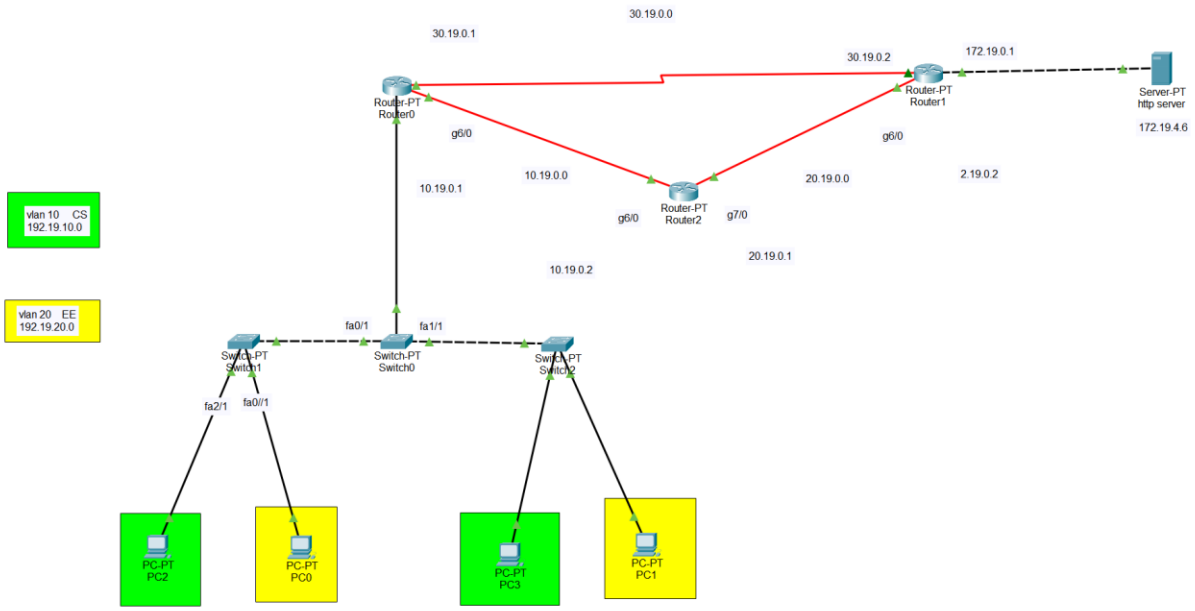


1. Pcs configuration

2. Switches configuration

```
Switch#config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#interface range fastethernet2/1
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport access vlan 10
Switch(config-if-range)#exit
Switch(config)#
Switch(config)#interface range fastethernet0/1
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport access vlan 20
Switch(config-if-range)#exit
Switch(config)#
Switch(config)#^Z
Switch#
%SYS-5-CONFIG_I: Configured from console by console

Switch#show vlan

VLAN Name                              Status    Ports
---- --------------------------------- --------- -------------------------------
1    default                           active    Fa1/1, Fa3/1, Fa4/1, Fa5/1
10   cs                                active    Fa2/1
20   EE                                active    Fa0/1
1002 fddi-default                      active
1003 token-ring-default                active
1004 fddinet-default                   active
1005 trnet-default                     active
```

3. Trunk switch configuration

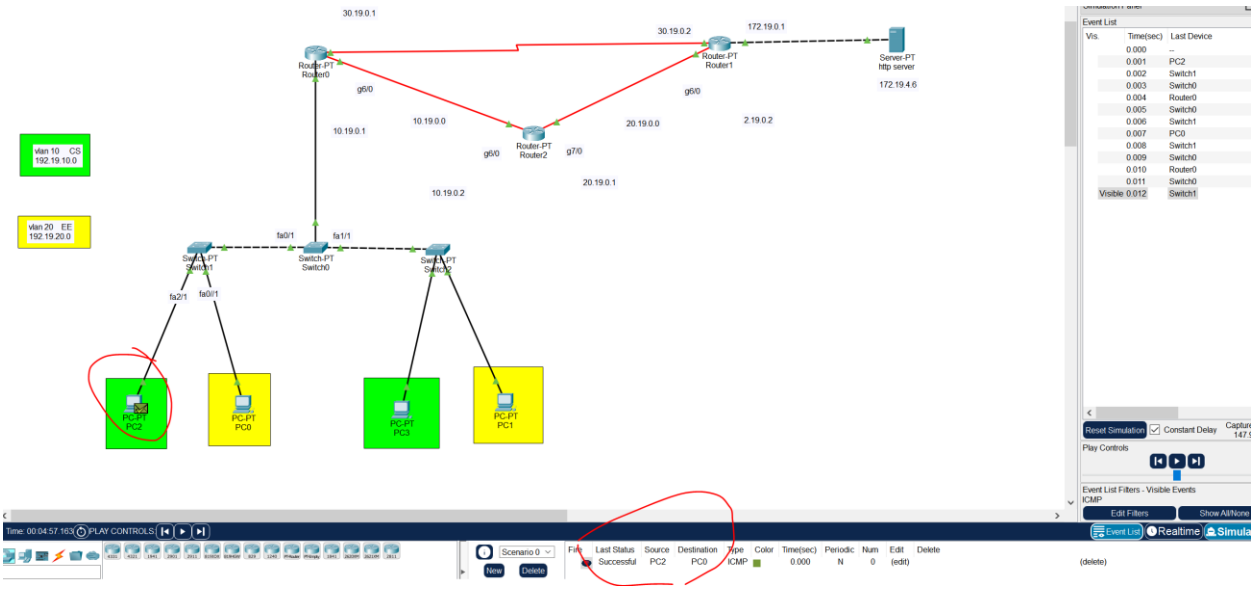
```
Switch>
Switch>enable
Switch#config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#interface fa0/1
Switch(config-if)#switchport mode trunk

Switch(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up

Switch(config-if)#switchport trunk allowed vlan all
Switch(config-if)#exit
Switch(config)#interface fa1/1
Switch(config-if)#switchport mode trunk

Switch(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/1, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/1, changed state to up

Switch(config-if)#switchport trunk allowed vlan all
Switch(config-if)#exit
Switch(config)#
```

```
Switch#
Switch#show interface trunk
Port        Mode         Encapsulation  Status        Native vlan
Fa0/1       on           802.1q         trunking      1
Fa1/1       on           802.1q         trunking      1

Port        Vlans allowed on trunk
Fa0/1       1-1005
Fa1/1       1-1005

Port        Vlans allowed and active in management domain
Fa0/1       1
Fa1/1       1

Port        Vlans in spanning tree forwarding state and not pruned
Fa0/1       1
Fa1/1       1

Switch#
```

4. Stick router

```
Router#config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface fa0/0.10
Router(config-subif)#
%LINK-5-CHANGED: Interface FastEthernet0/0.10, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0.10, cha

Router(config-subif)#encaps
Router(config-subif)#encapsulation
Router(config-subif)#encapsulation dot1Q 10
Router(config-subif)#ip address 192.19.10.1 255.255.255.0
Router(config-subif)#exit
Router(config)#
Router(config)#interface fa0/0.20
Router(config-subif)#
%LINK-5-CHANGED: Interface FastEthernet0/0.20, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0.20, cha

Router(config-subif)#encapsulation dot1Q 20
Router(config-subif)#ip address 192.19.20.1 255.255.255.0
Router(config-subif)#exit
Router(config)#
Router(config)#^Z
```

Intervlan routing



5.Eigrp on routers

Router 0

```
Router(config-if)#
Router(config-if)#exit
Router(config)#router eigrp 100
Router(config-router)#network 30.19.0.0
Router(config-router)#
%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 30.19.10.2 (Serial2/0) is up: new adjacency

Router(config-router)#network 10.19.0.0
Router(config-router)#network
% Incomplete command.
Router(config-router)#network 192.19.10.0
Router(config-router)#network 192.19.20.0
Router(config-router)#exit
Router(config)#
Router(config)#
Router(config)#^Z
Router#
Router#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

C    10.0.0.0/8 is directly connected, GigabitEthernet6/0
D    20.0.0.0/8 [90/20512256] via 30.19.10.2, 00:09:52, Serial2/0
C    30.0.0.0/8 is directly connected, Serial2/0
C    192.19.10.0/24 is directly connected, FastEthernet0/0.10
C    192.19.20.0/24 is directly connected, FastEthernet0/0.20
```

Router - 02

```
Router(config)#router eigrp 100
Router(config-router)#network 20.19.0.0
Router(config-router)#
%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 20.19.0.2 (GigabitEthernet7/0) is up: new adjacency

Router(config-router)#network 10.19.0.0
Router(config-router)#
Router(config-router)#exit
Router(config)#
```

```
Router>
Router>show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

C    10.0.0.0/8 is directly connected, GigabitEthernet6/0
C    20.0.0.0/8 is directly connected, GigabitEthernet7/0
D    30.0.0.0/8 [90/20512256] via 20.19.0.2, 00:10:56, GigabitEthernet7/0

Router>
```

6. EIGRP shortest path

Gigabit Fiber Path instead of the Serial Path is used

7. server access