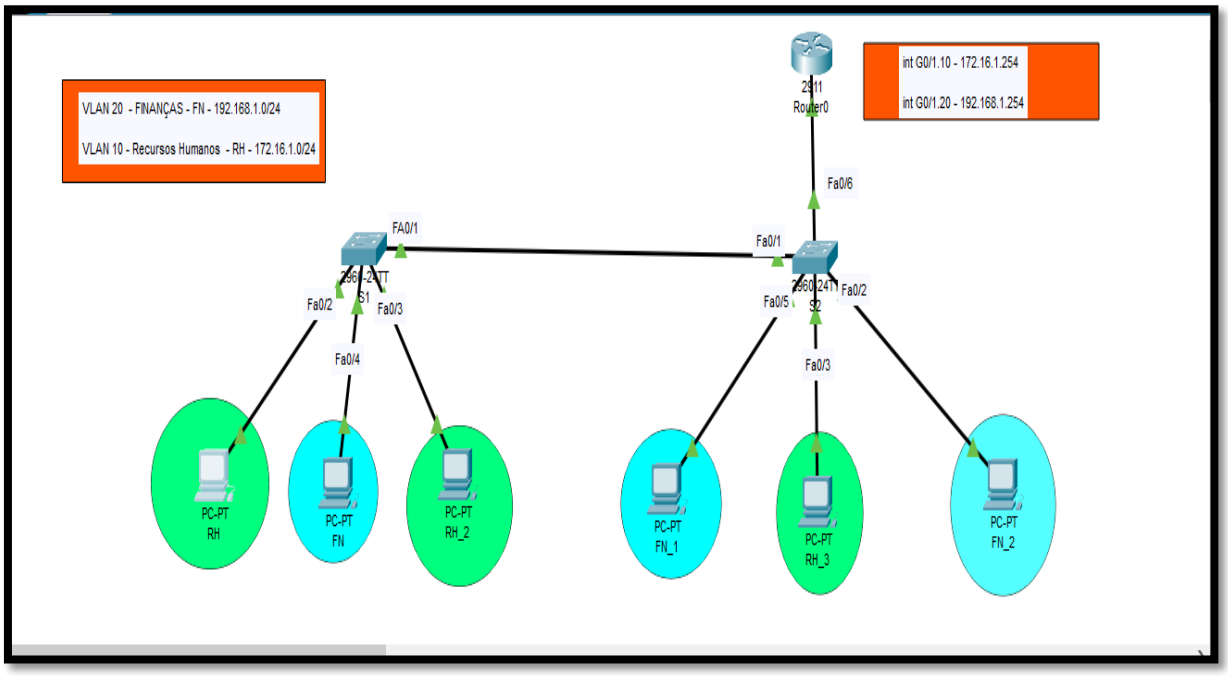
Roteamento inter-vlan nos dispositos cisco e Huawei

CISCO



1.- Criar as vlans no primeiro switch

S1(config)#vlan 10
S1(config-vlan)#name RH
S1(config-vlan)#exit
S1(config)#vlan 20
S1(config-vlan)#name FN

1.1 – Visualizar as vlans

S1#show vlan

```
S1#show vlan

VLAN Name                                Status    Ports
---- ----------------------------------- --------- -------------------------------
1    default                             active    Fa0/1, Fa0/2, Fa0/3, Fa0/4
                                                   Fa0/5, Fa0/6, Fa0/7, Fa0/8
                                                   Fa0/9, Fa0/10, Fa0/11, Fa0/12
                                                   Fa0/13, Fa0/14, Fa0/15, Fa0/16
                                                   Fa0/17, Fa0/18, Fa0/19, Fa0/20
                                                   Fa0/21, Fa0/22, Fa0/23, Fa0/24
                                                   Gig0/1, Gig0/2
10   RH                                  active
20   FN                                  active
```

2 – Associar as portas a vlan

S1(config)#int fa0/2
S1(config-if)#switchport mode access
S1(config-if)#switchport access vlan 10
S1(config-if)#exit

S1(config-if)#int fa0/3
S1(config-if)#switchport mode access
S1(config-if)#switchport access vlan 10
S1(config-if)#exit

S1(config)#int fa0/4
S1(config-if)#switchport mode access
S1(config-if)#switchport access vlan 20

2.1 – Visualizar as vlans

S1#show vlan

```
S1#show vlan

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Fa0/1, Fa0/5, Fa0/6, Fa0/7
                                                Fa0/8, Fa0/9, Fa0/10, Fa0/11
                                                Fa0/12, Fa0/13, Fa0/14, Fa0/15
                                                Fa0/16, Fa0/17, Fa0/18, Fa0/19
                                                Fa0/20, Fa0/21, Fa0/22, Fa0/23
                                                Fa0/24, Gig0/1, Gig0/2
10   RH                               active    Fa0/2, Fa0/3
20   FN                               active    Fa0/4
```

1- Criar as vlans no segundo switch

S2(config-vlan)#vlan 10
S2(config-vlan)#name RH
S2(config-vlan)#exit
S2(config)#vlan 20
S2(config-vlan)#name FN

1.1 – Visualizar as vlans

S2#show vlan

```
S2#show vlan

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Fa0/1, Fa0/2, Fa0/3, Fa0/4
                                                Fa0/5, Fa0/6, Fa0/7, Fa0/8
                                                Fa0/9, Fa0/10, Fa0/11, Fa0/12
                                                Fa0/13, Fa0/14, Fa0/15, Fa0/16
                                                Fa0/17, Fa0/18, Fa0/19, Fa0/20
                                                Fa0/21, Fa0/22, Fa0/23, Fa0/24
                                                Gig0/1, Gig0/2
10   RH                               active
20   FN                               active
```

2 – Associar as portas a vlan

S2(config)#int fa0/5
S2(config-if)#switchport mode access
S2(config-if)#switchport access vlan 20
S2(config-if)#exit

S2(config)#int fa0/3
S2(config-if)#switchport mode access
S2(config-if)#switchport access vlan 10
S2(config-if)#exit

S2(config)#int fa0/2
S2(config-if)#switchport mode access
S2(config-if)#switchport access vlan 20
S2(config-if)#exit

2.1 – Visualizar se as portas foram associadas as vlans

S1#show vlan

```
S2#show vlan

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Fa0/1, Fa0/4, Fa0/6, Fa0/7
                                                Fa0/8, Fa0/9, Fa0/10, Fa0/11
                                                Fa0/12, Fa0/13, Fa0/14, Fa0/15
                                                Fa0/16, Fa0/17, Fa0/18, Fa0/19
                                                Fa0/20, Fa0/21, Fa0/22, Fa0/23
                                                Fa0/24, Gig0/1, Gig0/2
10   RH                               active    Fa0/3
20   FN                               active    Fa0/2, Fa0/5
```

3– Habilitar a porta trunk nos switchs

S1(config)#int fa0/1
S1(config-if)#switchport mode trunk
S1(config-if)#switchport trunk allowed vlan 10,20

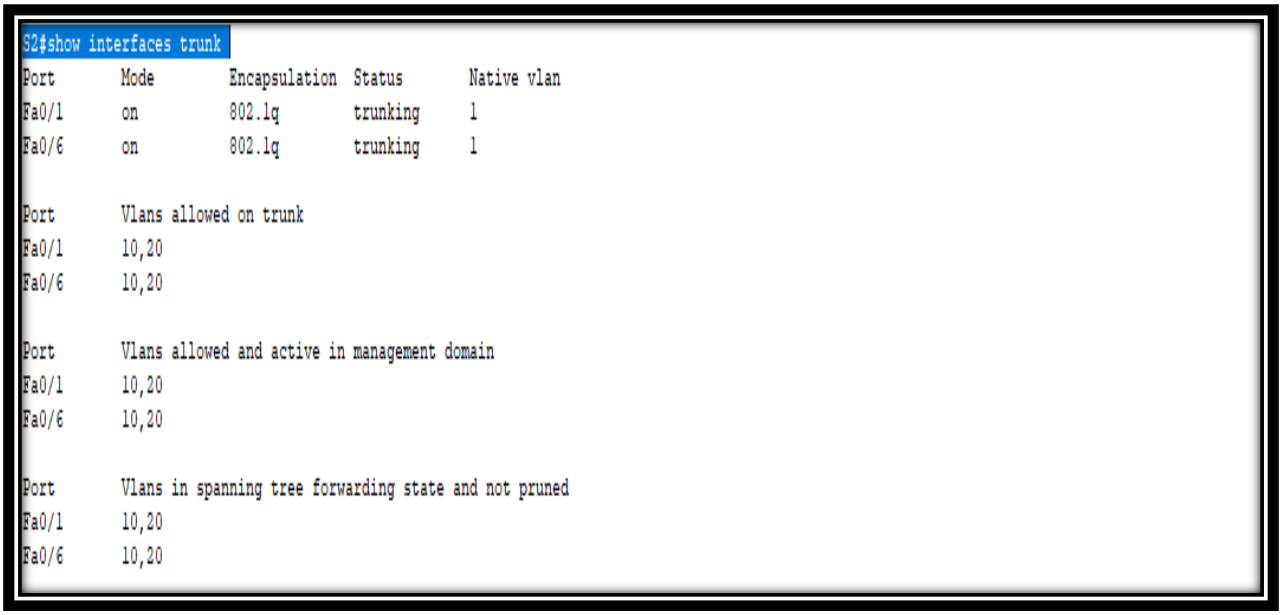
S2(config)#int fa0/1
S2(config-if)#switchport mode trunk
S2(config-if)#switchport trunk allowed vlan 10,20

Obs ; a porta do switch 2 ligado ao roteador também deve estar no modo trunk

S2(config-if)#int fa0/6
S2(config-if)#switchport mode trunk
S2(config-if)#switchport trunk allowed vlan 10,20

3.1 – Visualizar as portas trunk

S2#show interfaces trunk



```
S2#show interfaces trunk
Port        Mode         Encapsulation  Status       Native vlan
Fa0/1       on           802.1q         trunking     1
Fa0/6       on           802.1q         trunking     1

Port        Vlans allowed on trunk
Fa0/1       10,20
Fa0/6       10,20

Port        Vlans allowed and active in management domain
Fa0/1       10,20
Fa0/6       10,20

Port        Vlans in spanning tree forwarding state and not pruned
Fa0/1       10,20
Fa0/6       10,20
```

4.Configurando o roteador

Router(config)#int g0/1
Router(config-if)#no shutdown

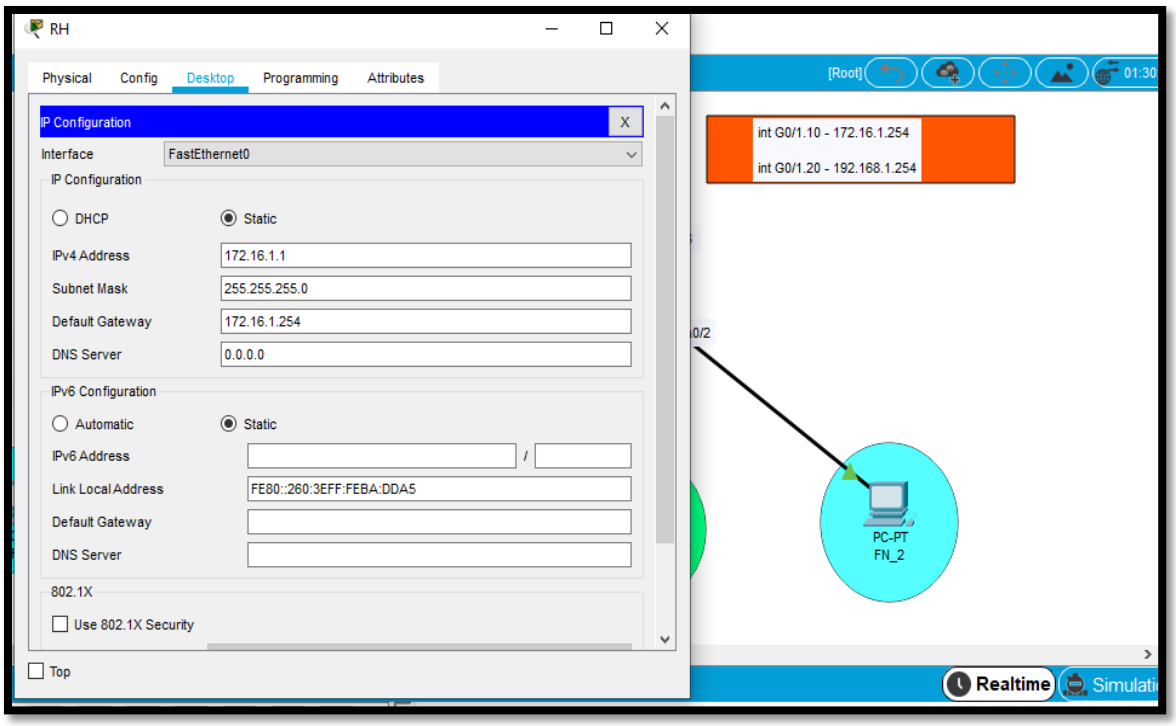
4. 1 – Configurando as sub-interfaces no roteador

Router(config)#int g0/1.20
Router(config-subif)#encapsulation dot1Q 20
Router(config-subif)#ip add 192.168.1.254 255.255.255.0

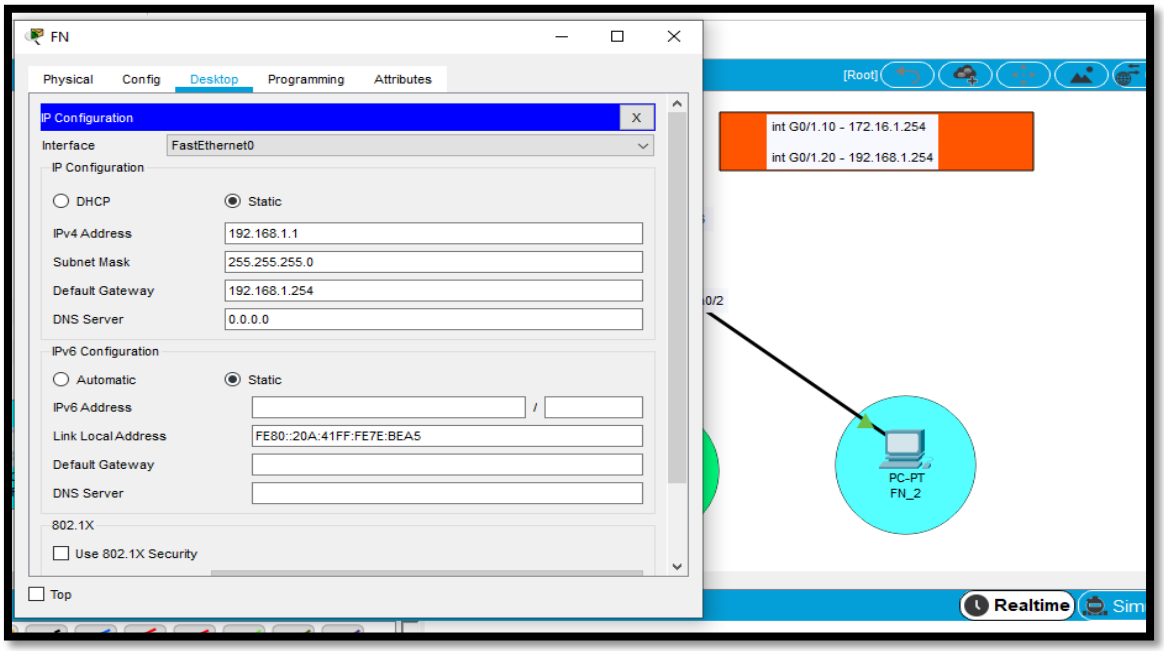
Router(config)#int g0/1.10
Router(config-subif)#encapsulation dot1Q 10
Router(config-subif)#ip add 172.16.1.254 255.255.255.0

Verificar a conexão entre os dispositivos

PC RH

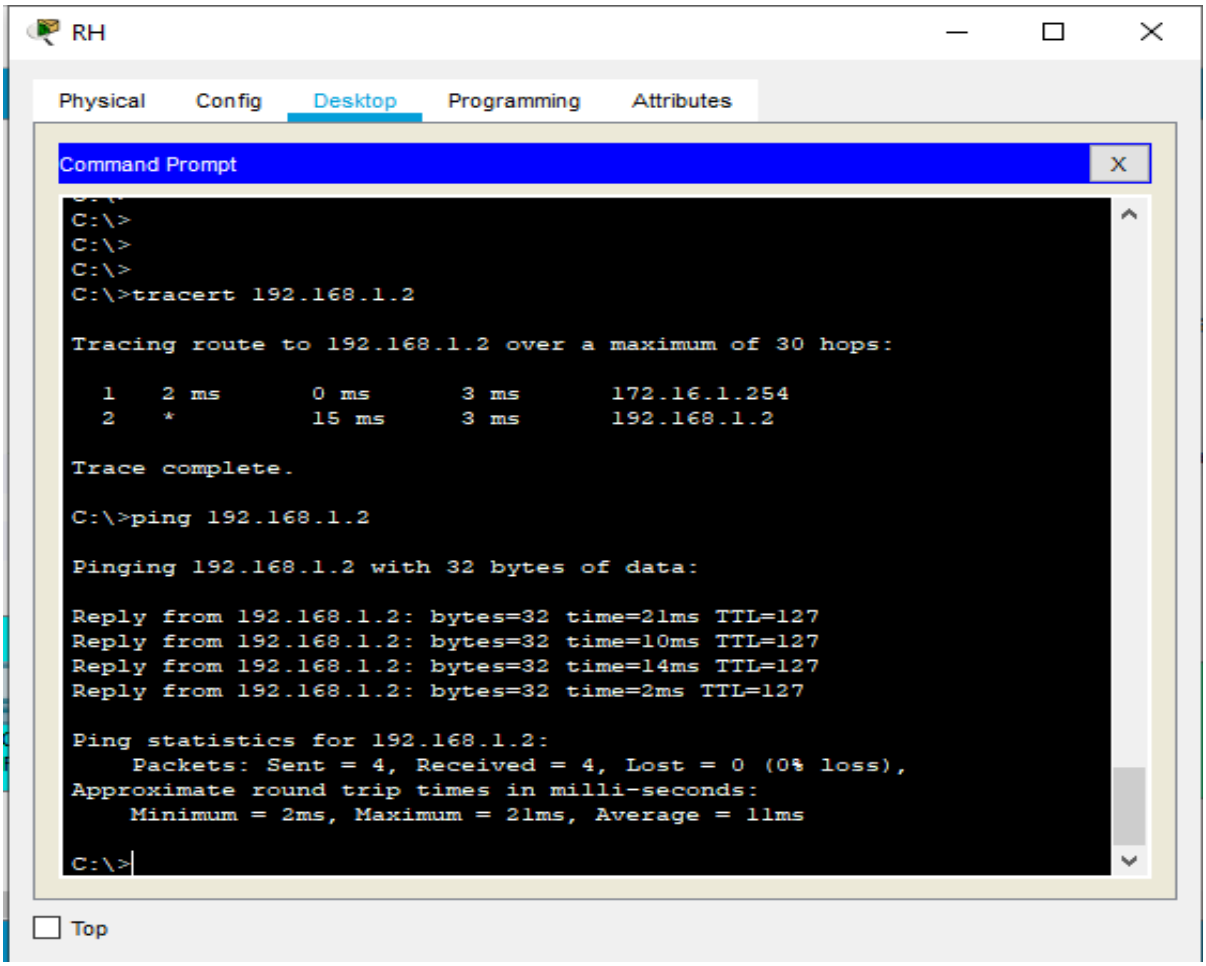


PC FN

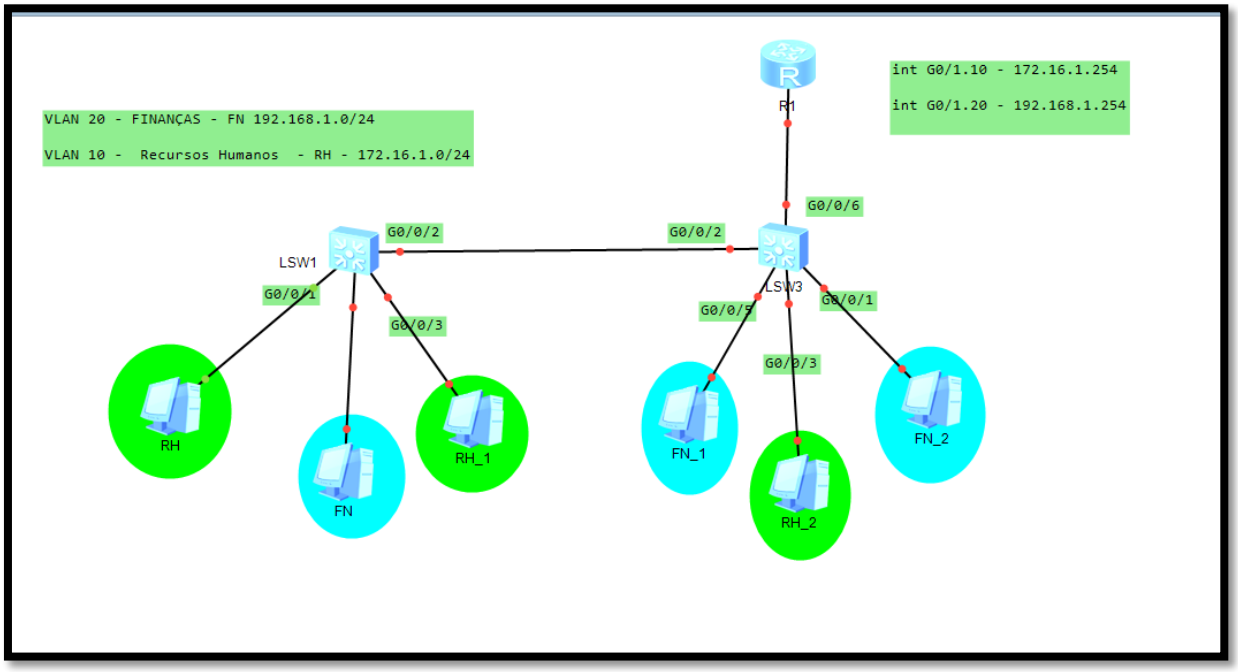


Tracert de 172.16.1.1 para 192.168.1.2

Ping de 172.16.1.1 para 192.168.1.2



HUAWEI



1.- Criar as vlans no primeiro switch

```
[S1]vlan 10
[S1-vlan10]description RH
[S1-vlan10]quit

[S1]vlan 20
[S1-vlan20]description FN
[S1-vlan20]quit
```

1.1 – Visualizar as vlans

```
[S1]display vlan
```

```
[S1]display vlan
The total number of vlans is : 3
--------------------------------------------------------------------------------
U: Up;         D: Down;         TG: Tagged;         UT: Untagged;
MP: Vlan-mapping;               ST: Vlan-stacking;
#: ProtocolTransparent-vlan;    *: Management-vlan;
--------------------------------------------------------------------------------

VID  Type    Ports
--------------------------------------------------------------------------------
1    common  UT:GE0/0/1(U)      GE0/0/2(U)      GE0/0/3(U)      GE0/0/4(U)
                GE0/0/5(D)      GE0/0/6(D)      GE0/0/7(D)      GE0/0/8(D)
                GE0/0/9(D)      GE0/0/10(D)     GE0/0/11(D)     GE0/0/12(D)
                GE0/0/13(D)     GE0/0/14(D)     GE0/0/15(D)     GE0/0/16(D)
                GE0/0/17(D)     GE0/0/18(D)     GE0/0/19(D)     GE0/0/20(D)
                GE0/0/21(D)     GE0/0/22(D)     GE0/0/23(D)     GE0/0/24(D)

10   common
20   common

VID  Status  Property      MAC-LRN Statistics Description
--------------------------------------------------------------------------------
1    enable  default       enable  disable    VLAN 0001
10   enable  default       enable  disable    FN
20   enable  default       enable  disable    RH
[S1]
```

2 – Associar as portas a vlan

```
[S1]int g0/0/1
[S1-GigabitEthernet0/0/1]port link-type access
[S1-GigabitEthernet0/0/1]port default vlan 10
[S1-GigabitEthernet0/0/1]quit

[S1]int g0/0/4
[S1-GigabitEthernet0/0/4]port link-type access
[S1-GigabitEthernet0/0/4]port default vlan 20
[S1-GigabitEthernet0/0/4]quit

[S1]int g0/0/3
[S1-GigabitEthernet0/0/3]port link-type access
[S1-GigabitEthernet0/0/3]port default vlan 10
[S1-GigabitEthernet0/0/3]quit
```

2 – Visualizar se as foram portas associadas a vlans

```
[S1]display vlan
The total number of vlans is : 3
--------------------------------------------------------------------------------
U: Up;         D: Down;         TG: Tagged;         UT: Untagged;
MP: Vlan-mapping;               ST: Vlan-stacking;
#: ProtocolTransparent-vlan;    *: Management-vlan;
--------------------------------------------------------------------------------

VID  Type    Ports
--------------------------------------------------------------------------------
1    common  UT:GE0/0/2(U)       GE0/0/5(D)       GE0/0/6(D)       GE0/0/7(D)
                GE0/0/8(D)       GE0/0/9(D)       GE0/0/10(D)      GE0/0/11(D)
                GE0/0/12(D)      GE0/0/13(D)      GE0/0/14(D)      GE0/0/15(D)
                GE0/0/16(D)      GE0/0/17(D)      GE0/0/18(D)      GE0/0/19(D)
                GE0/0/20(D)      GE0/0/21(D)      GE0/0/22(D)      GE0/0/23(D)
                GE0/0/24(D)

10   common  UT:GE0/0/1(U)       GE0/0/3(U)
20   common  UT:GE0/0/4(U)
```

1.- Criar as vlans no segundo switch

```
[S2]vlan 10
[S2-vlan10]description RH
[S1-vlan10]quit

[S2]vlan 20
[S2-vlan20]description FN
[S2-vlan20]quit
```

1.1 – Visualizar se as vlans Foram Criadas

```
[S1]display vlan
```

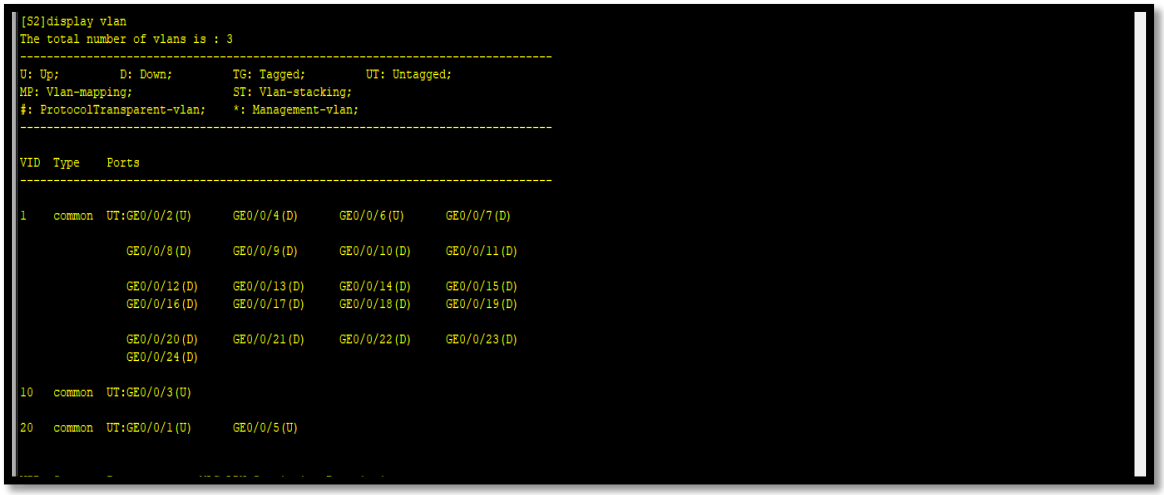
```
[S1]display vlan
The total number of vlans is : 3
--------------------------------------------------------------------------------
U: Up;         D: Down;         TG: Tagged;         UT: Untagged;
MP: Vlan-mapping;               ST: Vlan-stacking;
#: ProtocolTransparent-vlan;    *: Management-vlan;
--------------------------------------------------------------------------------

VID  Type    Ports
--------------------------------------------------------------------------------
1    common  UT:GE0/0/1(U)       GE0/0/2(U)       GE0/0/3(U)       GE0/0/4(U)
                GE0/0/5(D)       GE0/0/6(D)       GE0/0/7(D)       GE0/0/8(D)
                GE0/0/9(D)       GE0/0/10(D)      GE0/0/11(D)      GE0/0/12(D)
                GE0/0/13(D)      GE0/0/14(D)      GE0/0/15(D)      GE0/0/16(D)
                GE0/0/17(D)      GE0/0/18(D)      GE0/0/19(D)      GE0/0/20(D)
                GE0/0/21(D)      GE0/0/22(D)      GE0/0/23(D)      GE0/0/24(D)

10   common
20   common

VID  Status  Property      MAC-LRN Statistics Description
--------------------------------------------------------------------------------
1    enable  default       enable  disable    VLAN 0001
10   enable  default       enable  disable    FN
20   enable  default       enable  disable    RH
[S1]
```

2 – Associar as portas a vlan

```
[S2]int g0/0/5
[S2-GigabitEthernet0/0/5]port link-type access
[S2-GigabitEthernet0/0/5]port default vlan 20
[S2-GigabitEthernet0/0/5]quit

[S2-GigabitEthernet0/0/3]int g0/0/3
[S2-GigabitEthernet0/0/3]port link-type access
[S2-GigabitEthernet0/0/3]port default vlan 10

[S2-GigabitEthernet0/0/1]int g0/0/1
[S2-GigabitEthernet0/0/1]port link-type access
[S2-GigabitEthernet0/0/1]port default vlan 20
```

2.1 – Visualizar se as foram portas associadas a vlans

```
[S1]display vlan
```



3– Habilitar a porta trunk nos switchs

```
[S1]int g0/0/2
[S1-GigabitEthernet0/0/2]port link-type trunk
[S1-GigabitEthernet0/0/2]port trunk allow-pass vlan 10 20
```

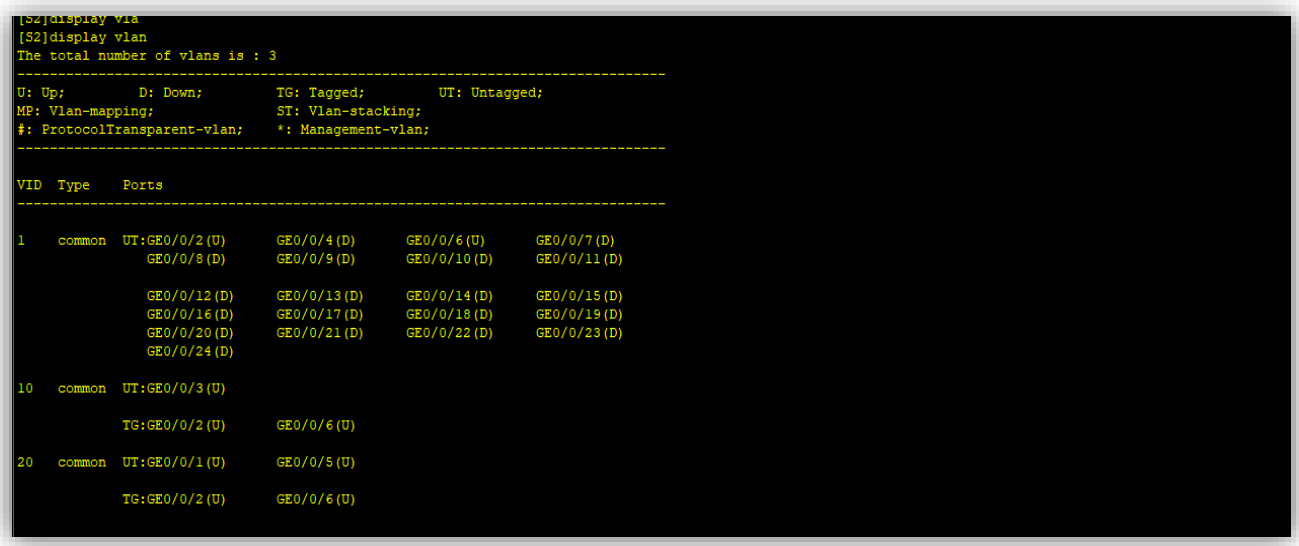
```
[S2]int g0/0/2
[S2-GigabitEthernet0/0/2]port link-type trunk
[S2-GigabitEthernet0/0/2]port trunk allow-pass vlan 10 20
```

Obs -- a porta do switch 2 ligado ao rateador também deve estar no modo trunk

```
[S2]int g0/0/6
[S2-GigabitEthernet0/0/6]port link-type trunk
[S2-GigabitEthernet0/0/6]port trunk allow-pass vlan 10 20
```

3.1 – Visualizar as portas trunk

```
[S2]display vlan
```



4. - Configurando o roteador

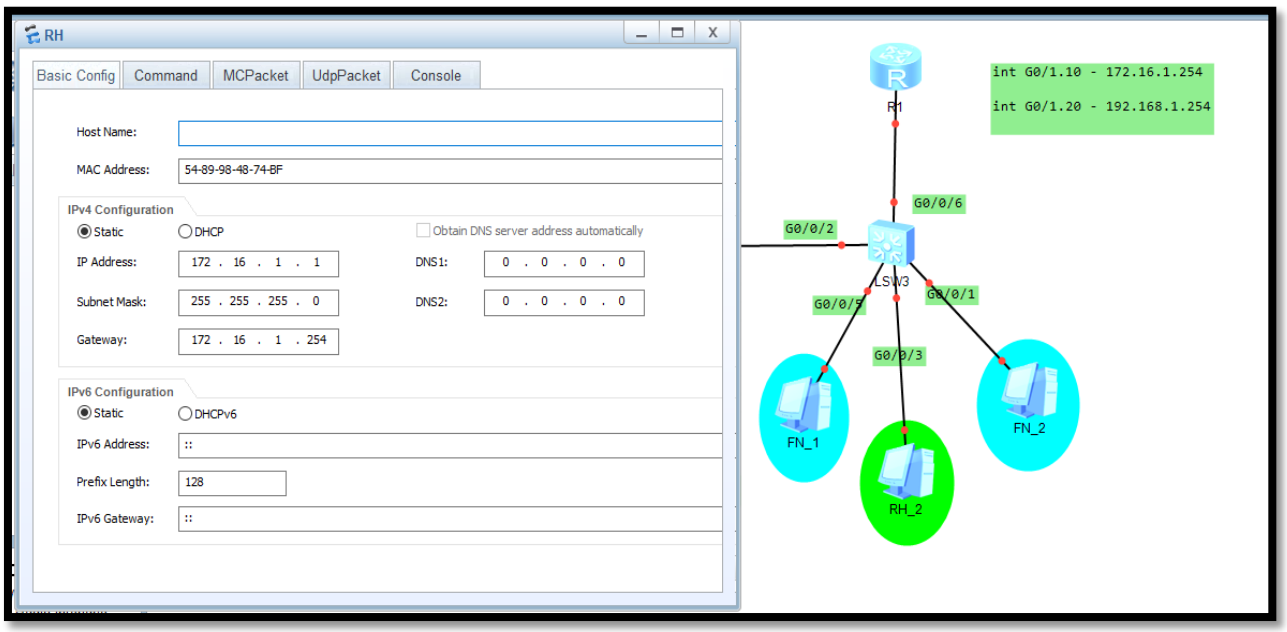
```
[Router-GigabitEthernet0/0/1]int g0/0/1
[Router-GigabitEthernet0/0/1]undo shutdown
```

4. 1 – Configurando as sub-interfaces no roteador

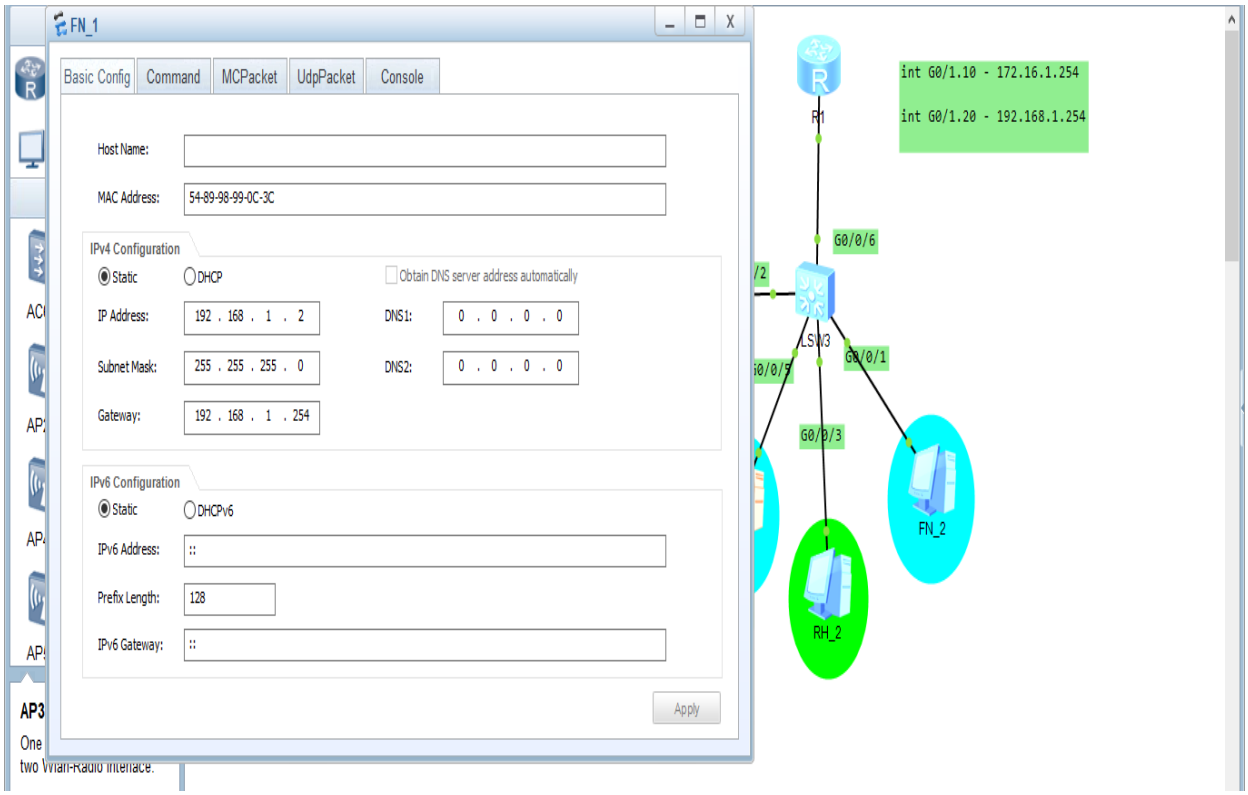
```
[Router]int g0/0/1.10
[Router-GigabitEthernet0/0/1.10]vlan-type dot1 10
[Router-GigabitEthernet0/0/1.10]vlan-type dot1 10
[Router-GigabitEthernet0/0/1.10]ip address 172.16.1.254 255.255.255.0
[Router]quit

[Router]int g0/0/1.20
[Router-GigabitEthernet0/0/1.20]vlan-type dot1 20
[Router-GigabitEthernet0/0/1.20]ip address 192.168.1.254 255.255.255.0
```

Verificar a conexão entre os dispositivos

PC RH



PC FN



Tracert de 172.16.1.1 para 192.168.1.2

Ping de 172.16.1.1 para 192.168.1.2