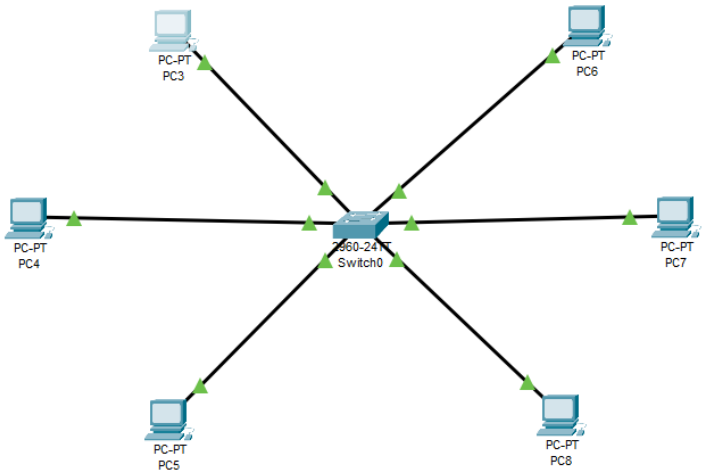
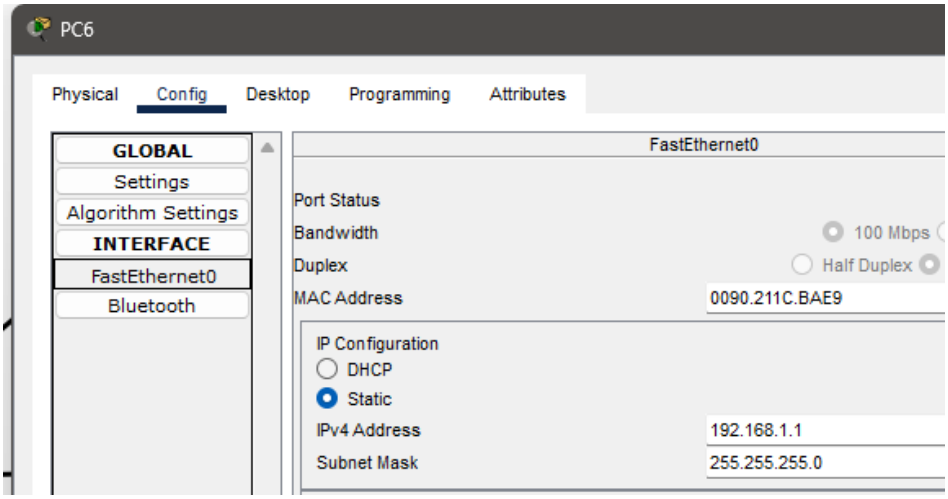
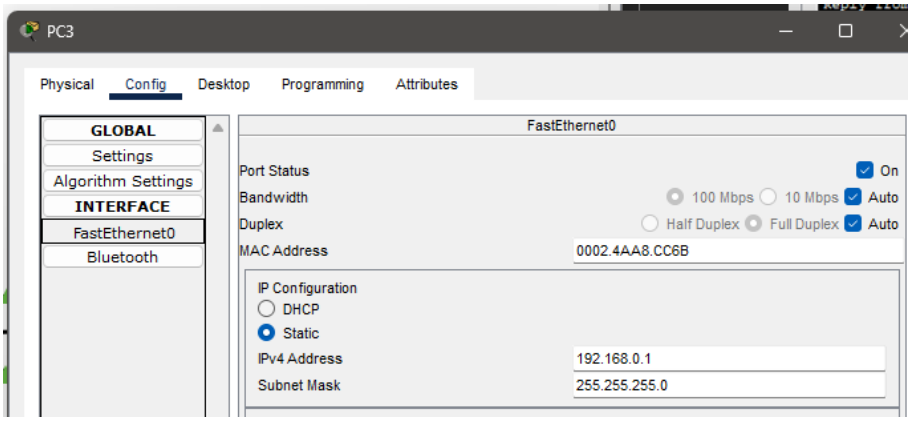
Практическая работа 12 – настройка передачи данных между сетями на маршрутизаторе

1. Создаем сеть



2. Настраиваем две локальные сети справа и слева.



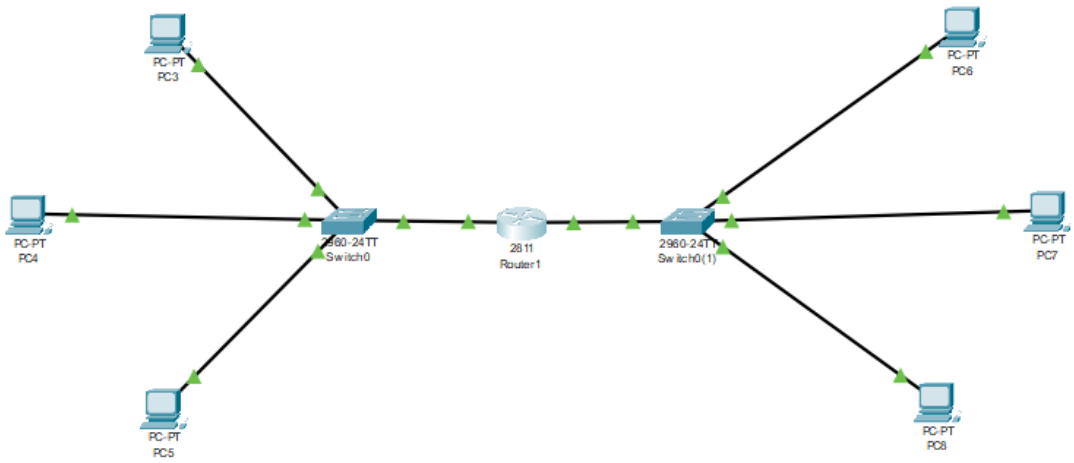


3. Пингуем в одну сеть и в другую.

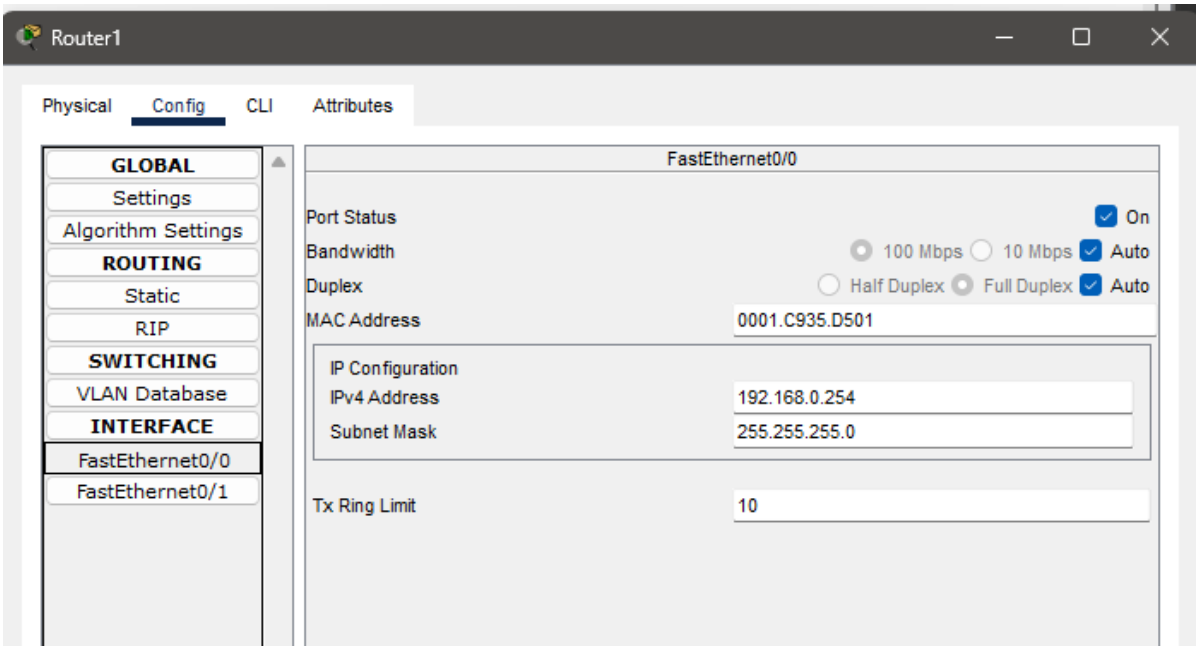
```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>ping 192.168.0.2

Pinging 192.168.0.2 with 32 bytes of data:

Reply from 192.168.0.2: bytes=32 time<1ms TTL=128
Reply from 192.168.0.2: bytes=32 time<1ms TTL=128
Reply from 192.168.0.2: bytes=32 time<1ms TTL=128
Reply from 192.168.0.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

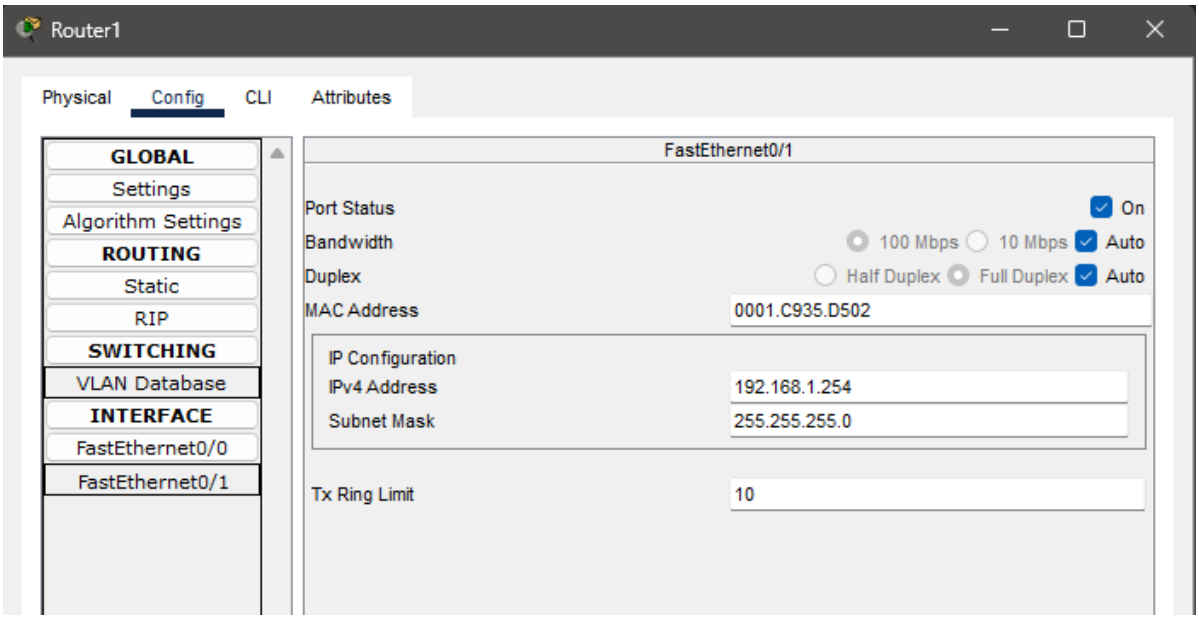
При отправке пакетов из одной сети в другую они не доходят. Для связи двух подсетей требуется маршрутизатор.

4. Модифицируем сеть, добавляем роутер.

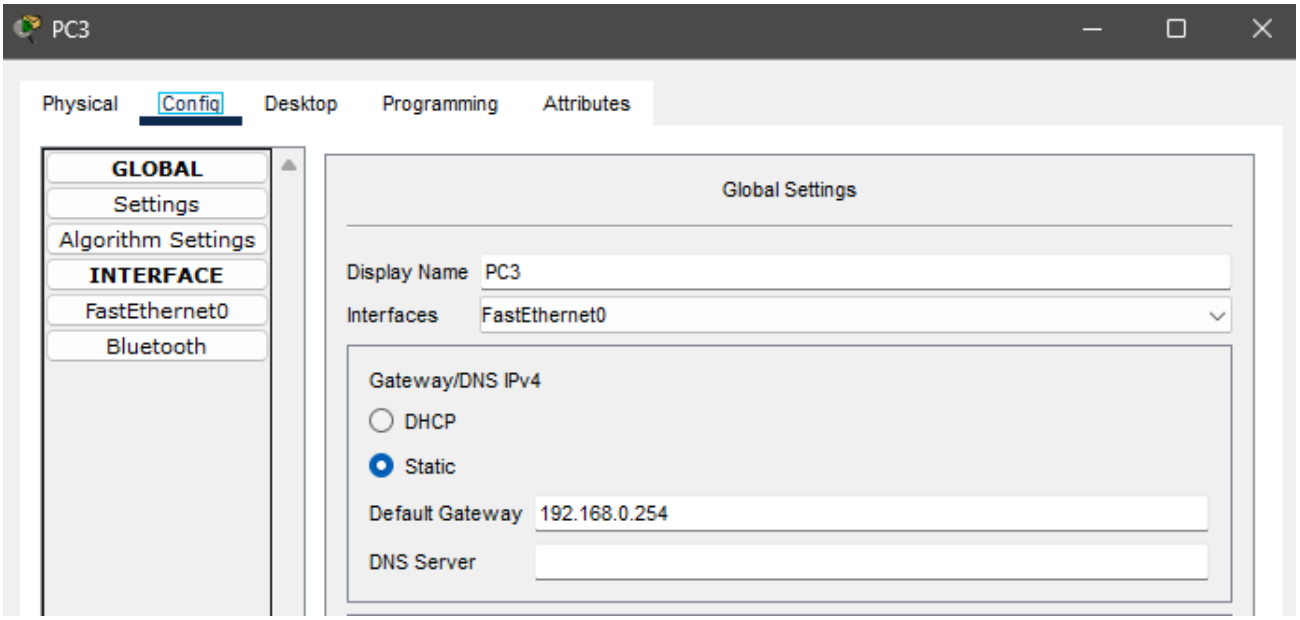


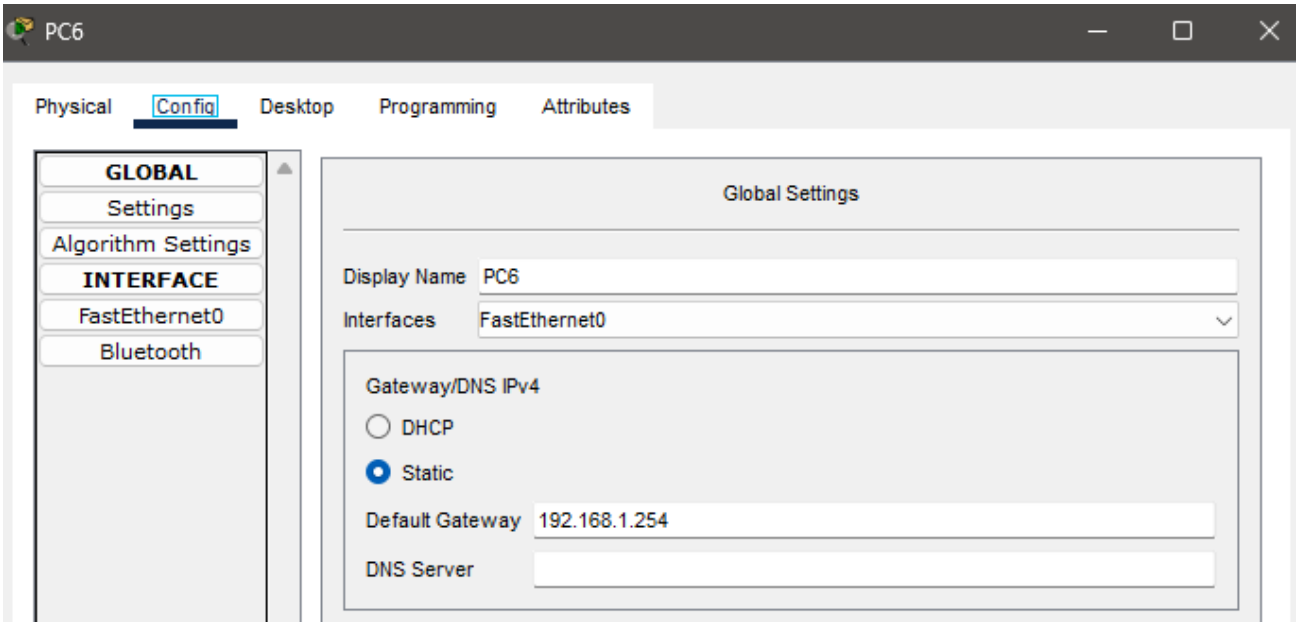
5. Настраиваем интерфейсы на наши сети.





6. Устанавливаем шлюз на устройствах





7. Пингуем компьютеры из роутера

```
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.0.0, timeout is 2 seconds:

Reply to request 0 from 192.168.0.1, 0 ms
Reply to request 0 from 192.168.0.2, 0 ms
Reply to request 0 from 192.168.0.3, 0 ms
Reply to request 1 from 192.168.0.1, 0 ms
Reply to request 1 from 192.168.0.2, 0 ms
Reply to request 1 from 192.168.0.3, 0 ms
Reply to request 2 from 192.168.0.1, 0 ms
Reply to request 2 from 192.168.0.2, 0 ms
Reply to request 2 from 192.168.0.3, 0 ms
Reply to request 3 from 192.168.0.1, 0 ms
Reply to request 3 from 192.168.0.2, 0 ms
Reply to request 3 from 192.168.0.3, 0 ms
Reply to request 4 from 192.168.0.1, 0 ms
Reply to request 4 from 192.168.0.2, 0 ms
Reply to request 4 from 192.168.0.3, 0 ms

Router#ping 192.168.1.0

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.1.0, timeout is 2 seconds:

Reply to request 0 from 192.168.1.1, 0 ms
Reply to request 0 from 192.168.1.2, 0 ms
Reply to request 0 from 192.168.1.3, 0 ms
Reply to request 1 from 192.168.1.1, 0 ms
Reply to request 1 from 192.168.1.2, 0 ms
Reply to request 1 from 192.168.1.3, 0 ms
Reply to request 2 from 192.168.1.1, 0 ms
Reply to request 2 from 192.168.1.2, 0 ms
Reply to request 2 from 192.168.1.3, 0 ms
Reply to request 3 from 192.168.1.1, 0 ms
Reply to request 3 from 192.168.1.2, 0 ms
Reply to request 3 from 192.168.1.3, 0 ms
Reply to request 4 from 192.168.1.1, 0 ms
Reply to request 4 from 192.168.1.2, 0 ms
Reply to request 4 from 192.168.1.3, 0 ms
```

8. Делаем пинг из одной сети в другую

```
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<1ms TTL=127
Reply from 192.168.1.1: bytes=32 time<1ms TTL=127
Reply from 192.168.1.1: bytes=32 time<1ms TTL=127
Reply from 192.168.1.1: bytes=32 time=2ms TTL=127

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 2ms, Average = 0ms

C:\>
```