

# HW6

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\*Ethernet

Файл Редактирование Просмотр Запуск Захват Анализ Статистика Телефония Беспроводной Инструменты Помощь

tcp

No.	Time	Source	Destination	Protocol	Length	Info
245	3.651204	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=143718 Win=27
246	3.651536	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=145178 Win=27
247	3.651536	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=146638 Win=27
248	3.651617	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=148098 Win=27
249	3.651909	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=149558 Win=27
250	3.651909	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=151018 Win=27
251	3.651909	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=152478 Win=27
252	3.652136	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=152959 Win=27
253	3.652416	128.119.245.12	192.168.1.63	HTTP	831	HTTP/1.1 200 OK (text/html)
254	3.699748	192.168.1.63	128.119.245.12	TCP	54	50135 → 80 [ACK] Seq=152959 Ack=778 Win=

> Frame 253: 831 bytes on wire (6648 bits), 831 bytes captured (6648 bits) on interface \Device\NPF\_{45939136-950B-4A86-B5D2}

> Ethernet II, Src: Keenetic\_1e:95:c8 (50:ff:20:1e:95:c8), Dst: HewlettP\_0e:f2:25 (84:a9:3e:0e:f2:25)

> Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.1.63

> Transmission Control Protocol, Src Port: 80, Dst Port: 50135, Seq: 1, Ack: 152959, Len: 777

> Hypertext Transfer Protocol

> Line-based text data: text/html (11 lines)

0030 08 fa 1d 27 00 00 48 54 54 50 2f 31 2e 31 20 32 ... HTTP/1.1 2

0040 30 30 20 4f 4b 0d 0a 44 61 74 65 3a 20 54 75 65 00 OK Date: Tue

0050 2c 20 31 30 20 4d 61 79 20 32 30 32 32 20 30 37 , 10 May 2022 07

Hypertext Transfer Protocol (http), 359 byte(s) | Пакеты: 282 · Показаны: 246 (87.2%) · Потеряно: 0 (0.0%) | Профиль: Default

IP адрес компьютера 192.168.1.63, порт 50135

IP адрес сервера 128.119.245.12, порт 80

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tcp

No.	Time	Source	Destination	Protocol	Length	Info
6	0.395742	192.168.1.63	128.119.245.12	TCP	66	50134 → 80 [SYN] Seq=0 Win=64240 Len=0
7	0.395961	192.168.1.63	128.119.245.12	TCP	66	50135 → 80 [SYN] Seq=0 Win=64240 Len=0
9	0.566810	128.119.245.12	192.168.1.63	TCP	66	80 → 50135 [SYN, ACK] Seq=0 Ack=1 Win=29
10	0.566887	192.168.1.63	128.119.245.12	TCP	54	50135 → 80 [ACK] Seq=1 Ack=1 Win=262656
11	0.569467	128.119.245.12	192.168.1.63	TCP	66	80 → 50134 [SYN, ACK] Seq=0 Ack=1 Win=29
12	0.569577	192.168.1.63	128.119.245.12	TCP	54	50134 → 80 [ACK] Seq=1 Ack=1 Win=262656
17	2.026212	192.168.1.63	93.158.134.119	TCP	55	49841 → 443 [ACK] Seq=1 Ack=1 Win=1023
18	2.038526	93.158.134.119	192.168.1.63	TCP	66	443 → 49841 [ACK] Seq=1 Ack=2 Win=166
22	2.416132	192.168.1.63	87.240.129.129	TLSv1.2	89	Application Data
23	2.418745	192.168.1.63	87.240.129.129	TLSv1.2	93	Application Data

Destination Port: 80  
 [Stream index: 0]  
 [Conversation completeness: Incomplete, ESTABLISHED (7)]  
 [TCP Segment Len: 0]  
 Sequence Number: 0 (relative sequence number)  
 Sequence Number (raw): 4112364562  
 [Next Sequence Number: 1 (relative sequence number)]  
 Acknowledgment Number: 0  
 Acknowledgment number (raw): 0  
 1000 .... = Header Length: 32 bytes (8)  
 ✓ **Flags: 0x002 (SYN)**  
 000. .... = Reserved: Not set  
 ...0 .... = Nonce: Not set  
 .... 0... = Congestion Window Reduced (CWR): Not set  
 .... .0.. = ECN-Echo: Not set  
 .... ..0. = Urgent: Not set  
 .... ...0 = Acknowledgment: Not set  
 .... .... 0... = Push: Not set  
 .... .... .0.. = Reset: Not set  
 > .... .... ..1. = Syn: Set  
 .... .... ...0 = Fin: Not set

0020 f5 0c c3 d6 00 50 f5 1d b4 12 00 00 00 00 80 02 .....P...  
 0030 fa f0 37 92 00 00 02 04 05 b4 01 03 03 08 01 01 ..7.....  
 0040 04 02 ..

Syn (tcp.flags.syn), 1 byte(s) | Пакеты: 282 · Показаны: 246 (87.2%) · Потеряно: 0 (0.0%) | Профиль: Default

Sequence Number: 0 (relative sequence number)

Sequence Number (raw): 4112364562

По флагу можно определить, что это SYN-сегмент: Flags: 0x002 (SYN)

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tcp

No.	Time	Source	Destination	Protocol	Length	Info
6	0.395742	192.168.1.63	128.119.245.12	TCP	66	50134 → 80 [SYN] Seq=0 Win=64240 Len=0
7	0.395961	192.168.1.63	128.119.245.12	TCP	66	50135 → 80 [SYN] Seq=0 Win=64240 Len=0
9	0.566810	128.119.245.12	192.168.1.63	TCP	66	80 → 50135 [SYN, ACK] Seq=0 Ack=1 Win=29
10	0.566887	192.168.1.63	128.119.245.12	TCP	54	50135 → 80 [ACK] Seq=1 Ack=1 Win=262656
11	0.569467	128.119.245.12	192.168.1.63	TCP	66	80 → 50134 [SYN, ACK] Seq=0 Ack=1 Win=29
12	0.569577	192.168.1.63	128.119.245.12	TCP	54	50134 → 80 [ACK] Seq=1 Ack=1 Win=262656
17	2.026212	192.168.1.63	93.158.134.119	TCP	55	49841 → 443 [ACK] Seq=1 Ack=1 Win=1023
18	2.038526	93.158.134.119	192.168.1.63	TCP	66	443 → 49841 [ACK] Seq=1 Ack=2 Win=166
22	2.416132	192.168.1.63	87.240.129.129	TLSv1.2	89	Application Data
23	2.418745	192.168.1.63	87.240.129.129	TLSv1.2	93	Application Data

Source Port: 80  
Destination Port: 50134  
[Stream index: 0]  
[Conversation completeness: Incomplete, ESTABLISHED (7)]  
[TCP Segment Len: 0]  
Sequence Number: 0 (relative sequence number)  
Sequence Number (raw): 3400973743  
[Next Sequence Number: 1 (relative sequence number)]  
Acknowledgment Number: 1 (relative ack number)  
Acknowledgment number (raw): 4112364563  
1000 .... = Header Length: 32 bytes (8)  
▼ Flags: 0x012 (SYN, ACK)  
000. .... = Reserved: Not set  
...0 .... = Nonce: Not set  
.... 0... = Congestion Window Reduced (CWR): Not set  
.... .0.. = ECN-Echo: Not set  
.... ..0. = Urgent: Not set  
.... ...1 = Acknowledgment: Set  
.... .... 0... = Push: Not set  
.... .... .0.. = Reset: Not set  
> .... .... .1 = Syn: Set

0020 01 3f 00 50 c3 d6 ca b6 bd af f5 1d b4 13 80 12 .?.P....  
0030 72 10 cf c6 00 00 02 04 05 b4 01 01 04 02 01 03 r.....  
0040 03 07 ..

This shows the raw value of the acknowledgment number (tcp.ack\_raw), 4 byte(s) | Пакеты: 282 · Показаны: 246 (87.2%) · Потеряно: 0 (0.0%) | Профиль: Default

Sequence Number: 0 (relative sequence number)

Sequence Number (raw): 3400973743

Acknowledgment number (raw): 4112364563 = Sequence Number (raw): 4112364562 + 1

По флагу: Flags: 0x012 (SYN, ACK)

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tcp

No.	Time	Source	Destination	Protocol	Length	Info
32	2.437130	87.240.129.129	192.168.1.63	TCP	60	443 → 49904 [ACK] Seq=275 Ack=603 Win=83
33	2.437130	87.240.129.129	192.168.1.63	TLSv1.2	89	Application Data
34	2.438382	87.240.129.129	192.168.1.63	TLSv1.2	493	Application Data
35	2.438406	192.168.1.63	87.240.129.129	TCP	54	49904 → 443 [ACK] Seq=603 Ack=749 Win=16
38	2.939517	192.168.1.63	142.251.1.190	TCP	66	50136 → 443 [SYN] Seq=0 Win=64240 Len=0
39	2.943295	192.168.1.63	128.119.245.12	TCP	691	50135 → 80 [PSH, ACK] Seq=1 Ack=1 Win=26291
40	2.945414	142.251.1.190	192.168.1.63	TCP	66	443 → 50136 [SYN, ACK] Seq=0 Ack=1 Win=64240
41	2.945546	192.168.1.63	142.251.1.190	TCP	54	50136 → 443 [ACK] Seq=1 Ack=1 Win=26291
42	2.948263	192.168.1.63	142.251.1.190	TLSv1.3	571	Client Hello
43	2.954200	142.251.1.190	192.168.1.63	TCP	60	443 → 50136 [ACK] Seq=1 Ack=518 Win=6683

> Frame 39: 691 bytes on wire (5528 bits), 691 bytes captured (5528 bits) on interface \Device\NPF\_{45939136-950B-4A86-B5C}

> Ethernet II, Src: HewlettP\_0e:f2:25 (84:a9:3e:0e:f2:25), Dst: Keenetic\_1e:95:c8 (50:ff:20:1e:95:c8)

> Internet Protocol Version 4, Src: 192.168.1.63, Dst: 128.119.245.12

✓ Transmission Control Protocol, Src Port: 50135, Dst Port: 80, Seq: 1, Ack: 1, Len: 637

Source Port: 50135

Destination Port: 80

[Stream index: 1]

[Conversation completeness: Incomplete, DATA (15)]

[TCP Segment Len: 637]

Sequence Number: 1 (relative sequence number)

Sequence Number (raw): 1504234691

[Next Sequence Number: 638 (relative sequence number)]

Acknowledgment Number: 1 (relative ack number)

Acknowledgment number (raw): 863449861

0101 .... = Header Length: 20 bytes (5)

✓ Flags: 0x018 (PSH, ACK)

000. .... = Reserved: Not set

...0 .... = Nonce: Not set

0020 f5 0c c3 d7 00 50 59 a8 cc c3 33 77 33 05 50 18 .....PY. .3w3.P.

0030 04 02 3a 03 00 00 50 4f 53 54 20 2f 77 69 72 65 ...:..PO ST /wire

0040 73 68 61 72 6b 2d 6c 61 62 73 2f 6c 61 62 33 2d shark-la bs/lab3-

0050 31 2d 72 65 70 6c 79 2e 68 74 6d 20 48 54 54 50 1-reply. htm HTTP

0060 2f 31 2e 31 0d 0a 48 6f 73 74 3a 20 67 61 69 61 /1.1..Ho st: gaia

0070 2e 63 73 2e 75 6d 61 73 73 2e 65 64 75 0d 0a 43 .cs.umas s.edu..C

Байты 54-690: TCP segment data (tcp.segment\_data) | Пакеты: 282 · Показаны: 246 (87.2%) · Потеряно: 0 (0.0%) | Профиль: Default

Sequence Number: 1 (relative sequence number)

Sequence Number (raw): 1504234691

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tcp

No.	Time	Source	Destination	Protocol	Length	Info
6	0.395742	192.168.1.63	128.119.245.12	TCP	66	50134 → 80 [SYN] Seq=0 Win=64240 Len=0
7	0.395961	192.168.1.63	128.119.245.12	TCP	66	50135 → 80 [SYN] Seq=0 Win=64240 Len=0
10	0.566887	192.168.1.63	128.119.245.12	TCP	54	50135 → 80 [ACK] Seq=1 Ack=1 Win=262656
12	0.569577	192.168.1.63	128.119.245.12	TCP	54	50134 → 80 [ACK] Seq=1 Ack=1 Win=262656
39	2.943295	192.168.1.63	128.119.245.12	TCP	691	50135 → 80 [PSH, ACK] Seq=1 Ack=1 Win=262656
56	2.967666	192.168.1.63	128.119.245.12	TCP	13194	50135 → 80 [ACK] Seq=638 Ack=1 Win=262656
80	3.114036	192.168.1.63	128.119.245.12	TCP	1514	50135 → 80 [ACK] Seq=13778 Ack=1 Win=262656
88	3.138288	192.168.1.63	128.119.245.12	TCP	23414	50135 → 80 [PSH, ACK] Seq=15238 Ack=1 Win=262656
90	3.139103	192.168.1.63	128.119.245.12	TCP	2974	50135 → 80 [ACK] Seq=38598 Ack=1 Win=262656
92	3.284962	192.168.1.63	128.119.245.12	TCP	2974	50135 → 80 [ACK] Seq=41518 Ack=1 Win=262656
99	3.309064	192.168.1.63	128.119.245.12	TCP	17574	50135 → 80 [PSH, ACK] Seq=44438 Ack=1 Win=262656
108	3.310054	192.168.1.63	128.119.245.12	TCP	26334	50135 → 80 [PSH, ACK] Seq=61958 Ack=1 Win=262656
112	3.310808	192.168.1.63	128.119.245.12	TCP	8814	50135 → 80 [ACK] Seq=88238 Ack=1 Win=262656
170	3.454898	192.168.1.63	128.119.245.12	TCP	5894	50135 → 80 [PSH, ACK] Seq=96998 Ack=1 Win=262656
172	3.478676	192.168.1.63	128.119.245.12	TCP	2974	50135 → 80 [ACK] Seq=102838 Ack=1 Win=262656
175	3.478897	192.168.1.63	128.119.245.12	TCP	5894	50135 → 80 [ACK] Seq=105758 Ack=1 Win=262656
177	3.478925	192.168.1.63	128.119.245.12	TCP	2974	50135 → 80 [ACK] Seq=111598 Ack=1 Win=262656
179	3.479135	192.168.1.63	128.119.245.12	TCP	2974	50135 → 80 [PSH, ACK] Seq=114518 Ack=1 Win=262656
181	3.479348	192.168.1.63	128.119.245.12	TCP	2974	50135 → 80 [ACK] Seq=117438 Ack=1 Win=262656
184	3.479567	192.168.1.63	128.119.245.12	TCP	5894	50135 → 80 [ACK] Seq=120358 Ack=1 Win=262656

Destination Port: 80  
[Stream index: 1]  
[Conversation completeness: Incomplete, DATA (15)]  
[TCP Segment Len: 637]  
Sequence Number: 1 (relative sequence number)  
Sequence Number (raw): 1504234691  
[Next Sequence Number: 638 (relative sequence number)]  
Acknowledgment Number: 1 (relative ack number)  
Acknowledgment Number (raw): 802440861

```

0020 f5 0c c3 d7 00 50 59 a8 cc c3 33 77 33 05 50 18 .....PY...3w3·P·
0030 04 02 3a 03 00 00 50 4f 53 54 20 2f 77 69 72 65 ·····PO ST /wire
0040 73 68 61 72 6b 2d 6c 61 62 73 2f 6c 61 62 33 2d shark-la bs/lab3-
0050 31 2d 72 65 70 6c 79 2e 68 74 6d 20 48 54 54 50 1-reply. htm HTTP
0060 2f 31 2e 31 0d 0a 48 6f 73 74 3a 20 67 61 69 61 /1.1·Ho st: gaia
0070 2e 63 73 2e 75 6d 61 73 73 2e 65 64 75 0d 0a 43 .cs.umas s.edu·C

```

Sequence Number (tcp.seq), 4 byte(s) | Пакеты: 282 · Показаны: 246 (87.2%) · Потеряно: 0 (0.0%) | Профиль: Default

Номера:

Sequence Number: 1 (relative sequence number), Sequence Number (raw): 1504234691  
Sequence Number: 638 (relative sequence number), Sequence Number (raw): 1504235328  
Sequence Number: 13778 (relative sequence number), Sequence Number (raw): 1504248468  
Sequence Number: 15238 (relative sequence number), Sequence Number (raw): 1504249928  
Sequence Number: 38598 (relative sequence number), Sequence Number (raw): 1504273288  
Sequence Number: 41518 (relative sequence number), Sequence Number (raw): 1504276208

Время на скрин, первый 2.943295, последний 3.284962



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tcp

No.	Time	Source	Destination	Protocol	Length	Info
9	0.566810	128.119.245.12	192.168.1.63	TCP	66	80 → 50135 [SYN, ACK] Seq=0 Ack=1 Win=29
11	0.569467	128.119.245.12	192.168.1.63	TCP	66	80 → 50134 [SYN, ACK] Seq=0 Ack=1 Win=29
79	3.113994	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=638 Win=30597
81	3.138242	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=2098 Win=3344
82	3.138242	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=3558 Win=3639
83	3.138242	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=5018 Win=3929
84	3.138242	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=6478 Win=4224
85	3.138242	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=7938 Win=4518
86	3.138242	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=9398 Win=4800
87	3.138242	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=12318 Win=5380
89	3.139072	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=13778 Win=5680
91	3.284921	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=15238 Win=5970
93	3.308934	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=16698 Win=6270
94	3.308934	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=18158 Win=6570
95	3.308934	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=19618 Win=6870
96	3.308934	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=21078 Win=7170
97	3.308934	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=22538 Win=7470
98	3.308934	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=23998 Win=7770
100	3.309997	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=25458 Win=8070
101	3.309997	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=26918 Win=8370

Destination Port: 50135  
 [Stream index: 1]  
 [Conversation completeness: Incomplete, DATA (15)]  
 [TCP Segment Len: 0]  
 Sequence Number: 1 (relative sequence number)  
 Sequence Number (raw): 863449861  
 [Next Sequence Number: 1 (relative sequence number)]  
 Acknowledgment Number: 638 (relative ack number)  
 Acknowledgment Number (raw): 150437538

```

0000 84 a9 3e 0e f2 25 50 ff 20 1e 95 c8 08 00 45 00  ..>...%P. ....E.
0010 00 28 a2 1a 40 00 24 06 7d 4a 80 77 f5 0c c0 a8  .(..@.$..}J.w....
0020 01 3f 00 50 c3 d7 33 77 33 05 59 a8 cf 40 50 10  .?.P...3w 3.Y...@P.
0030 00 ef 23 ed 00 00 00 00 60 e7 0b 24              ..#.....`..$.
  
```

Transmission Control Protocol: Protocol | Пакеты: 282 · Показаны: 246 (87.2%) · Потеряно: 0 (0.0%) | Профиль: Default

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tcp

No.	Time	Source	Destination	Protocol	Length	Info
110	3.310787	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=40058 Win=1090
111	3.310787	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=41518 Win=1190
168	3.454818	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=42978 Win=1190
169	3.454818	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=44438 Win=1190
171	3.478642	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=45898 Win=1290
173	3.478884	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=47358 Win=1290

Destination Port: 50135  
 [Stream index: 1]  
 [Conversation completeness: Incomplete, DATA (15)]  
 [TCP Segment Len: 0]  
 Sequence Number: 1 (relative sequence number)

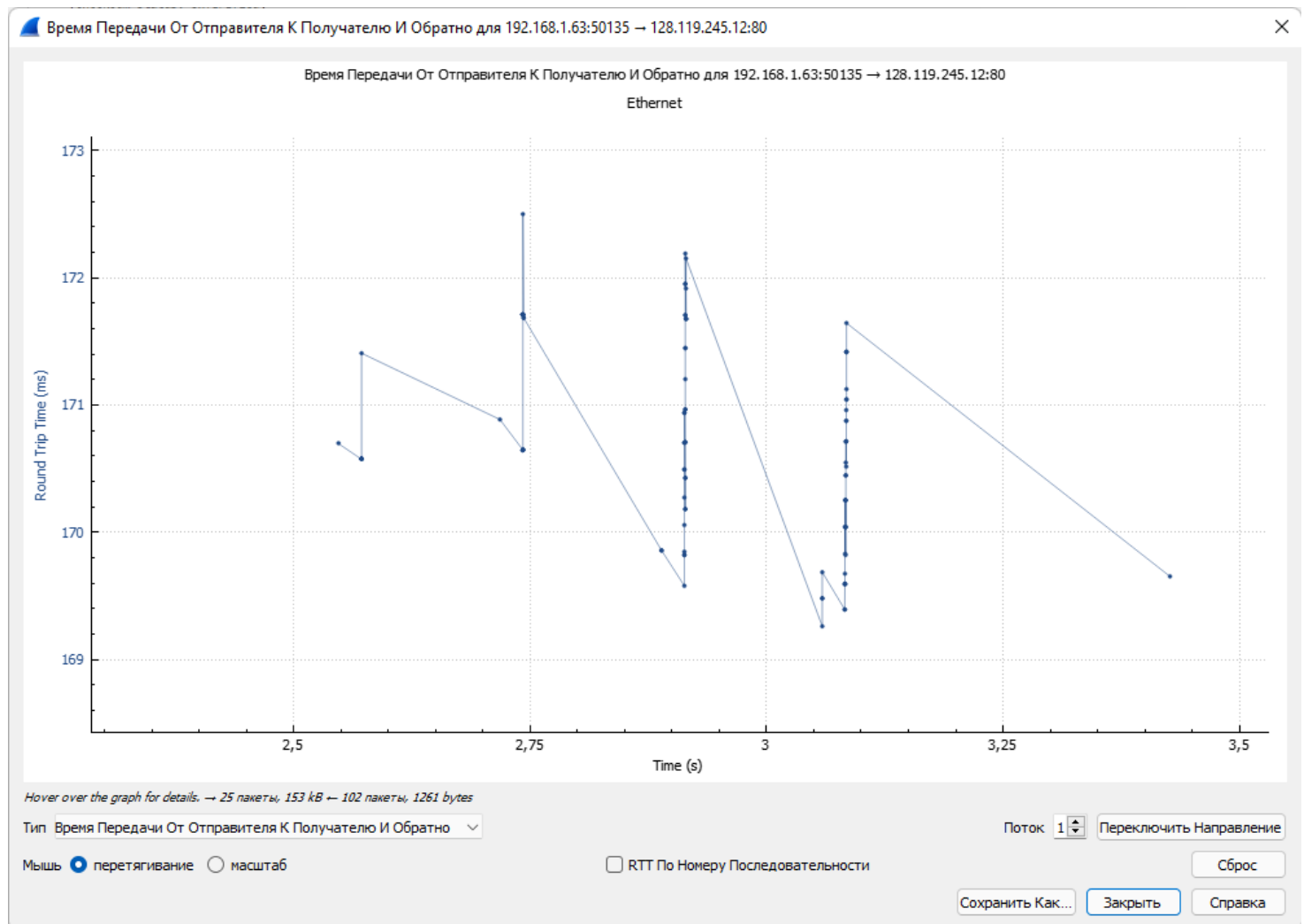
```

0000 84 a9 3e 0e f2 25 50 ff 20 1e 95 c8 08 00 45 00  ..>...%P. ....E.
0010 00 28 a2 34 40 00 24 06 7d 30 80 77 f5 0c c0 a8  .(..4@.$..}J.w....
  
```

The completeness of the conversation capture (tcp.completeness) | Пакеты: 282 · Показаны: 246 (87.2%) · Потеряно: 0 (0.0%) | Профиль: Default

Чтобы определить ответное подтверждение, надо сравнить Ask полученного и Seq отправленного

Время получения первого 3.113994, второго 3.139072, последнего 3.310787



Для подсчета RTT можно посмотреть на разность времени получения и времени отправки, это также можно видеть на графике. Для первых 6 точек значение между 170 и 173 мс

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tcp

No.	Time	Source	Destination	Protocol	Length	Info
243	3.651119	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=140798 Win=20
244	3.651119	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=142258 Win=20
245	3.651204	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=143718 Win=20
246	3.651536	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=145178 Win=20
247	3.651536	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=146638 Win=20
248	3.651617	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=148098 Win=20
249	3.651909	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=149558 Win=20
250	3.651909	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=151018 Win=20
251	3.651909	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=152478 Win=20
252	3.652136	128.119.245.12	192.168.1.63	TCP	60	80 → 50135 [ACK] Seq=1 Ack=152959 Win=20
253	3.652416	128.119.245.12	192.168.1.63	HTTP	831	HTTP/1.1 200 OK (text/html)
255	3.725559	87.240.129.131	192.168.1.63	TLSv1.2	417	Application Data

Destination Port: 50135  
[Stream index: 1]  
[Conversation completeness: Incomplete, DATA (15)]  
[TCP Segment Len: 0]  
Sequence Number: 1 (relative sequence number)  
Sequence Number (raw): 863449861  
[Next Sequence Number: 1 (relative sequence number)]  
Acknowledgment Number: 152959 (relative ack number)  
Acknowledgment number (raw): 1504387649  
0101 .... = Header Length: 20 bytes (5)

```

0000  84 a9 3e 0e f2 25 50 ff 20 1e 95 c8 08 00 45 00  .>...%P. ....E.
0010  00 28 a2 7c 40 00 24 06 7c e8 80 77 f5 0c c0 a8  .(|@$. |..w...
0020  01 3f 00 50 c3 d7 33 77 33 05 59 ab 22 41 50 10  .?..P...3w 3.Y."AP.
0030  08 fa c8 de 00 00 00 00 00 00 00 00 00 00 00  .

```

The completeness of the conversation capture (tcp.completeness) | Пакеты: 282 · Показаны: 246 (87.2%) · Потеряно: 0 (0.0%) | Профиль: Default

Время отправки первого SYN 0.395742, получения последнего ACK 3.652136, размер данных 152138 байт. Тогда пропускная способность

$$\frac{152138}{(3.652136 - 0.395742)} = 46719 \text{ байт/с}$$



