 with Router ID 10.1.255.1
Neighbor Brief information
Area: 0.0.0.0
Router ID   Address   Pri   Dead-Time  Interface  State
10.0.255.2  10.0.1.2  1     32         vlan1      Full/BDR
Area: 0.0.0.1
Router ID   Address   Pri   Dead-Time  Interface  State
10.1.255.2  10.1.101.2 1     32         vlan101    Full/DR
```

The Open Shortest Path First (OSPF) implementation in a network is not working correctly. Based on the information shown in Exhibit 2, what is one logical next step for the network engineer?

- A. Enter the `display ip route` command and see whether Switch 1 has a route to 10.1.255.3.
- B. Enter the `display route-policy` command and look for a misconfigured rule.
- C. Enter the `display ospf isdb` command and look for the link state advertisements (LSAs) sent and received on VLAN 100.
- D. Enter the `display ospf error` command and look for errors that indicate mismatched settings.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 67**

Refer to the exhibit.

Exhibit: Command output on the HP router

```
<HP router>display bgp peer
```

```
BGP local router ID : 10.1.255.1
Local AS number : 1
Total number of peers : 1           Peers in established state : 1
```

Peer	AS	MsgRcvd	Msgsent	OutQ	PrefRcv Up/Down	State
172.16.1.1	2001	8	6	0	0 00:05:09	Established

```
<HP router>display ip routing
```

```
Routing Tables: Public
Destinations : 12           Routes : 12
```

Destination/Mask	Proto	Pre	Cost	NextHop	Interface
10.2.255.1/32	Direct	0	0	127.0.0.1	InLoop0
10.2.2.0/24	OSPF	10	2	10.2.10.2	Vlan10
10.2.4.1/24	OSPF	10	2	10.2.10.2	Vlan10
10.2.10.0/30	Direct	0	0	10.2.10.1	Vlan10
10.2.10.1/32	Direct	0	0	127.0.0.1	InLoop0
0/16	BGP	255	0	172.16.1.1	Vlan101
0.0/8	Direct	0	0	127.0.0.1	InLoop0
0.1/32	Direct	0	0	127.0.0.1	InLoop0
172.16.1.0/30	Direct	0	0	172.16.1.2	Vlan101
172.16.1.2/32	Direct	0	0	127.0.0.1	InLoop0
0/16	BGP	255	0	172.16.1.1	Vlan101
192.168.6.0/24	BGP	255	0	172.16.1.1	Vlan101

```
<HP router>display bgp routing
```

```
Total Number of Routes: 3
```

```
BGP Local router ID is 10.2.255.1
Status codes: * - valid, ^ - VPN best, > - best, d - damped,
              h - history, i - internal, s - suppressed, S - Stale
Origin : i - igp, e - EGP, ? - incomplete
```

Network	NextHop	MED	LocPrf	Prefval	Path/Ogn
* > 10.3-0.0/16	172.16.1.1	0		0	2001i
* > 172.17.0.0	172.16.1.1	0		0	2001i
* > 192.168.6.0	172.16.1.1	0		0	2001i

A company has a new internet service provider (ISP). The network administrator is configuring external Border Gateway Protocol (BGP) on the company HP MSR50-40 router. The router should announce a route for this network to the ISP router. However, the ISP router is not receiving the route.

Based on information shown in the exhibit, what must the network administrator do to fix the problem?

- A. Add a route to 10.2.0.0/16 through the null interface.
- B. Change the BGP router ID to 172.16.1.2.
- C. Create a route map that permits the advertisement of 10.2.0.0/16.
- D. Enable eBGP multihop.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 68**

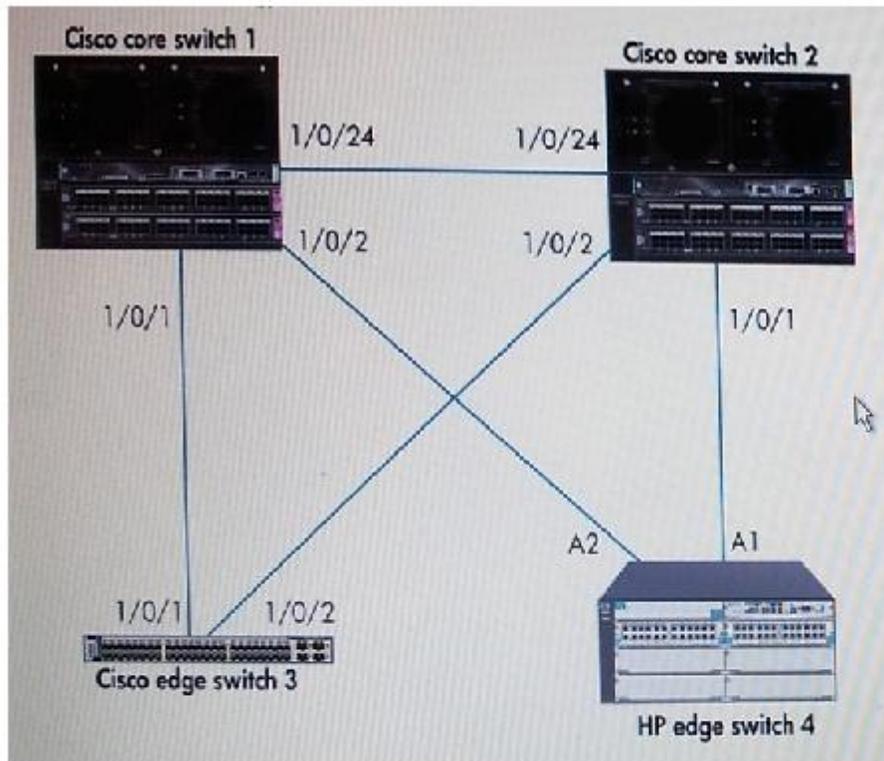


Exhibit 2: Portion of config for switches

```
Cisco core switch 1
spanning-tree mode rapid-pvst
spanning-tree vlan 2-3 priority root primary
spanning-tree vlan 4-5 priority root secondary
interface gigabitethernet 1/0/1
switchport mode trunk
switchport trunk native vlan 2
switchport trunk allowed vlan 2-5
```

```
Cisco core switch 2
spanning-tree mode rapid-pvst
spanning-tree vlan 2-3 priority root secondary
spanning-tree vlan 4-5 priority root primary
interface gigabitethernet 1/0/1
switchport mode trunk
switchport trunk native vlan 2
switchport trunk allowed vlan 2-5
```

In Exhibit 1, all links are GigabitEthernet links. Exhibit 2 shows the configuration for only ones configuration. Spanning tree settings that are not shown are at their factory defaults. The HP 5400 zl switch is at factory defaults. The Cisco Catalyst 3750 switches at the edge, A network administrator has enabled spanning tree on a new HP 5400 switch. The HP 5400 zl switch is at factory defaults as shown in the exhibit.

What happens?

- A. Port 1/0/2 on switch 1 forwards traffic, and Port 1/0/1 on switch 2 blocks traffic.
- B. Port 1/0/2 on switch 1 and Port 1/0/1 on switch 2 forward traffic, causing a network loop.
- C. Port 1/0/2 on switch 1 forwards traffic in VLANs 2 and 3 and blocks other traffic. Port 1/0/1 on switch 2 forwards traffic in VLANs 4 and 5 and blocks other traffic.
- D. Port 1/0/2 on switch 1 blocks traffic, and Port 1/0/1 on switch 2 forwards traffic.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 69

Two HP 10500 switches implement Virtual Routing Redundancy Protocol (VRRP) on a subnet. The master fails, so the backup takes over as the new master. Which message is sent to other devices on the subnet?

- A. a VRRP multicast that notifies other devices on the new master's MAC address
- B. a gratuitous ARP message that lets other devices map the VRRP group's virtual MAC address with the correct port
- C. a VRRP multicast that notifies VRRP backup devices where to send hellos
- D. a gratuitous ARP message that lets other devices map the VRRP group's virtual IP address with the new master's MAC address

**Correct Answer:** B

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 70**

Network topology

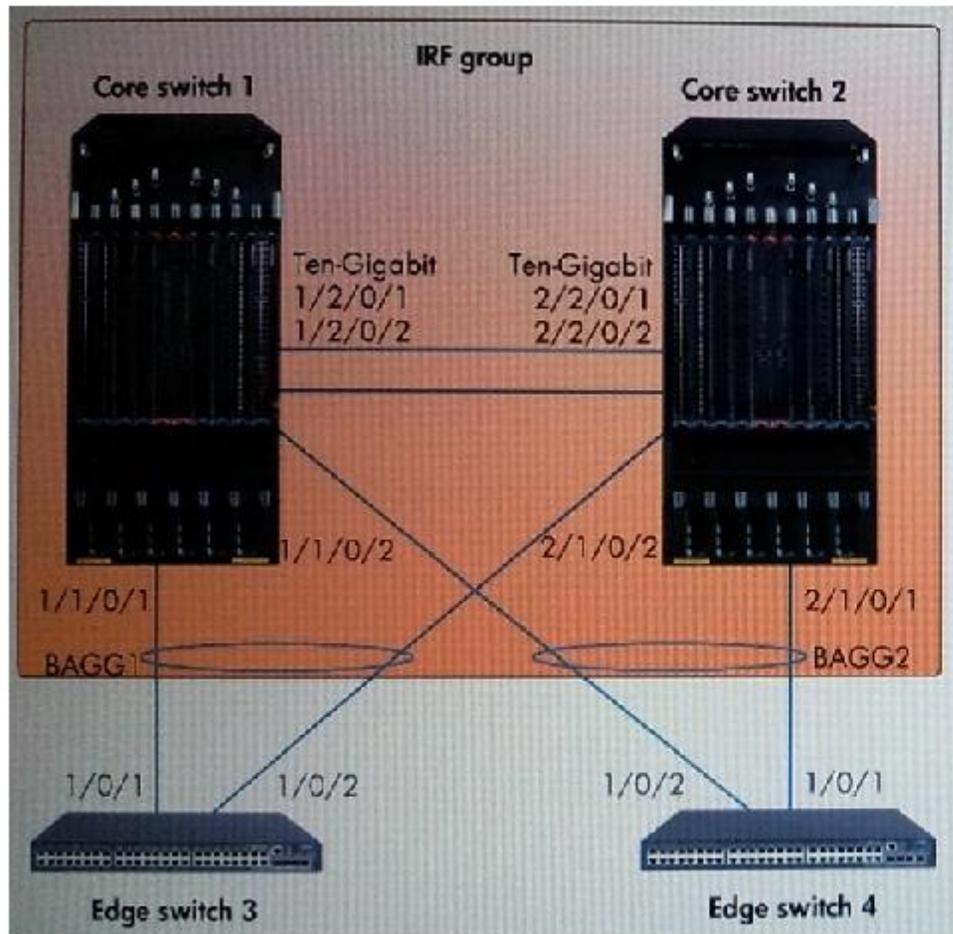


Exhibit 2: Portion of configs for switches - MISSING

A network administrator has created an HP Intelligent Resilient Framework (IRF) group between the two core switches shown in Exhibit 1. Exhibit 2 shows relevant configurations for the core switches. During a test, the network administrator discovers that endpoints cannot receive IP addresses. The network administrator checks the interfaces on the IRF group and sees the following output:

What is the problem?

- A. The network administrator connected the ports to two different core switches; however, links in bridge aggregation groups must connect to the same switch.
- B. STP has been enabled, and STP is not compatible with IRF.
- C. The ports on the IRF group are not assigned to the correct bridge aggregation groups.
- D. The physical links are configured for trunk mode; only the bridge aggregations should be configured for this mode.

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**