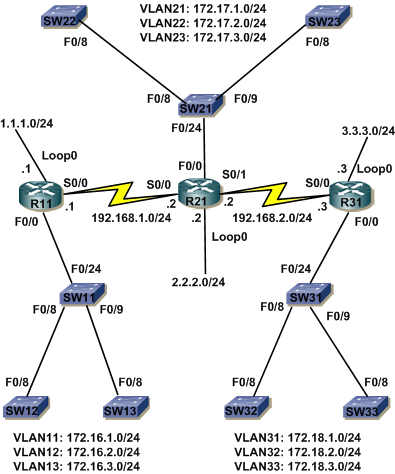
Bottom of Form

CẤU HÌNH SWITCH PORT, VLANS, TRUNK, VTP, INTERVLAN ROUTING

[](https://vnpro.vn/cau-hinh-switch-port-vlans-trunk-vtp-intervlan-routing/cau-hinh-vlan-trunking-vtp-vlan-routing/)

Yêu cầu:

1. Mô hình trên dùng cho 3 nhóm, mỗi nhóm từ 2->3 học viên, thiết bị của mỗi nhóm là 1 router + 3 switch.
2. Cấu hình trung kế:
   1. Cấu hình trung kế Dot1q kết nối giữa Switch – Switch.
   2. Cấu hình trung kế Dot1q kết nối giữa Switch – Router.
3. Cấu hình VTP:
   1. Mỗi nhóm cấu hình VTP theo các yêu cầu sau:
   2. VTP domain: BCMSNx (x là số thứ tự của nhóm, x = 1,2,3).
   3. VTP pass: CISCO (lưu ý chữ hoa chữ thường).
   4. SWx1 là VTP server.
   5. SWx2, SWx3 là VTP client.
4. Cấu hình VLANs:
   1. Mỗi nhóm tạo 3 VLANs tương ứng với mô hình trên
   2. Ví dụ: nhóm 1 tạo VLAN11, VLAN12, VLAN13.
   3. Gán port vào VLAN như sau:
5. Port 1->7 thuộc VLANx1.
6. Port 10->16 thuộc VLANx2

* Port 17->23 thuộc VLANx3

1. x là số thứ tự của nhóm (x = 1,2,3).
2. Cấu hình định tuyến giữa các VLAN:
   1. Mỗi nhóm cấu hình để 3 VLAN trong mỗi nhóm có thể ping thấy nhau.
   2. Mỗi nhóm cấu hình giao thức định tuyến OSPF để tất cả VLAN và Interface Loopback có thể ping thấy nhau.

  Gợi ý:

2a: Dùng lệnh sau trên switch trong mode interface:

Switch(config-if)# **switchport trunk encapsulation dot1q**

Switch(config-if)# **switchport mode trunk**

!Lưu ý: phải gõ lệnh “**switchport trunk encapsulation dot1q**” trước lệnh “**switchport mode trunk**”, nếu gõ theo thứ tự ngược lại sẽ không thể tạo kết nối trung kế thành công

2b: Dùng lệnh sau trên router để cấu hình trung kế dot1q:

Router(config)# **interface fastethernet**0/0.11

Router(config-if)# **encapsulation dot1q**10

Router(config-if)# **ip address**192.168.1.1 255.255.255.0

!lưu ý: câu lệnh trên tạo subinterface f0/0.11, chỉ định encapsulation là dot1q, thuộc VLAN 10 và có IP 192.168.1.1.

3: Dùng lệnh sau để cấu hình VTP:

Switch(config)# **vtp domain**BCMSN

Switch(config)# **vtp mode { client | server | transparent }**

Switch(config)# **vtp password**CISCO

4: Dùng các lệnh sau để cấu hình VLAN:

Switch(config)# **vlan**10

Switch(config-vlan)# **name**VLAN10           !ßđặt tên là VLAN10

Switch(config)# **interface range fastethernet**0/1 – 6

Switch(config-if-range)# **switchport mode access**

Switch(config-if-range)# **switchport access vlan** 10     

Cấu hình đầy đủ:

!Nhóm 1:

!SW11:

! configure terminal

! interface fastEthernet0/8

switchport trunk encapsulation dot1q

switchport mode trunk

! interface fastEthernet0/9

switchport trunk encapsulation dot1q

switchport mode trunk

! interface fastEthernet0/24

switchport trunk encapsulation dot1q

switchport mode trunk

! vtp domain BCMSN1

vtp pass CISCO

! vlan 11

name VLAN11

! vlan 12

name VLAN12

! vlan 13

name VLAN13

! interface range fastEthernet0/1 - 7

switchport mode access

switchport access vlan 11

! interface range fastEthernet0/10 - 16

switchport mode access

switchport access vlan 12

! int range fastEthernet0/17 - 23

switchport mode access

switchport access vlan 13

! end

!SW12:

! configure terminal

! interface fastEthernet0/8

switchport trunk encapsulation dot1q

switchport mode trunk

! vtp mode client

vtp domain BCMSN1

vtp pass CISCO

! interface range fastEthernet0/1 - 7

switchport mode access

switchport access vlan 11

! interface range fastEthernet0/9 - 16

switchport mode access

switchport access vlan 12

! interface range fastEthernet0/17 - 24

switchport mode access

switchport access vlan 13

! end

SW13:

configure terminal

! interface fastEthernet0/8

switchport trunk encapsulation dot1q

switchport mode trunk

! vtp mode client

vtp domain BCMSN1

vtp pass CISCO

! interface range fastEthernet0/1 - 7

switchport mode access

switchport access vlan 11

! interface range fastEthernet0/10 - 16

switchport mode access

switchport access vlan 12

! interface range fastEthernet0/17 - 24

switchport mode access

switchport access vlan 13

! end

!R11:

configure terminal

! interface loopback0

ip address 1.1.1.1 255.255.255.0

! interface serial0/0

clock rate 64000

ip address 192.168.1.1 255.255.255.0

no shutdown

! interface fastEthernet0/0

no shutdown

! interface fastEthernet0/0.11

encapsulation dot1q 11

ip address 172.16.1.1 255.255.255.0

! interface fastEthernet0/0.12

encapsulation dot1q 12

ip address 172.16.2.1 255.255.255.0

! interface fastEthernet0/0.13

encapsulation dot1q 13

ip address 172.16.3.1 255.255.255.0

! router ospf 1

network 0.0.0.0 255.255.255.255 are 0

! end

!Nhóm 2:

SW21:

! configure terminal

! interface fastEthernet0/8

switchport trunk encapsulation dot1q

switchport mode trunk

! interface fastEthernet0/9

switchport trunk encapsulation dot1q

switchport mode trunk

! interface fastEthernet0/24

switchport trunk encapsulation dot1q

switchport mode trunk

! vtp domain BCMSN2

vtp pass CISCO

! vlan 21

name VLAN21

! vlan 22

name VLAN22

! vlan 23

name VLAN23

! interface range fastEthernet0/1 - 7

switchport mode access

switchport access vlan 21

! interface range fastEthernet0/10 - 16

switchport mode access

switchport access vlan 22

! interface range fastEthernet0/17 - 23

switchport mode access

switchport access vlan 23

! end

SW22:

! configure terminal

! interface fastEthernet0/8

switchport trunk encapsulation dot1q

switchport mode trunk

! vtp domain BCMSN2

vtp mode client

vtp pass CISCO

! interface range fastEthernet0/1 - 7

switchport mode access

switchport access vlan 21

! interface range fastEthernet0/9 - 16

switchport mode access

switchport access vlan 22

! interface range fastEthernet0/17 - 24

switchport mode access

switchport access vlan 23

! end

SW23:

! configure terminal

! interface fastEthernet0/8

switchport trunk encapsulation dot1q

switchport mode trunk

! vtp domain BCMSN2

vtp mode client

vtp pass CISCO

! interface range fastEthernet0/1 - 7

switchport mode access

switchport access vlan 21

! interface range fastEthernet0/9 - 16

switchport mode access

switchport access vlan 22

! interface range fastEthernet0/17 - 24

switchport mode access

switchport access vlan 23

! end

R21:

! configure terminal

! interface loopback0

ip address 2.2.2.2 255.255.255.0

! interface serial0/0

clock rate 64000

ip address 192.168.1.2 255.255.255.0

no shutdown

! interface serial0/1

clock rate 64000

ip address 192.168.2.2 255.255.255.0

no shutdown

! interface fastEthernet0/0

no shutdown

! interface fastEthernet0/0.21

encapsulation dot1q 21

ip address 172.17.1.1 255.255.255.0

! interface fastEthernet0/0.22

encapsulation dot1q 22

ip address 172.17.2.1 255.255.255.0

! interface fastEthernet0/0.23

encapsulation dot1q 23

ip address 172.17.3.1 255.255.255.0

! router ospf 1

network 0.0.0.0 255.255.255.255 are 0

! end

!Nhóm 3:

SW31:

! configure terminal

! interface fastEthernet0/8

switchport trunk encapsulation dot1q

switchport mode trunk

! interface fastEthernet0/9

switchport trunk encapsulation dot1q

switchport mode trunk

! interface fastEthernet0/24

switchport trunk encapsulation dot1q

switchport mode trunk

! vtp domain BCMSN3

vtp pass CISCO

! vlan 31

name VLAN31

! vlan 32

name VLAN32

! vlan 33

name VLAN33

! interface range fastEthernet0/1 - 7

switchport mode access

switchport access vlan 31

! interface range fastEthernet0/10 - 16

switchport mode access

switchport access vlan 32

! interface range fastEthernet0/17 - 23

switchport mode access

switchport access vlan 33

! end

SW32:

! configure terminal

! interface fastEthernet0/8

switchport trunk encapsulation dot1q

switchport mode trunk

! vtp mode client

vtp domain BCMSN3

vtp pass CISCO

! interface range fastEthernet0/1 - 7

switchport mode access

switchport access vlan 31

! interface range fastEthernet0/9 - 16

\switchport mode access

switchport access vlan 32

! interface range fastEthernet0/17 - 24

switchport mode access

switchport access vlan 33

! end

SW33:

! configure terminal

! interface fastEthernet0/8

switchport trunk encapsulation dot1q

switchport mode trunk

! vtp mode client

vtp domain BCMSN3

vtp pass

CISCO

! interface range fastEthernet0/1 - 7

switchport mode access

switchport access vlan 31

! interface range fastEthernet0/9 - 16

switchport mode access

switchport access vlan 32

! interface range fastEthernet0/17 - 24

switchport mode access

switchport access vlan 33

! end

R31:

configure terminal

! interface loop 0

ip address 3.3.3.3 255.255.255.0

! interface s0/0

clock rate 64000

ip address 192.168.2.3 255.255.255.0

no shutdown

! interface fastEthernet0/0

no shutdown

! interface fastEthernet0/0.31

encapsulation dot1q 31

ip address 172.18.1.1 255.255.255.0

! interface fastEthernet0/0.32

encapsulation dot1q 32

ip address 172.18.2.1 255.255.255.0

! interface fastEthernet0/0.33

encapsulation dot1q 33

ip address 172.18.3.1 255.255.255.0

! router ospf 1

network 0.0.0.0 255.255.255.255 are 0 !

end

!kiem tra trunk

#show int trunk

!kiem tra vtp

#show vtp status

 !kiem tra routing table

#show ip route