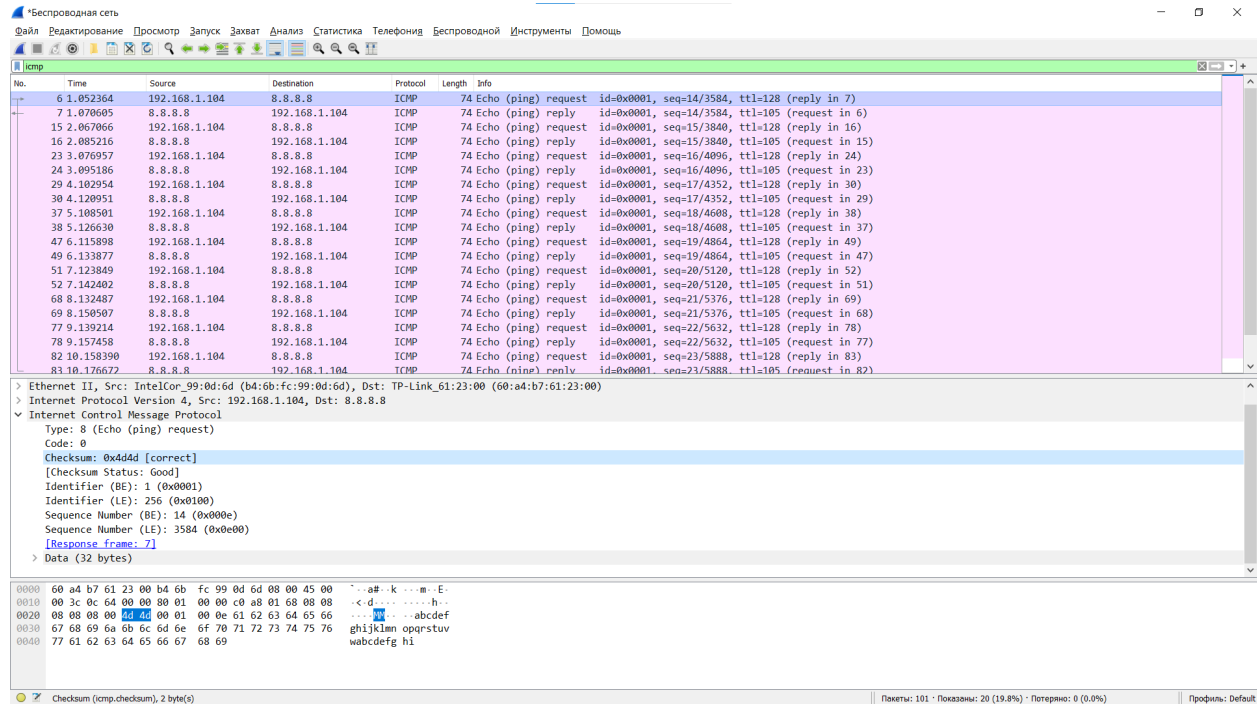


Wireshark

Задание 1.



1. Мой хост 192.168.1.104, хост назначения 8.8.8.8
2. ICMP не обладает портами, потому что это протокол не транспортного, а сетевого уровня.
3. Тип 8, код 0. Есть поля контрольной суммы (2 байта), индификатор (2 байта), номер последовательности (2 байта) и данные.
4. Тип 0, код 0. Есть поля контрольной суммы (2 байта), индификатор (2 байта), номер последовательности (2 байта) и данные.

Задание 2.

1. Отличается значением ttl и data и с пометкой что ответ не пришел.

Захват из Беспроводная сеть

Файл Редактирование Просмотр Запуск Захват Анализ Статистика Телефония Беспроводной Инструменты Помощь

No.	Time	Source	Destination	Protocol	Length	Info
62	6.429850	192.168.1.104	8.8.8.8	ICMP	106	Echo (ping) request id=0x0001, seq=24/6144, ttl=1 (no response found!)
63	6.431160	192.168.1.1	192.168.1.104	ICMP	126	Time-to-live exceeded (Time to live exceeded in transit)
64	6.431810	192.168.1.104	8.8.8.8	ICMP	106	Echo (ping) request id=0x0001, seq=25/6400, ttl=1 (no response found!)
65	6.432838	192.168.1.1	192.168.1.104	ICMP	126	Time-to-live exceeded (Time to live exceeded in transit)
66	6.433342	192.168.1.104	8.8.8.8	ICMP	106	Echo (ping) request id=0x0001, seq=26/6656, ttl=1 (no response found!)
67	6.434280	192.168.1.1	192.168.1.104	ICMP	126	Time-to-live exceeded (Time to live exceeded in transit)
161	11.978378	192.168.1.104	8.8.8.8	ICMP	106	Echo (ping) request id=0x0001, seq=27/6912, ttl=2 (no response found!)
162	11.980192	10.219.3.254	192.168.1.104	ICMP	134	Time-to-live exceeded (Time to live exceeded in transit)
163	11.981337	192.168.1.104	8.8.8.8	ICMP	106	Echo (ping) request id=0x0001, seq=28/7168, ttl=2 (no response found!)
164	11.982624	10.219.3.254	192.168.1.104	ICMP	134	Time-to-live exceeded (Time to live exceeded in transit)
165	11.983421	192.168.1.104	8.8.8.8	ICMP	106	Echo (ping) request id=0x0001, seq=29/7424, ttl=2 (no response found!)
166	11.984940	10.219.3.254	192.168.1.104	ICMP	134	Time-to-live exceeded (Time to live exceeded in transit)
265	17.528961	192.168.1.104	8.8.8.8	ICMP	106	Echo (ping) request id=0x0001, seq=30/7680, ttl=3 (no response found!)
281	21.367964	192.168.1.104	8.8.8.8	ICMP	106	Echo (ping) request id=0x0001, seq=31/7936, ttl=3 (no response found!)
284	25.370959	192.168.1.104	8.8.8.8	ICMP	106	Echo (ping) request id=0x0001, seq=32/8192, ttl=3 (no response found!)
297	29.370845	192.168.1.104	8.8.8.8	ICMP	106	Echo (ping) request id=0x0001, seq=33/8448, ttl=4 (no response found!)
327	33.367576	192.168.1.104	8.8.8.8	ICMP	106	Echo (ping) request id=0x0001, seq=34/8704, ttl=4 (no response found!)
343	37.368989	192.168.1.104	8.8.8.8	ICMP	106	Echo (ping) request id=0x0001, seq=35/8960, ttl=4 (no response found!)
354	41.372635	192.168.1.104	8.8.8.8	ICMP	106	Echo (ping) request id=0x0001, seq=36/9216, ttl=5 (no response found!)
355	41.374511	10.219.116.25	192.168.1.104	ICMP	134	Time-to-live exceeded (Time to live exceeded in transit)

> Ethernet II, Src: IntelCor_99:0d:6d (b4:6b:fc:99:0d:6d), Dst: TP-Link_61:23:00 (60:a4:b7:61:23:00)

> Internet Protocol Version 4, Src: 192.168.1.104, Dst: 8.8.8.8

> Internet Control Message Protocol

Type: 8 (Echo (ping) request)

Code: 0

Checksum: 0xf7e6 [correct]

[Checksum Status: Good]

Identifier (BE): 1 (0x0001)

Identifier (LE): 256 (0x0100)

Sequence Number (BE): 24 (0x0018)

Sequence Number (LE): 6144 (0x1800)

> [No response seen]

> Data (64 bytes)

0000 60 a4 b7 61 23 00 b4 6b fc 99 0d 6d 08 00 45 00 ...a#...k...E-

0010 00 5c 0c 0e 00 00 01 01 00 00 c0 a8 01 68 08 08 ...p...@.....

0020 08 08 00 00 f7 e6 00 01 00 18 00 00 00 00 00 ...h.....E-\n

0030 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...h.....

0040 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

0050 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

0060 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Data (data), 64 byte(s)

Пакеты: 2577 · Показаны: 127 (4.9%)

Профиль: Default

2. Содержится заголовок IP и пакет ICMP, на котором произошла ошибка.

Захват из Беспроводная сеть

Файл Редактирование Просмотр Запуск Захват Анализ Статистика Телефония Беспроводной Инструменты Помощь

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281	21.367964	192.168.1.104	8.8.8.8	ICMP	106	Echo (ping) request id=0x0001, seq=31/7936, ttl=3 (no response found!)
284	25.370959	192.168.1.104	8.8.8.8	ICMP	106	Echo (ping) request id=0x0001, seq=32/8192, ttl=3 (no response found!)
297	29.370845	192.168.1.104	8.8.8.8	ICMP	106	Echo (ping) request id=0x0001, seq=33/8448, ttl=4 (no response found!)
327	33.367576	192.168.1.104	8.8.8.8	ICMP	106	Echo (ping) request id=0x0001, seq=34/8704, ttl=4 (no response found!)
343	37.368989	192.168.1.104	8.8.8.8	ICMP	106	Echo (ping) request id=0x0001, seq=35/8960, ttl=4 (no response found!)
354	41.372635	192.168.1.104	8.8.8.8	ICMP	106	Echo (ping) request id=0x0001, seq=36/9216, ttl=5 (no response found!)
355	41.374511	10.219.116.25	192.168.1.104	ICMP	134	Time-to-live exceeded (Time to live exceeded in transit)

> Frame 63: 126 bytes on wire (1008 bits), 126 bytes captured (1008 bits) on interface \Device\NPF_{7802C2D4-880A-4EFA-A9C9-CA2812E31AC}, id 0

> Ethernet II, Src: TP-Link_61:23:00 (60:a4:b7:61:23:00), Dst: IntelCor_99:0d:6d (b4:6b:fc:99:0d:6d)

> Internet Protocol Version 4, Src: 192.168.1.1, Dst: 192.168.1.104

> Internet Control Message Protocol

Type: 11 (Time-to-live exceeded)

Code: 0 (Time to live exceeded in transit)

Checksum: 0xf4ff [correct]

[Checksum Status: Good]

Unused: 00000000

> Internet Protocol Version 4, Src: 192.168.1.104, Dst: 8.8.8.8

> Internet Control Message Protocol

b4 6b fc 99 0d 6d 60 a4 b7 61 23 00 08 00 45 00 ...k...m"...a#...E-

0010 00 70 ee cd 00 00 40 01 08 06 c0 a8 01 01 c0 a8 ...p...@.....

0020 01 68 00 00 f4 ff 00 00 00 45 00 00 5c 0c 0e ...h.....E-\n

0030 00 00 01 01 db 13 c0 a8 01 68 08 08 08 08 08 00 ...h.....

0040 f7 e6 00 01 00 18 00 00 00 00 00 00 00 00 00

0050 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

0060 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

0070 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

Type (icmp-type), 1 byte(s)

Пакеты: 6087 · Показаны: 127 (2.1%)

Профиль: Default

3. Последние 3 пакета являются просто ответными пакетами, т.к. отправленные нами запросы достигли хоста, на который мы их отправляли.

1376	217.388923	192.168.1.104	8.8.8.8	ICMP	106 Echo (ping) request	id=0x0001, seq=96/24576, ttl=25 (reply in 1377)
1377	217.407346	8.8.8.8	192.168.1.104	ICMP	106 Echo (ping) reply	id=0x0001, seq=96/24576, ttl=105 (request in 1376)
1378	217.411252	192.168.1.104	8.8.8.8	ICMP	106 Echo (ping) request	id=0x0001, seq=97/24832, ttl=25 (reply in 1379)
1379	217.429050	8.8.8.8	192.168.1.104	ICMP	106 Echo (ping) reply	id=0x0001, seq=97/24832, ttl=105 (request in 1378)
1380	217.430825	192.168.1.104	8.8.8.8	ICMP	106 Echo (ping) request	id=0x0001, seq=98/25088, ttl=25 (reply in 1381)
1381	217.448400	8.8.8.8	192.168.1.104	ICMP	106 Echo (ping) reply	id=0x0001, seq=98/25088, ttl=105 (request in 1380)

+ Информация по IP-адресу 178.18.227.7	
IP-адрес:	 178.18.227.7
Уникальный номер AS (ASN):	 AS7713
Интернет Провайдер (ISP):	 Telekomunikasi Indonesia
[Код страны] / Страна:	 [RU] / Russia
Регион:	 St.-Petersburg
Город:	 St Petersburg
Часовой пояс:	Europe/Moscow
Почтовый индекс:	190805
Широта (по IP-адресу):	59.9237
Долгота (по IP-адресу):	30.3301

4.

+ Information about IP-address 108.170.250.146	
IP-address:	 108.170.250.146
Autonomous System Number (ASN):	 AS15169
Internet Service Provider (ISP):	 Google LLC
[Country code] / Country:	 [US] / United States
Region:	 Virginia
City:	 Ashburn
Time Zone:	America/New_York
Zip Code:	20149
Latitude (IP-address):	39.0438
Longitude (IP-address):	-77.4874

Программирование

Задание 1.

```
Ip address: 192.168.1.104
Subnetwork mask: 255.255.255.0

Process finished with exit code 0
```

Задание 2.

```
Enter ip address: 192.168.1.104
Enter minimal port: 130
Enter maximal port: 140
Available ports for 192.168.1.104:
130, 131, 132, 133, 134, 136, 137, 138, 140
```

Задание 3.

Copy Counter 11048

Alive copies: 2

Waiting time, ms: 2000

Address	PID
192.168.1.104:52806	11048
192.168.1.104:59680	3396

Copy Counter 3396

Alive copies: 2

Waiting time, ms: 2000

Address	PID
192.168.1.104:59680	3396
192.168.1.104:52806	11048