Ethernet

No.	Time	Source	Destination	Protocol	Length	Info
+	39 2022-05-28 11:34:50,918	238 192.168.0.102	128.119.245.12	HTTP	562	GET /wireshark-labs/HTTP-ethereal-lab-file3.html HTTP/1.1
-	48 2022-05-28 11:34:51,054	703 128.119.245.12	192.168.0.102	HTTP	535	HTTP/1.1 200 OK (text/html)
	52 2022-05-28 11:34:51,1514	451 192.168.0.102	128.119.245.12	HTTP	508	GET /favicon.ico HTTP/1.1
	59 2022-05-28 11:34:51,2808	896 128.119.245.12	192.168.0.102	HTTP	538	HTTP/1.1 404 Not Found (text/html)
> Fr	Frame 39: 562 bytes on wire (4496 bits), 562 bytes captured (4496 bits) on interface \Device\NPF_{AFA188C0-2747-48C5-815A-D8DE55689840}, id 0					
> Et	thernet II, Src: IntelCor_86:5b:64 (64:5d:86:86:5b:64), Dst: TP-Link_4a:ce:99 (c0:06:c3:4a:ce:99)					
> Ir	Internet Protocol Version 4, Src: 192.168.0.102, Dst: 128.119.245.12					
> Tr	ransmission Control Protocol, Src Port: 56390, Dst Port: 80, Seq: 1, Ack: 1, Len: 508					
✓ Hy	Hypertext Transfer Protocol					
>	> GET /wireshark-labs/HTTP-ethereal-lab-file3.html HTTP/1.1\r\n					
	Host: gaia.cs.umass.edu\r\n					
	Connection: keep-alive\r\n					
	Upgrade-Insecure-Requests: 1\r\n					
	User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/98.0.4758.141 YaBrowser/22.3.4.731 Yowser/2.5 Safari/537.36\r\n					
	Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q=0.9\r\n					
	Accept-Encoding: gzip, deflate\r\n					
	Accept-Language: ru,en;q=0.9\r\n					
	\r\n					
	[Full request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-ethereal-lab-file3.html]					
	[HTTP request 1/2]					
	[Response in frame: 48]					
9999	c0 06 c3 4a ce 99 64 5d 86	86 5h 64 08 00 45 00 ·	Jdl[dE.			
0010	02 24 9e 58 40 00 80 06 23		\$ · X@ · · · # · · · · f · w			
0020	fr 00 do 46 00 r0 00 fo 00		E . D 3 M . D .			

- 1. 64:5d:86:86:5b:64
- 2. IntelCor 86:5b:64 адрес моего компьютера

```
0×0800
       39 2022-05-28 11:34:50,918238 IntelCor_86:5b:64
                                                              TP-Link_4a:ce:99
                                                                                                      562 IPv4
       40 2022-05-28 11:34:51,012239 TP-Link_4a:ce:99
                                                              IntelCor_86:5b:64
       41 2022-05-28 11:34:51,012239 TP-Link_4a:ce:99
                                                              IntelCor_86:5b:64
                                                                                        0×0800
                                                                                                       54 TPv4
       42 2022-05-28 11:34:51,012295 IntelCor_86:5b:64
                                                              TP-Link_4a:ce:99
                                                                                        0x0800
                                                                                                       54 IPv4
       43 2022-05-28 11:34:51,050017 TP-Link_4a:ce:99
                                                              IntelCor_86:5b:64
                                                              IntelCor 86:5b:64
       44 2022-05-28 11:34:51,051920 TP-Link 4a:ce:99
                                                                                                     1514 IPv4
  Frame 39: 562 bytes on wire (4496 bits), 562 bytes captured (4496 bits) on interface \Device\NPF_{AFA1B8C0-2747-4BC5-815A-D8DE55689840}, id 0
v Ethernet II, Src: IntelCor_86:5b:64 (64:5d:86:86:5b:64), Dst: TP-Link_4a:ce:99 (c0:06:c3:4a:ce:99)
     Destination: TP-Link_4a:ce:99 (c0:06:c3:4a:ce:99)
   Source: IntelCor_86:5b:64 (64:5d:86:86:5b:64)
         Address: IntelCor_86:5b:64 (64:5d:86:86:5b:64)
         .....0. .... = LG bit: Globally unique address (factory default)
          .... ...0 .... = IG bit: Individual address (unicast)
      Type: IPv4 (0x0800)
```

- 3. c0:06:c3:4a:ce:99, TP-Link_4a:ce:99 адрес моего роутера
- 4. 64:5d:86:86:5b:64, Да, это адрес моего компьютера

```
47 2022-05-28 11:34:51,054201 TP-Link_4a:ce:99
                                                              IntelCor_86:5b:64
                                                                                         0x0800
                                                                                                     1514 IPv4
       48 2022-05-28 11:34:51,054703 TP-Link_4a:ce:99
                                                              IntelCor_86:5b:64
                                                                                         0x0800
                                                                                                      535 IPv4
       49 2022-05-28 11:34:51,054745 IntelCor_86:5b:64
                                                              TP-Link_4a:ce:99
                                                                                                       54 IPv4
                                                                                         0x0800
       50 2022-05-28 11:34:51,058750 TP-Link 4a:ce:99
                                                              IntelCor 86:5b:64
                                                                                         0x0800
                                                                                                      503 IPv4
<
   Frame 48: 535 bytes on wire (4280 bits), 535 bytes captured (4280 bits) on interface \Device\NPF_{AFA1B8C0-2747-4BC5
  Ethernet II, Src: TP-Link_4a:ce:99 (c0:06:c3:4a:ce:99), Dst: IntelCor_86:5b:64 (64:5d:86:86:5b:64)
    > Destination: IntelCor_86:5b:64 (64:5d:86:86:5b:64)
    Source: TP-Link_4a:ce:99 (c0:06:c3:4a:ce:99)
          Address: TP-Link_4a:ce:99 (c0:06:c3:4a:ce:99)
          .... .0. .... ... = LG bit: Globally unique address (factory default)
          .... ...0 .... = IG bit: Individual address (unicast)
      Type: IPv4 (0x0800)
   Data (521 bytes)
```

ARP

1. Source: IntelCor_86:5b:64 (64:5d:86:86:5b:64)
Destination: Broadcast (ff:ff:ff:ff:ff)

```
No.
                                                                                Destination
                                                                                                                  Protocol Length Info
           2 2022-05-28 11:54:24,852656 IntelCor_86:5b:64
3 2022-05-28 11:54:24,855030 TP-Link_4a:ce:99
                                                                                Broadcast
                                                                                                                                   42 Who has 192.168.0.1? Tell 192.168.0.102
                                                                                IntelCor 86:5b:64
                                                                                                                  ARP
                                                                                                                                     42 192.168.0.1 is at c0:06:c3:4a:ce:9
> Frame 2: 42 bytes on wire (336 bits), 42 bytes captured (336 bits) on interface \Device\NPF_{AFA1B8C0-2747-4BC5-815A-D8DE55689840}, id 0 v Ethernet II, Src: IntelCor_86:5b:64 (64:5d:86:86:5b:64), Dst: Broadcast (ff:ff:ff:ff:ff:ff)

→ Destination: Broadcast (ff:ff:ff:ff:ff)

             Address: Broadcast (ff:ff:ff:ff:ff)
     Address: IntelCor_86:5b:64 (64:5d:86:86:5b:64)
....0....= LG bit: Globally unique address (factory default)
....0...= IG bit: Individual address (unicast)
        Type: ARP (0x0806)
 > Address Resolution Protocol (request)
       ff ff ff ff ff ff 64 5d 86 86 5b 64 08 06 00 01 08 00 06 04 00 01 64 5d 86 86 5b 64 c0 a8 00 66 00 00 00 00 00 00 c0 a8 00 01
```

2. Да

```
2 2022-05-28 11:54:24,852656 IntelCor_86:5b:64 Broadcast ARP 42 Who has 192.168.0.1? Tell 192.168.0.102
3 2022-05-28 11:54:24,855030 TP-Link_4a:ce:99 IntelCor_86:5b:64 ARP 42 192.168.0.1 is at c0:06:c3:4a:ce:99

> Frame 2: 42 bytes on wire (336 bits), 42 bytes captured (336 bits) on interface \Device\NPF_{AFAIBSCO-2747-4BC5-815A-DBDE55689840}, id 0

Ethernet II, Src: IntelCor_86:5b:64 (64:5d:86:86:5b:64), Dst: Broadcast (ff:ff:ff:ff:ff)

Address Resolution Protocol (request)

Hardware type: Ethernet (1)
Protocol type: IPv4 (0x0800)
Hardware size: 6
Protocol size: 4
Opcode: request (1)
Sender MAC address: IntelCor_86:5b:64 (64:5d:86:86:5b:64)
Sender IP address: 192.168.0.102
```

3. Target MAC address: 00:00:00 00:00:00 (00:00:00:00:00)

4. Sender MAC address: TP-Link_4a:ce:99 (c0:06:c3:4a:ce:99)