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Кафедра ИИТ

Лабораторная работа №6
по дисциплине: **КСиС**
Тема: Анализ сетевого трафика и протоколов на базе WIRESHARK

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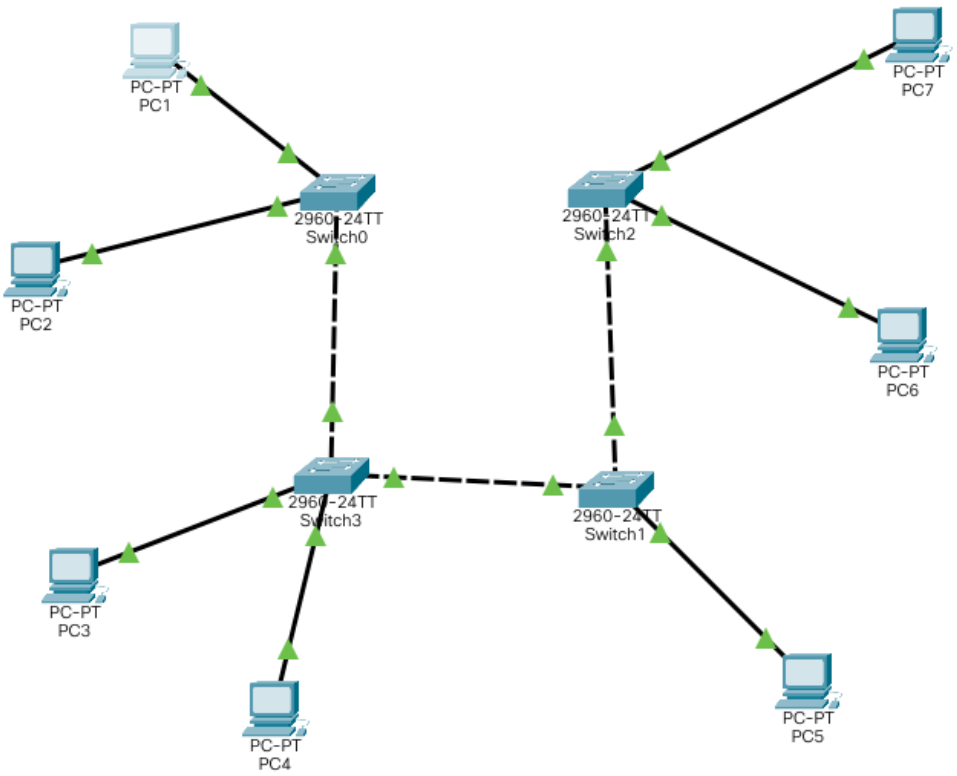
Часть 1: Топология сети:



Устройство	IP ADDRESS	SUBNET MASK
PC1	3.1.1.1	255.255.255.0
PC2	3.1.1.2	255.255.255.0
PC3	3.1.1.3	255.255.255.0
PC4	3.1.1.4	255.255.255.0
PC5	3.1.1.5	255.255.255.0
PC6	3.1.1.6	255.255.255.0
PC7	3.1.1.7	255.255.255.0

Тесты:

pc1

```
C:\>ping 3.1.1.2

Pinging 3.1.1.2 with 32 bytes of data:

Reply from 3.1.1.2: bytes=32 time=1ms TTL=128
Reply from 3.1.1.2: bytes=32 time<1ms TTL=128
Reply from 3.1.1.2: bytes=32 time<1ms TTL=128
Reply from 3.1.1.2: bytes=32 time<1ms TTL=128

Ping statistics for 3.1.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>ipconfig

```

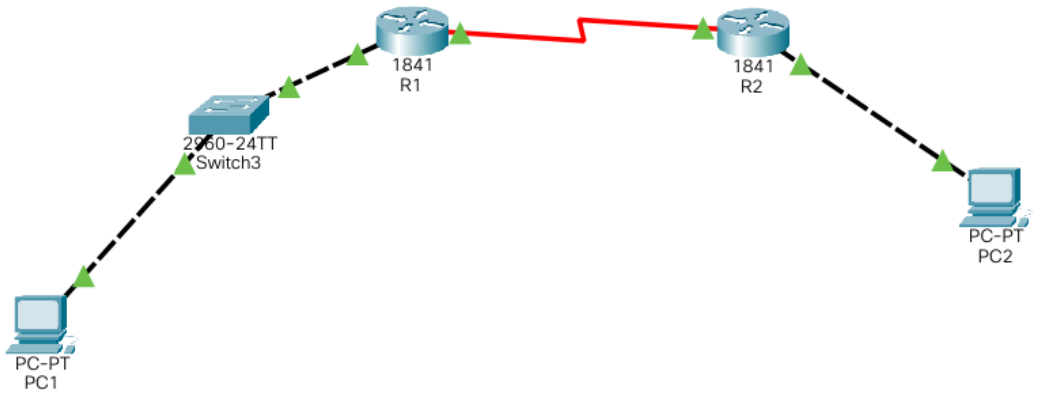
```
FastEthernet0 Connection:(default port)

   Connection-specific DNS Suffix..:
   Link-local IPv6 Address.....: FE80::2E0:B0FF:FE4C:811E
   IPv6 Address.....: ::
   IPv4 Address.....: 3.1.1.1
   Subnet Mask.....: 255.255.255.0
   Default Gateway.....: ::
                                  0.0.0.0
```

pc4

```
C:\>ping 3.1.1.6

Pinging 3.1.1.6 with 32 bytes of data:

Reply from 3.1.1.6: bytes=32 time=1ms TTL=128
Reply from 3.1.1.6: bytes=32 time=5ms TTL=128
Reply from 3.1.1.6: bytes=32 time<1ms TTL=128
Reply from 3.1.1.6: bytes=32 time<1ms TTL=128

Ping statistics for 3.1.1.6:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 5ms, Average = 1ms

C:\>ipconfig

FastEthernet0 Connection:(default port)

   Connection-specific DNS Suffix..:
   Link-local IPv6 Address.....: FE80::201:43FF:FEED:365C
   IPv6 Address.....: ::
   IPv4 Address.....: 3.1.1.4
   Subnet Mask.....: 255.255.255.0
   Default Gateway.....: ::
                                  0.0.0.0
```

Часть 2

Device	Interface	IP Address	Mask	Default Gateway
R1	Fa0/0	192.168.1.1	255.255.255.0	N/A
	S0/1/0	192.168.2.1	255.255.255.0	N/A
R2	Fa0/0	192.168.3.1	255.255.255.0	N/A
	S0/1/0	192.168.2.1	255.255.255.0	N/A
PC1	N/A	192.168.1.10	255.255.255.0	192.168.1.1
PC2	N/A	192.168.3.10	255.255.255.0	192.168.3.1



В итоге получилось 3 подсети. В подсети 1, 3 находятся PC, которые связываются роутерами. Роутеры коммуницируют между собой в подсети 2.

ping13

```
C:\>ipconfig

FastEthernet0 Connection:(default port)

   Connection-specific DNS Suffix..:
   Link-local IPv6 Address.....: FE80::2E0:F9FF:FE2E:CE8A
   IPv6 Address.....: ::
   IPv4 Address.....: 192.168.1.10
   Subnet Mask.....: 255.255.255.0
   Default Gateway.....: ::
                                 192.168.1.1


C:\>ping 192.168.3.10

Pinging 192.168.3.10 with 32 bytes of data:

Reply from 192.168.3.10: bytes=32 time=2ms TTL=126
Reply from 192.168.3.10: bytes=32 time=1ms TTL=126
Reply from 192.168.3.10: bytes=32 time=1ms TTL=126
Reply from 192.168.3.10: bytes=32 time=1ms TTL=126

Ping statistics for 192.168.3.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 2ms, Average = 1ms
```

Вывод: В работе была построена сеть с одной подсетью, а также были соединены две подсети при помощи роутера.