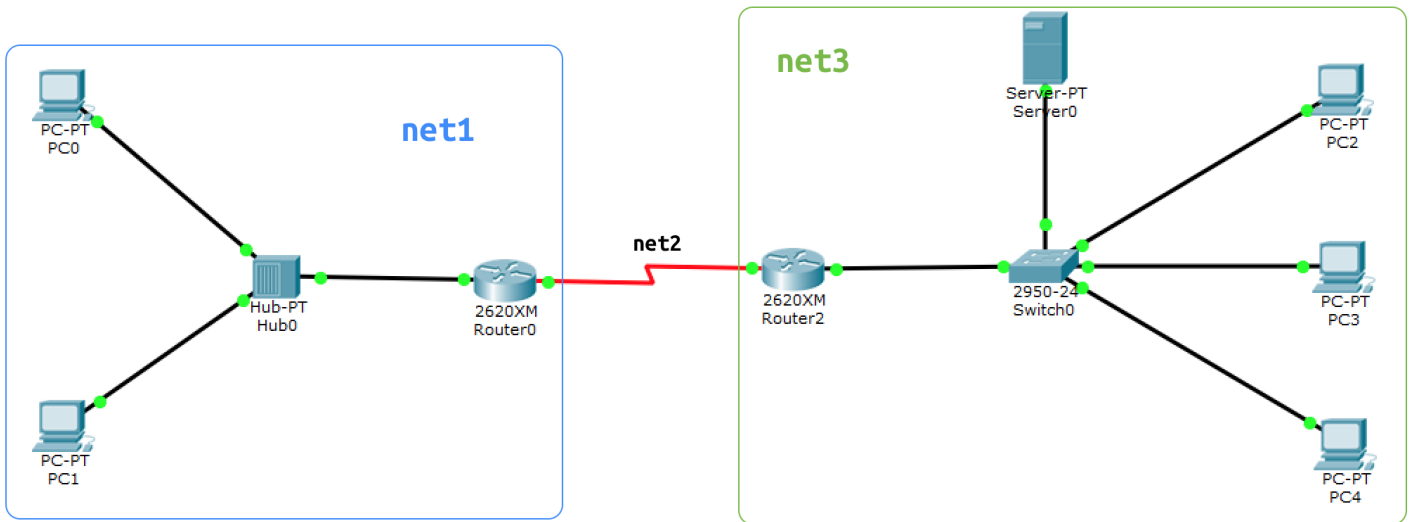


lab9

- Пажитных Иван Павлович
- 3 курс, 1 группа, MCC
- [github lab link](#)

part1



task1 - subnets:

- net1 ~ 50

name	value
ip/mask	176.141.64.128/26
ip	176.141.64.128
mask	255.255.255.192
net size	62
min addr	176.141.64.129
max addr	176.141.64.190
broadcast	176.141.64.191

- net2 ~ 2

name	value
------	-------

name	value
ip/mask	176.141.64.192/30
ip	176.141.64.192
mask	255.255.255.252
net size	2
min addr	176.141.64.193
max addr	176.141.64.194
broadcast	176.141.64.195

- net3 ~ 100

name	value
ip/mask	176.141.64.0/25
ip	176.141.64.0
mask	255.255.255.128
net size	126
min addr	176.141.64.1
max addr	176.141.64.126
broadcast	176.141.64.127

task2 - ip configs

- PC0 in net1

```
Link-local IPv6 Address.....: FE80::201:97FF:FE28:C205
IP Address.....: 176.141.64.130
Subnet Mask.....: 255.255.255.192
Default Gateway.....: 176.141.64.129
```

- PC1 in net1

```
Link-local IPv6 Address.....: FE80::203:E4FF:FE42:1323
IP Address.....: 176.141.64.131
Subnet Mask.....: 255.255.255.192
Default Gateway.....: 176.141.64.129
```

- R0 in net1

```
R0(config)#interface FastEthernet0/0
R0(config-if)#ip address 176.141.64.129 255.255.255.192
```

- R0 in net2

```
R0(config)#interface Serial0/2
R0(config-if)#ip address 176.141.64.193 255.255.255.252
```

- R1 in net2

```
R1(config)#interface Serial0/1
R1(config-if)#ip address 176.141.64.194 255.255.255.252
```

- R1 in net3

```
R1(config)#interface FastEthernet0/0
R1(config-if)#ip address 176.141.64.1 255.255.255.128
```

task3 - routes

- R0 -> net3

```
R0(config)#ip route 0.0.0.0 0.0.0.0 176.141.64.194
```

- R1 -> net1

```
R1(config)#ip route 0.0.0.0 0.0.0.0 176.141.64.193
```

task4 - dhcp setup

```
R1(config)#ip dhcp pool LAN-address
R1(dhcp-config)#network 176.141.64.0 255.255.255.128
R1(dhcp-config)#ip dhcp excluded-address 176.141.64.1 176.141.64.2
R1(dhcp-config)#ip domain name cisco.com
R1(dhcp-config)#dns-server 176.141.64.2
R1(dhcp-config)#default-router 176.141.64.1
```

```
R1(dhcp-config)#exit
R1(config)#exit
```

- `show running-config` :

```
Current configuration : 931 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname R1
!
ip dhcp excluded-address 176.141.64.1 176.141.64.2
!
ip dhcp pool LAN-address
 network 176.141.64.0 255.255.255.128
 default-router 176.141.64.1
 dns-server 176.141.64.2
!
ip domain-name cisco.com
!
interface FastEthernet0/0
 ip address 176.141.64.1 255.255.255.128
 duplex auto
 speed auto
!
interface Serial0/1
 ip address 176.141.64.194 255.255.255.252
!
```

task5 check routes

R0

- `show ip route` :

```
176.141.0.0/16 is variably subnetted, 2 subnets, 2 masks
C       176.141.64.128/26 is directly connected, FastEthernet0/0
C       176.141.64.192/30 is directly connected, Serial0/2
```

R1

- `show ip route` :

```
176.141.0.0/16 is variably subnetted, 3 subnets, 3 masks
C    176.141.64.0/25 is directly connected, FastEthernet0/0
S    176.141.64.128/26 [1/0] via 176.141.64.193
C    176.141.64.192/30 is directly connected, Serial0/1
```

task 6 **dhcp** **pc** addressing

- **PC2**

```
PC>ipconfig
```

```
FastEthernet0 Connection:(default port)
```

```
Link-local IPv6 Address.....: FE80::201:42FF:FE44:D9E0
IP Address.....: 176.141.64.4
Subnet Mask.....: 255.255.255.128
Default Gateway.....: 176.141.64.1
```

```
PC>ipconfig /release
```

```
IP Address.....: 0.0.0.0
Subnet Mask.....: 0.0.0.0
Default Gateway.....: 0.0.0.0
DNS Server.....: 0.0.0.0
```

```
PC>ipconfig /renew
```

```
IP Address.....: 176.141.64.3
Subnet Mask.....: 255.255.255.128
Default Gateway.....: 176.141.64.1
DNS Server.....: 176.141.64.2
```

task7 - check connection

net1 -> **net3** (**PC0** -> **PC2**)

- **ping 176.141.64.3**

```
Reply from 176.141.64.3: bytes=32 time=1ms TTL=126
Reply from 176.141.64.3: bytes=32 time=1ms TTL=126
Reply from 176.141.64.3: bytes=32 time=1ms TTL=126
Reply from 176.141.64.3: bytes=32 time=2ms TTL=126
```

```
Ping statistics for 176.141.64.3:
```

```
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 2ms, Average = 1ms
```

net3 -> net1 (PC2 -> PC0)

- ping 176.141.64.130

Pinging 176.141.64.130 with 32 bytes of data:

Reply from 176.141.64.130: bytes=32 time=1ms TTL=126

Reply from 176.141.64.130: bytes=32 time=1ms TTL=126

Reply from 176.141.64.130: bytes=32 time=1ms TTL=126

Reply from 176.141.64.130: bytes=32 time=1ms TTL=126

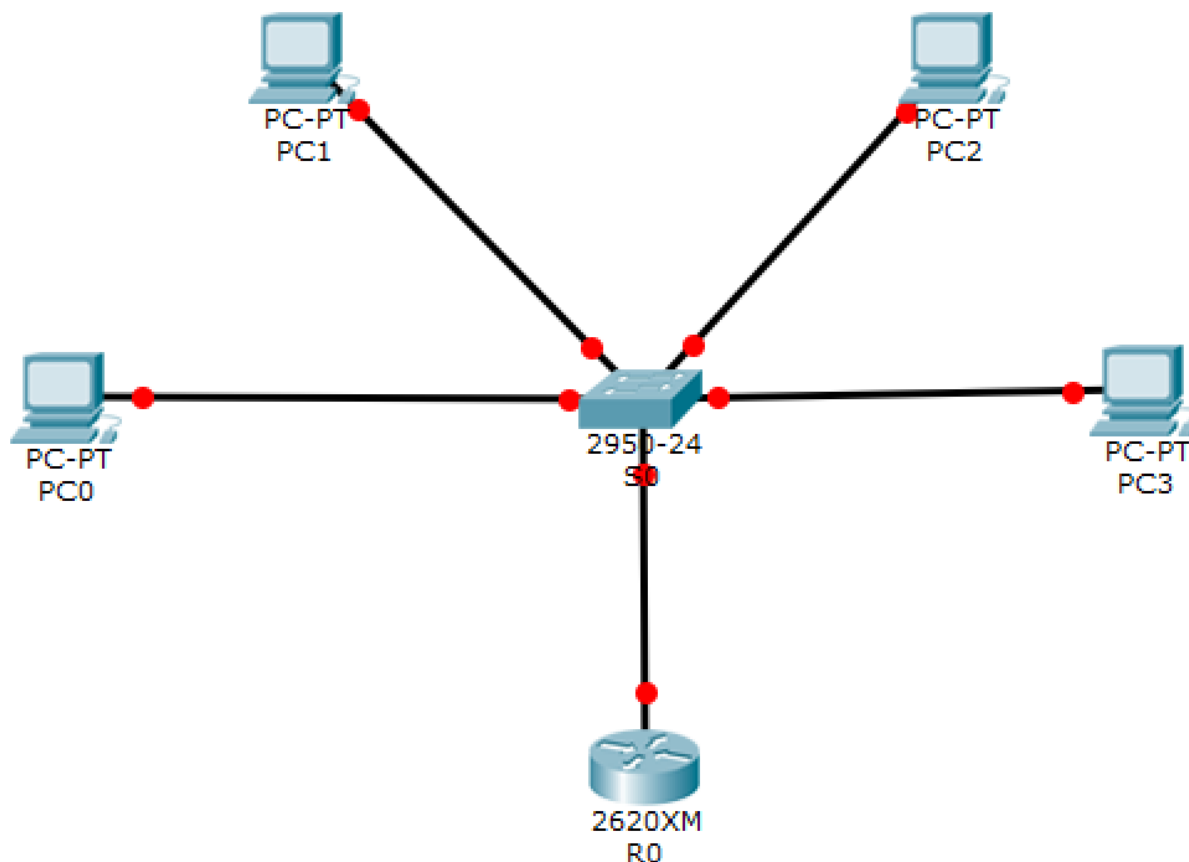
Ping statistics for 176.141.64.130:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 1ms, Maximum = 1ms, Average = 1ms

part2



task1 dhcp router config

```
R0(config)#interface FastEthernet0/0
R0(config-if)#ip address 176.141.64.1 255.255.0.0
```

```
R0(config)#ip dhcp pool pool18
R0(dhcp-config)#network 176.141.64.0 255.255.255.0
R0(dhcp-config)#dns-server 176.141.64.18
R0(dhcp-config)#default-router 176.141.64.1
R0(dhcp-config)#ip dhcp excluded-address 176.141.64.1 176.141.64.18
R0(config)#ip domain name bsu.by
R0(config)#end
```

task2 check config

- `sh run`

```
!
hostname R0
!
ip dhcp excluded-address 176.141.64.1 176.141.64.18
!
ip dhcp pool pool18
  network 176.141.64.0 255.255.255.0
  default-router 176.141.64.1
  dns-server 176.141.64.18
!
ip domain name bsu.by
!
interface FastEthernet0/0
  ip address 176.141.64.1 255.255.0.0
  duplex auto
  speed auto
!
```