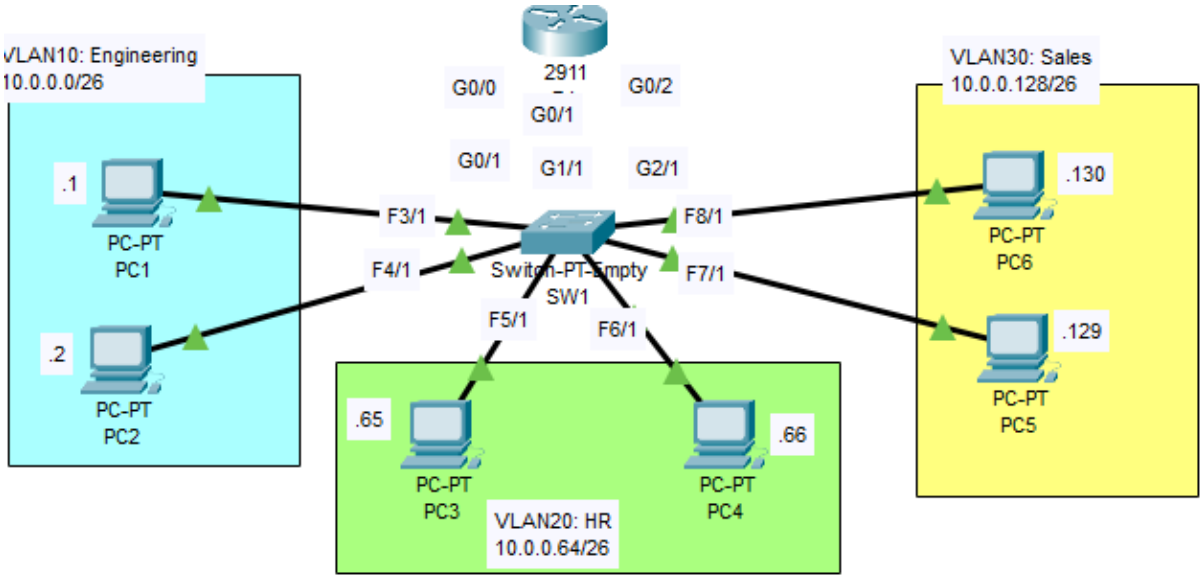
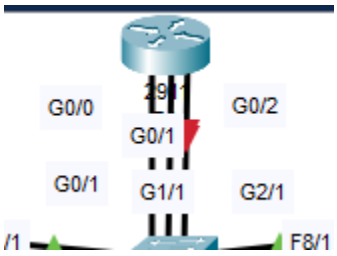


1. Configure the correct ip addresses/subnet mask for each set the gateway address as the last usable address of the subnet

   We are going to have to manually assign ip addresses to the computers click on the the Pcs 1 & 2 (10.0.0.1 & 10.0.0.2) Pcs 3 & 4 (10.0.0.65 & 10.0.0.66) and pcs 5 & 6 (10.0.0.129 & 10.0.0.130) and assign the interface an ip on the NIC to assign the host. In Vlan 10 the default gateway would be 10.0.0.62 (/26 has 62 useable hosts)
   Vlan 20 the default gateway would be 10.0.0.126(next ip is one reserved for the broadcast and one reserved for the network bringing it to 10.0.0.64+ 62(useable hosts) =126)
   Vlan 30 the default gateway would be 10.0.0.190 10.0.0.128 from 126 because one for the broadcast and one for the network bringing us to 10.0.0.128+62 = 190)

2. Make 3 connections between sw1 and r1 and configure one interface on r1 for each vlan




```
GigabitEthernet0/0     10.0.0.62       YES manual up                    up
GigabitEthernet0/1     10.0.0.126      YES manual up                    up
GigabitEthernet0/2     10.0.0.190      YES manual up                    up
Vlan1                  unassigned      YES unset  administratively down down
```

R1#INT G0/0
R1#ip address 10.0.0.62 255.255.255.192
R1#no shut
R1#int g0/1

R1#ip address 10.0.0.126 255.255.255.192
R1#no shut
R1#int gig0/2
R1#ip address 10.0.0.190 255.255.255.192
R1#no shut

3. Configure sw1 interface within the proper vlans remember the interfaces that connect to R1

VLAN 10

sw1#int range f3/1, f4/1,g1/1
sw1#switch mode access
sw1#switch mode access vlan 10
sw1#vlan 10
sw1#name engineering

Vlan 20

sw1#int range f5/1,f6/1,g1/1
sw1#swtich mode access
sw1#switch mode access vlan 20
sw1#vlan 20
sw1#name HR

Vlan 30

sw1#int range g2/1, f8/1, f7/1
sw1#switch mode access
sw1#switch access vlan 30
sw1#vlan 30
sw1#name sales

4. Ping between the computers to test the connectivity.