

Google Chrome - ter 14:18

Primeiro teste prático

https://elearning.ua.pt/mod/quiz/attempt.php?attempt=3442900&mid=30012&page=6

Português - Português (pt)

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Fundamentos de Redes

Navegação do teste

1 2 3 4 5 6 7 8 9 10

Terminar tentativa

Tempo restante 05:17

Pergunta 7

Por responder

Nota: 2,00

Marcar pergunta

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 router has two sub-interfaces associated respectively to VLAN 2 and 4. 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 C and PC B are connected to Switch A using access ports associated with the same VLAN. ☐ F

After performing one PING from PC C to 10.38.184.1, PC E will capture ICMP packets with no 802.1Q VLAN tag.

After performing one PING from PC B to PC C, PC E will capture ICMP packets with 802.1Q VLAN tag equal to 2 or 4. ☐ T

After sending one ICMP Echo Request packet from PC B to 10.38.184.2, PC E will capture two ICMP Echo Request packet. ☐ T

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

Página anterior

Página seguinte

1

10.31.138.0 = VLAN 2

O PC C pertence à VLAN 4, e o PC B à VLAN 2, logo não estão

10.38.184.0 = VLAN 4

associados a portos da mesma VLAN

3

PC B e PC C pertencem a VLANs distintas, logo, para a troca de pacotes entre estes PCs os conteúdos (ICMPs) terão de ir ao router para que sejam posteriormente reencaminhados, ao irem até ao router passam certamente pelo Hub que transmitirá toda a informação que por si passa ao PC E. Estes ICMPs terão as Vlan tags com valores de 2 ou 4 dependendo da vlan em questão.

4

O ICMP Echo Request dirige-se ao router, partindo do PC B (o PC B e o C não pertencem à mesma Vlan) = 1º Echo Request captado pelo PC E. Para transmitir o pacote ao seu destinatário, o router envia o que recebeu = 2º Echo Request captado pelo PC E

Navegação do teste

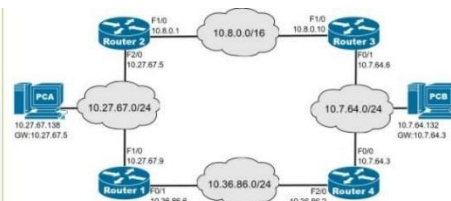


Terminar tentativa

Tempo restante 0:45:22

Pergunta 3

Resposta guardada
Nota de 2,00
Marcar pergunta



Considering the above network where all routers have the RIP active for all networks, and the routing process is stabilized, answer True or False to the following sentences:

The full IPv4 routing table entry in Router 1 for network 10.8.0.0/16 is

R 10.8.0.0/16 [120/1] via 10.27.67.5, 00:00:19, F1/0

True

The full IPv4 routing table entry in Router 2 for network 10.7.64.0/24 is

R 10.7.64.0/24 [120/1] via 10.8.0.1, 00:00:04, F1/0

False

The full IPv4 routing table entry in Router 3 for network 10.36.86.0/24 is

R 10.36.86.0/24 [120/2] via 10.7.64.3, 00:00:02, F0/1

True

The full IPv4 routing table entry in Router 4 for network 10.8.0.0/16 is

R 10.8.0.0/16 [120/1] via 10.7.64.6, 00:00:11, F0/0

True

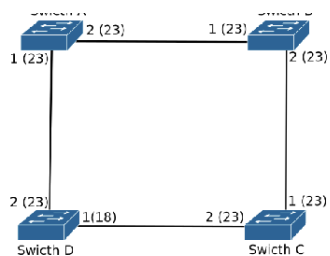
RIP funciona relativamente ao número mínimo de saltos para transmitir um dado pacote.

1 – Para chegar à rede 10.8.0.0/16 a partir do router 1 , escolhemos o percurso com menor numero de saltos possíveis, 1 salto neste caso, devemos utilizar o router 2 como ponte, int f2/0 do r2 como destino e int f1/0 do r1 como saída .

2 – Para chegar à rede 10.7.64.0/24 a partir do router 2 , escolhemos o percurso com menor numero de saltos possíveis, 1 salto neste caso, devemos utilizar o router 3 como ponte, int f1/0 do r3 (10.8.0.10 e não 10.8.0.1) como destino e int f1/0 do r2 como saída .

3 – O caminho indicado está correto, no entanto está indicada a norma (120) com 2 saltos, no entanto para o caminho descrito deveria ser apenas indicado 1 salto, ao invés de se ler 120/2 deveria ler-se 120/1.

4 – Para chegar à rede 10.8.0.0/16 a partir do router 4 , escolhemos o percurso com menor numero de saltos possíveis, 1 salto neste caso, devemos utilizar o router 3 como ponte, int f0/1 do R3 como destino e int f0/0 do r4 como saída .



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:

Changing the STP cost of port 1 of Switch C to 216, the Spanning-Tree will change. ☐ False

Changing the STP cost of port 2 of Switch B to 42, the port 1 of Switch B will remain in forwarding state. ☐ True

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 1 of Switch D to 68, the port 1 of Switch D will change from forwarding state to blocking state. ☐ False

1 – Sendo o SWC a raiz da ST o aumento do custo das suas portas não modifica em nada o seu estado uma vez que as portas da raiz terão de estar todas no estado forwarding.

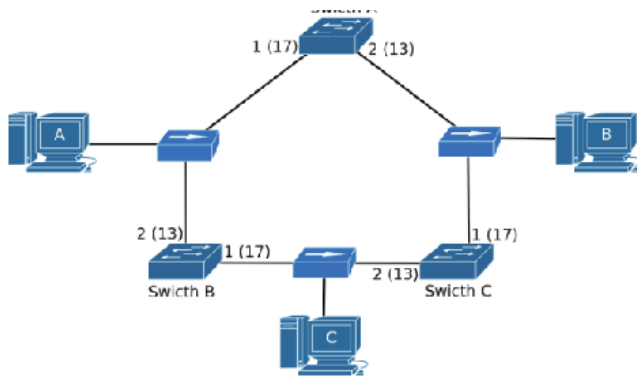
2 – O caminho alternativo seria:

Porta 1 SWB -> Porta 1 SWA -> Porta 1 SWB -> SW C = RAIZ

$23 + 23 + 18 = 64 > 42$ logo o estado das portas não se altera

3 – A não ser que aumentemos a prioridade do sw raiz, neste caso o sw C, o estado das portas não é alterado

4 – A porta 1 do SWD já se encontrava bloqueada anteriormente logo o seu estado não se altera de forwarding para blocking, mantém se bloqueada



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: 32765 / 0 / 11:a8:df:92:d1:5a Root Path Cost: 0 Bridge Identifier: 32765 / 0 / 11:a8:df:92:d1:5a Message Age: 0 Max Age: 20 Hello Time: 7 Forward Delay: 20 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: 32765 / 0 / 11:a8:df:92:d1:5a Root Path Cost: 13 Bridge Identifier: 32768 / 0 / 2c:51:8f:4b:3a:0d Message Age: 0 Max Age: 20 Hello Time: 7 Forward Delay: 20 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:

Packet 1 was captured by PC A ☐

Packet 2 was captured by PC A ☐

Switch A has the MAC address 2c:51:8f:4b:3a:0d ☐

The interval between sent BPDUs is 7 seconds ☐

1 – No pacote 1 podemos observar um pacote com root path cost = 0, logo, foi enviado da raiz e portanto só poderá ter sido capturado pelo PC C ou D, a partir dos quais o custo para a raiz seria 0.

2 - O pacote 2 foi enviado pelo SW A, que informa o PC A de que a partir dele (SWA) o custo até à raiz seria igual a 13.

3 - Tendo sido o pacote 2 enviado pelo sw A basta verificar o Bridge ID que indica o endereço MAC de origem do pacote, neste caso do SWA

4 – Hello Time = Tempo entre BPDUS = 7 segundos

Google Chrome - ter 14:21

Primeiro teste prático

https://elearning.ua.pt/mod/quiz/attempt.php?attempt=346290&cmid=630012&page=9

Navegação do teste

1 2 3 4 5 6 7 8 9 10

Terminar tentativa

Tempo restante 0:48:56

Pergunta 10

Por responder

Nota: 2,00

Marcar pergunta

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

Changing the STP cost of port 1 of Switch B to 140, the Spanning-Tree will remain the same. ☒ T

Changing the STP cost of port 2 of Switch A to 20, the port 1 of Switch A will change from forwarding state to blocking state. ☒ F

Increasing the STP priority of Switch C will produce no change on the state of the port 2 of Switch C. ☒ T

Changing the STP cost of port 1 of Switch C to 32, the port 1 of Switch C will change from forwarding state to blocking state. ☒ F

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

1 – Ao alterar o custo da porta 1 do SWB, sendo este a raiz da ST o estado das portas não se altera, pois as da raiz terão de estar sempre todas ligadas independentemente do seu custo

2 – A porta em questão já estava bloqueada anteriormente, logo não muda de estado

3 – A não ser que a prioridade de C diminua ou que a de B aumente, os estados das portas permanecem iguais

4 – O caminho alternativo seria:

Porta 2 SWC -> Porta 2 SWD -> Porta 2 SWA -> SW B = RAIZ

$11 + 11 + 11 = 33 > 32$ logo o estado das portas não se altera

Google Chrome - ter 14:19

Primeiro teste prático

https://elearning.ua.pt/mod/quiz/attempt.php?attempt=346290&cmid=630012&page=8

Pergunta 9

Por responder

Nota: 2,00

Marcar pergunta

Terminar tentativa

Tempo restante 05:13:35

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 / 0e:a8:06:c7:8b:6f
Root Path Cost: 0
Bridge Identifier: 32767 / 0 / 0e:a8:06:c7:8b:6f
Message Age: 0
Max Age: 20
Hello Time: 7
Forward Delay: 20
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 / 0e:a8:06:c7:8b:6f
Root Path Cost: 11
Bridge Identifier: 32768 / 0 / 42:d5:bb:b6:89:94
Message Age: 0
Max Age: 20
Hello Time: 7
Version 1 Length: 0
  
```

Considering the above network where all switches have Spanning-Tree active, that Switch B has the lowest STP priority, the respective STP 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 1 was captured by PC A or PC C ☒ T

Packet 2 was captured by PC A or PC C ☒ F

Switch A has the MAC address 42:d5:bb:b6:89:94 ☒ T

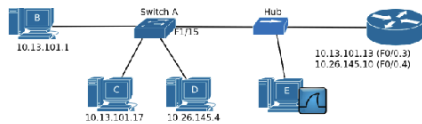
The interval between sent BPDUs is 20 seconds ☒ F

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

Página anterior

Página seguinte

- 1 – O pacote 1 foi enviado pelo SWB que é raiz desta ST, posto isto ao verificar o custo indicado, 0 neste caso, esta informação só seria válida para os pcs A ou C.
- 2 – O único PC para o qual o custo até à raiz seria 11 trata-se do PC B, que chega até ao SWB a partir da porta 1 do SWA
- 3 - O SWA enviou o pacote 2, logo basta verificar o bridge ID
- 4 – Hello Time = Intervalo entre BPDUs = 7s



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 router has two sub-interfaces associated respectively to VLAN 3 and 4. 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 C and PC D are connected to Switch A using access ports associated with the same VLAN. ☐

After performing one PING from PC B to 10.13.101.13, PC E will capture ICMP packets with no 802.1Q VLAN tag. ☐

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

After performing one PING from PC B to 10.26.145.10, PC E will capture ICMP packets with a 802.1Q VLAN tag equal to 4. ☐

1 – PC C e D pertencem a Vlans distintas

2 –

3 – Falso, uma vez que o PC B e D pertencem a vlans distintas qualquer ping entre eles terá de ir ao router para este ser posteriormente reencaminhar o pacote.

Atividades Google Chrome

Primeiro teste prático

https://learning.ue.pt/mod/quiz/attempt.php?attempt=346200&cmid=430012&page=4

Pergunta 5

Por responder

Nota: 2,00

Y Marcar pergunta

Terminar tentativa

Tempo restante 0:52:01

VLAN Name	Status	Ports
1 default	active	Fa1/0, Fa1/1, Fa1/2
2 VLAN0002	active	Fa1/3, Fa1/4, Fa1/5
3 VLAN0003	active	Fa1/6, Fa1/7

Considering the above network where all PCs have the indicated IPv4 addresses with a 255.255.255.0 mask. The output of the command "show vlan-switch" at the switch is depicted above. All ARP tables are empty. PC C is running Wireshark capturing all packets. Answer True or False to the following sentences:

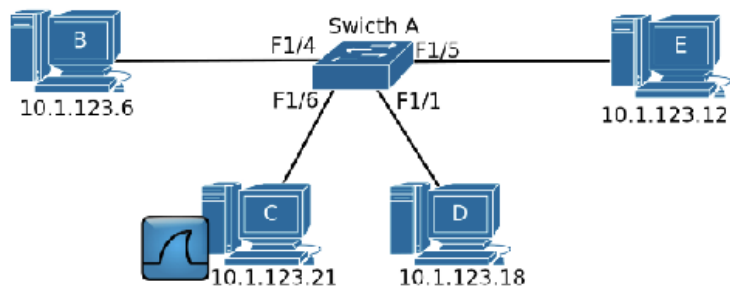
PC B has connectivity with PC C. ☐

PC D does not have connectivity with PC E. ☐

After performing a PING from PC D to address 10.25.171.254, PC C will capture the at least one ARP packet. ☐

After performing a PING from PC E to address 10.25.171.254, PC C will capture the at least one ARP packet. ☐

- 1- Pertencem a VLANs distintas não existindo nenhuma ligação trunk não comunicam
- 2- Pertencem a VLANs distintas não existindo nenhuma ligação trunk não comunicam
- 3- Vlan diferentes, nenhuma int configurada com trunk, logo, os pacotes não passam do SWA
- 4- Vlan diferentes, os arps não passam do SWA



VLAN	Name	Status	Ports
1	default	active	Fa1/0, Fa1/1, Fa1/2
2	VLAN0002	active	Fa1/3, Fa1/4, Fa1/5
3	VLAN0003	active	Fa1/6, Fa1/7

Considering the above network where all PCs have the indicated IPv4 addresses with a 255.255.255.0 mask capturing all packets. Answer True or False to the following sentences:

PC B does not have connectivity with PC C ☒ True

PC D does not have connectivity with PC E ☒ True

After performing a PING from PC D to address 10.1.123.254, PC C will capture the at least one ARP packet

☒ False

After performing a PING from PC E to address 10.1.123.254, PC C will capture the at least one ARP packet

☒ False

1 – Vlans diferentes e nenhuma ligação trunk

2- Vlans diferentes e nenhuma ligação trunk

3 - os arps não passam entre vlans