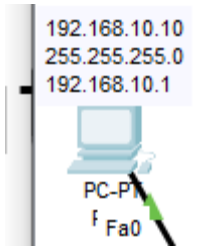
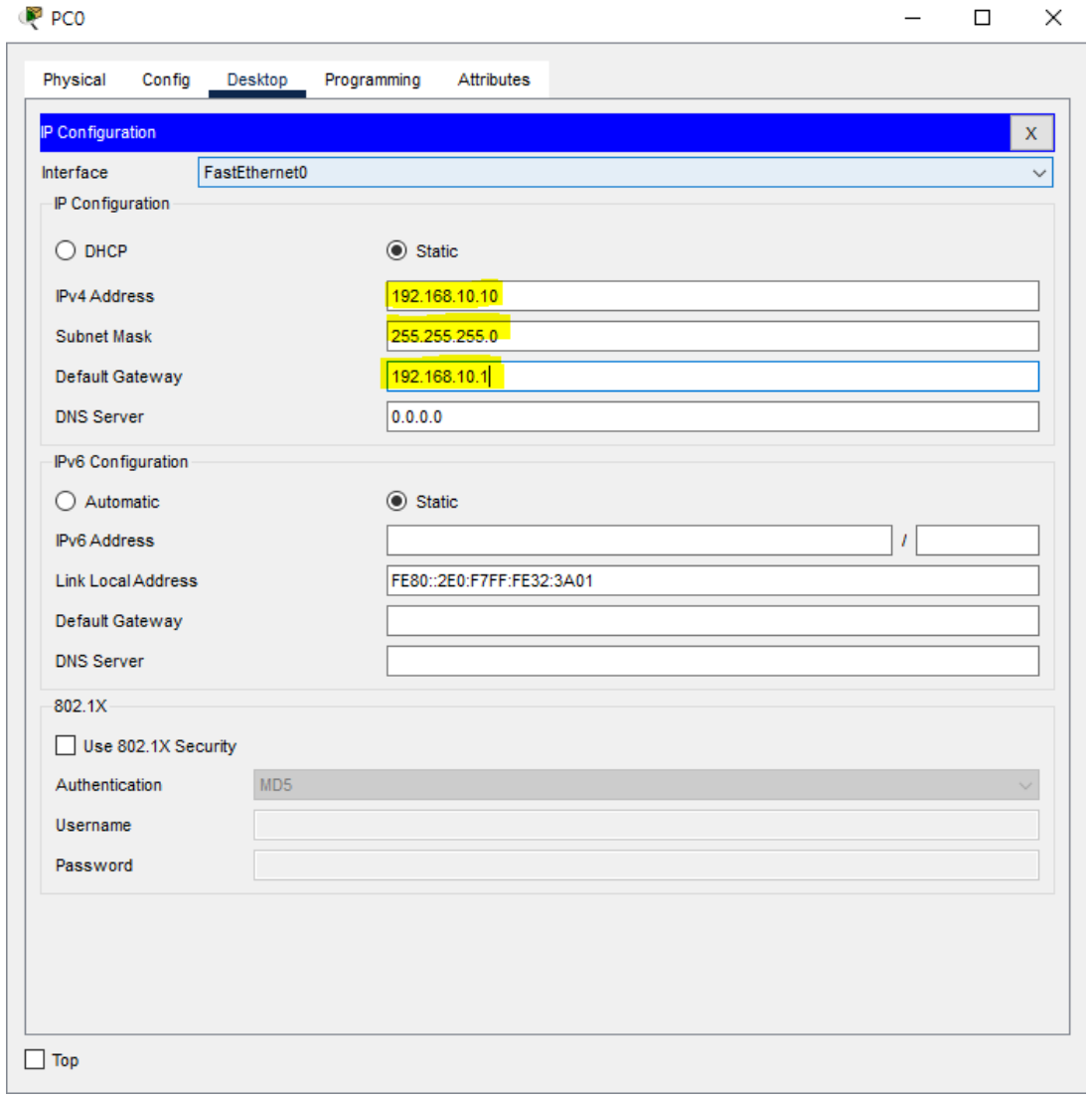
일일업무보고
20240814

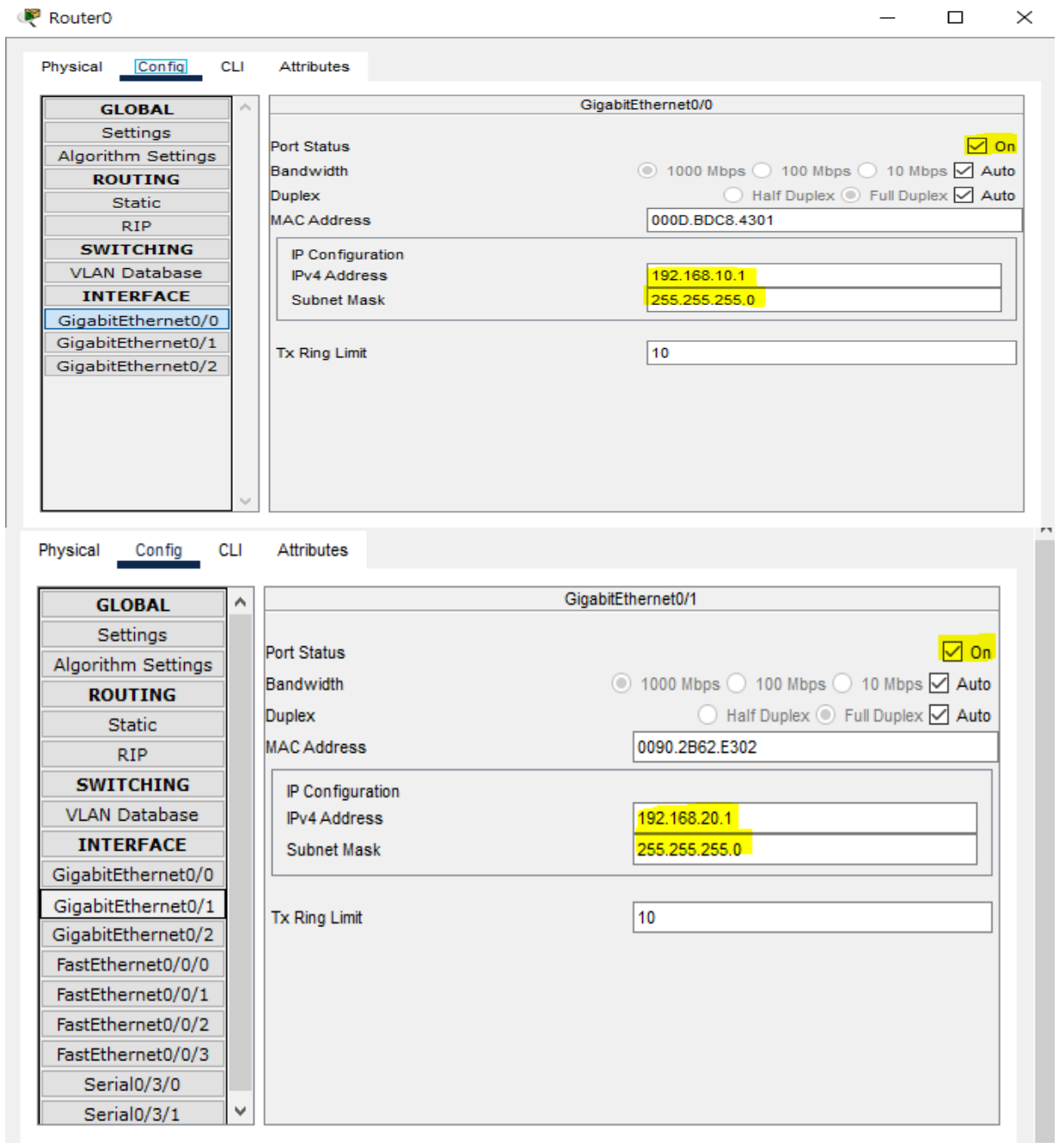
네트워크

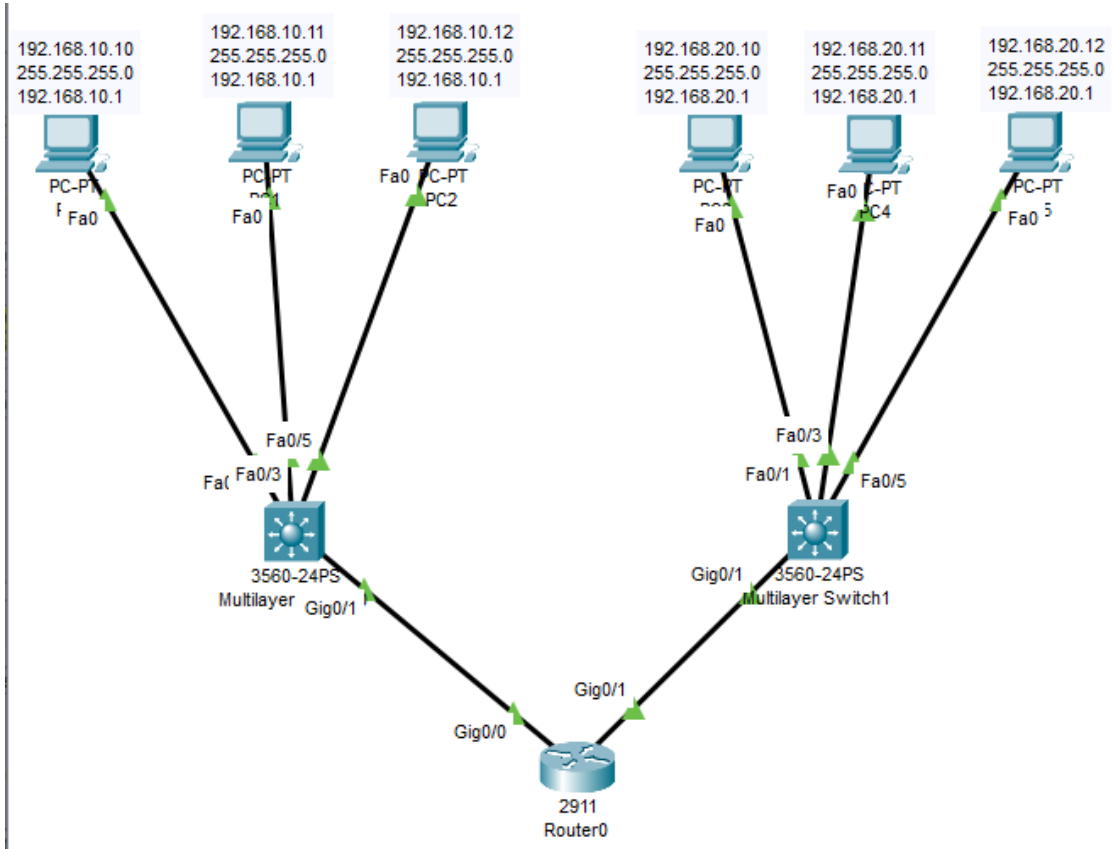
4switch_2Router





- Desktop의 ipconfig 에서 주소 설정



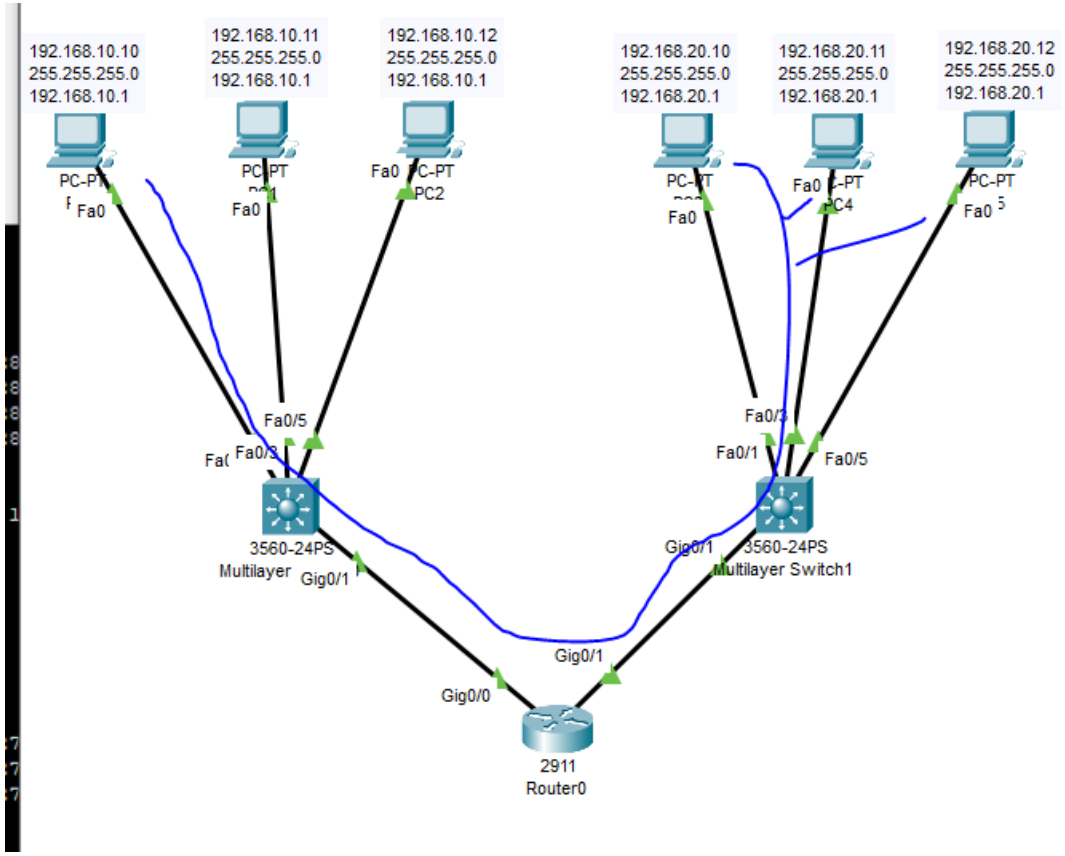


- 2개의 스위치를 연결하기 위해 Router에서 설정

port Status (on 체크)

- 접속확인

```
C:\>ping 192.168.10.11

Pinging 192.168.10.11 with 32 bytes of data:

Reply from 192.168.10.11: bytes=32 time<1ms TTL=128
Reply from 192.168.10.11: bytes=32 time<1ms TTL=128
Reply from 192.168.10.11: bytes=32 time<1ms TTL=128
Reply from 192.168.10.11: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.10.11:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.20.11

Pinging 192.168.20.11 with 32 bytes of data:

Request timed out.
Reply from 192.168.20.11: bytes=32 time<1ms TTL=127
Reply from 192.168.20.11: bytes=32 time<1ms TTL=127
Reply from 192.168.20.11: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.20.11:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```



Router0

Physical | Config | CLI | Attributes

GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0
GigabitEthernet0/1
GigabitEthernet0/2
Serial0/3/0
Serial0/3/1

Static Routes

Network 192.168.50.0
Mask 255.255.255.0
Next Hop 10.10.1.2
Add

Network Address

Remove

Router0

Physical | Config | CLI | Attributes

GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0
GigabitEthernet0/1
GigabitEthernet0/2
Serial0/3/0
Serial0/3/1

Serial0/3/0

Port Status: On
Duplex: Full Duplex
Clock Rate: 1200

IP Configuration
IPv4 Address: 10.10.1.1
Subnet Mask: 255.255.255.0

Tx Ring Limit: 10

Equivalent IOS Commands

```
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/2
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/3/0
Router(config-if)#
Router(config-if)#exit
Router(config)#
Router(config)#ip route 192.168.50.0 255.255.255.0 10.10.1.2
Router(config)#ip route 172.10.1.0 255.255.255.0 10.10.1.2
Router(config)#
Router(config)#interface Serial0/3/0
Router(config-if)#
```

Top

Router0

Physical | Config | CLI | Attributes

GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0
GigabitEthernet0/1
GigabitEthernet0/2
Serial0/3/0
Serial0/3/1

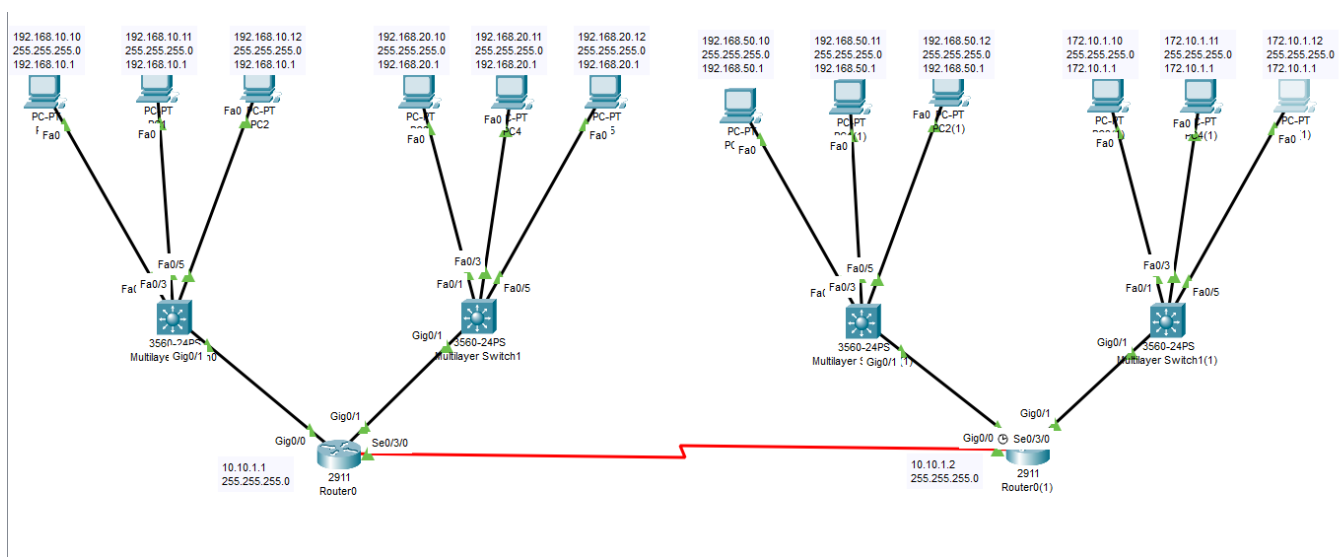
Static Routes

Network 172.10.1.0
Mask 255.255.255.0
Next Hop 10.10.1.2
Add

Network Address

192.168.50.0/24 via 10.10.1.2

Remove



• 접속확인

PC5(1)

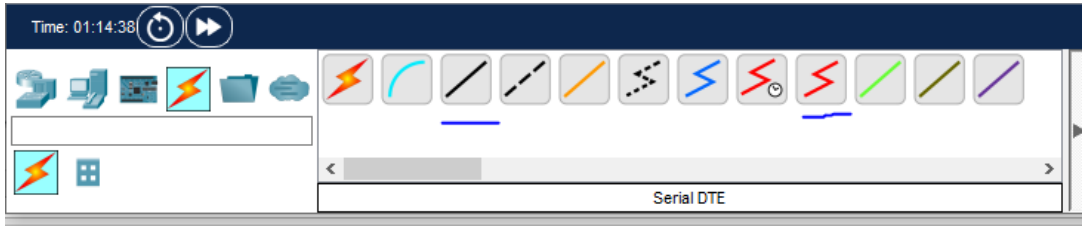
Physical | Config | Desktop | Programming | Attributes

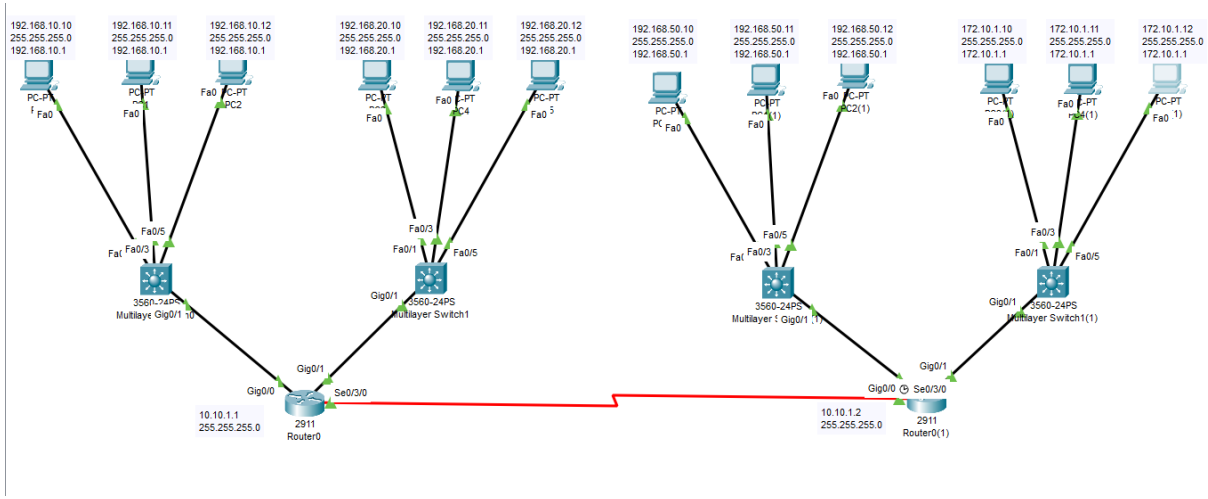
Command Prompt

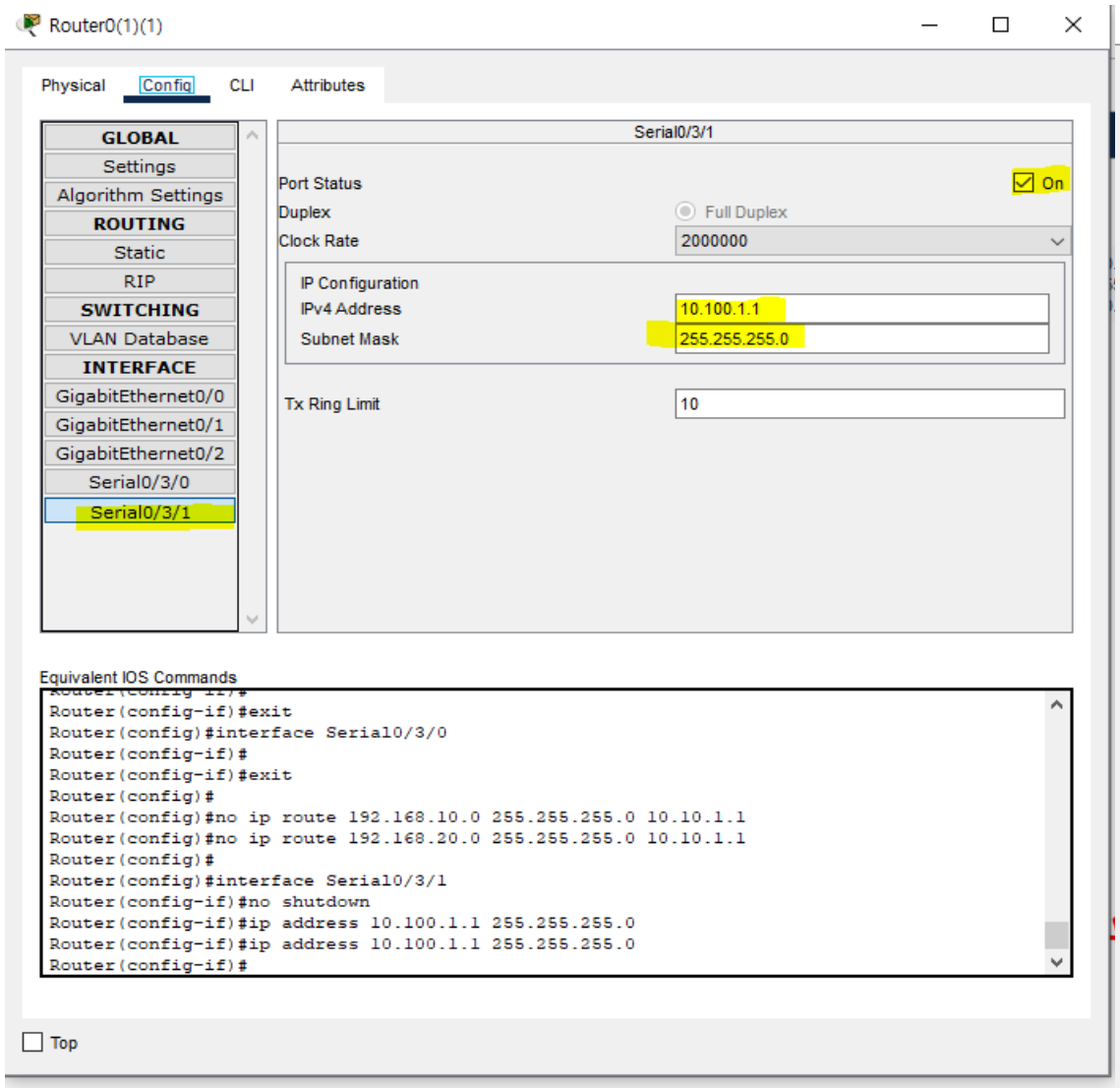
```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.50.10

Pinging 192.168.50.10 with 32 bytes of data:

Request timed out.
Reply from 192.168.50.10: bytes=32 time<1ms TTL=127
Reply from 192.168.50.10: bytes=32 time<1ms TTL=127
Reply from 192.168.50.10: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.50.10:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.20.10

Pinging 192.168.20.10 with 32 bytes of data:

Request timed out.
Reply from 192.168.20.10: bytes=32 time=1ms TTL=126
Reply from 192.168.20.10: bytes=32 time=8ms TTL=126
Reply from 192.168.20.10: bytes=32 time=1ms TTL=126

Ping statistics for 192.168.20.10:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 8ms, Average = 3ms

C:\>
```

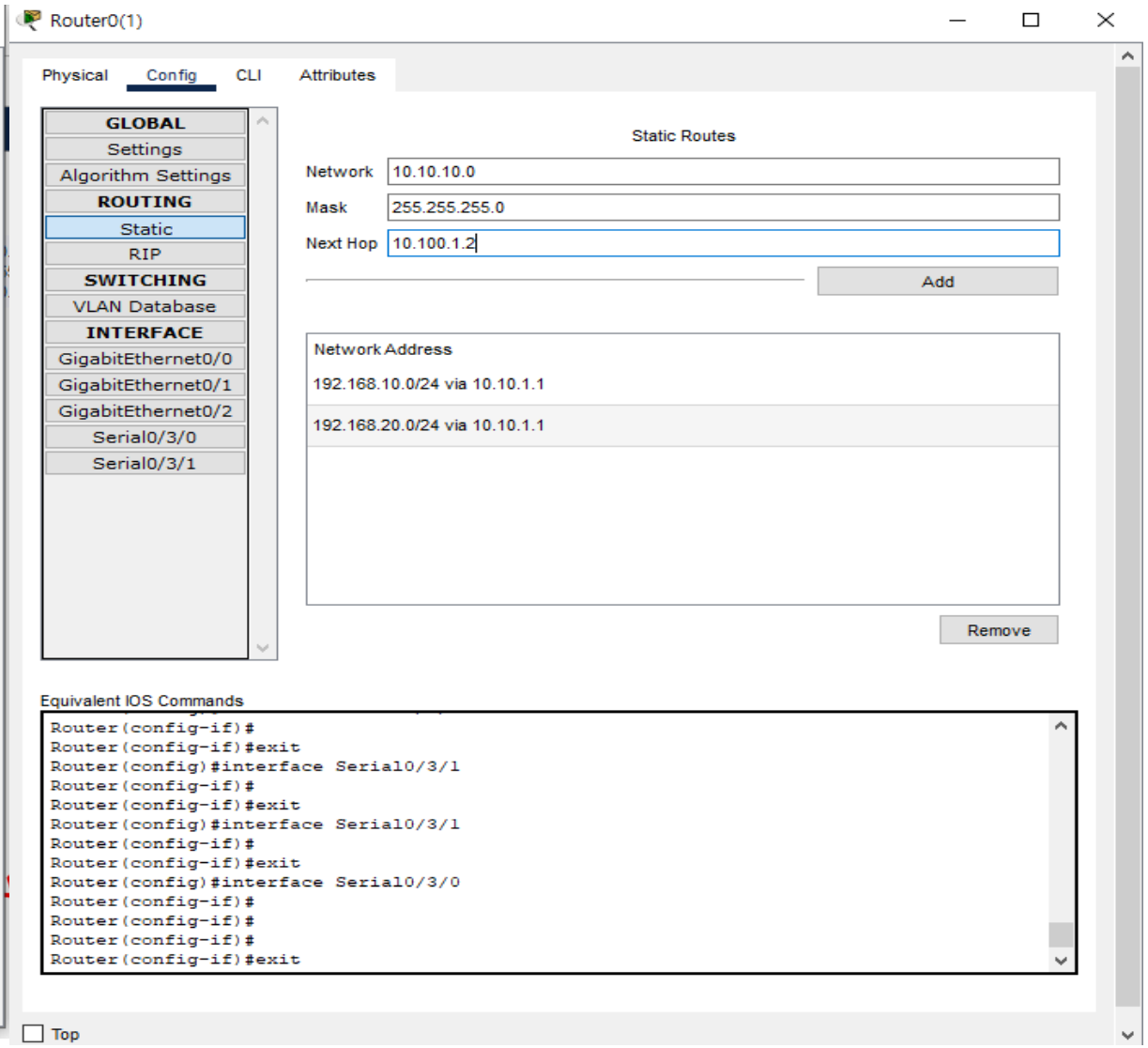
Top

- 검은선은 Pc와 Switch와Router의 연결선
- 빨강선 같은경우 Router의 연결선 (먼 거리)
- 예) 서울<>부산






Router0(1)(1)
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0
GigabitEthernet0/1
GigabitEthernet0/2
Serial0/3/0
Serial0/3/1
Serial0/3/1
Port Status
On
Duplex
Full Duplex
Clock Rate
2000000
IP Configuration
IPv4 Address
10.100.1.1
Subnet Mask
255.255.255.0
Tx Ring Limit
10
Equivalent IOS Commands
Router(config-if)#exit
Router(config)#interface Serial0/3/0
Router(config-if)#
Router(config-if)#exit
Router(config)#
Router(config)#no ip route 192.168.10.0 255.255.255.0 10.10.1.1
Router(config)#no ip route 192.168.20.0 255.255.255.0 10.10.1.1
Router(config)#
Router(config)#interface Serial0/3/1
Router(config-if)#no shutdown
Router(config-if)#ip address 10.100.1.1 255.255.255.0
Router(config-if)#ip address 10.100.1.1 255.255.255.0
Router(config-if)#
Top


Router0(1)
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0
GigabitEthernet0/1
GigabitEthernet0/2
Serial0/3/0
Serial0/3/1
Static Routes
Network
10.10.10.0
Mask
255.255.255.0
Next Hop
10.100.1.2
Add
Network Address
192.168.10.0/24 via 10.10.1.1
192.168.20.0/24 via 10.10.1.1
Remove
Equivalent IOS Commands
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/3/1
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/3/1
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/3/0
Router(config-if)#
Router(config-if)#
Router(config-if)#
Router(config-if)#exit
Top

클래스A

- **공인 IP 범위**:
- 1.0.0.0 ~ 126.0.0.0
- **사설 IP 범위**:
- 10.0.0.0 ~ 10.255.255.255
- **서브넷 마스크**:
- 기본 서브넷 마스크: 255.0.0.0

클래스 B

- **공인 IP 범위**:
- 128.0.0.0 ~ 191.255.0.0
- **사설 IP 범위**:
- 172.16.0.0 ~ 172.31.255.255
- **서브넷 마스크**:
- 기본 서브넷 마스크: 255.255.0.0

클래스 C

- **공인 IP 범위**:
- 192.0.0.0 ~ 223.255.255.0
- **사설 IP 범위**:
- 192.168.0.0 ~ 192.168.255.255
- **서브넷 마스크**:
- 기본 서브넷 마스크: 255.255.255.0

클래스 D (멀티캐스트)

- **공인 IP 범위**:
- 224.0.0.0 ~ 239.255.255.255
- **사설 IP 범위**:
- 사설 IP 주소 없음
- **용도**:
- 멀티캐스트를 위한 주소로, 일반적인 호스트 주소로 사용되지 않음

클래스 E (예약된 주소)

- **공인 IP 범위**:
- 240.0.0.0 ~ 255.255.255.255
- **사설 IP 범위**:
- 사설 IP 주소 없음
- **용도**:
- 연구 및 테스트 용도로 예약됨.