HACETTEPE UNIVERSITY DEPARTMENT OF

COMPUTER ENGINEERING

BBM 453 LAB EXPERIMENT

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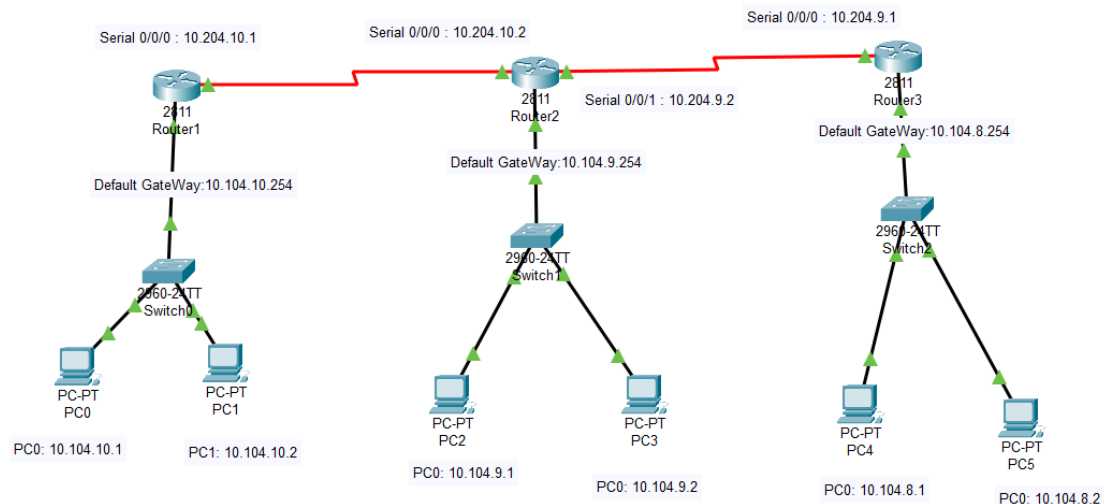
Çağlar USLU – 21808388

Group No: 4

1. **Aim of this experiment is to create a wide area network (WAN) as shown in Figure-2**
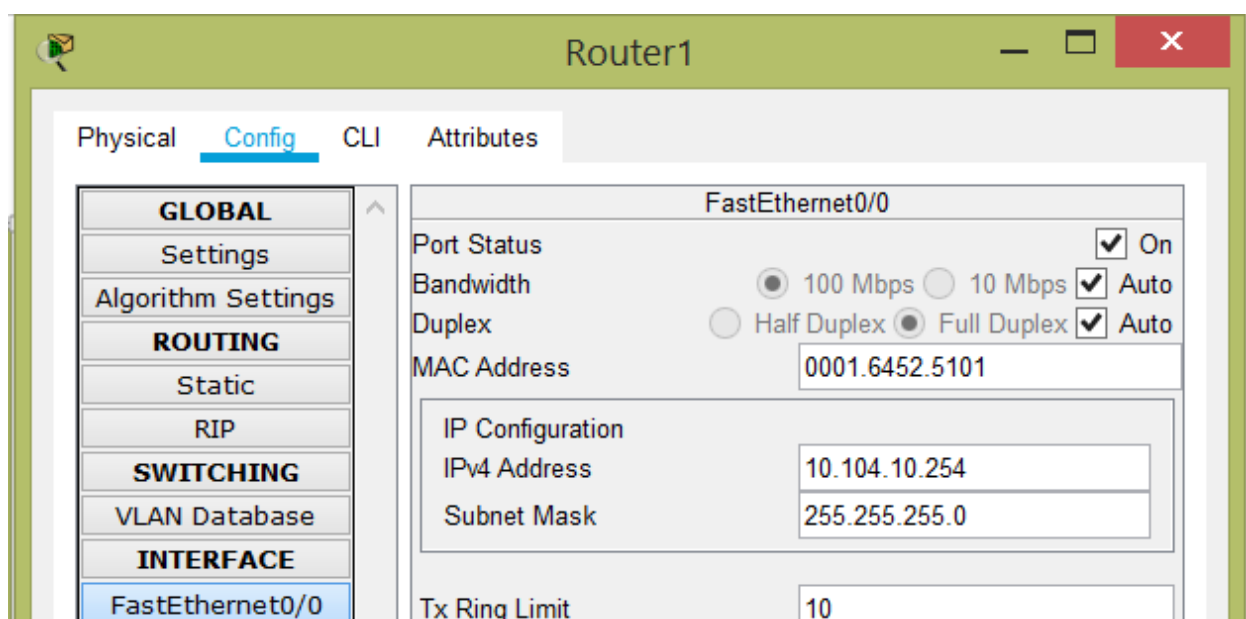
   Group id is 4, we set the IP's again.
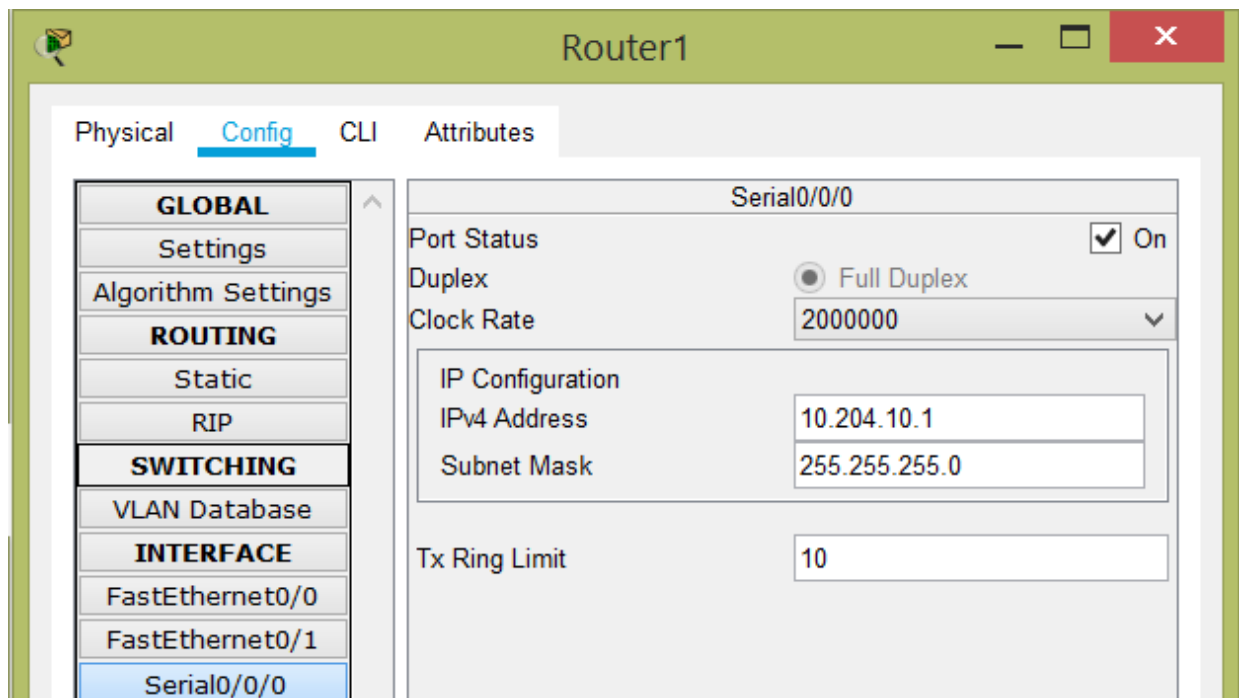
   Example : From 10.100.1.254 to 10.104.1.254

   All connections have been made correctly. All connections are green lights.
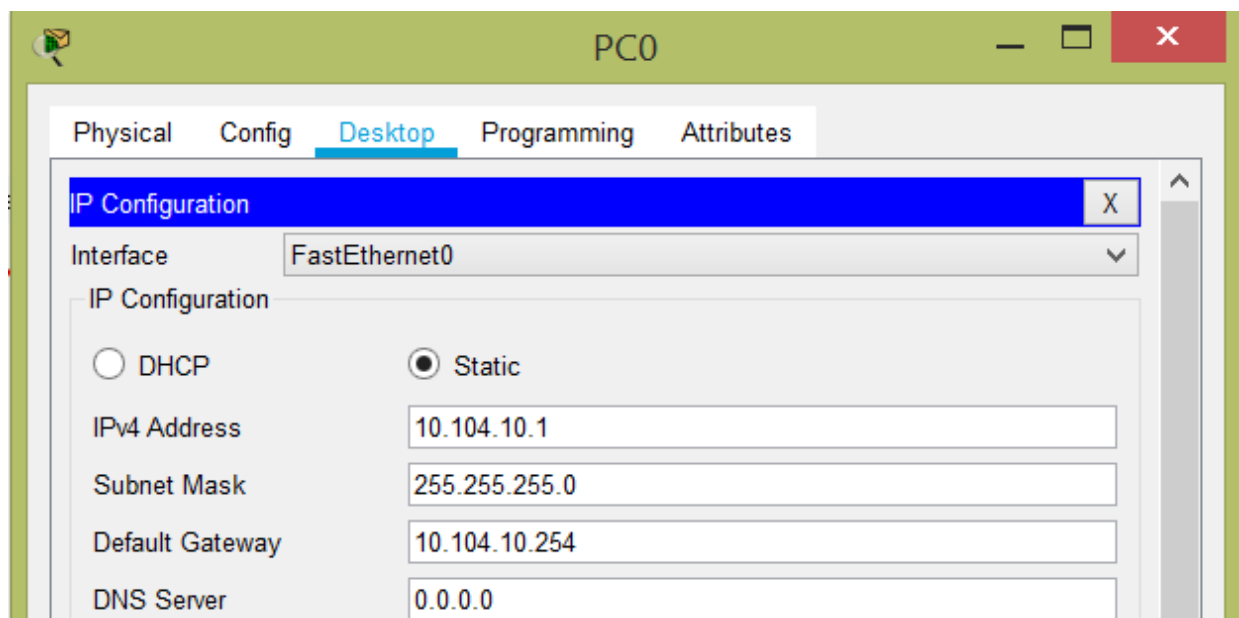
   Router1 FastEthernet0/0 info

Router1 Serial0/0/0 info

Information of computers connected to the router1

PC1

Physical   Config   Desktop   Programming   Attributes

IP Configuration   X

Interface   FastEthernet0

IP Configuration

○ DHCP   ● Static

IPv4 Address   10.104.10.2

Subnet Mask   255.255.255.0

Default Gateway   10.104.10.254

DNS Server   0.0.0.0
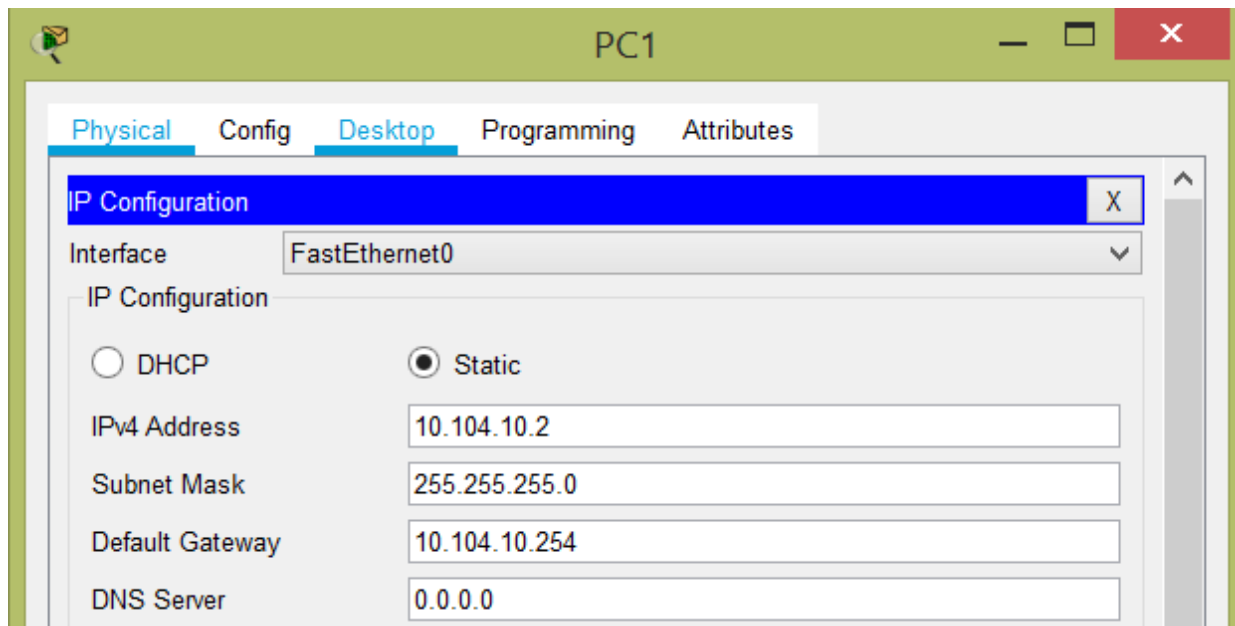
Router1 Static info

Router1

Physical   Config   CLI   Attributes

GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
FastEthernet0/0
FastEthernet0/1
Serial0/0/0
Serial0/0/1

Static Routes

Network   10.204.9.0

Mask   255.255.255.0

Next Hop   10.204.10.2

Add

Network Address

10.104.9.0/24 via 10.204.10.2

10.104.8.0/24 via 10.204.10.2

10.204.9.0/24 via 10.204.10.2

Remove
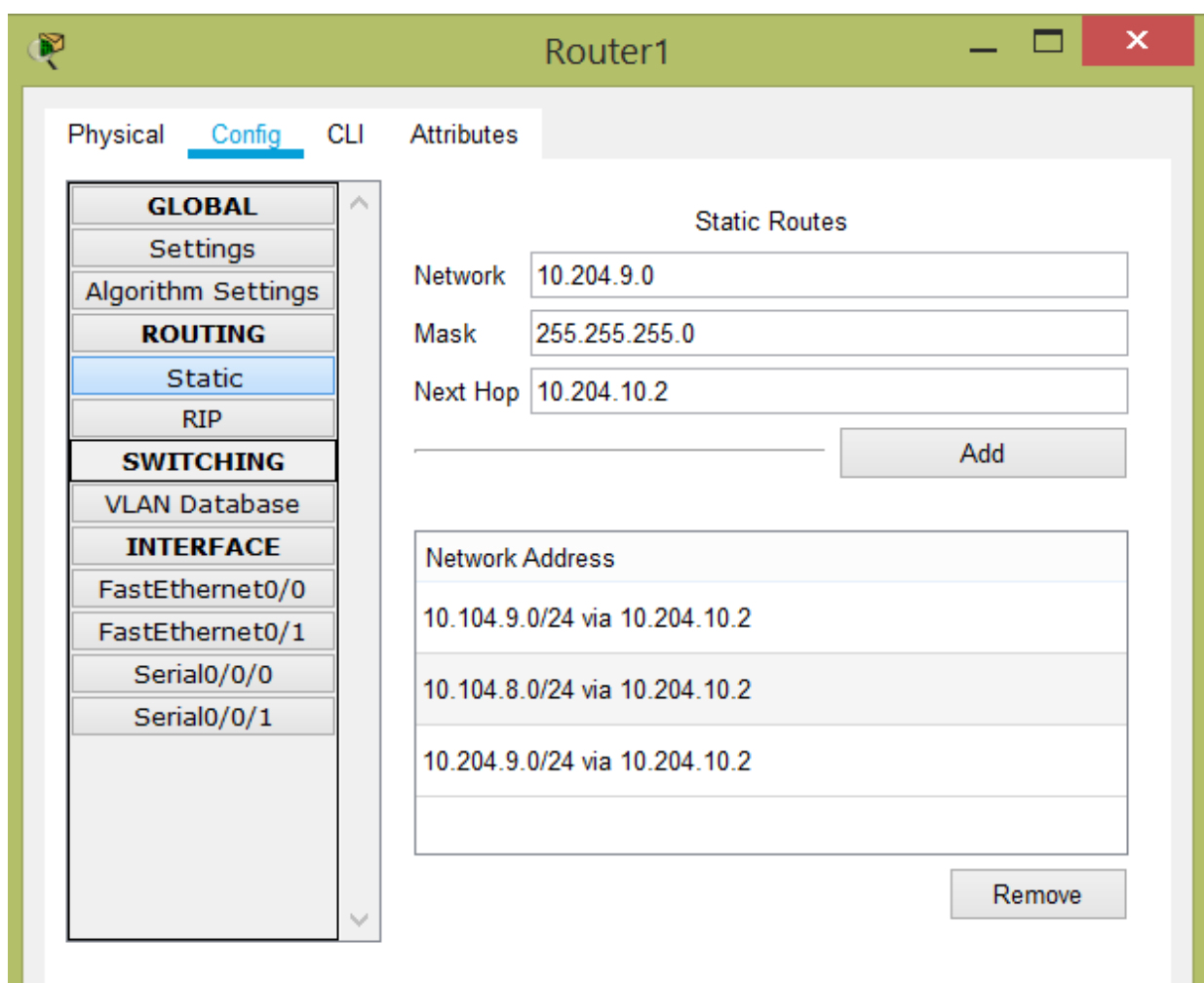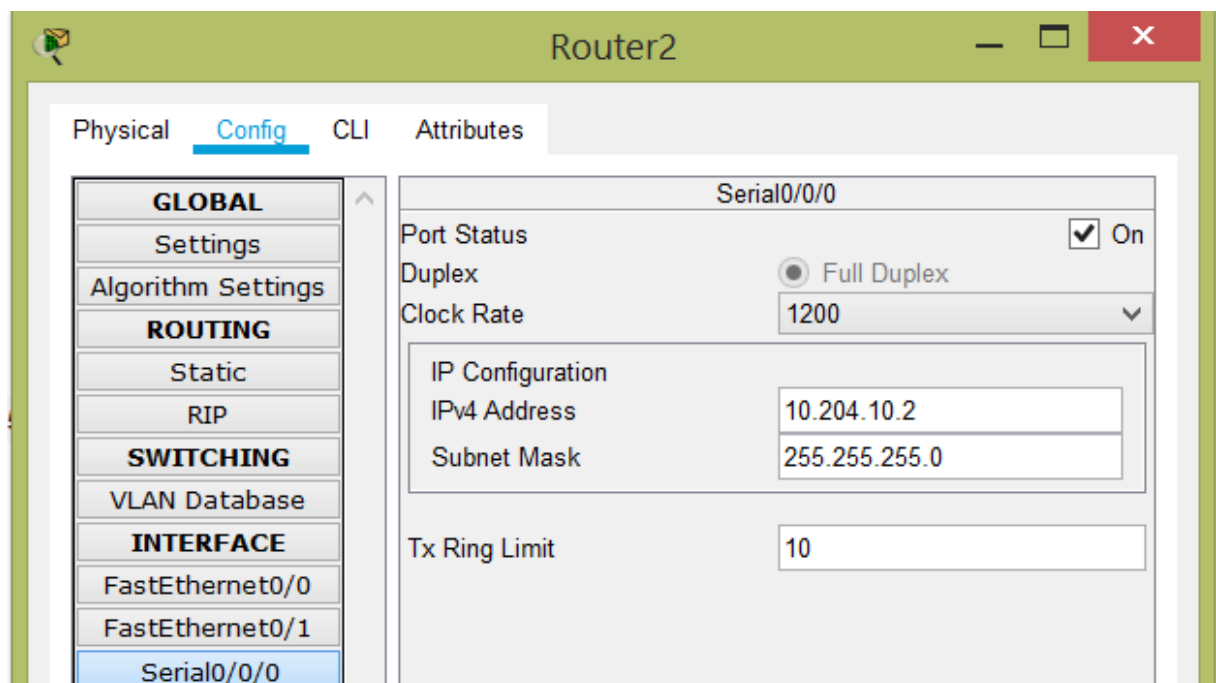
Router2 FastEthernet0/0 info

Router2 — Physical | Config | CLI | Attributes

GLOBAL
- Settings
- Algorithm Settings

ROUTING
- Static
- RIP

SWITCHING
- VLAN Database

INTERFACE
- FastEthernet0/0

FastEthernet0/0

Port Status	✔ On
Bandwidth	● 100 Mbps ○ 10 Mbps ✔ Auto
Duplex	○ Half Duplex ● Full Duplex ✔ Auto
MAC Address	00D0.58E9.D601

IP Configuration
- IPv4 Address: 10.104.9.254
- Subnet Mask: 255.255.255.0

Tx Ring Limit: 10

Router2 Serial0/0/0 info

Router2 — Physical | Config | CLI | Attributes

GLOBAL
- Settings
- Algorithm Settings

ROUTING
- Static
- RIP

SWITCHING
- VLAN Database

INTERFACE
- FastEthernet0/0
- FastEthernet0/1
- Serial0/0/0

Serial0/0/0

Port Status	✔ On
Duplex	● Full Duplex
Clock Rate	1200

IP Configuration
- IPv4 Address: 10.204.10.2
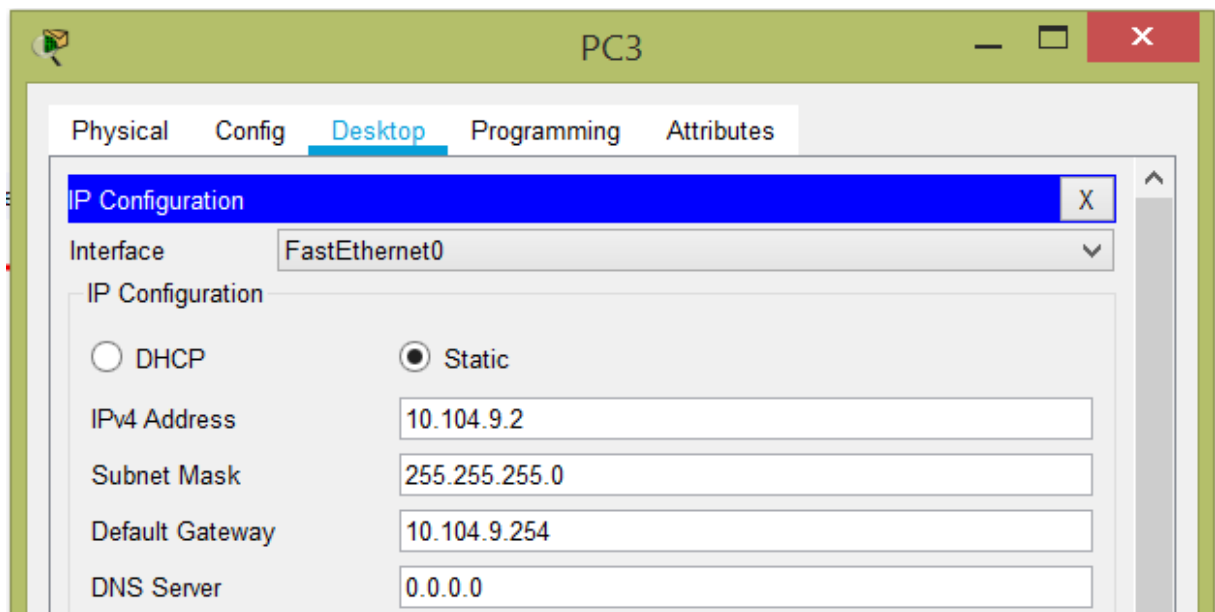- Subnet Mask: 255.255.255.0

Tx Ring Limit: 10

Router2 Serial0/0/1 info

Information of computers connected to the router2

Router2 Static info

Router3 FastEthernet0/0 info

Router3

Physical   Config   CLI   Attributes

GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
FastEthernet0/0

FastEthernet0/0

Port Status	☑ On
Bandwidth	◉ 100 Mbps ◯ 10 Mbps ☑ Auto
Duplex	◯ Half Duplex ◉ Full Duplex ☑ Auto
MAC Address	0009.7C2A.D601

IP Configuration
IPv4 Address   10.104.8.254
Subnet Mask   255.255.255.0

Tx Ring Limit   10

Router3 Serial0/0/0 info

Router3

Physical   Config   CLI   Attributes

GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
FastEthernet0/0
FastEthernet0/1
Serial0/0/0

Serial0/0/0

Port Status	☑ On
Duplex	◉ Full Duplex
Clock Rate	1200

IP Configuration
IPv4 Address   10.204.9.1
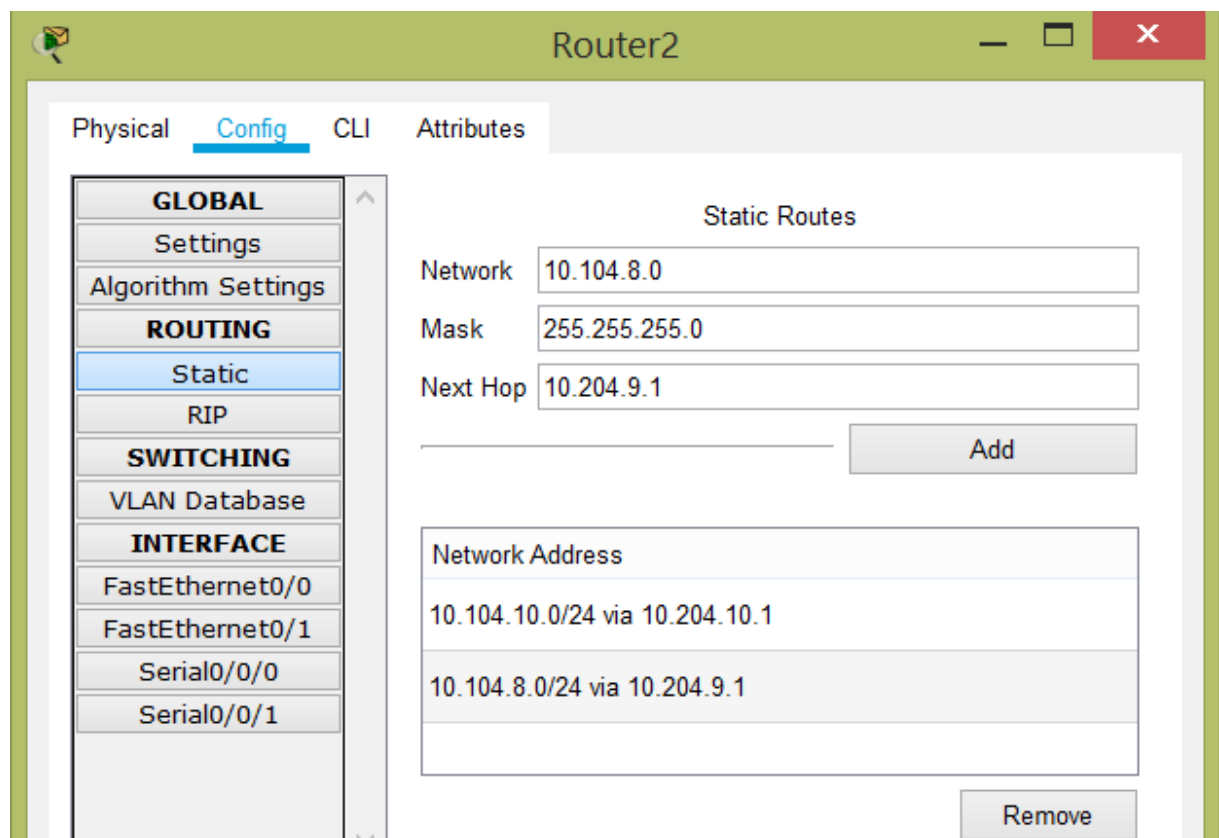Subnet Mask   255.255.255.0

Tx Ring Limit   10

Information of computers connected to the router3

PC4 — IP Configuration (Desktop tab)

Interface: FastEthernet0
- DHCP ○   Static ●
- IPv4 Address: 10.104.8.1
- Subnet Mask: 255.255.255.0
- Default Gateway: 10.104.8.254
- DNS Server: 0.0.0.0

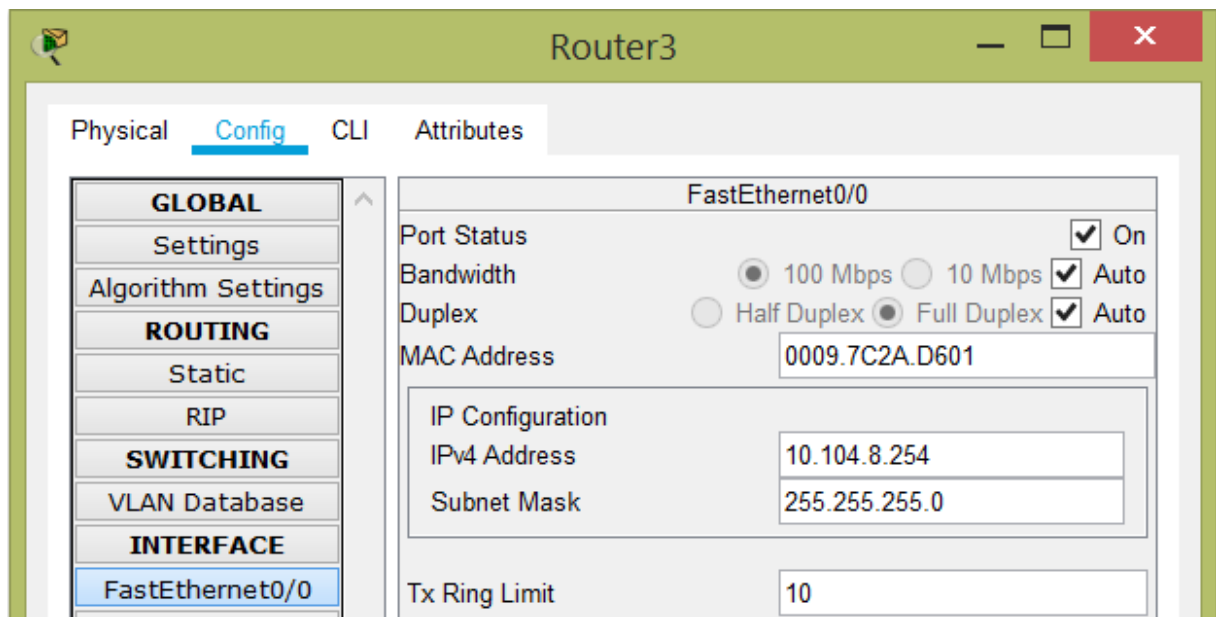PC5 — IP Configuration (Desktop tab)

Interface: FastEthernet0
- DHCP ○   Static ●
- IPv4 Address: 10.104.8.2
- Subnet Mask: 255.255.255.0
- Default Gateway: 10.104.8.254
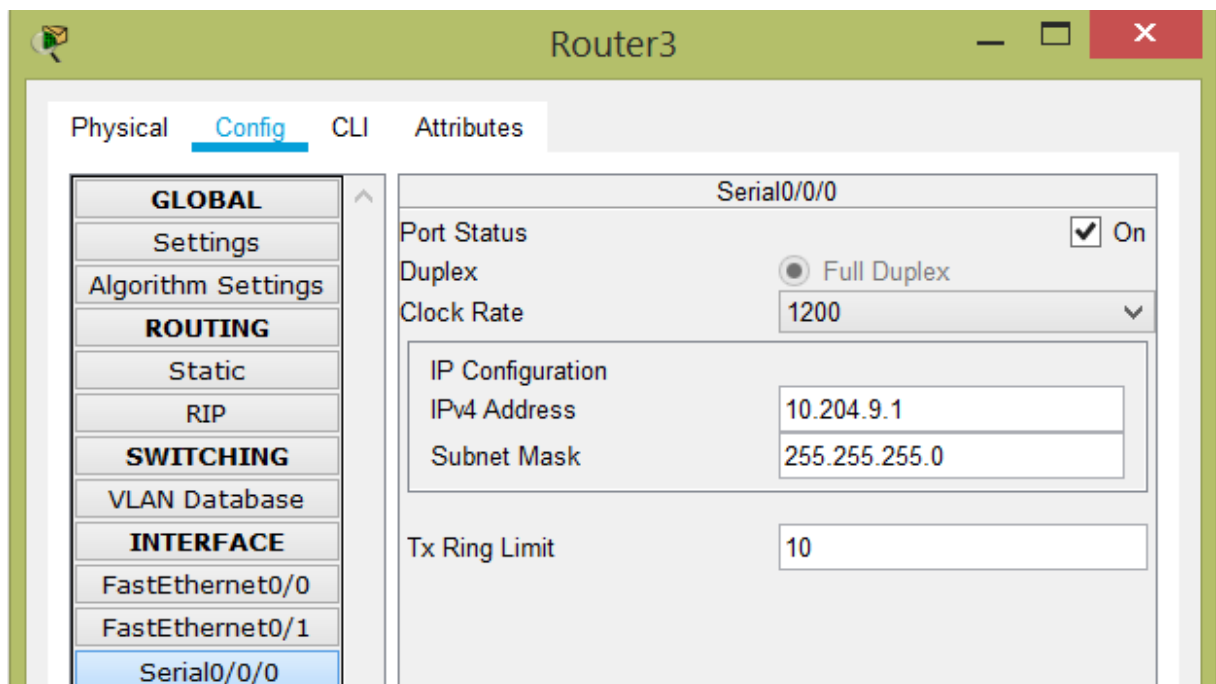- DNS Server: 0.0.0.0

Router3 Static info

Router3 — Config tab

Static Routes

Network: 10.104.10.0
Mask: 255.255.255.0
Next Hop: 10.204.9.2

Network Address
10.104.9.0/24 via 10.204.9.2
10.104.10.0/24 via 10.204.9.2

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC0	PC2	ICMP		0.000	N	0	(edit)	
	Successful	PC0	PC5	ICMP		0.000	N	1	(edit)	
	Successful	PC2	PC1	ICMP		0.000	N	2	(edit)	
	Successful	PC3	PC4	ICMP		0.000	N	3	(edit)	
	Successful	PC5	PC2	ICMP		0.000	N	4	(edit)	
	Successful	PC4	PC1	ICMP		0.000	N	5	(edit)	

PDU List Window

Ping from PC0 to PC4

```
                              PC0                    — □  ×

 Physical   Config   Desktop   Programming   Attributes

 Command Prompt                                           X

  Pinging 10.104.10.2 with 32 bytes of data:

  Reply from 10.104.10.2: bytes=32 time<1ms TTL=128
  Reply from 10.104.10.2: bytes=32 time<1ms TTL=128
  Reply from 10.104.10.2: bytes=32 time=1ms TTL=128
  Reply from 10.104.10.2: bytes=32 time<1ms TTL=128

  Ping statistics for 10.104.10.2:
      Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
  Approximate round trip times in milli-seconds:
      Minimum = 0ms, Maximum = 1ms, Average = 0ms

  C:\>ping 10.104.8.1

  Pinging 10.104.8.1 with 32 bytes of data:

  Reply from 10.104.8.1: bytes=32 time=2ms TTL=125
  Reply from 10.104.8.1: bytes=32 time=12ms TTL=125
  Reply from 10.104.8.1: bytes=32 time=11ms TTL=125
  Reply from 10.104.8.1: bytes=32 time=12ms TTL=125

  Ping statistics for 10.104.8.1:
      Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
  Approximate round trip times in milli-seconds:
      Minimum = 2ms, Maximum = 12ms, Average = 9ms

  C:\>

 ☐ Top
```

Ping from PC5 to PC1

```
                              PC5                    — □  ×

 Physical   Config   Desktop   Programming   Attributes

 Command Prompt                                           X

  Packet Tracer PC Command Line 1.0
  C:\>ping 10.104.10.2

  Pinging 10.104.10.2 with 32 bytes of data:

  Reply from 10.104.10.2: bytes=32 time=2ms TTL=125
  Reply from 10.104.10.2: bytes=32 time=2ms TTL=125
  Reply from 10.104.10.2: bytes=32 time=12ms TTL=125
  Reply from 10.104.10.2: bytes=32 time=15ms TTL=125

  Ping statistics for 10.104.10.2:
      Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
  Approximate round trip times in milli-seconds:
      Minimum = 2ms, Maximum = 15ms, Average = 7ms
```

Router2

Physical   Config   CLI   Attributes

IOS Command Line Interface

```
Press RETURN to get started!


%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up

%LINK-5-CHANGED: Interface Serial0/0/0, changed state to up

%LINK-5-CHANGED: Interface Serial0/0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/1,
changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/0,
changed state to up


Router>enable
Router#tra
Router#traceroute 10.204.10.1
Type escape sequence to abort.
Tracing the route to 10.204.10.1

  1   10.204.10.1     0 msec    0 msec    1 msec
Router#
```

Ctrl+F6 to exit CLI focus   Copy   Paste

☐ Top