

TP3 M1 Spanning tree

1. Configuration de base
2. Configuration des hôtes sans IPv4:

Propriétés de Connexion au réseau local

Gestion de réseau

Connexion en utilisant :

Intel(R) 82567LM-3 Gigabit Network Connection

Configurer...

Cette connexion utilise les éléments suivants :

- ☒ VMware Bridge Protocol
- ☒ Planificateur de paquets QoS
- ☐ Partage de fichiers et imprimantes Réseaux Microsoft
- ☐ Protocole Internet version 6 (TCP/IPv6)
- ☐ Protocole Internet version 4 (TCP/IPv4)
- ☒ Pilote E/S Mappage de découverte de couche liaison
- ☒ Répondeur de découverte de couche de liaison

Installer... Désinstaller Propriétés

Description

Permet à votre ordinateur d'accéder aux ressources d'un réseau Microsoft.

Intel(R) 82567LM-3 Gigabit Network Connection: Capturing - Wireshark

File Edit View Go Capture Analyze Statistics Telephony Tools Help

Filter: Expression... Clear Apply

No.	Time	Source	Destination	Protocol	Info
41	58.142113	Cisco_e0:fc:03	Spanning-tree-(for-br	STP	Conf. Root = 32768/1/00:1a:6d:e0:fc:00 Cost = 0 Port = 0x8003
42	60.147032	Cisco_e0:fc:03	Spanning-tree-(for-br	STP	Conf. Root = 32768/1/00:1a:6d:e0:fc:00 Cost = 0 Port = 0x8003
43	62.151961	Cisco_e0:fc:03	Spanning-tree-(for-br	STP	Conf. Root = 32768/1/00:1a:6d:e0:fc:00 Cost = 0 Port = 0x8003
44	62.210607	Cisco_e0:fc:03	Cisco_e0:fc:03	LOOP	Reply
45	64.156871	Cisco_e0:fc:03	CDP/VTP/DTP/PAGP/UDLD	DTP	Dynamic Trunking Protocol
46	64.156946	Cisco_e0:fc:03	CDP/VTP/DTP/PAGP/UDLD	DTP	Dynamic Trunking Protocol
47	64.157142	Cisco_e0:fc:03	Spanning-tree-(for-br	STP	Conf. Root = 32768/1/00:1a:6d:e0:fc:00 Cost = 0 Port = 0x8003
48	66.165024	Cisco_e0:fc:03	Spanning-tree-(for-br	STP	Conf. Root = 32768/1/00:1a:6d:e0:fc:00 Cost = 0 Port = 0x8003
49	68.166584	Cisco_e0:fc:03	Spanning-tree-(for-br	STP	Conf. Root = 32768/1/00:1a:6d:e0:fc:00 Cost = 0 Port = 0x8003
50	68.330548	0.0.0.0	0.0.0.0	IP	IPv6 hop-by-hop option (0x00)
51	70.171676	Cisco_e0:fc:03	Spanning-tree-(for-br	STP	Conf. Root = 32768/1/00:1a:6d:e0:fc:00 Cost = 0 Port = 0x8003
52	72.176519	Cisco_e0:fc:03	Spanning-tree-(for-br	STP	Conf. Root = 32768/1/00:1a:6d:e0:fc:00 Cost = 0 Port = 0x8003
53	72.210058	Cisco_e0:fc:03	Cisco_e0:fc:03	LOOP	Reply
54	74.181426	Cisco_e0:fc:03	Spanning-tree-(for-br	STP	Conf. Root = 32768/1/00:1a:6d:e0:fc:00 Cost = 0 Port = 0x8003
55	74.208460	0.0.0.0	0.0.0.0	IP	IPv6 hop-by-hop option (0x00)
56	76.082320	0.0.0.0	0.0.0.0	IP	IPv6 hop-by-hop option (0x00)
57	76.189524	Cisco_e0:fc:03	Spanning-tree-(for-br	STP	Conf. Root = 32768/1/00:1a:6d:e0:fc:00 Cost = 0 Port = 0x8003
58	76.274344	0.0.0.0	0.0.0.0	IP	IPv6 hop-by-hop option (0x00)
59	78.191271	Cisco_e0:fc:03	Spanning-tree-(for-br	STP	Conf. Root = 32768/1/00:1a:6d:e0:fc:00 Cost = 0 Port = 0x8003
60	80.196163	Cisco_e0:fc:03	Spanning-tree-(for-br	STP	Conf. Root = 32768/1/00:1a:6d:e0:fc:00 Cost = 0 Port = 0x8003
61	82.201114	Cisco_e0:fc:03	Spanning-tree-(for-br	STP	Conf. Root = 32768/1/00:1a:6d:e0:fc:00 Cost = 0 Port = 0x8003
62	82.217830	Cisco_e0:fc:03	Cisco_e0:fc:03	LOOP	Reply
63	84.206106	Cisco_e0:fc:03	Spanning-tree-(for-br	STP	Conf. Root = 32768/1/00:1a:6d:e0:fc:00 Cost = 0 Port = 0x8003
64	86.214164	Cisco_e0:fc:03	Spanning-tree-(for-br	STP	Conf. Root = 32768/1/00:1a:6d:e0:fc:00 Cost = 0 Port = 0x8003
65	88.215868	Cisco_e0:fc:03	Spanning-tree-(for-br	STP	Conf. Root = 32768/1/00:1a:6d:e0:fc:00 Cost = 0 Port = 0x8003
66	90.220751	Cisco_e0:fc:03	Spanning-tree-(for-br	STP	Conf. Root = 32768/1/00:1a:6d:e0:fc:00 Cost = 0 Port = 0x8003
67	92.225679	Cisco_e0:fc:03	Cisco_e0:fc:03	LOOP	Reply
68	92.225860	Cisco_e0:fc:03	Spanning-tree-(for-br	STP	Conf. Root = 32768/1/00:1a:6d:e0:fc:00 Cost = 0 Port = 0x8003
69	94.163486	Cisco_e0:fc:03	CDP/VTP/DTP/PAGP/UDLD	DTP	Dynamic Trunking Protocol
70	94.163560	Cisco_e0:fc:03	CDP/VTP/DTP/PAGP/UDLD	DTP	Dynamic Trunking Protocol
71	94.230587	Cisco_e0:fc:03	Spanning-tree-(for-br	STP	Conf. Root = 32768/1/00:1a:6d:e0:fc:00 Cost = 0 Port = 0x8003
72	96.238745	Cisco_e0:fc:03	Spanning-tree-(for-br	STP	Conf. Root = 32768/1/00:1a:6d:e0:fc:00 Cost = 0 Port = 0x8003
73	98.240709	Cisco_e0:fc:03	Spanning-tree-(for-br	STP	Conf. Root = 32768/1/00:1a:6d:e0:fc:00 Cost = 0 Port = 0x8003
74	99.515973	Cisco_e0:fc:03	CDP/VTP/DTP/PAGP/UDLD	CDP	Device ID: SwitchAB Port ID: FastEthernet0/1
75	100.245436	Cisco_e0:fc:03	Spanning-tree-(for-br	STP	Conf. Root = 32768/1/00:1a:6d:e0:fc:00 Cost = 0 Port = 0x8003
76	102.258720	Cisco_e0:fc:03	Spanning-tree-(for-br	STP	Conf. Root = 32768/1/00:1a:6d:e0:fc:00 Cost = 0 Port = 0x8003

Frame 58 (60 bytes on wire, 60 bytes captured)

Ethernet II, Src: 00:ff:b8:b8:f2:49 (00:ff:b8:b8:f2:49), Dst: C1msys_33:44:33 (00:11:22:33:44:33)

Internet Protocol, Src: 0.0.0.0 (0.0.0.0), Dst: 0.0.0.0 (0.0.0.0)

Data (12 bytes)

```

0000  00 11 22 33 44 55 00 ff b8 b8 f2 49 08 00 45 00  ...30U...I..E.
0010  00 20 00 00 00 00 00 00 00 00 00 00 00 00 00 00  .....
0020  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  .....
0030  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  .....

```

Ethernet (eth), 28 bytes Packets: 325 Displayed: 325 Marked: 0 Profile: Default

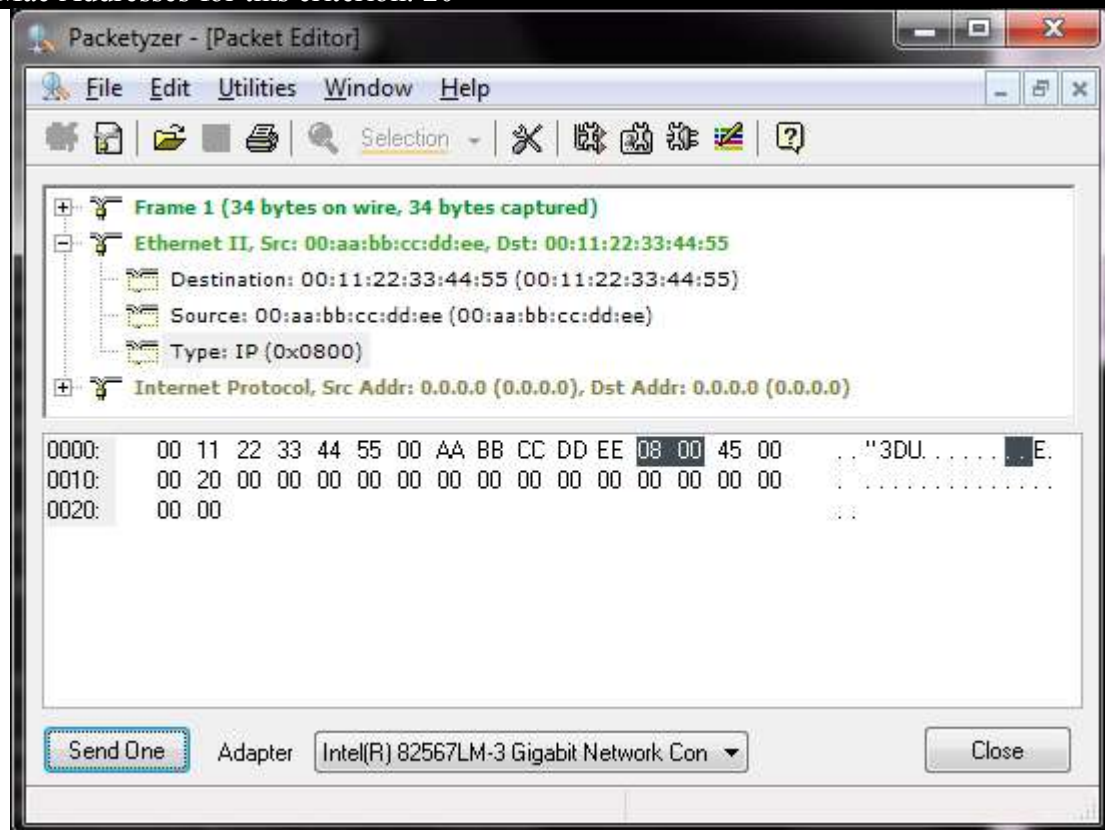
3.

SwitchAB#show mac address-table

Mac Address Table

Vlan	Mac Address	Type	Ports
All	0100.0ccc.cccc	STATIC	CPU
All	0100.0ccc.cccd	STATIC	CPU
All	0180.c200.0000	STATIC	CPU
All	0180.c200.0001	STATIC	CPU
All	0180.c200.0002	STATIC	CPU
All	0180.c200.0003	STATIC	CPU
All	0180.c200.0004	STATIC	CPU
All	0180.c200.0005	STATIC	CPU
All	0180.c200.0006	STATIC	CPU
All	0180.c200.0007	STATIC	CPU
All	0180.c200.0008	STATIC	CPU
All	0180.c200.0009	STATIC	CPU
All	0180.c200.000a	STATIC	CPU
All	0180.c200.000b	STATIC	CPU
All	0180.c200.000c	STATIC	CPU
All	0180.c200.000d	STATIC	CPU
All	0180.c200.000e	STATIC	CPU
All	0180.c200.000f	STATIC	CPU
All	0180.c200.0010	STATIC	CPU
All	ffff.ffff.ffff	STATIC	CPU

Total Mac Addresses for this criterion: 20



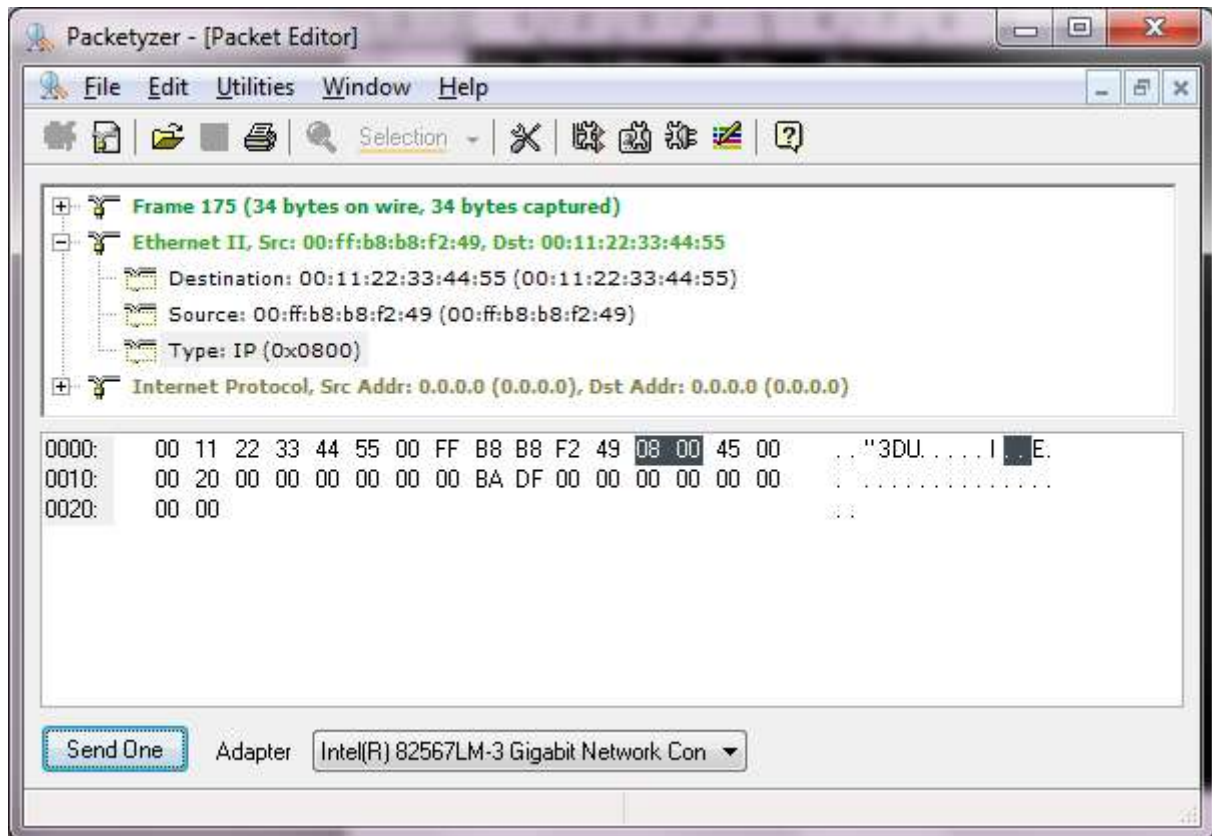
SwitchAB#show mac address-table
Mac Address Table

```
-----
Vlan  Mac Address      Type      Ports
----  -
All   0100.0ccc.cccc      STATIC    CPU
All   0100.0ccc.cccd      STATIC    CPU
All   0180.c200.0000      STATIC    CPU
All   0180.c200.0001      STATIC    CPU
All   0180.c200.0002      STATIC    CPU
All   0180.c200.0003      STATIC    CPU
All   0180.c200.0004      STATIC    CPU
All   0180.c200.0005      STATIC    CPU
All   0180.c200.0006      STATIC    CPU
All   0180.c200.0007      STATIC    CPU
All   0180.c200.0008      STATIC    CPU
All   0180.c200.0009      STATIC    CPU
All   0180.c200.000a      STATIC    CPU
All   0180.c200.000b      STATIC    CPU
All   0180.c200.000c      STATIC    CPU
All   0180.c200.000d      STATIC    CPU
All   0180.c200.000e      STATIC    CPU
All   0180.c200.000f      STATIC    CPU
All   0180.c200.0010      STATIC    CPU
All   ffff.ffff.ffff      STATIC    CPU
1     0011.2233.4455      DYNAMIC   Fa0/1
1     00aa.bbcc.ddee      DYNAMIC   Fa0/4
Total Mac Addresses for this criterion: 22
```

Deux ajouts : l'ip source du packet (00,11,22,33,44,55)

l'ip destinataire du packet (00,aa,bb,cc,dd)

Ils sont de type Dynamic, attribués les ports des deux machines.



```
SwitchAB#show mac address-table
```

```
Mac Address Table
```

```
-----
```

Vlan	Mac Address	Type	Ports
All	0100.0ccc.cccc	STATIC	CPU
All	0100.0ccc.cccd	STATIC	CPU
All	0180.c200.0000	STATIC	CPU
All	0180.c200.0001	STATIC	CPU
All	0180.c200.0002	STATIC	CPU
All	0180.c200.0003	STATIC	CPU
All	0180.c200.0004	STATIC	CPU
All	0180.c200.0005	STATIC	CPU
All	0180.c200.0006	STATIC	CPU
All	0180.c200.0007	STATIC	CPU
All	0180.c200.0008	STATIC	CPU
All	0180.c200.0009	STATIC	CPU
All	0180.c200.000a	STATIC	CPU
All	0180.c200.000b	STATIC	CPU
All	0180.c200.000c	STATIC	CPU
All	0180.c200.000d	STATIC	CPU
All	0180.c200.000e	STATIC	CPU
All	0180.c200.000f	STATIC	CPU
All	0180.c200.0010	STATIC	CPU
All	ffff.ffff.ffff	STATIC	CPU
1	0011.2233.4455	DYNAMIC	Fa0/4

Total Mac Addresses for this criterion: 21

La transmission du paquet à A est effectuée et l'adresse de destination est enregistrée dans la table.

Réponse de la machine A avec une mac address valide.

Ajout de la Mac address PCB.

```
SwitchAB#show mac address-table
Mac Address Table
-----
Vlan  Mac Address      Type    Ports
----  -
All   0100.0ccc.cccc    STATIC  CPU
All   0100.0ccc.cccd    STATIC  CPU
All   0180.c200.0000    STATIC  CPU
All   0180.c200.0001    STATIC  CPU
All   0180.c200.0002    STATIC  CPU
All   0180.c200.0003    STATIC  CPU
All   0180.c200.0004    STATIC  CPU
All   0180.c200.0005    STATIC  CPU
All   0180.c200.0006    STATIC  CPU
All   0180.c200.0007    STATIC  CPU
All   0180.c200.0008    STATIC  CPU
All   0180.c200.0009    STATIC  CPU
All   0180.c200.000a    STATIC  CPU
All   0180.c200.000b    STATIC  CPU
All   0180.c200.000c    STATIC  CPU
All   0180.c200.000d    STATIC  CPU
All   0180.c200.000e    STATIC  CPU
All   0180.c200.000f    STATIC  CPU
All   0180.c200.0010    STATIC  CPU
All   ffff.ffff.ffff    STATIC  CPU
1     0025.64b1.7f6a    STATIC  Fa0/4
1     00ff.b8b8.f249    DYNAMIC Fa0/1
Total Mac Addresses for this criterion: 22
```

Lorqu'on change de port, les paquets ne sont plus reçus par l'adresse de destination, puisqu'elle est configurée en static sur le port 4 et qu'il est vide!

```
SwitchAB(config)#no mac address-table static 0025.64B1.7F6A vlan 1
interfaceSwitchAB(config)#end
SwitchAB#show mac-address-table
Mac Address Table
-----
Vlan  Mac Address      Type    Ports
----  -
All   0100.0ccc.cccc    STATIC  CPU
All   0100.0ccc.cccd    STATIC  CPU
```

```
All 0180.c200.0000 STATIC CPU
All 0180.c200.0001 STATIC CPU
All 0180.c200.0002 STATIC CPU
All 0180.c200.0003 STATIC CPU
All 0180.c200.0004 STATIC CPU
All 0180.c200.0005 STATIC CPU
All 0180.c200.0006 STATIC CPU
All 0180.c200.0007 STATIC CPU
All 0180.c200.0008 STATIC CPU
All 0180.c200.0009 STATIC CPU
All 0180.c200.000a STATIC CPU
All 0180.c200.000b STATIC CPU
All 0180.c200.000c STATIC CPU
All 0180.c200.000d STATIC CPU
All 0180.c200.000e STATIC CPU
All 0180.c200.000f STATIC CPU
All 0180.c200.0010 STATIC CPU
All ffff.ffff.ffff STATIC CPU
1 00ff.b8b8.f249 DYNAMIC Fa0/1
Total Mac Addresses for this criterion: 21
```

Envoi d'un adresse inconnue vers une adresse inconnue

```
SwitchAB#show mac-address-table
Mac Address Table
-----
Vlan  Mac Address      Type    Ports
---  -
All  0100.0ccc.cccc    STATIC  CPU
All  0100.0ccc.cccd    STATIC  CPU
All  0180.c200.0000    STATIC  CPU
All  0180.c200.0001    STATIC  CPU
All  0180.c200.0002    STATIC  CPU
All  0180.c200.0003    STATIC  CPU
All  0180.c200.0004    STATIC  CPU
All  0180.c200.0005    STATIC  CPU
All  0180.c200.0006    STATIC  CPU
All  0180.c200.0007    STATIC  CPU
All  0180.c200.0008    STATIC  CPU
All  0180.c200.0009    STATIC  CPU
All  0180.c200.000a    STATIC  CPU
All  0180.c200.000b    STATIC  CPU
All  0180.c200.000c    STATIC  CPU
All  0180.c200.000d    STATIC  CPU
All  0180.c200.000e    STATIC  CPU
All  0180.c200.000f    STATIC  CPU
All  0180.c200.0010    STATIC  CPU
All  ffff.ffff.ffff    STATIC  CPU
1  0011.2233.4455    DYNAMIC Fa0/6
```

```
1 00ff.b8b8.f249 DYNAMIC Fa0/1
```

```
Total Mac Addresses for this criterion: 22
```

L'adresse d'envoi est enregistrée mais celle de destination non.

```
switch_B#show mac address-table
```

```
Mac Address Table
```

```
-----
```

Vlan	Mac Address	Type	Ports
All	0100.0ccc.cccc	STATIC	CPU
All	0100.0ccc.cccd	STATIC	CPU
All	0180.c200.0000	STATIC	CPU
All	0180.c200.0001	STATIC	CPU
All	0180.c200.0002	STATIC	CPU
All	0180.c200.0003	STATIC	CPU
All	0180.c200.0004	STATIC	CPU
All	0180.c200.0005	STATIC	CPU
All	0180.c200.0006	STATIC	CPU
All	0180.c200.0007	STATIC	CPU
All	0180.c200.0008	STATIC	CPU
All	0180.c200.0009	STATIC	CPU
All	0180.c200.000a	STATIC	CPU
All	0180.c200.000b	STATIC	CPU
All	0180.c200.000c	STATIC	CPU
All	0180.c200.000d	STATIC	CPU
All	0180.c200.000e	STATIC	CPU
All	0180.c200.000f	STATIC	CPU
All	0180.c200.0010	STATIC	CPU
All	ffff.ffff.ffff	STATIC	CPU
1	0007.5076.4c41	DYNAMIC	Fa0/1
1	0007.5076.4c44	DYNAMIC	Fa0/4
1	0025.64b1.7f6a	DYNAMIC	Fa0/4
1	0025.64b1.8148	DYNAMIC	Fa0/4

```
Total Mac Addresses for this criterion: 24
```

4. Les spanning-tree sont désactivés:

Il y a donc une loop entre les deux switch avec les FA01 et les FA04.

Lorsqu'un trame est envoyée par PCB par FA08, le Switch_B envoie au Switch_A par FA01, loop par le FA04 reviens au PCB => je suis enregistré en FA04 (ligne en gras).

SWITCH B :

```
switch_B#show spanning-tree
```

VLAN0001

Spanning tree enabled protocol ieee

Root ID Priority 32769

Address 001a.6de0.fc00

This bridge is the root

Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec

Bridge ID Priority 32769 (priority 32768 sys-id-ext 1)

Address 001a.6de0.fc00

Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec

Aging Time 15

Interface	Role	Sts	Cost	Prio.	Nbr	Type
Fa0/1	Desg	FWD	19	128.3	P2p	
Fa0/4	Desg	FWD	19	128.6	P2p	
Fa0/8	Desg	FWD	19	128.10	P2p	

SWITCH A:

```
switch_A#show spanning-tree brief
```

VLAN1

Spanning tree enabled protocol IEEE

ROOT ID Priority 32769

Address 001a.6de0.fc00

Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec

Bridge ID Priority 65535

Address 0007.5076.4c40

Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec

La pont racine (Root Bridge) est le Switch_B : 001a.6de0.fc00 puisqu'il est le plus rapide (Priority=32769). Tous les ports sont désignés (Desg)

Le Bridge est le Switch_A : 0007.5076.7c40. (Priority=65535)

Changement de la priorité du Switch A à 4 :

```
switch_A(config)#spanning-tree priority 4
```

SWITCH B:

```
switch_B#show spanning-tree
```

VLAN0001

Spanning tree enabled protocol ieee

Root ID Priority 4

Address 0007.5076.4c40

Cost 19

Port 3 (FastEthernet0/1)

Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec

Bridge ID Priority 32769 (priority 32768 sys-id-ext 1)

Address 001a.6de0.fc00

Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec

Aging Time 15

Interface	Role	Sts	Cost	Prio.Nbr	Type
Fa0/1	Root	FWD	19	128.3	P2p
Fa0/4	Altn	BLK	19	128.6	P2p
Fa0/8	Desg	FWD	19	128.10	P2p

Le Switch_A est devenu le Root Bridge.

```
switch_B#show spanning-tree
```

VLAN0001

Spanning tree enabled protocol ieee

Root ID Priority 4

Address 0007.5076.4c40

Cost 19

Port 6 (FastEthernet0/4)

Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec

Bridge ID Priority 32769 (priority 32768 sys-id-ext 1)

Address 001a.6de0.fc00

Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec

Aging Time 300

Interface	Role	Sts	Cost	Prio.Nbr	Type
Fa0/4	Root	FWD	19	128.6	P2p
Fa0/8	Desg	FWD	19	128.10	P2p

Lorsque l'on débranche le FA01, le FA04 prend le relai en gardant pour Root Bridge précédent.

5. Vlan

```
switch_B(vlan)#vlan 20 name Marketing
VLAN 20 added:
  Name: Marketing
```

```
switch_B(config)#interface fastEthernet 0/7
switch_B(config-if)#switchport access vlan 20
switch_B(config-if)#exit
```

```
switch_B#show vlan
```

VLAN Name	Status	Ports
1 default	active	Fa0/1, Fa0/2, Fa0/3, Fa0/13 Fa0/14, Fa0/15, Fa0/16, Fa0/17 Fa0/18, Fa0/19, Fa0/20, Fa0/21 Fa0/22, Fa0/23, Fa0/24, Gi0/1 Gi0/2
10 Accounting	active	Fa0/4, Fa0/5, Fa0/6
20 Marketing	active	Fa0/7, Fa0/8, Fa0/9
30 Engineering	active	Fa0/10, Fa0/11, Fa0/12
1002 fddi-default	act/unsup	
1003 token-ring-default	act/unsup	
1004 fddinet-default	act/unsup	
1005 trnet-default	act/unsup	

VLAN Type	SAID	MTU	Parent	RingNo	BridgeNo	Stp	BrdgMode	Trans1	Trans2
1 enet	100001	1500	-	-	-	-	-	0	0
10 enet	100010	1500	-	-	-	-	-	0	0
20 enet	100020	1500	-	-	-	-	-	0	0
30 enet	100030	1500	-	-	-	-	-	0	0
1002 fddi	101002	1500	-	-	-	-	-	0	0

VLAN Type	SAID	MTU	Parent	RingNo	BridgeNo	Stp	BrdgMode	Trans1	Trans2
1003 tr	101003	1500	-	-	-	-	-	0	0
1004 fdnet	101004	1500	-	-	-	ieee	-	0	0
1005 trnet	101005	1500	-	-	-	ibm	-	0	0

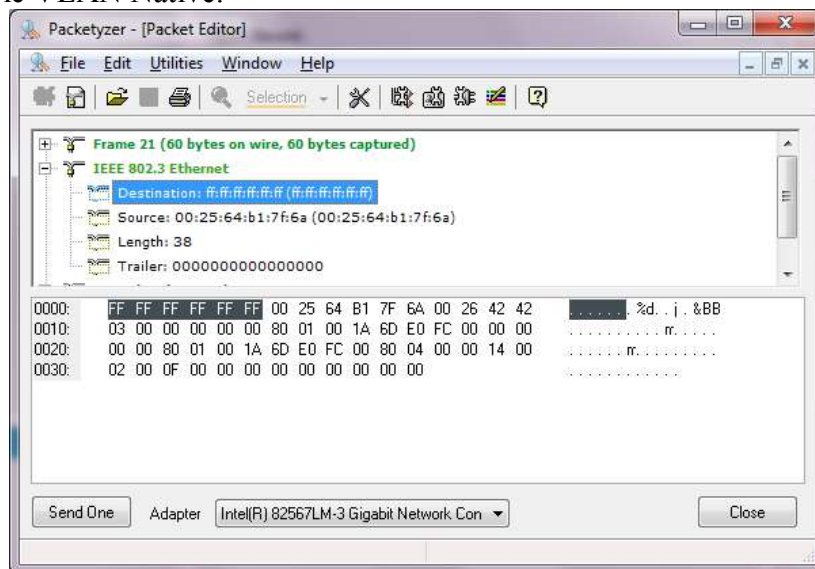
PCA : FA02 : ping du PCB placé sur **FA03 (VLAN Native)**

```
C:\Users\eleve>ping 192.168.1.21
Envoi d'une requête 'Ping' 192.168.1.21 avec 32 octets de données :
Réponse de 192.168.1.21 : octets=32 temps<1ms TTL=128
```

PCA : FA02 : ping du PCB placé sur **FA07(VLAN Marketing)**

```
C:\Users\eleve>ping 192.168.1.21
Envoi d'une requête 'Ping' 192.168.1.21 avec 32 octets de données :
Délai d'attente de la demande dépassé.
```

Broadcast depuis le VLAN Native:



Sur la même VLAN

No. .	Time	Source	Destination	Protocol	Info
13	2.750404	Dell_b1:81:48	Broadcast	ARP	who has 192.168.1.1? Tell 192.168.1.21
16	3.252560	Dell_b1:81:48	Broadcast	ARP	who has 192.168.1.1? Tell 192.168.1.21
18	4.252611	Dell_b1:81:48	Broadcast	ARP	who has 192.168.1.1? Tell 192.168.1.21
34	11.251934	Dell_b1:81:48	Dell_b1:7f:6a	ARP	who has 192.168.1.31? Tell 192.168.1.21
44	20.325503	Dell_b1:81:48	Broadcast	ARP	who has 192.168.1.1? Tell 192.168.1.21
45	21.252391	Dell_b1:81:48	Broadcast	ARP	who has 192.168.1.1? Tell 192.168.1.21
47	22.252437	Dell_b1:81:48	Broadcast	ARP	who has 192.168.1.1? Tell 192.168.1.21

Le PCB répond au PCA en donnant son adresse Mac.

Sur des VLAN différentes

No. .	Time	Source	Destination	Protocol	Info
39	54.780796	Dell_b1:7f:6a	Broadcast	ARP	who has 192.168.1.1? Tell 192.168.1.31
41	55.779884	Dell_b1:7f:6a	Broadcast	ARP	who has 192.168.1.1? Tell 192.168.1.31
42	56.777580	Dell_b1:7f:6a	Broadcast	ARP	who has 192.168.1.1? Tell 192.168.1.31
44	57.775948	Dell_b1:7f:6a	Broadcast	ARP	who has 192.168.1.1? Tell 192.168.1.31

No. .	Time	Source	Destination	Protocol	Info
13	16.367857	Dell_b1:81:48	Broadcast	ARP	who has 192.168.1.1? Tell 192.168.1.21
14	17.304701	Dell_b1:81:48	Broadcast	ARP	who has 192.168.1.1? Tell 192.168.1.21
16	18.304744	Dell_b1:81:48	Broadcast	ARP	who has 192.168.1.1? Tell 192.168.1.21
17	19.367837	Dell_b1:81:48	Broadcast	ARP	who has 192.168.1.1? Tell 192.168.1.21
20	20.303834	Dell_b1:81:48	Broadcast	ARP	who has 192.168.1.1? Tell 192.168.1.21
21	21.303881	Dell_b1:81:48	Broadcast	ARP	who has 192.168.1.1? Tell 192.168.1.21
22	22.368177	Dell_b1:81:48	Broadcast	ARP	who has 192.168.1.1? Tell 192.168.1.21
24	23.303974	Dell_b1:81:48	Broadcast	ARP	who has 192.168.1.1? Tell 192.168.1.21
26	24.304020	Dell_b1:81:48	Broadcast	ARP	who has 192.168.1.1? Tell 192.168.1.21
27	25.368123	Dell_b1:81:48	Broadcast	ARP	who has 192.168.1.1? Tell 192.168.1.21
29	26.304112	Dell_b1:81:48	Broadcast	ARP	who has 192.168.1.1? Tell 192.168.1.21
30	27.304160	Dell_b1:81:48	Broadcast	ARP	who has 192.168.1.1? Tell 192.168.1.21

Les deux machines ne voient pas leurs broadcasts respectifs.

6. Trunking

```
switch_B(config-if)#switchport trunk encapsulation dot1q  
switch_B(config-if)#switchport mode trunk
```

Sur le FA0/12 :

```
C:\Users\eleve>ping 192.168.30.21
```

Envoi d'une requête 'Ping' 192.168.30.21 avec 32 octets de données :

Réponse de 192.168.30.21 : octets=32 temps<1ms TTL=128

Réponse de 192.168.30.21 : octets=32 temps<1ms TTL=128

Sur le FA0/07 :

```
C:\Users\eleve>ping 192.168.30.21
```

Envoi d'une requête 'Ping' 192.168.30.21 avec 32 octets de données :

Réponse de 192.168.30.21 : octets=32 temps<1ms TTL=128

Réponse de 192.168.30.21 : octets=32 temps<1ms TTL=128

Running Config :

```
switch_B#show running-config
Building configuration...

Current configuration : 1592 bytes
!
version 12.2
no service pad
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname switch_B
!
enable secret 5 $1$Z0Jw$cwRD2GXWbpENln5bjnrsr.
!
no aaa new-model
ip subnet-zero
!
!
!
!
no file verify auto
spanning-tree mode pvst
spanning-tree extend system-id
!
vlan internal allocation policy ascending
!
interface FastEthernet0/1
 switchport trunk encapsulation dot1q
 switchport mode trunk
!
interface FastEthernet0/2
!
interface FastEthernet0/3
!
interface FastEthernet0/4
 switchport access vlan 10
!
interface FastEthernet0/5
 switchport access vlan 10
!
interface FastEthernet0/6
 switchport access vlan 10
!
interface FastEthernet0/7
 switchport access vlan 20
!
interface FastEthernet0/8
--More--
```

```
switchport access vlan 20
!
interface FastEthernet0/9
switchport access vlan 20
!
interface FastEthernet0/10
switchport access vlan 30
!
interface FastEthernet0/11
switchport access vlan 30
!
interface FastEthernet0/12
switchport access vlan 30
!
interface FastEthernet0/13
!
interface FastEthernet0/14
!
interface FastEthernet0/15
!
interface FastEthernet0/16
!
interface FastEthernet0/17
!
interface FastEthernet0/18
!
interface FastEthernet0/19
!
interface FastEthernet0/20
!
interface FastEthernet0/21
!
interface FastEthernet0/22
!
interface FastEthernet0/23
!
interface FastEthernet0/24
!
interface GigabitEthernet0/1
!
interface GigabitEthernet0/2
!
interface Vlan1
ip address 192.168.1.3 255.255.255.0
!
ip classless
ip http server
!
!
control-plane
```

```
!  
!  
line con 0  
line vty 0 4  
  password cisco  
  login  
line vty 5 15  
  no login  
!  
end
```