

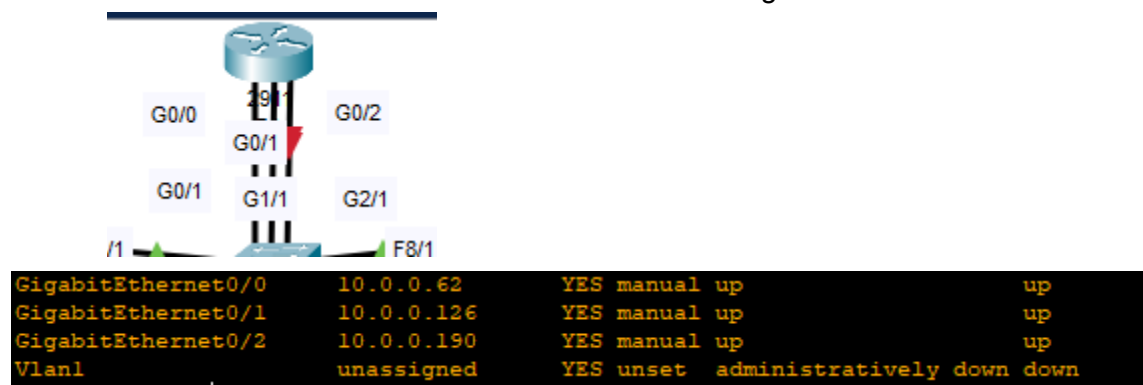
1. Configure the correct ip addresses/subnet mask for each set the gateway address as the last usable address of the subnet

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



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

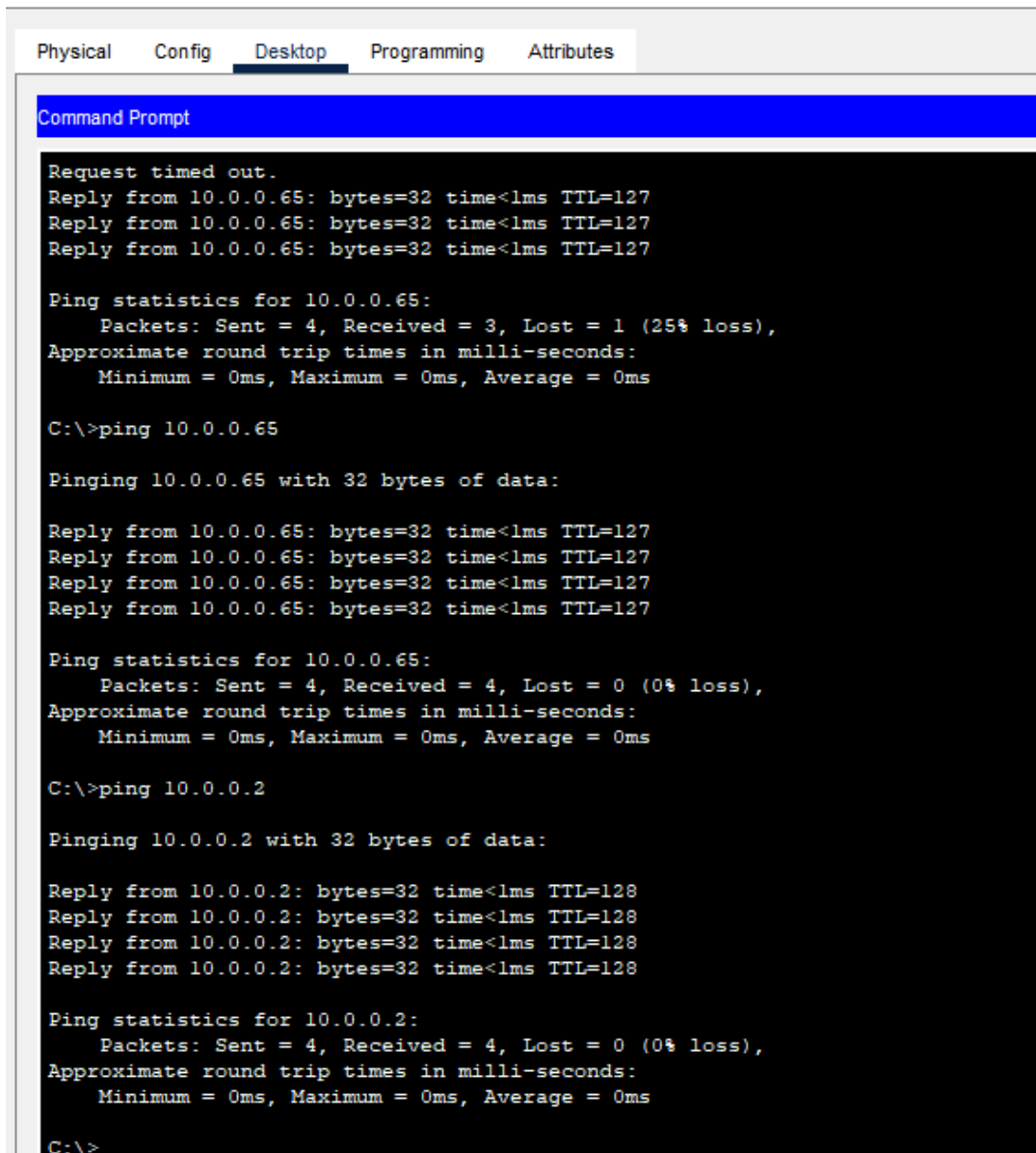
```
sw1#int range f5/1,f6/1,g1/1
sw1#swtich mode access
sw1#switch mode access vlan 20
sw1#vlan 20
sw1#name HR
```

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.

PC1



The screenshot shows a Windows Command Prompt window titled "Command Prompt" with tabs for Physical, Config, Desktop, Programming, and Attributes. The Desktop tab is active. The window displays the output of two ping commands. The first command is "ping 10.0.0.65", which shows a 25% loss of packets. The second command is "ping 10.0.0.2", which shows 0% loss of packets.

```
Request timed out.
Reply from 10.0.0.65: bytes=32 time<1ms TTL=127
Reply from 10.0.0.65: bytes=32 time<1ms TTL=127
Reply from 10.0.0.65: bytes=32 time<1ms TTL=127

Ping statistics for 10.0.0.65:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 10.0.0.65

Pinging 10.0.0.65 with 32 bytes of data:

Reply from 10.0.0.65: bytes=32 time<1ms TTL=127
Reply from 10.0.0.65: bytes=32 time<1ms TTL=127
Reply from 10.0.0.65: bytes=32 time<1ms TTL=127
Reply from 10.0.0.65: bytes=32 time<1ms TTL=127

Ping statistics for 10.0.0.65:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 10.0.0.2

Pinging 10.0.0.2 with 32 bytes of data:

Reply from 10.0.0.2: bytes=32 time<1ms TTL=128
Reply from 10.0.0.2: bytes=32 time<1ms TTL=128
Reply from 10.0.0.2: bytes=32 time<1ms TTL=128
Reply from 10.0.0.2: bytes=32 time<1ms TTL=128

Ping statistics for 10.0.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```