

Teste imagens Zegameiro

quando começa com 2 entao o IP é global  
quando começa com FE80 entao é um link-local

Considering this network, where all equipments are IPv6 aware and are fully configured, which of the following entries can be in the routing table of Router 1?

K

Seleciona uma opção de resposta:

- C 2001:A:1:1::100/64 [0/0] via ::, FastEthernet0/0 → refere-se à sub-network completa (2001:A:1:1::/64) e não a um endereço específico.  
Além disso, /64 corresponde a uma sub-rede.
- C 2001:A:1:1::128 [0/0] via ::, FastEthernet0/0 → refere-se a um endereço específico
- L FE80::/10 [0/0] via ::, Null0 → Esta refere-se aos endereços link-local para a comunicação na mesma rede
- C 2001:A:1:2::128 [0/0] via ::, FastEthernet0/0 → refere-se a um endereço específico

Atividades Firefox Navegador Web 6 de dez 16:16 17% 1.37

Miniteste2\_2022\_2023

https://elearning.ua.pt/mod/quiz/attempt.php?attempt=1792264&cmid=1180896

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3 193.0.0.10 [1/0] via 193.12.63.9

Router 2  
S 193.12.63.0/24 [1/0] via 193.46.89.8  
C 193.46.89.0/24 is directly connected, F0/0  
C 193.6.0.0/16 is directly connected, F1/0

Router 3  
C 193.12.63.0/24 is directly connected, F2/0  
S 193.46.89.0/24 [1/0] via 193.6.0.4  
C 193.6.0.0/16 is directly connected, F1/0

Considering the above network and routing tables, answer True or False to the following sentences:

An IPv4 packet sent from Router 2 to PCB will reach its destination.

PCA will have full connectivity with PCB.

The interface F2/0 from Router 3 doesn't have the IPv4 address 193.12.63.9.

A packet sent from PCA to a terminal in network 193.6.0.0/16 may make Router 1 send an ICMP Redirect message.

Grading: right answer: 25%, wrong answer: -12%, no answer: 0%

Quando um host envia um pacote para um destino e o roteador percebe que o próximo salto para o destino pode ser feito de maneira mais eficiente através de outro roteador, informando-o com um ICMP Redirect message.



Atividades Firefox Navegador Web 6 de dez 16:15 17% 1.38

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Terminar tentativa

Pergunta 1  
Por responder  
Nota: 2,00  
Marcar pergunta

Tempo restante 0:59:02

```
graph LR; Router1[Router 1] --- F1_0((F1/0)); Router1 --- F1_1((F1/1)); Router1 --- F1_0_1((F1/0)); Router1 --- F1_1_1((F1/1)); Router2[Router 2] --- F1_0_2((F1/0)); Router2 --- F0_0((F0/0)); Router3[Router 3] --- F1_0_3((F1/0)); Router3 --- F2_0((F2/0)); Subnet1((193.46.89.0/24)) --- PCA[PCA]; Subnet2((193.12.63.0/24)) --- PCB[PCB]; Subnet3((193.6.0.0/16)) --- Router1
```

Router 1

C 193.12.63.0/24 is directly connected, F1/0

C 193.46.89.0/24 is directly connected, F1/1

S 193.6.0.0/16 [1/0] via 193.12.63.9

Router 2

S 193.12.63.0/24 [1/0] via 193.46.89.8

C 193.46.89.0/24 is directly connected, F0/0

C 193.6.0.0/16 is directly connected, F1/0

Router 3

C 193.12.63.0/24 is directly connected, F2/0

S 193.46.89.0/24 [1/0] via 193.6.0.4

C 193.6.0.0/16 is directly connected, F1/0

Considering the above network and routing tables, answer True or False to the following sentences:

Icons: Firefox, PC, File, Terminal, Spotify, VS Code, Docker, Telegram, Sun, Grid.

## Pergunta 1

Por responder

Nota: 2,00

 Marcar pergunta

No.	Time	Source	Destination	Protocol	Info
1630	7009.554000	2001:0:1:1:200:ff:fe4c:4000	172.17.0.1	TCP 80	Neighbor solicitation
1631	7009.556462	2001:a:1:1::1	2001:a:1:1:2aa:ff:fe4c:4800	ICMPv6	Neighbor advertisement

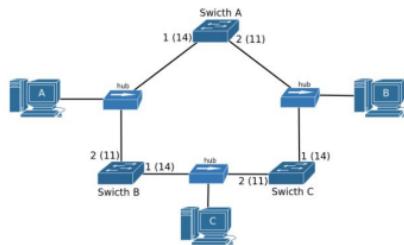
► Frame 1631 (86 bytes on wire, 86 bytes captured)  
► Ethernet II, Src: c2:00:2a:89:00:00 (c2:00:2a:89:00:00), Dst: 00:aa:00:4c:48:00 (00:aa:00:4c:48:00)  
▼ Internet Protocol Version 6  
    Source: 2001:a:1:1::1 (2001:a:1:1::1)  
    Destination: 2001:a:1:1:2aa:ff:fe4c:4800 (2001:a:1:1:2aa:ff:fe4c:4800)  
▼ Internet Control Message Protocol v6  
    Type: 136 (Neighbor advertisement)  
    Code: 0  
    Checksum: 0xfef9 [correct]  
    ► Flags: 0xe0000000  
        Target: 2001:a:1:1::1 (2001:a:1:1::1)  
    ▼ ICMPv6 Option (Target link-layer address)  
        Type: Target link-layer address (2)  
        Length: 8  
        Link-layer address: c2:00:2a:89:00:00

The purpose of this packet is:

Selecione uma opção de resposta:

- To ask for the MAC address of the machine with IPv6 address 2001:a:1:1:2aa:ff:fe4c:4800.
- Answer to a neighbor indicating the IPv6 address of the machine that sent this packet.
- Answer to a neighbor indicating the MAC address of the machine that sent this packet. ✓
- To ask for the MAC address of the machine with IPv6 address 2001:a:1:1::1.

Pergunta 4  
Por responder  
Nota: 2,00  
1º Marcar pergunta



Packet 1

## Spanning Tree Protocol

```

Protocol Identifier: Spanning Tree Protocol (0x0000)
Protocol Version Identifier: Rapid Spanning Tree (2)
BPDU Type: None/Multiple Spanning Tree (0x02)
BPDU Flags: 0x7c, Agreement, Forwarding, Learning, Port Role: Designated
Root Identifier: 32766 / 0 : 5f:5d:3d:2c:d1:1e
Root Path Cost: 0
Bridge Identifier: 32766 / 0 : 5f:5d:3d:2c:d1:1e
Message Age: 0
Max Age: 20
Hello Time: 6
Forward Delay: 19
Version 1 Length: 0
  
```

Packet 2

## Spanning Tree Protocol

```

Protocol Identifier: Spanning Tree Protocol (0x0000)
Protocol Version Identifier: Rapid Spanning Tree (2)
BPDU Type: None/Multiple Spanning Tree (0x02)
BPDU Flags: 0x7c, Agreement, Forwarding, Learning, Port Role: Designated
Root Identifier: 32766 / 0 : 5f:5d:3d:2c:d1:1e
Root Path Cost: 11
Bridge Identifier: 32768 / 0 : 0a:a1:cd:33:d0:fe
Message Age: 0
Max Age: 20
Hello Time: 6
Forward Delay: 19
Version 1 Length: 0
  
```

Considering the above network where all switches have Spanning-Tree active, that Switch C has the lowest SPT priority, the respective SPT port costs between parenthesis, and the above captured (partial) packets. PC A, B and C are capturing packets. Answer True or False to the following sentences:

é a razão

Packet 1 was captured by PC B or PC C True

Switch A has the MAC address 0:a1:cd:33:d0:fe True

Packet 2 was captured by PC B or PC C True

The interval between sent BPDUs is 19 seconds True

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https://elearning.ua.pt/mod/quiz/attempt.php?attempt=1792264&cmid=1180896&page=1

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Navegação do teste

Voltar

1 2 3 4 5 6 7 8 9 10

Terminar tentativa

Tempo restante 0:55:50

Pergunta 2 Por responder Nota: 2,00 Marcar pergunta

Regarding the network of the following figure, consider that the Spanning Tree protocol is active at all switches, the ports numbers and their corresponding costs (in parentheses) are placed near each port.

Switch 1  
Priority: 30000h  
MAC: aa:aa:aa:aa:aa:aa

Switch 2  
Priority: 20000h  
MAC: bb:bb:bb:bb:bb:bb

Switch 3  
Priority: 30000h  
MAC: cc:cc:cc:cc:cc:cc

LAN 1 LAN 2 LAN 3

1(10) 2(15) 1(1) 2(4) 5 1(5)

We can say that:

Selecione uma ou mais opções de resposta:

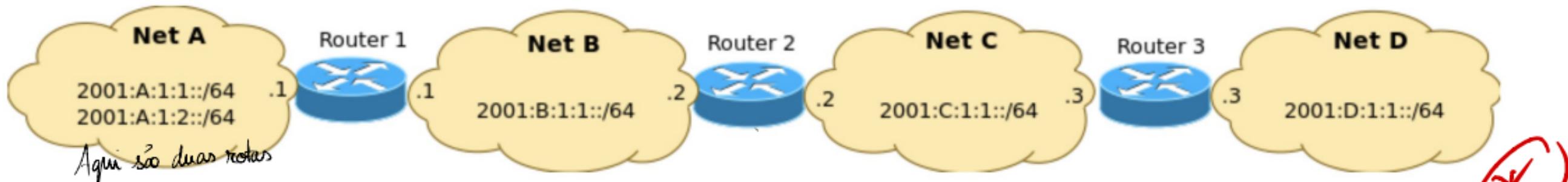
a. Switch 1 sends Configuration BPDU packets on LANs 1 and 2.  
 b. Changing the costs of switch 2 ports will have no impact on the current state of the ports of the different switches.  
 c. By changing the cost of port 1 of switch 3 to 5, this switch will become designated for LAN 2.  
 d. If Switch 1 priority is changed to 20000h, this switch will become the root switch.  
 e. Switch 3 sends Configuration BPDU packets on LAN 2.

Página anterior

Página seguinte

Ir para...

Regarding the following figure, consider that IPv6 routing is exclusively based on static routes (excluding static default routes). We can say that:



Selecione uma ou mais opções de resposta:

- a. In order to have total connectivity, Router 3 must have 3 static routes configured.  $1 + 2 = 3$  ✓
- b. At Router 3, all static routes that must be configured should have as next hop the interface with IPv6 address 2001:c:1:1::2 ✓
- c. At Router 2, the static route to network 2001:a:1:1::/64 must have, as next hop, the interface with IPv6 address 2001:b:1:1::2 ×
- d. In order to have total connectivity, Router 1 must have 3 static routes configured. ×
- e. In order to have total connectivity, we have to configure a total of 6 static routes. ×

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1 2 3 4 5 6 7 8 9 10

Terminar tentativa

Tempo restante 0:55:44

Pergunta 3  
Por responder  
Nota: 2,00  
Marcar pergunta

Router 1

Interface F0/0: FE80::C169:8E80:DE6D:C997  
Interface F1/1: FE80::D23B:C3D0:B853:AC9B

Router 2

Interface F2/0: FE80::E753:B8FA:9355:A191  
Interface F0/1: FE80::9FE4:CBB5:D0E9:8D7B

Router 3

Interface F2/0: FE80::77CA:9082:D2F2:9A7D  
Interface F1/0: FE80::994F:B85F:7810:CFBE

Router 4

Interface F1/0: FE80::AC0D:BB7E:8A40:90D7  
Interface F0/1: FE80::B07B:7E07:CE77:76FC

Considering the above network where all routers have the RIPng active for all networks and that the routing process is stabilized, and the above defined IPv6 Link-Local addresses, answer True or False to the following sentences:

Icon bar: Firefox, PC, File, Back, Spotify, Python, VS Code, Docker, Terminal, Sunflower icon.

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https://elearning.ua.pt/mod/quiz/attempt.php?attempt=1792264&cmid=1180896&page=2

Painel do utilizador Eventos Minhas UC Esta UC

Interface F0/1: FE80::B07B:7E07:CE77:76FC

Tempo restante 0:55:40

Considering the above network where all routers have the RIPng active for all networks and that the routing process is stabilized, and the above defined IPv6 Link-Local addresses, answer True or False to the following sentences:

The full IPv6 routing table entry in Router 2 for network 2500:880::/64 is  
R 2500:880::/64 [120/2] → não devia ser 1,  
via FE80::77CA:9082:D2F2:9A7D, F0/1

False

The full IPv6 routing table entry in Router 4 for network 2500:4472::/64 is  
R 2500:4472::/64 [120/2] → não devia ser 1,  
via FE80::994F:B85F:7810:CFBE, F1/0

False

The full IPv6 routing table entry in Router 1 for network 2500:880::/64 is  
R 2500:880::/64 [120/1]  
via FE80::B07B:7E07:CE77:76FC, F1/1

True

The full IPv6 routing table entry in Router 3 for network 2500:4683::/64 is  
R 2500:4683::/64 [120/2] → não devia ser 1,  
via FE80::B07B:7E07:CE77:76FC, F1/1X





Miniteste2\_segunda (pa...)

<https://elearning.ua.pt/mod/quiz/attempt.php?attempt=1444884&cmid=1020561>[Dashboard](#) [Events](#) [My courses](#) [This course](#)

Quiz navigation

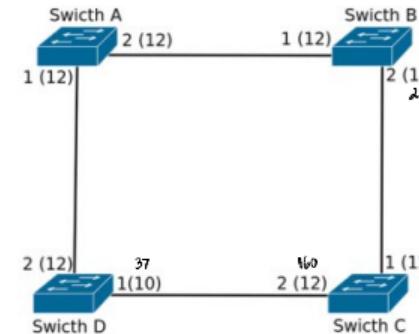
- [1](#)
- [2](#)
- [3](#)
- [4](#)
- [5](#)
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- [7](#)
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- [9](#)
- [10](#)

[Finish attempt ...](#)

Question 1

Not yet answered  
Marked out of 2.5  
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Time left 0:49:47



Teste 2 Duarte 1

Considering the above network where all switches have Spanning-Tree active, the respective SPT port costs between parenthesis, and that Switch C has the lowest SPT priority. Answer True or False to the following sentences:

Increasing the STP priority of Switch D will produce no change on the state of the port 2 of Switch D.

True

Changing the STP cost of port 2 of Switch C to 160, the Spanning-Tree will change.

False

Changing the STP cost of port 2 of Switch B to 23, the port 1 of Switch B will remain in forwarding state.

False

Changing the STP cost of port 1 of Switch D to 37, the port 1 of Switch D will remain in forwarding state.

False

Grading: right answer: 25%, wrong answer: -12%, no answer: 0%



Miniteste2\_segunda (pa...)



https://elearning.ua.pt/mod/quiz/attempt.php?attempt=1444884&amp;cmid=1020561&amp;page=1



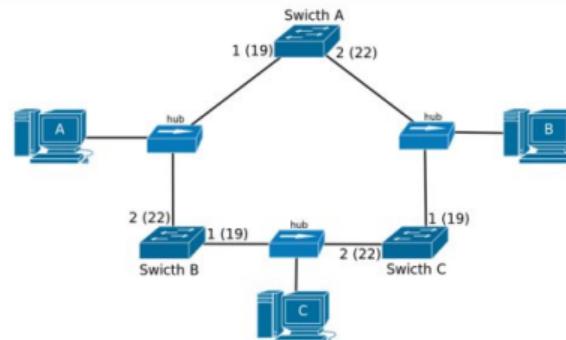
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Finish attempt ...

Question 2  
Not yet answered  
Marked out of 2.5  
Flag question

Time left 0:44:55



## Packet 1

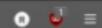
Spanning Tree Protocol  
Protocol Identifier: Spanning Tree Protocol (0x0000)  
Protocol Version Identifier: Rapid Spanning Tree (2)  
BPDU Type: Rapid/Multiple Spanning Tree (0x02)  
BPDU flags: 0x7c, Agreement, Forwarding, Learning, Port Role: Designated  
Root Identifier: 32767 / 0 / 14:74:ea:4e:79:fd  
Root Path Cost: 19  
Bridge Identifier: 32768 / 0 / 11:9b:7f:19:c7:8a  
Message Age: 0  
Max Age: 20  
Hello Time: 4  
Forward Delay: 17  
Version 1 Length: 0

## Packet 2

Spanning Tree Protocol  
Protocol Identifier: Spanning Tree Protocol (0x0000)  
Protocol Version Identifier: Rapid Spanning Tree (2)  
BPDU Type: Rapid/Multiple Spanning Tree (0x02)  
BPDU flags: 0x7c, Agreement, Forwarding, Learning, Port Role: Designated  
Root Identifier: 32767 / 0 / 14:74:ea:4e:79:fd  
Root Path Cost: 0  
Bridge Identifier: 32767 / 0 / 14:74:ea:4e:79:fd  
Message Age: 0  
Max Age: 20  
Hello Time: 4  
Forward Delay: 17  
Version 1 Length: 0



Miniteste2\_segunda (pa...)

<https://elearning.ua.pt/mod/quiz/attempt.php?attempt=1444884&cmid=1020561&page=1>

Dashboard

Events

My courses

This course

Max Age: 20  
Hello Time: 4  
Forward Delay: 17  
Version 1 Length: 0

Time left 0:44:49

**Packet 2**

Spanning Tree Protocol  
Protocol Identifier: Spanning Tree Protocol (0x0000)  
Protocol Version Identifier: Rapid Spanning Tree (2)  
BPDU Type: Rapid/Multiple Spanning Tree (0x02)  
BPDU flags: 0x7c, Agreement, Forwarding, Learning, Port Role: Designated  
Root Identifier: 32767 / 0 / 14:74:ea:4e:79:fd  
Root Path Cost: 0  
Bridge Identifier: 32767 / 0 / 14:74:ea:4e:79:fd  
Message Age: 0  
Max Age: 20  
Hello Time: 4  
Forward Delay: 17  
Version 1 Length: 0

Considering the above network where all switches have Spanning-Tree active, that Switch A has the lowest SPT priority, the respective SPT port costs between parenthesis, and the above captured (partial) packets. PC A, B and C are capturing packets. Answer True or False to the following sentences:

Packet 2 was captured by PC A or PC B  **True**

Switch C has the MAC address 11:9b:7f:19:c7:8a  **True**

Packet 1 was captured by PC A or PC B  **True, mas só captado pelo PC B.**

The Interval between sent BPDUs is 17 seconds  **False**

Grading: right answer: 25%, wrong answer: -12%, no answer: 0%





## Router 3

C 192.18.84.0/24 is directly connected, F1/1  
S 192.23.0.0/16 [1/0] via 192.18.84.10  
S 192.28.62.0/24 [1/0] via 192.18.84.10  
C 192.45.0.0/16 is directly connected, F2/1

Time left 0:40:23

## Router 4

C 192.18.84.0/24 is directly connected, F1/0  
S 192.23.0.0/16 [1/0] via 192.18.84.8  
[1/0] via 192.28.62.1  
C 192.28.62.0/24 is directly connected, F0/1

Considering the above network and routing tables, answer True or False to the following sentences:

PCA will have full connectivity with PCB.  *True*

The Interface F1/1 from Router 3 has the IPv4 address 192.18.84.10.  *False*

An IPv4 packet sent from Router 3 to PCA will not reach its destination.  *False*

A packet sent from PCA to a terminal in network 192.45.0.0/16 may make Router 1 send an ICMP Destination Unreachable message.  *False*

Grading: right answer: 25%, wrong answer: -12%, no answer: 0%



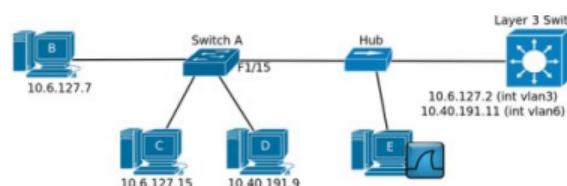
## Quiz navigation



Finish attempt ...

## Question 4

Not yet answered  
Marked out of 2.5  
 Flag question



Considering the above network where all PCs have the indicated IPv4 addresses with a 255.255.255.0 mask and the correct gateway configured. The layer 3 switch has two virtual interfaces associated to VLAN 3 and 6. Switch A has port F1/15 configured as trunk/inter-switch. There are connectivity between all terminals. PC E is capturing packets. Answer True or False to the following sentences:

PC D and PC B are connected to Switch A using access ports associated with different VLAN.

After performing one PING from PC B to 10.6.127.2, PC E will capture ICMP packets with a 802.1Q VLAN tag equal to 3.

After performing one PING from PC B to PC D, PC E will capture ICMP packets with 802.1Q VLAN tag equal to 3 or 6.

After sending one ICMP Echo Request packet from PC B to 10.40.191.11, PC E will capture only one ICMP Echo Request packet.

Grading: right answer: 25%, wrong answer: -12%, no answer: 0%

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Question 5

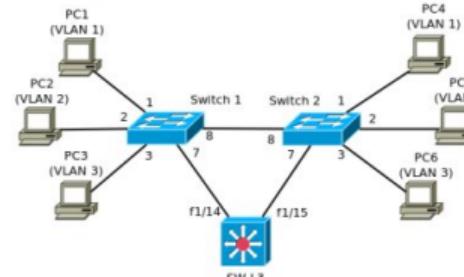
Not yet answered

Marked out of 2.5

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Time left 0:31:40

Consider the network of the following figure, where routing between VLANs 1, 2 and 3 is performed by layer 3 switch SW L3. Ports 7 and 8 of switches 1, 2 and 3 are interswitch ports (trunk ports). Assume that all necessary configuration were already done and there is total connectivity.



We can say that:

Ports f1/14 and f1/15 of SW L3 must also be interswitch ports.

PC1 has no connectivity with PC6.

At the switch SW L3, it was necessary to configure all three VLANs.

Each VLAN corresponds to a different IP network.

Grading: right answer: 25%, wrong answer: -12%, no answer: 0%

Atividades Firefox Navegador Web 13 de dez 11:38

Miniteste2\_segunda (página 1 de 5) https://elearning.ua.pt/mod/quiz/attempt.php?attempt=1444884&cmid=1020561&page=5

Dashboard Events My courses This course

My courses > 41770-RS > Avaliação/Evaluation > Miniteste2\_segunda

Quiz navigation

Time left 0:29:19

1 2 3 4 5 6 7 8 9 10

Finish attempt ...

Question 6  
Not yet answered  
Marked out of 1.5  
Flag question

Router1

PC

2001:A:1:1::64  
2001:A:1:2::64

Considering this network, where all equipments are IPv6 aware and are fully configured, which of the following entries can be in the Router routing table?

Select one:

C 2001:A:1:1::/128 [0/0] via ::, FastEthernet0/0

C 2001:A:1:1::100/64 [0/0] via ::, FastEthernet0/0

C 2001:A:1:1::/24 [0/0] via ::, FastEthernet0/0

L FE80::/10 [0/0] via ::, Null0

Previous page Next page

Jump to... ▾



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Miniteste2\_segunda (página 1 de 1)

https://elearning.ua.pt/mod/quiz/attempt.php?attempt=1444884&cmid=1020561&page=6

## Redes e Serviços

Dashboard Events My courses This course

My courses > 41770-RS > Avaliação/Evaluation > Miniteste2\_segunda

Quiz navigation

1 2 3 4 5 6 7 8 9 10

Question 7  
Not yet answered  
Marked out of 2.0  
Flag question

Finish attempt ...

No. Time Source Destination Protocol Info

Frame 1631 (86 bytes on wire, 86 bytes captured)  
Ethernet II, Src: 00:aa:00:4c:48:00 (C:00:2a:09:00:00), Dst: 00:aa:00:4c:48:00 (00:aa:09:4c:48:00)  
Internet Control Message Protocol, v6  
Source: 2001:a:1:1::1 (2001:a:1:1::1)  
Destination: 2001:a:1:1::2aa:ff:fe4c:4800 (2001:a:1:1:2aa:ff:fe4c:4800)  
Internet Control Message Protocol, v6  
Type: 138 (Neighbor advertisement)  
Checksum: 0x0000 (correct)  
Flags: 0x00000000  
Target: 2001:a:1:1::1 (2001:a:1:1::1)  
IPv6 Option [Target link-layer address]  
Type: Target link-layer address (2)  
Length: 8  
Link-layer address: c2:00:2a:09:00:00

The purpose of this packet is:

Select one:

To ask for the MAC address of the machine with the IPv6 address 2001:a:1:1:2aa:ff:fe4c:4800. ✗  
 Respond to a neighbor indicating the MAC address of the machine that sent this packet.  
 Respond to a neighbor indicating the MAC address of the IPv6 gateway.  
 To ask for the MAC address of the machine with the IPv6 address 2001:a:1:1::1. ✗

Previous page Next page

Jump to... ↴





## Router 2

C 220.21.0.0/16 is directly connected, F2/0  
C 220.33.0.0/16 is directly connected, F1/0

Time left 0:24:39

## Router 3

C 220.12.76.0/24 is directly connected, F1/1  
C 220.33.0.0/16 is directly connected, F2/0

## Router 4

C 220.12.76.0/24 is directly connected, F0/0  
C 220.23.0.0/16 is directly connected, F1/0

Considering the above network and routing tables, and assuming that PCB's gateway is the respective interface of Router 4, and that PCA's gateway is the respective interface of Router 4, answer True or False to the following sentences:

PCB has connectivity to all Router 4's IPv4 addresses.

The network net2 has IPv4 prefix 220.33.0.0/16.

PCB has no connectivity to PCA.

The Interface F2/0 of Router 2 may be configured with the IPv4 address 220.33.144.219.

Grading: right answer: 25%, wrong answer: -12%, no answer: 0%

## Quiz navigation

[Finish attempt ...](#)

Question 9

Not yet  
answeredMarked out of  
1.0 Flag  
question

IPv6 hosts send Router Solicitations in order to prompt routers to generate Router Advertisements quickly.

Select one:

- True  
 False

Time left 0:22:02

[Previous page](#)[Next page](#)[Jump to...](#)

## Quiz navigation

[Finish attempt ...](#)

Question 10  
Not yet answered  
Marked out of 1.0  
 Flag question

The source address of a Neighbor Solicitation Message is always the null address.

Select one:

- True  
 False

Pode ser unicast

Time left 0:21:16

[Previous page](#)[Finish attempt ...](#)[Jump to...](#)

## Quiz navigation



Finish attempt ...

Time left 0:27:47

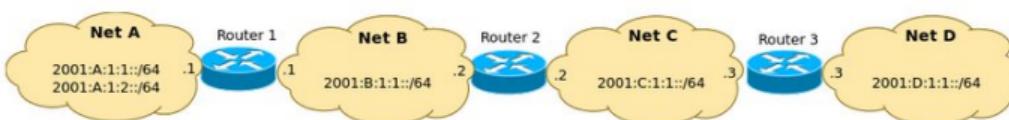
Question 3

Answer saved

Marked out of  
1.00

Flag question

Considerando que na rede da figura seguinte o encaminhamento IPv6 é baseado em rotas estáticas. Podemos afirmar que (duas afirmações corretas):



Select one or more:

- a. No Router 3, todas as rotas estáticas a configurar deverão ter como next hop o interface com endereço IPv6 2001:c:1:1::2 ✓
- b. No Router 2, a rota estática para a rede 2001:a:1:1::/64 deverá ter como next hop o interface com endereço IPv6 2001:b:1:1::2
- c. Para haver conectividade total na rede é necessário configurar 6 rotas estáticas.
- d. Para que haja conectividade total, o Router 1 deve ter 3 rotas estáticas configuradas.
- e. Para que haja conectividade total, o Router 3 deve ter 3 rotas estáticas configuradas. ✓

Previous page

Next page ↑

## 2º Teste Prático 2018\_19 x

<https://elearning.ua.pt/mod/quiz/attempt.php?attempt=245902&cmid=40433>

Pesquisar

[My courses](#) > [40433-RS](#) > [Topic 5](#) > [2º Teste Prático 2018\\_19 P1](#)

## Quiz navigation



Finish attempt ...

Time left 0:27:40

## Question 4

Answer saved

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1.00

Flag question

A captura ilustrada na figura seguinte representa os pacotes enviados por um router desde o seu arranque até ao momento em que lhe é configurado um endereço IPv6 global. Podemos afirmar que (três afirmações corretas):

Capturing from Standard Input [Wireshark 1.6.7]						
No.	Time	Source	Destination	Protocol	Length	Info
8	4.404564	::	ff02::16	ICMPv6	90	Multicast Listener Report Message v2
9	4.899544	::	ff02::1:ff20:0	ICMPv6	78	Neighbor Solicitation for fe80::c000:3eff:fe20:0
10	5.931081	fe80::c000:3eff:fe20:0	ff02::1	ICMPv6	66	Neighbor Advertisement fe80::c000:3eff:fe20:0 (rtr, ovr) is at c2:00:3e:20:00:00
17	22.438571	fe80::c000:3eff:fe20:0	ff02::16	ICMPv6	90	Multicast Listener Report Message v2
18	22.448789	::	ff02::1:ff00:100	ICMPv6	78	Neighbor Solicitation for 2001:a1:1::100
20	23.459415	2001:a1:1::100	ff02::1	ICMPv6	86	Neighbor Advertisement 2001:a1:1::100 (rtr, ovr) is at c2:00:3e:20:00:00

Select one or more:

- a. O pacote número 9 é enviado para verificação de endereços duplicados. ✓
- b. O pacote número 18 é enviado para verificação de endereços duplicados. ✓
- c. O interface do router tem o endereço link local ff02::1:ff00:100.
- d. O pacote número 10 é enviado para verificação de endereços duplicados.
- e. O interface do router tem o endereço global 2001:a1:1::100. ✓

[Previous page](#)[Next page](#)



## Quiz navigation



Finish attempt ...

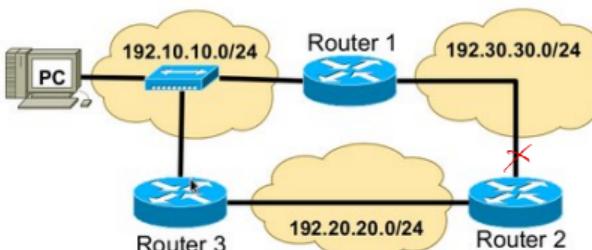
Time left 0:27:31

## Question 5

Answer saved  
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2.00

Flag question

Assuma que o protocolo OSPF está configurado nos três routers da figura seguinte. Considere ainda que os custos dos interfaces são todos iguais a 1.



Ao desligar (fazendo shutdown) a interface do Router 2 que liga à rede 192.30.30.0, foram capturados (entre outros) os seguintes pacotes na rede 192.10.10.0 e, assim, podemos afirmar que (três afirmações corretas):

Capturing from Standard Input [Wireshark 1.6.7]

No.	Time	Source	Destination	Protocol	Length	Info
27	48.723669	192.10.10.1	224.0.0.5	OSPF	110	LS Update
28	48.743968	192.10.10.1	224.0.0.5	OSPF	94	LS Update
30	51.227716	192.10.10.3	224.0.0.5	OSPF	98	LS Acknowledge
31	54.912102	192.10.10.3	224.0.0.5	OSPF	94	Hello Packet

```

Frame 27: 110 bytes on wire (880 bits), 110 bytes captured (880 bits)
Ethernet II, Src: c2:00:4e:aa:00:00 (c2:00:4e:aa:00:00), Dst: IPv4mcast_00:00:05 (01:00:5e:00:00:05)
Internet Protocol Version 4, Src: 192.10.10.1 (192.10.10.1), Dst: 224.0.0.5 (224.0.0.5)
Open Shortest Path First
  OSPF Header
  LS Update Packet
    Number of LSAs: 1
    LS Type: Router-LSA
      LS Age: 1 seconds
      Do Not Age: False
      Options: 0x22 (DC, E)
      Link-State Advertisement Type: Router-LSA (1)

```

2º Teste Prático 2018\_19 X

 <https://elearning.ua.pt/mod/quiz/attempt.php?attempt=245902&cmid=404>   

```
30 51.227/16 192.10.10.3          224.0.0.5      OSPF      98 LS Acknowledge
31 54.912102 192.10.10.3          224.0.0.5      OSPF      94 Hello Packet

> Frame 27: 110 bytes on wire (880 bits), 110 bytes captured (880 bits)
> Ethernet II, Src: c2:00:4e:aa:00:00 (c2:00:4e:aa:00:00), Dst: IPv4mcast_00:00:05 (01:00:5e:00:00:05)
> Internet Protocol Version 4, Src: 192.10.10.1 (192.10.10.1), Dst: 224.0.0.5 (224.0.0.5)
Open Shortest Path First
  ▷ OSPF Header
    ▷ LS Update Packet
      Number of LSAs: 1
      ▷ LS Type: Router-LSA
        LS Age: 1 seconds
        Do Not Age: False
      ▷ Options: 0x22 (DC, E)
        Link-State Advertisement Type: Router-LSA (1)
        Link State ID: 192.30.30.1
        Advertising Router: 192.30.30.1 (192.30.30.1)
        LS Sequence Number: 0x80000005
        LS Checksum: 0x9acc
        Length: 48
      ▷ Flags: 0x00
        Number of Links: 2
      ▷ Type: Stub     ID: 192.30.30.0    Data: 255.255.255.0    Metric: 10
      ▷ Type: Transit  ID: 192.10.10.1   Data: 192.10.10.1   Metric: 10
```

Select one or more:

- a. O conteúdo do pacote número 28 deverá ser igual ao conteúdo do pacote número 27.
  - b. O pacote número 27 é enviado para um endereço IPv4 do tipo multicast. ✓
  - c. O pacote número 27 é um LS Update enviado pelo Router 1 e indica que o Router 2 não tem ligação direta à rede 192.30.30.0. ✓
  - d. A tabela de encaminhamento do Router 2 será:  
C 192.20.20.0/24 ls directly connected, Fastethernet0/0  
O 192.10.10.0 [110/2], via 192.20.20.3, Fastethernet0/0
  - e. A tabela de encaminhamento do Router 2 será: ✓  
C 192.20.20.0/24 ls directly connected, Fastethernet0/0  
O 192.10.10.0 [110/2], via 192.20.20.3, Fastethernet0/0  
O 192.30.30.0 [110/31], via 192.20.20.3, Fastethernet0/0

## Quiz navigation



Finish attempt ...

Time left 0:27:17

## Question 6

Answer saved

Marked out of  
2.00

Flag question

Este pacote foi capturado numa LAN e revela que (duas afirmações corretas):

- ▷ Ethernet II, Src: c2:04:30:c1:00:01 , Dst: 01:00:5e:00:00:05
- ▷ Internet Protocol, Src: 10.3.3.1 (10.3.3.1), Dst: 224.0.0.5 (224.0.0.5)
- ▷ Open Shortest Path First
  - ▷ OSPF Header
    - OSPF Version: 2
    - Message Type: Hello Packet (1)
    - Packet Length: 48
    - Source OSPF Router: 10.10.10.1 (10.10.10.1)
    - Area ID: 0.0.0.0 (Backbone)
    - Packet Checksum: 0x9666 [correct]
    - Auth Type: Null
    - Auth Data (none)
  - ▷ OSPF Hello Packet
    - Network Mask: 255.255.255.0
    - Hello Interval: 10 seconds
    - ▷ Options: 0x12 (L, E)
      - Router Priority: 1
      - Router Dead Interval: 40 seconds
      - Designated Router: 10.3.3.3
      - Backup Designated Router: 10.3.3.1
      - Active Neighbor: 10.30.30.1

## Select one or more:

- a. Este router enviará um novo pacote deste tipo dentro de 10 segundos.
- b. A LAN pertence à area 0 e tem apenas um router ativo.
- c. Este pacote foi enviado pelo Designated Router desta LAN.
- d. A LAN pertence à area 0 e tem dois routers ativos.
- e. A LAN pertence à area 12 e tem dois routers ativos.

## Quiz navigation



Finish attempt ...

Time left 0:27:10

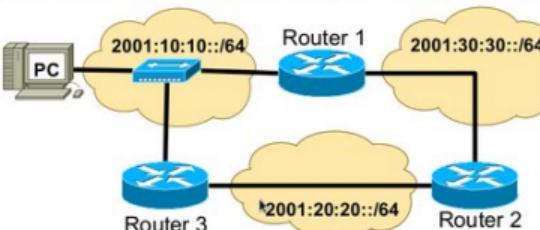
## Question 7

Answer saved

Marked out of  
2.00

Flag question

Assuma que o protocolo OSPFv3 está configurado nos três routers da figura seguinte. Considere ainda que os custos dos interfaces são todos iguais a 1 (três afirmações corretas).



Select one or more:

- a. Desligando o interface do Router 2 que liga à rede 2001:30:30::/64, irá circular pelo menos um pacote OSPF do tipo LS Update.
- b. Após a construção da base de dados OSPF em todos os routers e do estabelecimento das respectivas tabelas de encaminhamento, os únicos pacotes OSPF que circulam na rede são do tipo Hello.
- c. Na configuração do OSPFv3, é obrigatória a definição do Router-ID em cada router.
- d. A tabela de encaminhamento do Router 2 contém as seguintes entradas:  
 C 2001:20:20::/64 [0/0] via ::, Fastethernet0/0  
 C 2001:30:30::/64 [0/0] via ::, Fastethernet0/1  
 O 2001:10:10::/64 [110/2], via FE80:C000:1BFF:FE74:1, Fastethernet0/1
- e. A base de dados OSPF varia conforme o router em que é visualizada, uma vez que as redes IPv6 a que ele está ligado também são diferentes.



## Quiz navigation



Finish attempt ...

Time left 0:27:03

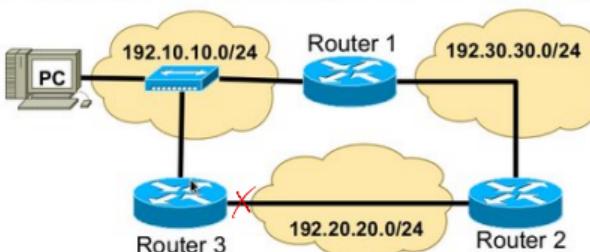
Question 8

Answer saved

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1.00

Flag question

Assuma que o protocolo RIP está configurado nos três routers da figura seguinte (três afirmações corretas).



Select one or more:

- a. Com o mecanismo split horizon ativo, os pacotes RIP Response enviados pelo Router 3 para a rede 192.10.10.0/24 só contêm o vetor distância correspondente à rede 192.20.20.0. ✓
- b. Sem o mecanismo split horizon ativo, os pacotes RIP Response enviados pelo Router 1 para a rede 192.10.10.0/24 contêm os vetores distância correspondentes às três redes IP. ✓
- c. Se o interface do Router 3 para a rede 192.20.20.0/24 for desligado (shutdown), o Router 3 envia um RIP Response para a rede 192.10.10.0/24 incluindo um vetor distância com métrica de 16 para a rede 192.20.20.0. ✓
- d. Se o interface do Router 3 para a rede 192.20.20.0/24 for desligado (shutdown), o Router 3 deixa de ter acesso à rede 192.20.20.0.
- e. Com o mecanismo split horizon ativo, os pacotes RIP Response enviados pelo Router 1 para a rede 192.10.10.0/24 só contêm o vetor distância correspondente à rede 192.20.20.0.

## Quiz navigation

[Finish attempt ...](#)

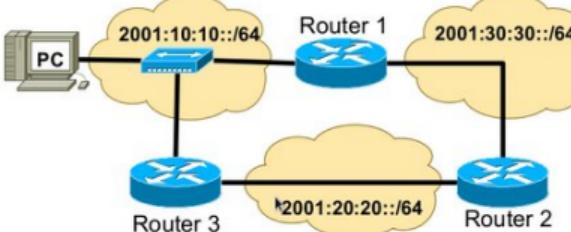
Time left 0:26:57

## Question 9

Answer saved

Marked out of  
1.00[Flag question](#)

Assuma que o protocolo RIPng está configurado nos três routers da figura seguinte (três afirmações corretas).



Select one or more:

- a. O Router 2 terá dois caminhos de custo mínimo para a rede 192.10.10.0. ✓
- b. Em cada router, o protocolo RIPng é ativado por interface. ✓
- c. Em cada router, o protocolo RIPng é ativado no modo de configuração global, indicando as redes a que o router está ligado.
- d. Os pacotes RIPng Response são enviados com endereço IPv6 origem do tipo link local. ✓
- e. O Router 3 terá um caminho de custo mínimo (igual a 2) para a rede 192.30.30.0.

[Previous page](#)[Next page](#)

≡ Quiz navigation

- |   |   |    |    |    |   |   |
|---|---|----|----|----|---|---|
| 1 | 2 | 3  | 4  | 5  | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 |   |   |

**Finish attempt ...**

Time left 0:26:50

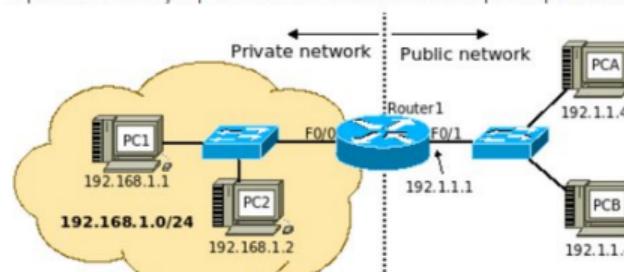
**Question 10**

◎ 人物

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2.00

 Flag question

Na rede seguinte assuma que o serviço NAT (Network Address Translation) está configurado no Router 1, sendo a pool de endereços públicos a atribuir constituída apenas pelo endereço 192.1.1.21 (duas afirmações corretas).



Select one or more

- a. Configurando o serviço NAT/PAT (Port Address Translation) dinâmico, o acesso a um dos PCs da rede privada a partir da rede pública só será possível depois de apagar a tabela de traduções no Router 1.
  - b. Configurando o serviço NAT/PAT (Port Address Translation) dinâmico, já será possível que ambos os PCs 1 e 2 comuniquem simultaneamente com a rede pública.
  - c. O PC A conseguirá estabelecer conectividade com o PC 1.
  - d. Os PCs 1 e 2 não terão simultaneamente conectividade com a rede pública.
  - e. Configurando o serviço NAT/PAT (Port Address Translation) dinâmico, já será possível estabelecer conectividade com o PC 1 a partir do PC A.

2º Teste Prático 2018\_19

◀ ▶ ⌂ ⌂

≡ Quiz navigation

1	2	3	4	5	6	7
8	9	10	11	12		

[Finish attempt ...](#)

Time left 0:26:43

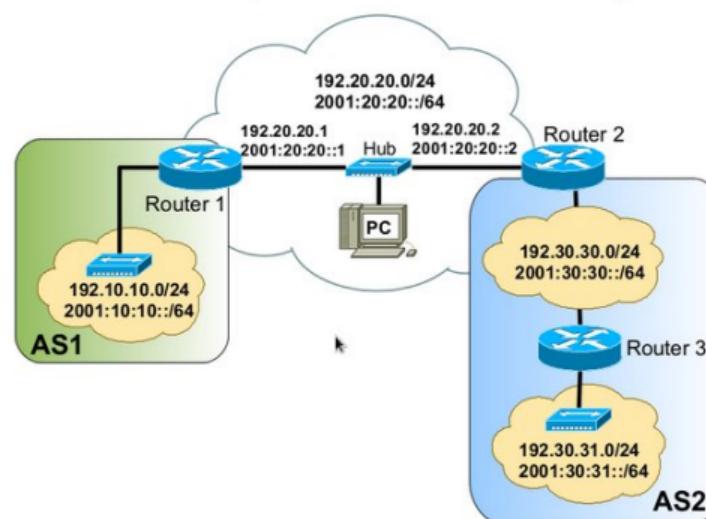
**Question 11**

#### **Answer seven**

Marked out of  
2.00

 Flag question

Considere a rede da figura seguinte, onde o protocolo BGP foi configurado nas redes 192.20.20.0/24 e 2001:20:20::/64. Dentro dos sistemas autónomos, o protocolo de encaminhamento é o OSPF. Considere ainda que o Router 2 anuncia uma rota por omissão OSPF e efectua a redistribuição das rotas OSPF para o protocolo BGP.



A tabela de encaminhamento IPv4 do Router 2 é a seguinte. Quais das seguintes afirmações são corretas (três afirmações corretas)?

- ```
C 192.20.20.0/24 is directly connected, Fastethernet0/0
C 192.30.30.0/24 is directly connected, Fastethernet0/1
O 192.30.31.0/24 [110/2] via 192.30.30.3, Fastethernet0/0
B 192.10.10.0/24 [20/0] via 192.20.20.1
B 192.30.30.0/23 [200/0] via 0.0.0.0, Null0
```

A tabela de encaminhamento IPv4 do Router 2 é a seguinte. Quais das seguintes afirmações são corretas (três afirmações corretas)?

- C 192.20.20.0/24 is directly connected, Fastethernet0/0
- C 192.30.30.0/24 is directly connected, Fastethernet0/1
- O 192.30.31.0/24 [110/2] via 192.30.30.3, Fastethernet0/1
- B 192.10.10.0/24 [20/0] via 192.20.20.1
- B 192.30.30.0/23 [200/0] via 0.0.0.0, Null0

Select one or more:

- a. Na tabela de encaminhamento do Router 3 irá aparecer uma entrada correspondente à rede 192.10.10.0/24 do Sistema Autónomo 1.
- b. O Router 2 estabeleceu uma relação de vizinhança BGP apenas com o Router 1.
- c. Na tabela de encaminhamento do Router 1 irão aparecer entradas para as redes 192.30.30.0/24 e 192.30.31.0/24 do Sistema Autónomo 2.
- d. Na tabela de encaminhamento do Router 3 irá aparecer uma rota por omissão.
- e. Podemos dizer que o Router 2 está a fazer a summarização das redes IP do Sistema Autónomo 2.

[Previous page](#)[Next page](#)

2º Teste Prático 2018\_19 x



https://elearning.ua.pt/mod/quiz/attempt.php?attempt=245902&amp;cmid=404



Pesquisar



## Quiz navigation



Question 12

Answer saved

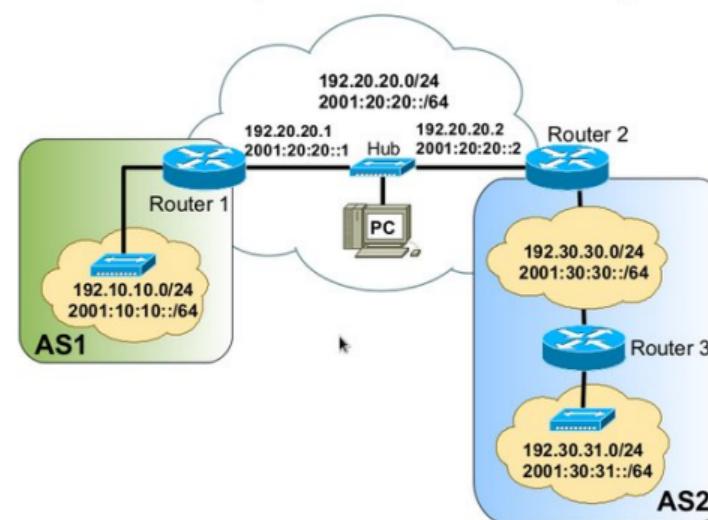
Marked out of  
2.00

Flag question

Finish attempt ...

Time left 0:26:30

Considere a rede da figura seguinte, onde o protocolo BGP foi configurado nas redes 192.20.20.0/24 e 2001:20:20::/64. Dentro dos sistemas autónomos, o protocolo de encaminhamento é o OSPF. Considere ainda que o Router 2 anuncia uma rota por omissão OSPF e efectua a redistribuição das rotas OSPF para o protocolo BGP.



No PC, foi efetuada a seguinte captura de pacotes usando o wireshark. Quais das seguintes afirmações são correctas (três afirmações corretas):

Capturing from Standard Input [Wireshark 1.6.7]

File Edit View Go Capture Analyze Statistics Telephony Tools Internals Help

Filter: bgp Expression... Clear Apply

| No. | Time      | Source      | Destination | Protocol | Length | Info                            |
|-----|-----------|-------------|-------------|----------|--------|---------------------------------|
| 20  | 48.113185 | 192.20.20.2 | 192.20.20.1 | BGP      | 99     | OPEN Message                    |
| 21  | 48.123245 | 192.20.20.1 | 192.20.20.2 | BGP      | 118    | OPEN Message, KEEPALIVE Message |
| 22  | 48.123277 | 192.20.20.2 | 192.20.20.1 | BGP      | 95     | KEEPALIVE Message               |

correctas (tres afirmações corretas):

Capturing from Standard input [Wireshark 1.6.7]

| No. | Time       | Source      | Destination | Protocol | Length | Info                                 |
|-----|------------|-------------|-------------|----------|--------|--------------------------------------|
| 20  | 48.113185  | 192.20.20.2 | 192.20.20.1 | BGP      | 99     | OPEN Message                         |
| 21  | 48.123245  | 192.20.20.1 | 192.20.20.2 | BGP      | 118    | OPEN Message, KEEPALIVE Message      |
| 22  | 48.133577  | 192.20.20.2 | 192.20.20.1 | BGP      | 73     | KEEPALIVE Message                    |
| 23  | 48.143742  | 192.20.20.2 | 192.20.20.1 | BGP      | 118    | UPDATE Message                       |
| 24  | 48.234577  | 192.20.20.2 | 192.20.20.1 | BGP      | 92     | KEEPALIVE Message, KEEPALIVE Message |
| 25  | 48.244629  | 192.20.20.1 | 192.20.20.2 | BGP      | 106    | UPDATE Message                       |
| 26  | 48.325429  | 192.20.20.1 | 192.20.20.2 | BGP      | 92     | KEEPALIVE Message, KEEPALIVE Message |
| 42  | 108.254627 | 192.20.20.2 | 192.20.20.1 | BGP      | 73     | KEEPALIVE Message                    |

Select one or more:

- a. Se fizermos shutdown do interface do Router 3 que liga à rede 192.30.31.0, o Router 2 não enviará nenhuma mensagem BGP Update para o Router 1.
- b. A mensagem BGP Update enviada pelo Router 2 anuncia as redes 192.30.30.0/24 e 192.30.31.0/24.
- c. As mensagens BGP Keepalive destinam-se a manter ativas as ligações TCP entre os routers 1 e 2.
- d. A mensagem BGP Update enviada pelo Router 2 anuncia a rede 192.30.30.0/24.
- e. A mensagem BGP Update enviada pelo Router 1 anuncia a rede 192.10.10.0/24.

Previous page

Finish attempt ...