Лабараторная работа 4 частка 1

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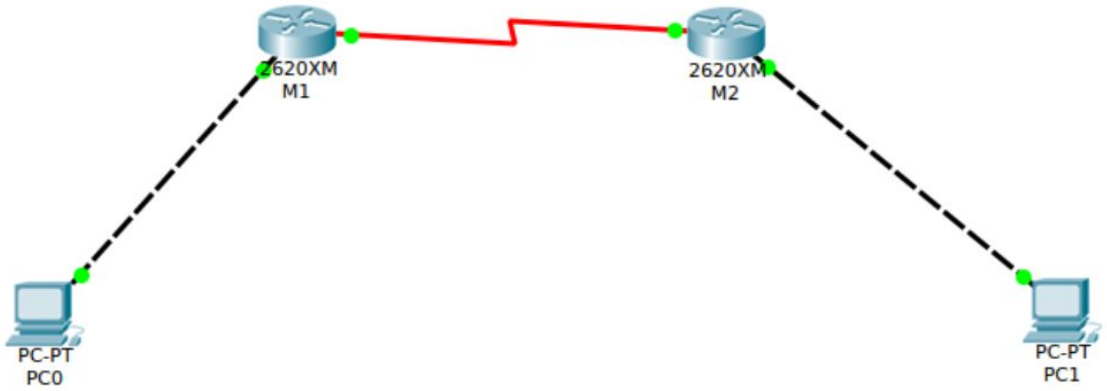
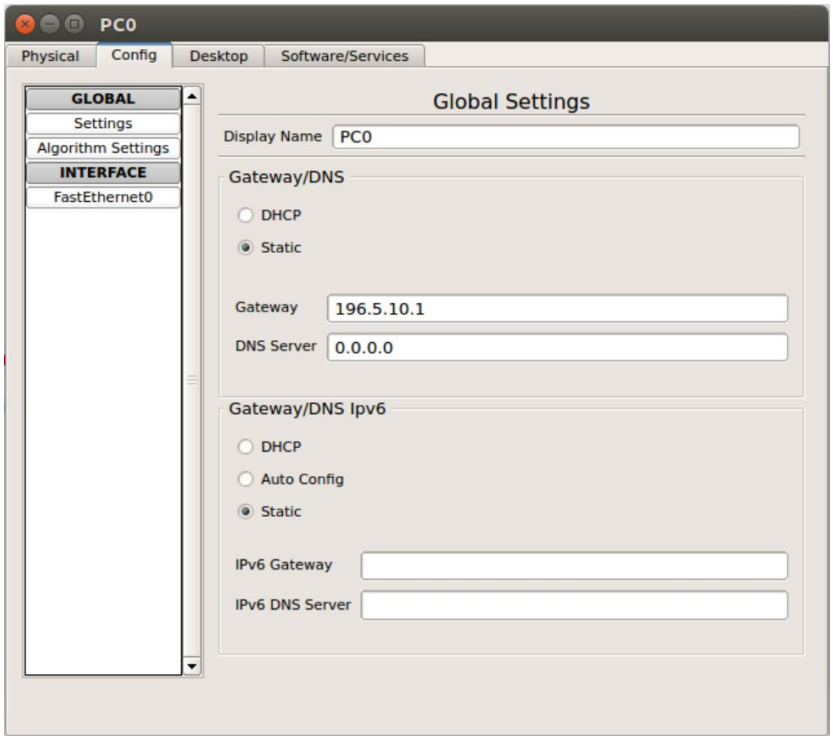
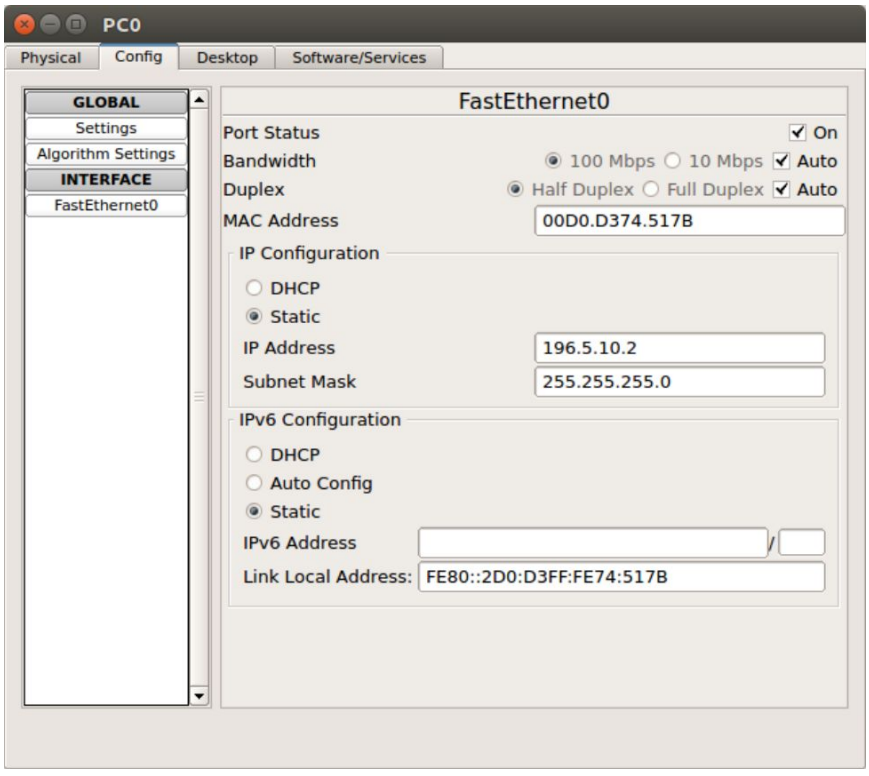
Варыянт 3

Будуем схему сеткі:



Задаем IP-адрасы для канечных прыладаў, канфігуруем роўтары:


PC0
Physical
Config
Desktop
Software/Services
GLOBAL
Settings
Algorithm Settings
INTERFACE
FastEthernet0
Global Settings
Display Name
PC0
Gateway/DNS
DHCP
Static
Gateway
196.5.10.1
DNS Server
0.0.0.0
Gateway/DNS Ipv6
DHCP
Auto Config
Static
IPv6 Gateway
IPv6 DNS Server

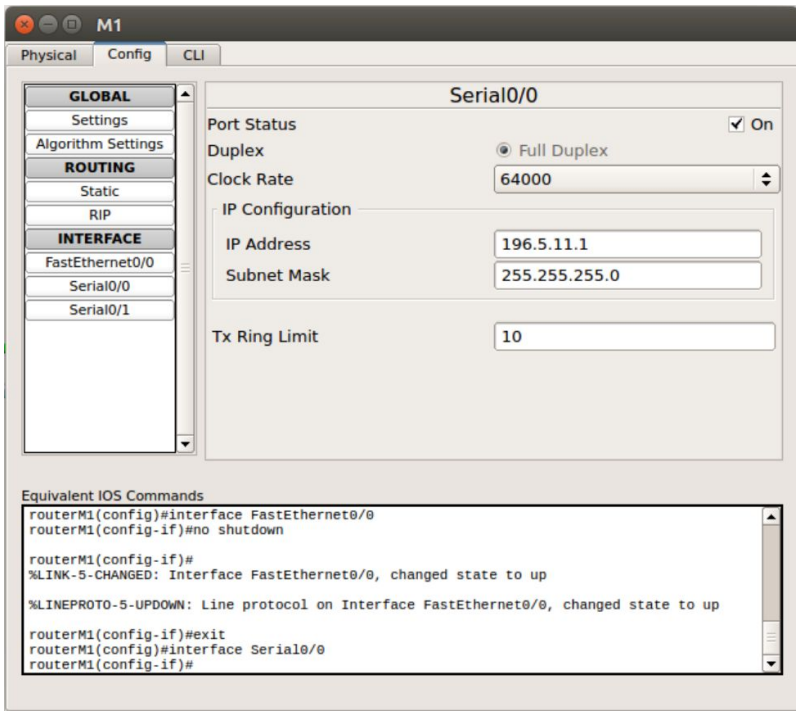

PC0
Physical
Config
Desktop
Software/Services
GLOBAL
Settings
Algorithm Settings
INTERFACE
FastEthernet0
FastEthernet0
Port Status
On
Bandwidth
100 Mbps
10 Mbps
Auto
Duplex
Half Duplex
Full Duplex
Auto
MAC Address
00D0.D374.517B
IP Configuration
DHCP
Static
IP Address
196.5.10.2
Subnet Mask
255.255.255.0
IPv6 Configuration
DHCP
Auto Config
Static
IPv6 Address
Link Local Address:
FE80::2D0:D3FF:FE74:517B

```
Router>eaenable
Router#
Router#
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#
Router(config)#
Router(config)#
Router(config)#hostname routerM1
routerM1(config)#
routerM1(config)#
```

```
routerM1>
routerM1>enable
routerM1#
routerM1#
routerM1#
routerM1#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
routerM1(config)#
routerM1(config)#
routerM1(config)#
routerM1(config)#enable password password
routerM1(config)#
routerM1(config)#
```

Аналагічна для PC1 і M2.

Задаем налады для Serial 0/0 :



Аналагічна для M2.

Роўтары дасягальныя адзін з аднаго:

```
routerM2#
routerM2#ping 196.5.11.1

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 196.5.11.1, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/8/15 ms

routerM2#
```

Захоўваем канфігурацыю ў якасці пачатковай:

```
routerM1#
routerM1#copy running-config startup-config
Destination filename [startup-config]? startup-config
Building configuration...
[OK]
routerM1#
routerM1#
```

Роўтар з адпаведнага кампутара даступны; кампутар з іншай сеткі - не даступны:

```
PC>
PC>ping 196.5.10.1

Pinging 196.5.10.1 with 32 bytes of data:

Reply from 196.5.10.1: bytes=32 time=1ms TTL=255
Reply from 196.5.10.1: bytes=32 time=0ms TTL=255
Reply from 196.5.10.1: bytes=32 time=0ms TTL=255
Reply from 196.5.10.1: bytes=32 time=0ms TTL=255

Ping statistics for 196.5.10.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

PC>
PC>
PC>ping 196.5.12.2

Pinging 196.5.12.2 with 32 bytes of data:

Reply from 196.5.10.1: Destination host unreachable.
Reply from 196.5.10.1: Destination host unreachable.
Reply from 196.5.10.1: Destination host unreachable.
Reply from 196.5.10.1: Destination host unreachable.

Ping statistics for 196.5.12.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

PC>
```

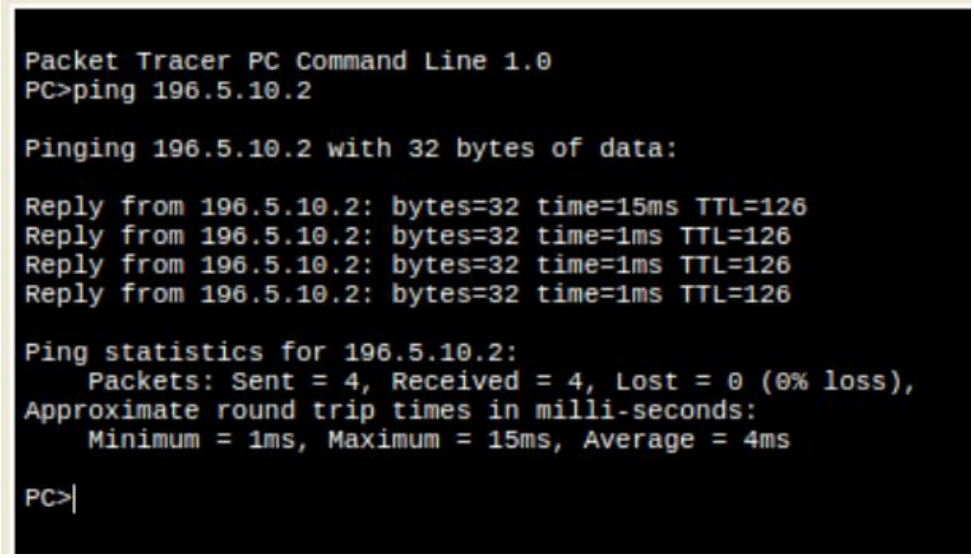
Задаем статычныя маршруты на роўтарах:

```
routerM1(config)#
routerM1(config)#ip route 0.0.0.0 0.0.0.0 196.5.11.2
routerM1(config)#ip route 196.5.12.0 255.255.255.0 196.5.11.2
routerM1(config)#show ip route
                ^
% Invalid input detected at '^' marker.

routerM1(config)#exit
routerM1#
%SYS-5-CONFIG_I: Configured from console by console

routerM1#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is 196.5.11.2 to network 0.0.0.0

C    196.5.10.0/24 is directly connected, FastEthernet0/0
C    196.5.11.0/24 is directly connected, Serial0/0
S    196.5.12.0/24 [1/0] via 196.5.11.2
S*   0.0.0.0/0 [1/0] via 196.5.11.2
routerM1#
```

Правяраем дасягальнасць двух кампутараў з розных сетак:

```
PC>
PC>ping 196.5.12.2

Pinging 196.5.12.2 with 32 bytes of data:

Reply from 196.5.12.2: bytes=32 time=12ms TTL=126
Reply from 196.5.12.2: bytes=32 time=1ms TTL=126
Reply from 196.5.12.2: bytes=32 time=1ms TTL=126
Reply from 196.5.12.2: bytes=32 time=1ms TTL=126

Ping statistics for 196.5.12.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 12ms, Average = 3ms

PC>
```

Ура!


Packet Tracer PC Command Line 1.0
PC>ping 196.5.10.2
Pinging 196.5.10.2 with 32 bytes of data:
Reply from 196.5.10.2: bytes=32 time=15ms TTL=126
Reply from 196.5.10.2: bytes=32 time=1ms TTL=126
Reply from 196.5.10.2: bytes=32 time=1ms TTL=126
Reply from 196.5.10.2: bytes=32 time=1ms TTL=126
Ping statistics for 196.5.10.2:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 1ms, Maximum = 15ms, Average = 4ms
PC>