Documentation Spanning-Tree (et rapports de tests) :

Trunks des nouveaux câbles entre le Switch RDC, 1E étage et 2E étage :

```
conf t
interface Gi0/2
switchport mode trunk
switchport trunk allowed vlan all
end
wr
```

```
conf t
interface Gi0/2
switchport mode trunk
switchport trunk allowed vlan all
end
wr
```

```
conf t
interface Fa0/24
switchport mode trunk
switchport trunk allowed vlan all
end
wr
```

```
conf t
interface Fa0/23
switchport mode trunk
switchport trunk allowed vlan all
end
wr
```

Mise en place du Spanning-Tree avec la priorité la plus basse pour le switch Cœur afin qu'il soit le pont racine :

```
conf t
spanning-tree mode rapid-pvst
spanning-tree vlan 1 priority 0
end
wr
```

Mise en place des Spanning-Tree de même priorité pour les 3 autres switchs :

```
conf t
spanning-tree mode rapid-pvst
spanning-tree vlan 1 priority 4096
end
wr
```

Show spanning-tree du switch Cœur montrant que le switch Cœur est le pont racine :

```
SwitchCoeur#sh spanning-tree

VLAN0001
  Spanning tree enabled protocol rstp
  Root ID     Priority    1
              Address     00fc.ba06.2c00
              This bridge is the root
              Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID   Priority    1      (priority 0 sys-id-ext 1)
              Address     00fc.ba06.2c00
              Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec
              Aging Time  300 sec

Interface           Role Sts Cost      Prio.Nbr Type
------------------- ---- --- --------- -------- --------------------------------
Gi1/0/1             Desg FWD 4         128.1    P2p
Gi1/0/2             Desg FWD 4         128.2    P2p
Gi1/0/3             Desg FWD 4         128.3    P2p
```

Show spanning-tree des autres switchs :

```
SwitchRDC#sh spanning-tree

VLAN0001
  Spanning tree enabled protocol rstp
  Root ID     Priority    1
              Address     00fc.ba06.2c00
              Cost        4
              Port        25 (GigabitEthernet0/1)
              Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID   Priority    4097   (priority 4096 sys-id-ext 1)
              Address     c800.844f.1d00
              Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec
              Aging Time  300 sec

Interface           Role Sts Cost      Prio.Nbr Type
------------------- ---- --- --------- -------- --------------------------------
Gi0/1               Root FWD 4         128.25   P2p
Gi0/2               Altn BLK 4         128.26   P2p
```

```
Switch1E#sh spanning-tree

VLAN0001
  Spanning tree enabled protocol rstp
  Root ID     Priority    1
              Address     00fc.ba06.2c00
              Cost        4
              Port        25 (GigabitEthernet0/1)
              Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID   Priority    4097   (priority 4096 sys-id-ext 1)
              Address     203a.0726.c180
              Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec
              Aging Time  300 sec

Interface           Role Sts Cost      Prio.Nbr Type
------------------- ---- --- --------- -------- --------------------------------
Fa0/24              Desg FWD 19        128.24   P2p
Gi0/1               Root FWD 4         128.25   P2p
Gi0/2               Desg FWD 4         128.26   P2p
```

```
Switch2E#sh spanning-tree

VLAN0001
  Spanning tree enabled protocol rstp
  Root ID     Priority    1
              Address     00fc.ba06.2c00
              Cost        4
              Port        24 (GigabitEthernet1/0/24)
              Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID   Priority    4097   (priority 4096 sys-id-ext 1)
              Address     2852.616a.2780
              Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec
              Aging Time  300 sec

Interface           Role Sts Cost      Prio.Nbr Type
------------------- ---- --- --------- -------- --------------------------------
Gi1/0/23            Altn BLK 19        128.23   P2p
Gi1/0/24            Root FWD 4         128.24   P2p
```

Rapports de tests :

Ping et traceroute du switch Cœur vers le switch RDC :

```
SwitchCoeur#ping 172.20.70.11
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.20.70.11, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/2/4 ms
SwitchCoeur#
SwitchCoeur#traceroute 172.20.70.11
Type escape sequence to abort.
Tracing the route to 172.20.70.11
VRF info: (vrf in name/id, vrf out name/id)
  1 172.20.70.11 4 msec *  5 msec
```

Shutdown du port reliant ces deux switchs pour effectuer la vérification du spanning-tree vers une autre route :

```
SwitchCoeur(config)#int gi1/0/1
SwitchCoeur(config-if)#sh
SwitchCoeur(config-if)#exit
```

Test après Shutdown :

```
SwitchCoeur#ping 172.20.70.11
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.20.70.11, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 2/2/4 ms
SwitchCoeur#traceroute 172.20.70.11
Type escape sequence to abort.
Tracing the route to 172.20.70.11
VRF info: (vrf in name/id, vrf out name/id)
  1 172.20.70.11 30 msec *  5 msec
```