

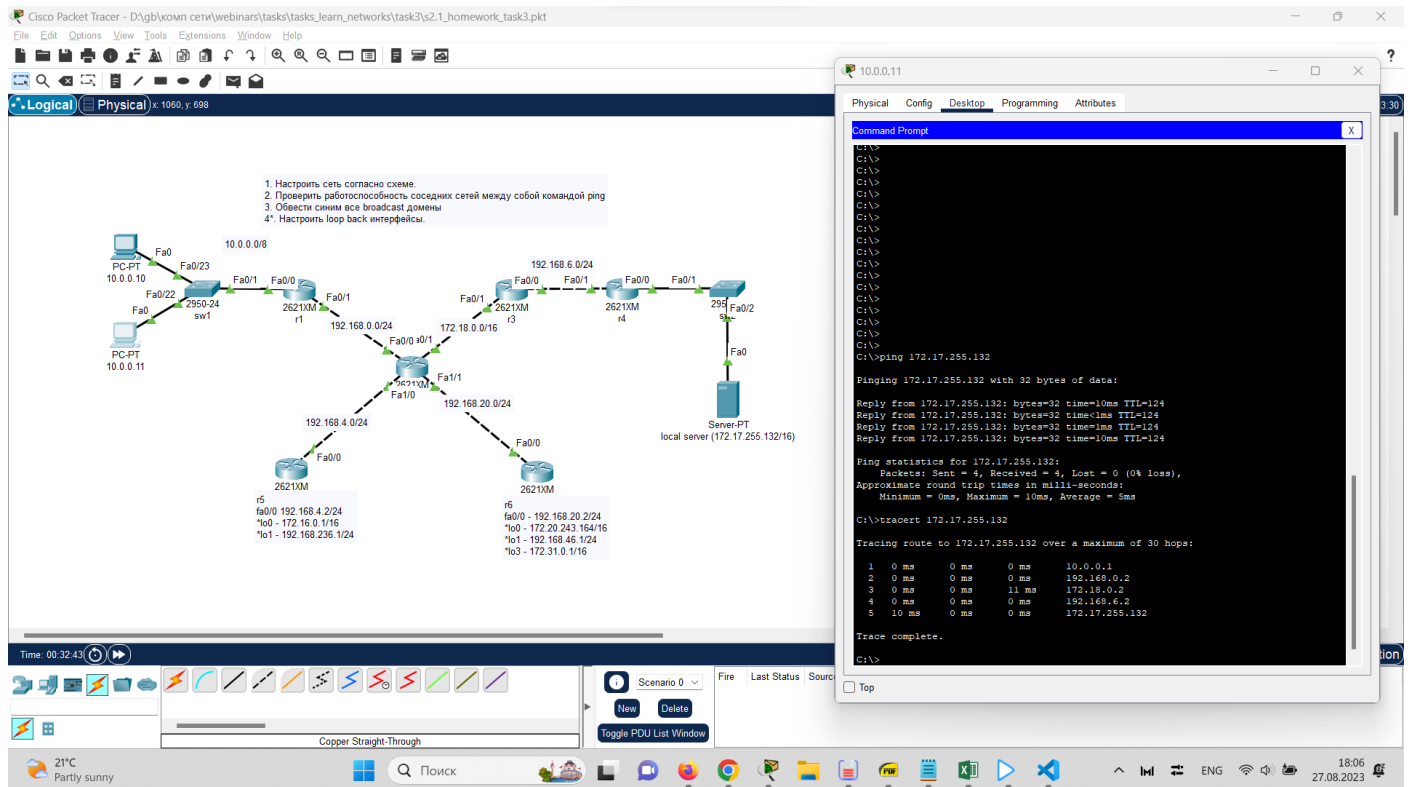
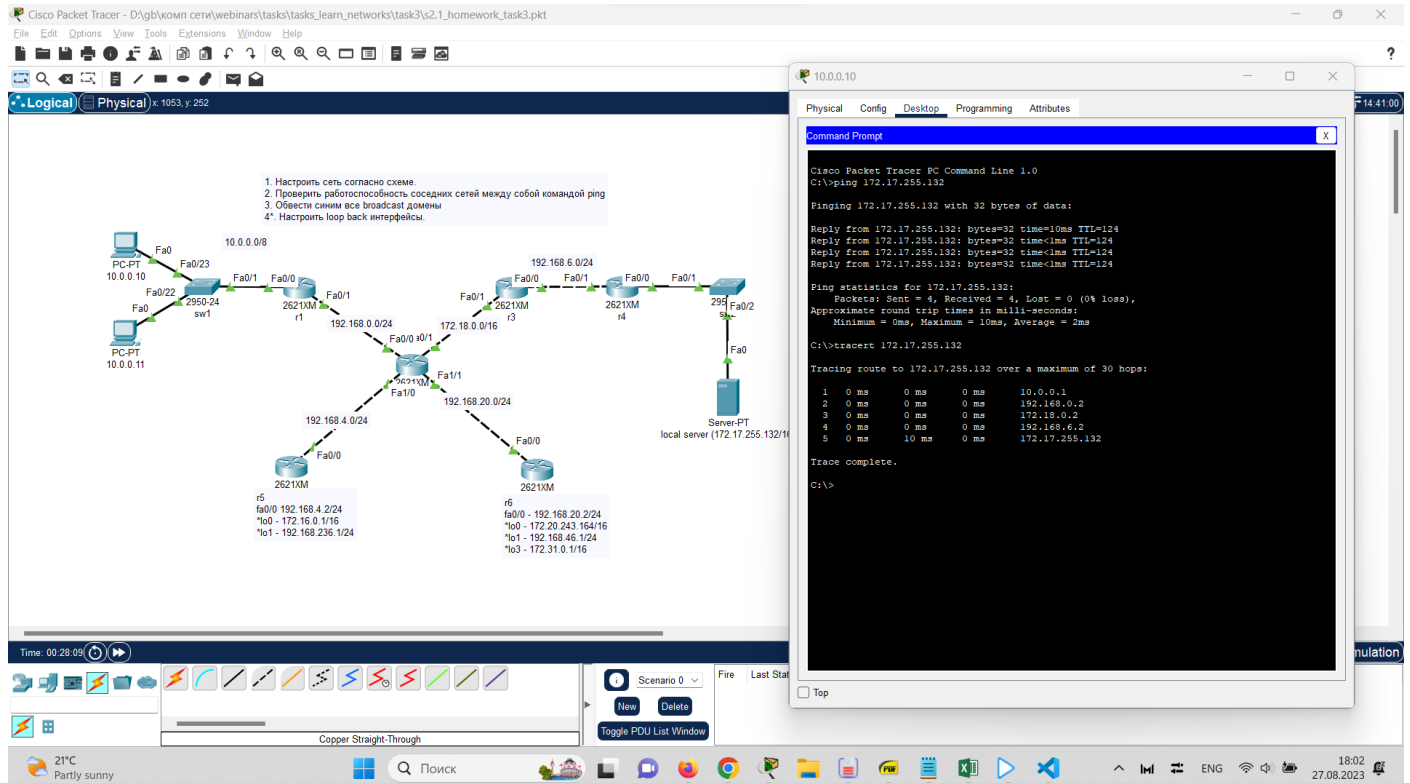
## Урок 3. Технология Ethernet. Протокол IP.

Условие:

### 1. Усложняем сеть из предыдущего домашнего задания

Используя только статическую маршрутизацию связать сеть компов и сервера

2. Проверить работоспособность сети командой ping с компов до сервера и обратно



Cisco Packet Tracer - D:\gb\комн\сер\webinars\tasks\learn\_networks\task3\s2.1\_homework\_task3.pkt
File Edit Options View Tools Extensions Window Help
Logical Physical x 946, y 692
1. Настроить сеть согласно схеме.  
2. Проверить работоспособность соседних сетей между собой командой ping  
3. Обвести синими все broadcast домены  
4. Настроить loop back интерфейсы.

Time: 00:35:01
Scenario 0
Fire
La
Copper Straight-Through
Toggle PDU List Window
local server (172.17.255.132/16)
Physical Config Services Desktop Programming Attributes
Command Prompt
C:\>  
C:\>  
C:\>ping 10.0.0.10  
Pinging 10.0.0.10 with 32 bytes of data:  
Reply from 10.0.0.10: bytes=32 time=1ms TTL=124  
Reply from 10.0.0.10: bytes=32 time=1ms TTL=124  
Reply from 10.0.0.10: bytes=32 time=10ms TTL=124  
Reply from 10.0.0.10: bytes=32 time=10ms TTL=124  
Ping statistics for 10.0.0.10:  
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  
Approximate round trip times in milli-seconds:  
Minimum = 0ms, Maximum = 10ms, Average = 5ms  
C:\>tracert 10.0.0.10  
Tracing route to 10.0.0.10 over a maximum of 30 hops:  
0 0 ms 0 ms 0 ms 172.17.0.1  
1 1 ms 0 ms 0 ms 192.168.6.1  
2 1 ms 0 ms 0 ms 172.18.0.1  
3 0 ms 0 ms 0 ms 172.18.0.1  
4 0 ms 0 ms 0 ms 192.168.0.1  
5 0 ms 0 ms 0 ms 10.0.0.10  
Trace complete.  
C:\>tracert 10.0.0.11  
Tracing route to 10.0.0.11 over a maximum of 30 hops:  
0 0 ms 0 ms 0 ms 172.17.0.1  
1 0 ms 0 ms 0 ms 192.168.6.1  
2 0 ms 0 ms 0 ms 172.18.0.1  
3 0 ms 0 ms 0 ms 172.18.0.1  
4 0 ms 0 ms 0 ms 192.168.0.1  
5 10 ms 10 ms 0 ms 10.0.0.11  
Trace complete.  
C:\>tracert 10.0.0.11  
Tracing route to 10.0.0.11 over a maximum of 30 hops:  
0 1 ms 0 ms 0 ms 172.17.0.1  
1 11 ms 0 ms 0 ms 192.168.6.1  
2 0 ms 0 ms 0 ms 172.18.0.1  
3 0 ms 0 ms 0 ms 172.18.0.1  
4 0 ms 0 ms 0 ms 192.168.0.1  
5 10 ms 0 ms 1 ms 10.0.0.11  
Trace complete.  
C:\>  
Top
21°C Partly sunny
Поиск
18:09 27.08.2023

## 2.1. \* Попробовать настроить статистику так, чтобы пинговались все интерфейсы отовсюду.

Cisco Packet Tracer - D:\gb\комн\сер\webinars\tasks\learn\_networks\task3\s2.1\_homework\_task3.pkt
File Edit Options View Tools Extensions Window Help
Logical Physical x 692, y 700
1. Настроить сеть согласно схеме.  
2. Проверить работоспособность соседних сетей между собой командой ping  
3. Обвести синими все broadcast домены  
4. Настроить loop back интерфейсы.

Time: 03:37:55
Scenario 0
Fire
Last Status Source Destinat
Copper Straight-Through
Toggle PDU List Window
local server (172.17.255.132/16)
Physical Config Desktop Programming Attributes
Command Prompt
C:\>  
C:\>  
C:\>  
C:\>  
C:\>  
C:\>  
C:\>  
C:\>  
C:\>tracert 192.168.0.2  
Tracing route to 192.168.0.2 over a maximum of 30 hops:  
0 0 ms 0 ms 0 ms 10.0.0.1  
1 0 ms 0 ms 0 ms 192.168.0.2  
Trace complete.  
C:\>tracert 172.18.0.2  
Tracing route to 172.18.0.2 over a maximum of 30 hops:  
0 0 ms 0 ms 0 ms 10.0.0.1  
1 0 ms 0 ms 0 ms 192.168.0.2  
2 0 ms 0 ms 0 ms 172.18.0.2  
Trace complete.  
C:\>tracert 192.168.6.2  
Tracing route to 192.168.6.2 over a maximum of 30 hops:  
0 0 ms 0 ms 0 ms 10.0.0.1  
1 0 ms 0 ms 0 ms 192.168.0.2  
2 0 ms 0 ms 0 ms 172.18.0.2  
3 0 ms 0 ms 0 ms 192.168.6.2  
Trace complete.  
C:\>tracert 172.17.255.132  
Tracing route to 172.17.255.132 over a maximum of 30 hops:  
0 0 ms 0 ms 0 ms 10.0.0.1  
1 0 ms 0 ms 0 ms 192.168.0.2  
2 0 ms 0 ms 0 ms 172.18.0.2  
3 0 ms 0 ms 0 ms 192.168.6.2  
4 0 ms 0 ms 0 ms 172.17.255.132  
5 22 ms 0 ms 10 ms 172.17.255.132  
Trace complete.  
C:\>  
Top
21°C Partly sunny
Поиск
5:50 28.08.2023

## 3. Изучить получившиеся таблицы маршрутизации

Cisco Packet Tracer - D:\gb\комн\сери\webinars\tasks\tasks\_learn\_networks\task3\с2.1\_homework\_task3.pkt

File Edit Options View Tools Extensions Window Help

Logical Physical x 624, y 115

1. Настроить сеть согласно схеме.  
2. Проверить работоспособность соседних сетей между собой командой ping  
3. Обвести синим все broadcast домены  
4. Настроить loop back интерфейсы.

Time: 03:21:13

Scenario 0

Toggle PDU List Window

21°C Partly sunny

5:32 28.08.2023

IOS Command Line Interface

Router>enable  
Router#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 not set

C 10.0.0.0/8 is directly connected, FastEthernet0/0  
S 172.17.0.0/16 [1/0] via 192.168.0.2  
S 172.18.0.0/16 [1/0] via 192.168.0.2  
C 192.168.0.0/24 is directly connected, FastEthernet0/1  
S 192.168.4.0/24 [1/0] via 192.168.0.2  
S 192.168.6.0/24 [1/0] via 192.168.0.2  
S 192.168.20.0/24 [1/0] via 192.168.0.2

Router#

Cisco Packet Tracer - D:\gb\комн\сери\webinars\tasks\tasks\_learn\_networks\task3\с2.1\_homework\_task3.pkt

File Edit Options View Tools Extensions Window Help

Logical Physical x 793, y 701

1. Настроить сеть согласно схеме.  
2. Проверить работоспособность соседних сетей между собой командой ping  
3. Обвести синим все broadcast домены  
4. Настроить loop back интерфейсы.

Time: 03:22:19

Scenario 0

Toggle PDU List Window

21°C Partly sunny

5:33 28.08.2023

IOS Command Line Interface

Router>enable  
Router#configure terminal  
Enter configuration commands, one per line. End with CNTL/Z.  
Router(config)#  
Router(config)#ex  
Router#  
%SYS-5-CONFIG\_I: Configured from console by console

Router#ping 172.17.255.132

Type escape sequence to abort.  
Sending 5, 100-byte ICMP Echos to 172.17.255.132, timeout is 2 seconds:  
!!!!!!  
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/0/1 ms

Router#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 not set

S 10.0.0.0/8 [1/0] via 192.168.0.1  
S 172.17.0.0/16 [1/0] via 172.18.0.2  
C 172.18.0.0/16 is directly connected, FastEthernet0/1  
C 192.168.0.0/24 is directly connected, FastEthernet0/0  
S 192.168.4.0/24 [1/0] via 172.18.0.2  
C 192.168.6.0/24 [1/0] via 172.18.0.2  
C 192.168.20.0/24 is directly connected, FastEthernet1/1

Router#

Cisco Packet Tracer - D:\gb\комн\сери\webinars\tasks\tasks\_learn\_networks\task3\с2.1\_homework\_task3.pkt

File Edit Options View Tools Extensions Window Help

Logical Physical x 671, y 244

1. Настроить сеть согласно схеме.  
2. Проверить работоспособность соседних сетей между собой командой ping.  
3. Обвести синим все broadcast домены.  
4. Настроить loop back интерфейсы.

Time: 03:23:18

Scenario 0

Toggle PDU List Window

21°C Partly sunny

ИОС Command Line Interface

```
Router>en
Router#ping 172.17.255.132

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.17.255.132, timeout is 2 seconds:
!!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/0/1 ms

Router#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 not set

S    10.0.0.0/8 [1/0] via 172.18.0.1
S    172.17.0.0/16 [1/0] via 192.168.6.2
C    172.18.0.0/16 is directly connected, FastEthernet0/1
S    192.168.0.0/24 [1/0] via 172.18.0.1
S    192.168.4.0/24 [1/0] via 172.18.0.1
C    192.168.6.0/24 is directly connected, FastEthernet0/0
S    192.168.20.0/24 [1/0] via 172.18.0.1

Router#
```

Cisco Packet Tracer - D:\gb\комн\сери\webinars\tasks\tasks\_learn\_networks\task3\с2.1\_homework\_task3.pkt

File Edit Options View Tools Extensions Window Help

Logical Physical x 1082, y 700

1. Настроить сеть согласно схеме.  
2. Проверить работоспособность соседних сетей между собой командой ping.  
3. Обвести синим все broadcast домены.  
4. Настроить loop back интерфейсы.

Time: 03:24:20

Scenario 0

Toggle PDU List Window

21°C Partly sunny

ИОС Command Line Interface

```
Router com0 is now available

Press RETURN to get started.

Router>en
Router#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 not set

S    10.0.0.0/8 [1/0] via 192.168.6.1
C    172.17.0.0/16 is directly connected, FastEthernet0/0
S    172.18.0.0/16 [1/0] via 192.168.6.1
S    192.168.0.0/24 [1/0] via 192.168.6.1
S    192.168.4.0/24 [1/0] via 192.168.6.1
C    192.168.6.0/24 is directly connected, FastEthernet0/1
S    192.168.20.0/24 [1/0] via 192.168.6.1

Router#
```

Cisco Packet Tracer - D:\gb\комн\сери\webinars\tasks\tasks\_learn\_networks\task3\с2.1\_homework\_task3.pkt

File Edit Options View Tools Extensions Window Help

Logical Physical x 244, y 700

1. Настроить сеть согласно схеме.  
2. Проверить работоспособность соседних сетей между собой командой ping.  
3. Обвести синим все broadcast домены.  
4. Настроить loop back интерфейсы.

Time: 03:25:25

Scenario 0

Toggle PDU List Window

21°C Partly sunny

IOS Command Line Interface

Router con0 is now available

Press RETURN to get started.

```

Router>en
Router#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 not set

S    10.0.0.0/8 [1/0] via 192.168.4.1
S    172.17.0.0/16 [1/0] via 192.168.4.1
S    172.18.0.0/16 [1/0] via 192.168.4.1
S    192.168.0.0/24 [1/0] via 192.168.4.1
C    192.168.4.0/24 is directly connected, FastEthernet0/0
S    192.168.6.0/24 [1/0] via 192.168.4.1
S    192.168.20.0/24 [1/0] via 192.168.4.1
Router#

```

Copy Paste

Cisco Packet Tracer - D:\gb\комн\сери\webinars\tasks\tasks\_learn\_networks\task3\с2.1\_homework\_task3.pkt

File Edit Options View Tools Extensions Window Help

Logical Physical x 36, y 693

1. Настроить сеть согласно схеме.  
2. Проверить работоспособность соседних сетей между собой командой ping.  
3. Обвести синим все broadcast домены.  
4. Настроить loop back интерфейсы.

Time: 03:26:41

Scenario 0

Toggle PDU List Window

21°C Partly sunny

IOS Command Line Interface

Router con0 is now available

Press RETURN to get started.

```

Router>en
Router#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 not set

S    10.0.0.0/8 [1/0] via 192.168.20.1
S    172.17.0.0/16 [1/0] via 192.168.20.1
S    172.18.0.0/16 [1/0] via 192.168.20.1
S    192.168.0.0/24 [1/0] via 192.168.20.1
S    192.168.4.0/24 [1/0] via 192.168.20.1
S    192.168.6.0/24 [1/0] via 192.168.20.1
C    192.168.20.0/24 is directly connected, FastEthernet0/0
Router#

```

Copy Paste

4. Попрактиковаться в использовании команды tracer

Cisco Packet Tracer - D:\gb\комн\сери\webinars\tasks\tasks\_learn\_networks\task3\2.1\_homework\_task3.pkt

File Edit Options View Tools Extensions Window Help

Logical Physical x 1138, y 43

1. Настроить сеть согласно схеме.  
2. Проверить работоспособность соседних сетей между собой командой ring  
3. Обвести синим все broadcast домены  
4. Настроить loop back интерфейсы.

10.0.0.0/8

PC-PT 10.0.0.10

PC-PT 10.0.0.11

2950-24 sw1

2621XM r1

192.168.0.0/24

192.168.6.0/24

2621XM r4

172.18.0.0/16

2621XM r5

192.168.4.0/24

192.168.20.0/24

2621XM r6

192.168.20.0/24

172.17.255.132

Server-PT

local server (172.17.255.132)

Time: 03:31:11

Scenario 0

Toggle PDU List Window

21°C Partly sunny

10.0.0.11

Physical Config Desktop Programming Attributes

Command Prompt

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

C:\>ping 192.168.4.2

Pinging 192.168.4.2 with 32 bytes of data:

Request timed out.
Reply from 192.168.4.2: bytes=32 time=1ms TTL=253
Reply from 192.168.4.2: bytes=32 time=1ms TTL=253
Reply from 192.168.4.2: bytes=32 time=1ms TTL=253

Ping statistics for 192.168.4.2:
Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.4.2

Pinging 192.168.4.2 with 32 bytes of data:

Reply from 192.168.4.2: bytes=32 time=1ms TTL=253
Reply from 192.168.4.2: bytes=32 time=1ms TTL=253
Reply from 192.168.4.2: bytes=32 time=1ms TTL=253
Reply from 192.168.4.2: bytes=32 time=1ms TTL=253

Ping statistics for 192.168.4.2:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>tracert 172.17.255.132

Tracing route to 172.17.255.132 over a maximum of 30 hops:
  0  0 ms    10 ms   0 ms    10.0.0.1
  1  0 ms    0 ms    0 ms    192.168.0.2
  2  1 ms    0 ms    0 ms    172.18.0.2
  3  0 ms    1 ms    0 ms    192.168.6.2
  4  0 ms    10 ms   10 ms   172.17.255.132
  5  10 ms   10 ms   10 ms   172.17.255.132

Trace complete.

C:\>
```

## 6.\* Настроить loop back интерфейсы, статику до них и они тоже должны пинговаться

- lo0 - 172.16.0.1/16
- lo1 - 192.168.236.1/24

Cisco Packet Tracer - D:\gb\комн\сери\webinars\tasks\tasks\_learn\_networks\task3\2.1\_homework\_task3.pkt

File Edit Options View Tools Extensions Window Help

Logical Physical x 367, y 701

1. Настроить сеть согласно схеме.  
2. Проверить работоспособность соседних сетей между собой командой ring  
3. Обвести синим все broadcast домены  
4. Настроить loop back интерфейсы.

10.0.0.0/8

2950-24 sw1

2621XM r1

192.168.0.0/24

172.18.0.0/16

2621XM r4

2621XM r5

192.168.4.0/24

192.168.20.0/24

2621XM r6

192.168.20.0/24

172.17.255.132/16

Server-PT

local server (172.17.255.132/16)

Time: 11:50:58

Scenario 0

Toggle PDU List Window

21°C Partly sunny

Physical Config CLI Attributes

IOS Command Line Interface

Press RETURN to get started.

```
Router>en
Router#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, N - 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 not set

S    10.0.0.0/8 [1/0] via 192.168.4.1
S    172.16.0.0/16 [1/0] is directly connected, Loopback0
S    172.17.0.0/16 [1/0] via 192.168.4.1
S    172.18.0.0/16 [1/0] via 192.168.4.1
S    172.20.0.0/16 [1/0] via 192.168.4.1
S    192.168.0.0/24 [1/0] via 192.168.4.1
C    192.168.4.0/24 [1/0] is directly connected, FastEthernet0/0
S    192.168.6.0/24 [1/0] via 192.168.4.1
S    192.168.20.0/24 [1/0] via 192.168.4.1
S    192.168.46.0/24 [1/0] via 192.168.4.1
C    192.168.236.0/24 [1/0] is directly connected, Loopback1

Router#
```

- lo0 - 172.20.243.164/16
- lo1 - 192.168.46.1/24
- lo3 - 172.31.0.1/16



Cisco Packet Tracer - D:\gb\комн\сери\webinars\tasks\learn\_networks\task3\vs2.1\_homework\_task3.pkt

File Edit Options View Tools Extensions Window Help

Logical Physical x 1208, y 416

1. Настроить сеть согласно схеме.  
2. Проверить работоспособность соседних сетей между собой командой ping  
3. Обвести синим все broadcast домены  
4. Настроить loop back интерфейсы.

Time: 11:52:09

Scenario 0

Toggle PDU List Window

21°C Partly sunny

17:09 28.08.2023

IOS Command Line Interface

```

Router>en
Router>ping 172.17.255.132

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.17.255.132, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/0/0 ms

Router>show ip route

Codes: C - connected, S - static, I - IGMP, 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 not set

S 10.0.0.0/8 [1/0] via 192.168.20.1
S 172.16.0.0/16 [1/0] via 192.168.20.1
S 172.17.0.0/16 [1/0] via 192.168.20.1
S 172.18.0.0/16 [1/0] via 192.168.20.1
C 172.20.0.0/16 is directly connected, Loopback0
C 172.31.0.0/16 is directly connected, Loopback3
S 192.168.0.0/24 [1/0] via 192.168.20.1
S 192.168.4.0/24 [1/0] via 192.168.20.1
S 192.168.6.0/24 [1/0] via 192.168.20.1
C 192.168.20.0/24 is directly connected, FastEthernet0/0
C 192.168.46.0/24 is directly connected, Loopback1
S 192.168.236.0/24 [1/0] via 192.168.20.1
--More--
  
```

- ping loop back интерфейсов

Cisco Packet Tracer - D:\gb\комн\сери\webinars\tasks\learn\_networks\task3\vs2.1\_homework\_task3.pkt

File Edit Options View Tools Extensions Window Help

Logical Physical x 428, y 727

1. Настроить сеть согласно схеме.  
2. Проверить работоспособность соседних сетей между собой командой ping  
3. Обвести синим все broadcast домены  
4. Настроить loop back интерфейсы.

Time: 12:04:00

Scenario 0

Toggle PDU List Window

21°C Partly sunny

17:21 28.08.2023

Command Prompt

```

C:\>ping 172.16.0.1
Reply from 172.16.0.1: bytes=32 time=1ms TTL=253
Reply from 172.16.0.1: bytes=32 time=1ms TTL=253
Reply from 172.16.0.1: bytes=32 time=1ms TTL=253

Ping statistics for 172.16.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>ping 192.168.236.1
Pinging 192.168.236.1 with 32 bytes of data:
Reply from 192.168.236.1: bytes=32 time=1ms TTL=253
Reply from 192.168.236.1: bytes=32 time=1ms TTL=253
Reply from 192.168.236.1: bytes=32 time=1ms TTL=253
Reply from 192.168.236.1: bytes=32 time=1ms TTL=253

Ping statistics for 192.168.236.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 172.20.243.164
Pinging 172.20.243.164 with 32 bytes of data:
Reply from 172.20.243.164: bytes=32 time=1ms TTL=253
Reply from 172.20.243.164: bytes=32 time=1ms TTL=253
Reply from 172.20.243.164: bytes=32 time=1ms TTL=253
Reply from 172.20.243.164: bytes=32 time=1ms TTL=253

Ping statistics for 172.20.243.164:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 2ms, Average = 0ms

C:\>ping 192.168.46.1
Pinging 192.168.46.1 with 32 bytes of data:
Reply from 192.168.46.1: bytes=32 time=1ms TTL=253
Reply from 192.168.46.1: bytes=32 time=1ms TTL=253
Reply from 192.168.46.1: bytes=32 time=1ms TTL=253
Reply from 192.168.46.1: bytes=32 time=1ms TTL=253

Ping statistics for 192.168.46.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>ping 172.31.0.1
Pinging 172.31.0.1 with 32 bytes of data:
Reply from 172.31.0.1: bytes=32 time=1ms TTL=253
Reply from 172.31.0.1: bytes=32 time=1ms TTL=253
Reply from 172.31.0.1: bytes=32 time=1ms TTL=253
Reply from 172.31.0.1: bytes=32 time=1ms TTL=253
  
```

Cisco Packet Tracer - D:\gb\комн\сери\webinars\tasks\tasks\_learn\_networks\task3\v2.1\_homework\_task3.pkt

File Edit Options View Tools Extensions Window Help

Logical Physical x 132, y 738

1. Настроить сеть согласно схеме.  
2. Проверить работоспособность соседних сетей между собой командой ping  
3. Обесити снимим все broadcast домены  
4. Настроить loop back интерфейсы.

Time: 12:06:46

Scenario 0

21°C Partly sunny

10.0.0.11

Physical Config Desktop Programming Attributes

Command Prompt

```

Reply from 172.16.0.1: bytes=32 time=1ms TTL=253
Reply from 172.16.0.1: bytes=32 time=1ms TTL=253

Ping statistics for 172.16.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.236.1

Pinging 192.168.236.1 with 32 bytes of data:

Reply from 192.168.236.1: bytes=32 time=1ms TTL=253
Reply from 192.168.236.1: bytes=32 time=1ms TTL=253
Reply from 192.168.236.1: bytes=32 time=1ms TTL=253
Reply from 192.168.236.1: bytes=32 time=1ms TTL=253

Ping statistics for 192.168.236.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 172.20.243.164

Pinging 172.20.243.164 with 32 bytes of data:

Reply from 172.20.243.164: bytes=32 time=1ms TTL=253
Reply from 172.20.243.164: bytes=32 time=1ms TTL=253
Reply from 172.20.243.164: bytes=32 time=1ms TTL=253
Reply from 172.20.243.164: bytes=32 time=1ms TTL=253

Ping statistics for 172.20.243.164:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.46.1

Pinging 192.168.46.1 with 32 bytes of data:

Reply from 192.168.46.1: bytes=32 time=1ms TTL=253
Reply from 192.168.46.1: bytes=32 time=1ms TTL=253
Reply from 192.168.46.1: bytes=32 time=1ms TTL=253
Reply from 192.168.46.1: bytes=32 time=1ms TTL=253

Ping statistics for 192.168.46.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 3ms, Average = 7ms

C:\>ping 172.31.0.1

Pinging 172.31.0.1 with 32 bytes of data:

Reply from 172.31.0.1: bytes=32 time=1ms TTL=253
Reply from 172.31.0.1: bytes=32 time=1ms TTL=253

```

21:10:00

ulation

Cisco Packet Tracer - D:\gb\комн\сери\webinars\tasks\tasks\_learn\_networks\task3\v2.1\_homework\_task3.pkt

File Edit Options View Tools Extensions Window Help

Logical Physical x 99, y 559

1. Настроить сеть согласно схеме.  
2. Проверить работоспособность соседних сетей между собой командой ping  
3. Обесити снимим все broadcast домены  
4. Настроить loop back интерфейсы.

Time: 12:09:15

Scenario 0

21°C Partly sunny

local server (172.17.255.132/16)

Physical Config Services Desktop Programming Attributes

Command Prompt

```

Reply from 172.16.0.1: bytes=32 time=1ms TTL=252
Reply from 172.16.0.1: bytes=32 time=1ms TTL=252

Ping statistics for 172.16.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 27ms, Average = 7ms

C:\>ping 192.168.236.1

Pinging 192.168.236.1 with 32 bytes of data:

Reply from 192.168.236.1: bytes=32 time=1ms TTL=252
Reply from 192.168.236.1: bytes=32 time=1ms TTL=252
Reply from 192.168.236.1: bytes=32 time=1ms TTL=252
Reply from 192.168.236.1: bytes=32 time=1ms TTL=252

Ping statistics for 192.168.236.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 13ms, Average = 3ms

C:\>ping 172.20.243.164

Pinging 172.20.243.164 with 32 bytes of data:

Reply from 172.20.243.164: bytes=32 time=1ms TTL=252
Reply from 172.20.243.164: bytes=32 time=1ms TTL=252
Reply from 172.20.243.164: bytes=32 time=1ms TTL=252
Reply from 172.20.243.164: bytes=32 time=1ms TTL=252

Ping statistics for 172.20.243.164:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 25ms, Average = 6ms

C:\>ping 192.168.46.1

Pinging 192.168.46.1 with 32 bytes of data:

Reply from 192.168.46.1: bytes=32 time=1ms TTL=252
Reply from 192.168.46.1: bytes=32 time=1ms TTL=252
Reply from 192.168.46.1: bytes=32 time=1ms TTL=252
Reply from 192.168.46.1: bytes=32 time=1ms TTL=252

Ping statistics for 192.168.46.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 172.31.0.1

Pinging 172.31.0.1 with 32 bytes of data:

Reply from 172.31.0.1: bytes=32 time=1ms TTL=252
Reply from 172.31.0.1: bytes=32 time=1ms TTL=252
Reply from 172.31.0.1: bytes=32 time=1ms TTL=252
Reply from 172.31.0.1: bytes=32 time=1ms TTL=252

```

22:27:30

mulation

- получившиеся таблицы маршрутизации



Cisco Packet Tracer - D:\gb\комн\сери\webinars\tasks\tasks\_learn\_networks\task3\с2.1\_homework\_task3.pkt

File Edit Options View Tools Extensions Window Help

Logical Physical x 734, y 694

1. Настроить сеть согласно схеме.  
2. Проверить работоспособность соседних сетей между собой командой ping  
3. Обвести синим все broadcast домены  
4. Настроить loop back интерфейсы.

Time: 12:12:38

Scenario 0

Toggle PDU List Window

21°C Partly sunny

17:30 28.08.2023

r1

Physical Config CLI Attributes

IOS Command Line Interface

Press RETURN to get started.

```
Router>en
Router#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 not set

C    10.0.0.0/8 is directly connected, FastEthernet0/0
S    172.16.0.0/16 [1/0] via 192.168.0.2
S    172.17.0.0/16 [1/0] via 192.168.0.2
S    172.18.0.0/16 [1/0] via 192.168.0.2
S    172.20.0.0/16 [1/0] via 192.168.0.2
S    172.31.0.0/16 [1/0] via 192.168.0.2
C    192.168.0.0/24 is directly connected, FastEthernet0/1
S    192.168.4.0/24 [1/0] via 192.168.0.2
S    192.168.6.0/24 [1/0] via 192.168.0.2
S    192.168.20.0/24 [1/0] via 192.168.0.2
S    192.168.46.0/24 [1/0] via 192.168.0.2
S    192.168.236.0/24 [1/0] via 192.168.0.2

Router#
```

Cisco Packet Tracer - D:\gb\комн\сери\webinars\tasks\tasks\_learn\_networks\task3\с2.1\_homework\_task3.pkt

File Edit Options View Tools Extensions Window Help

Logical Physical x 399, y 701

1. Настроить сеть согласно схеме.  
2. Проверить работоспособность соседних сетей между собой командой ping  
3. Обвести синим все broadcast домены  
4. Настроить loop back интерфейсы.

Time: 12:13:59

Scenario 0

Toggle PDU List Window

21°C Partly sunny

17:32 28.08.2023

r2

Physical Config CLI Attributes

IOS Command Line Interface

Press RETURN to get started.

```
Router>en
Router#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 not set

S    10.0.0.0/8 [1/0] via 192.168.0.1
S    172.16.0.0/16 [1/0] via 192.168.4.2
S    172.17.0.0/16 [1/0] via 172.18.0.2
C    172.18.0.0/16 is directly connected, FastEthernet0/1
S    172.20.0.0/16 [1/0] via 192.168.20.2
S    172.31.0.0/16 [1/0] via 192.168.20.2
C    192.168.0.0/24 is directly connected, FastEthernet0/0
C    192.168.4.0/24 is directly connected, FastEthernet0/0
S    192.168.6.0/24 [1/0] via 172.18.0.2
S    192.168.20.0/24 is directly connected, FastEthernet1/1
C    192.168.46.0/24 [1/0] via 192.168.20.2
S    192.168.236.0/24 [1/0] via 192.168.4.2

Router#
```

Cisco Packet Tracer - D:\gb\комн\сери\webinars\tasks\tasks\_learn\_networks\task3\с2.1\_homework\_task3.pkt

File Edit Options View Tools Extensions Window Help

Logical Physical x 285, y 694

1. Настроить сеть согласно схеме.  
2. Проверить работоспособность соседних сетей между собой командой ping  
3. Обвести синим все broadcast домены  
4. Настроить loop back интерфейсы.

Time: 12:14:47

Scenario 0

Toggle PDU List Window

21°C Partly sunny

Поиск

IOS Command Line Interface

Press RETURN to get started.

```
Router>en
Router#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, I1 - IS-IS level-1, I2 - 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 not set

S    10.0.0.0/8 [1/0] via 172.18.0.1
S    172.16.0.0/16 [1/0] via 172.18.0.1
S    172.17.0.0/16 [1/0] via 192.168.6.2
C    172.18.0.0/16 is directly connected, FastEthernet0/1
S    172.20.0.0/16 [1/0] via 172.18.0.1
S    172.31.0.0/16 [1/0] via 172.18.0.1
S    192.168.0.0/24 [1/0] via 172.18.0.1
S    192.168.4.0/24 [1/0] via 172.18.0.1
C    192.168.6.0/24 is directly connected, FastEthernet0/0
S    192.168.20.0/24 [1/0] via 172.18.0.1
S    192.168.46.0/24 [1/0] via 172.18.0.1
S    192.168.236.0/24 [1/0] via 172.18.0.1

Router#
```

Cisco Packet Tracer - D:\gb\комн\сери\webinars\tasks\tasks\_learn\_networks\task3\с2.1\_homework\_task3.pkt

File Edit Options View Tools Extensions Window Help

Logical Physical x 902, y 701

1. Настроить сеть согласно схеме.  
2. Проверить работоспособность соседних сетей между собой командой ping  
3. Обвести синим все broadcast домены  
4. Настроить loop back интерфейсы.

Time: 12:15:38

Scenario 0

Toggle PDU List Window

21°C Partly sunny

Поиск

IOS Command Line Interface

Press RETURN to get started.

```
Router>en
Router#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, I1 - IS-IS level-1, I2 - 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 not set

S    10.0.0.0/8 [1/0] via 192.168.6.1
S    172.16.0.0/16 [1/0] via 192.168.6.1
C    172.17.0.0/16 is directly connected, FastEthernet0/0
S    172.18.0.0/16 [1/0] via 192.168.6.1
S    172.20.0.0/16 [1/0] via 192.168.6.1
S    172.31.0.0/16 [1/0] via 192.168.6.1
S    192.168.0.0/24 [1/0] via 192.168.6.1
S    192.168.4.0/24 [1/0] via 192.168.6.1
C    192.168.6.0/24 is directly connected, FastEthernet0/1
S    192.168.20.0/24 [1/0] via 192.168.6.1
S    192.168.46.0/24 [1/0] via 192.168.6.1
S    192.168.236.0/24 [1/0] via 192.168.6.1

Router#
```

