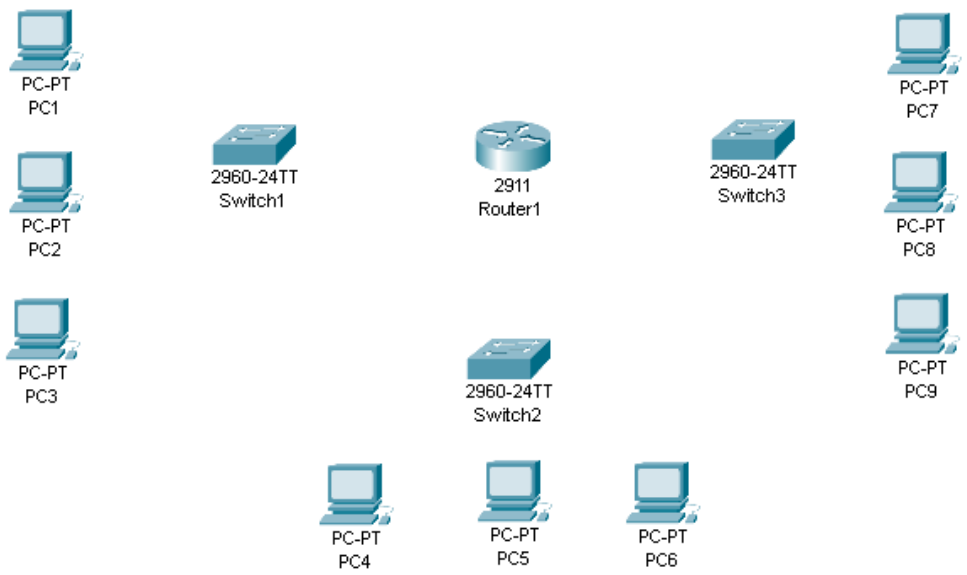
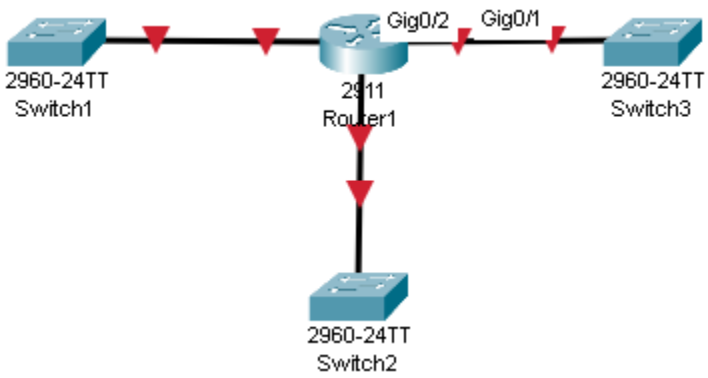
Building a network IP address on three different switches.



Here we have a router on the center and three switches. On this exercise we will segment these switches on their own network addresses so that frames and data would only circulate on the perspective networks and won't cause traffic.

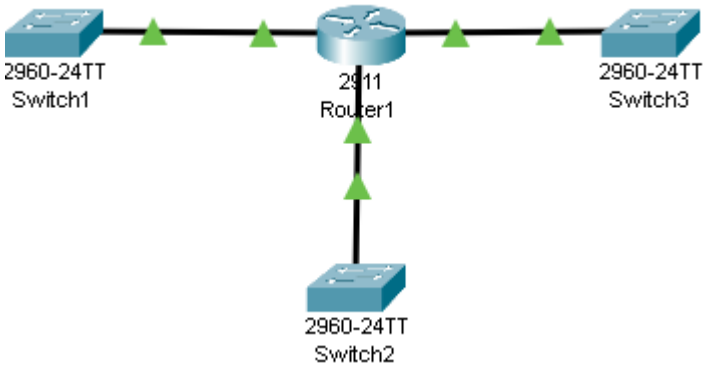


Here we can see all three interfaces are administratively down upon connection as all three has no network address and on natural router behavior it would be down initially. So, lets fix it by giving all three switches their own address

Sw1 = 192.168.10.254/24 255.255.255.0

sw2 = 192.168.20.254/24 255.255.255.0

Sw3 = 192.168.30.254/24 255.255.255.0



Here we successfully put up our connection with the switches

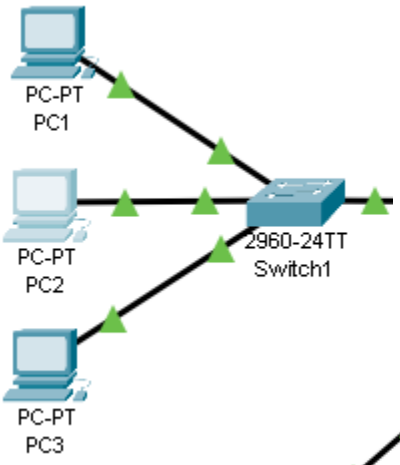
We used the CLI commands:

#ip address [ip] [subnet]

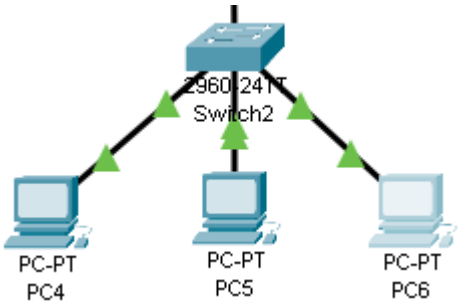
And

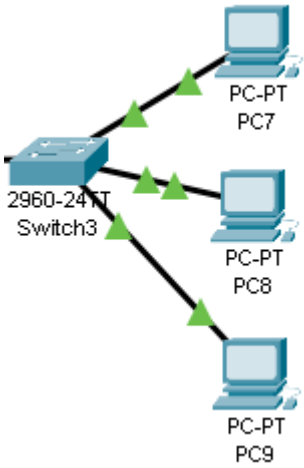
#no shut or no shutdown

```
Interface              IP-Address      OK? Method Status                Protocol
GigabitEthernet0/0     192.168.10.254  YES manual up                    up
GigabitEthernet0/1     192.168.20.254  YES manual up                    up
GigabitEthernet0/2     192.168.30.254  YES manual up                    up
Vlan1                  unassigned      YES unset  administratively down down
```

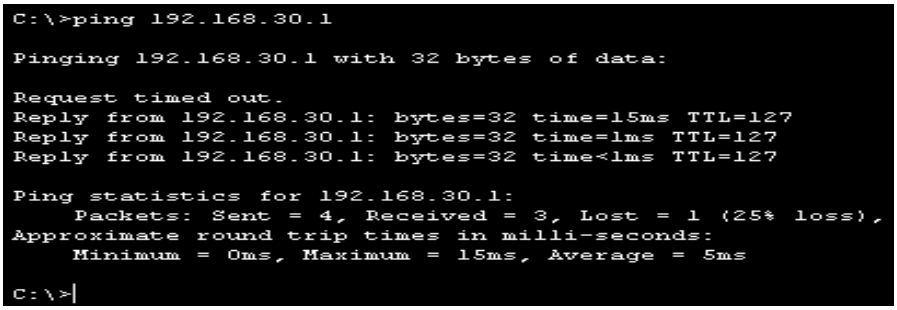


Here we have three pc's on interface g0/0. Each of those pc's are under the same network. 192.168.10.0/24. And this time those pc's have a default gateway of 192.168.10.254 that allows them to communicate outside of their network. Lets do the same to other connections.





Due to the router even if this connection is secured by a VLAN,
pinging other networks will result on a reply as the connection aren't secured by an ACL or a Firewall.



Here we used PC1 to ping a PC on the 30.0 network which resulted on a success. The reason for this is that the PC is assigned a default gateway allowing the router to rely the data to other networks and look for the destination. If there is no gateway the request would time out.