Trabalho Wireshark

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Introdução

01) HTTP & TCP

02) 0,181172 segundos

03) IP do site gaia.cs.umass.edu: 128.119.245.12

Meu IP: 192.168.0.10

0050 77 69 72 65 73 68 61 72 6b 2d 66 69 6c 65 31 2e

Time to live (ip.ttl), 1 byte(s)

04)

+ 1412 17:48:50,670147 192.168.0.10	128.119.245.12	HTTP	560 GET /wireshark-labs/INTRO-wireshark-file1.html HTTP/1.1
1426 17:48:50,851319 128.119.245.12	192.168.0.10	HTTP	491 HTTP/1.1 200 OK (text/html)
1428 17:48:51,229177 192.168.0.10	128.119.245.12	HTTP	492 GET /favicon.ico HTTP/1.1
1429 17:48:51,407278 128.119.245.12	192.168.0.10	HTTP	537 HTTP/1.1 404 Not Found (text/html)

```
> Frame 1412: 560 bytes on wire (4480 bits), 560 bytes captured (4480 bits) on interface \Device\NPF_{09C6D243-6621-487A-83BB-D0836146E086}, id 0 > Ethernet II, Src: IntelCor_0c:52:15 (5c:cd:5b:0c:52:15), Dst: ARRISGro_0d:54:c2 (5c:e3:0e:0d:54:c2)
      Internet Protocol Version 4, Src: 192.168.0.10, Dst: 128.119.245.12
> Transmission Control Protocol, Src Port: 49494, Dst Port: 80, Seq: 1, Ack: 1, Len: 506

Hypertext Transfer Protocol
        > GET /wireshark-labs/INTRO-wireshark-file1.html HTTP/1.1\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/85.0.4183.83 Safari/537.36\r\n
               Accept: \texttt{text/html,application/xhtml+xml,application/xml;} q=0.9, \\ \texttt{image/avif,image/avif,image/appl,*/*;} q=0.8, \\ \texttt{application/signed-exchange;} v=b3; \\ \texttt{q=0.9,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/avif,image/a
               Accept-Encoding: gzip, deflate\r\n
               Accept-Language: pt-BR, pt; q=0.9, en-US; q=0.8, en; q=0.7, es; q=0.6 \r\n
               [Full request URI: http://gaia.cs.umass.edu/wireshark-labs/INTRO-wireshark-file1.html]
               [HTTP request 1/2]
               [Response in frame: 1426]
[Next request in frame: 1428]
0010 02 22 de f0 40 00 80 06 e3 ae c0 a8 00 0a 80 77 0020 f5 0c c1 56 00 50 c8 96 a8 e6 a3 12 a6 47 50 18 0030 61 00 ec bc 00 00 47 45 54 20 £7 77 69 72 65 73 0040 68 61 72 6b 2d 6c 61 62 73 2f 49 4e 54 52 4f 2d
                                                                                                                                                                                      . . V . P .
                                                                                                                                                                                 hark-lab s/INTRO-
```

Packets: 6762 · Displayed: 4 (0.1%) · Dropped: 0 (0.0%)

wireshar k-file1.

DNS

01) site: gadgets.in

IP: 164.52.194.7

C:\Users\luiza>nslookup www.gadgets.in

Servidor: UnKnown

Address: 2804:14d:1:0:181:213:132:2

Não é resposta autoritativa:

Nome: www.gadgets.in

Address: 164.52.194.7

02) Universidade de Sorbonne

C:\Users\luiza>nslookup -type=ns sorbonne-universite.fr

Servidor: UnKnown

Address: 2804:14d:1:0:181:213:132:2

Não é resposta autoritativa:

sorbonne-universite.fr nameserver = shiva.jussieu.fr

sorbonne-universite.fr nameserver = soleil.uvsq.fr

sorbonne-universite.fr nameserver = ganesh.upmc.fr

```
C:\Users\luiza>nslookup portal.office365.com shiva.jussieu.fr
```

Servidor: shiva.jussieu.fr Address: 134.157.0.129

*** shiva.jussieu.fr não encontrou portal.office365.com: Query refused

04) Usa UDP

0., 05 021								
59 19:28:31,791742 192.168.0.10	181.213.132.3	DNS	72 Standard query 0x8a18 A www.ietf.org					
63 19:28:31,812475 181.213.132.3	192.168.0.10	DNS	165 Standard query response 0x8a18 A www.ietf.org CNAME www.ietf.org.cdn.cloudflare.					
1227 19:28:34,001714 192.168.0.10	181.213.132.3	DNS	78 Standard query 0xba22 AAAA analytics.ietf.org					
1233 19:28:35,010778 192.168.0.10	181.213.132.2	DNS	78 Standard query 0xba22 AAAA analytics.ietf.org					
1235 19:28:35,429477 181.213.132.3	192.168.0.10	DNS	120 Standard query response 0xba22 AAAA analytics.ietf.org CNAME ietf.org AAAA 2001:					
1237 19:28:35,429620 181.213.132.2	192.168.0.10	DNS	120 Standard query response 0xba22 AAAA analytics.ietf.org CNAME ietf.org AAAA 2001:					
			>					
Frame 59: 72 bytes on wire (576 bits), 72 bytes captured (576 bits) on interface \Device\NPF {09C6D243-6621-487A-838B-D0836146E086}, id 0								
Ethernet II. Src: IntelCor 0c:52:15 (5c:cd:5b:0c:52:15), Dst: ARRISGOR 0d:54:c2 (5c:e3:0e:0d:54:c2)								
Internet Protocol Version 4, Src: 192.168.0.10, Dst: 181.213.132.3								
User Datagram Protocol, Src Port: 63366, Dst Port: 53								
Domain Name System (query)								

05) Porta de destino da consulta: 53

Porta de origem da resposta: 53

- 06) A mensagem é enviada para o endereço 192.168.0.10. O endereço de IP do DNS é o mesmo.
- 07) Type: A (Host Address)

Não possui nenhum campo de resposta ("answer")

08) Existem 4 campos. Em comum, as quatro possuem: "Name"; "Type"; "Class"; "Time to live"; "Data lenght". Três delas possuem "Address" e uma possui "CNAME".

```
Answers
  ∨ www.ietf.org: type CNAME, class IN, cname www.ietf.org.cdn.cloudflare.net
       Name: www.ietf.org
       Type: CNAME (Canonical NAME for an alias) (5)
       Class: IN (0x0001)
       Time to live: 1800 (30 minutes)
       Data length: 33
       CNAME: www.ietf.org.cdn.cloudflare.net
  www.ietf.org.cdn.cloudflare.net: type A, class IN, addr 104.20.111.6
       Name: www.ietf.org.cdn.cloudflare.net
       Type: A (Host Address) (1)
       Class: IN (0x0001)
       Time to live: 300 (5 minutes)
       Data length: 4
       Address: 104.20.111.6
  www.ietf.org.cdn.cloudflare.net: type A, class IN, addr 172.67.33.249
       Name: www.ietf.org.cdn.cloudflare.net
       Type: A (Host Address) (1)
       Class: IN (0x0001)
       Time to live: 300 (5 minutes)
       Data length: 4
       Address: 172.67.33.249
  ∨ www.ietf.org.cdn.cloudflare.net: type A, class IN, addr 104.20.110.6
       Name: www.ietf.org.cdn.cloudflare.net
       Type: A (Host Address) (1)
       Class: IN (0x0001)
       Time to live: 300 (5 minutes)
       Data length: 4
       Address: 104.20.110.6
  [Request In: 59]
  [Time: 0.020733000 seconds]
```

09) O meu wireshark não capturou nenhum SYN enviado pelo meu servidor. Ele recebeu um ACK de outro IP que eu estou assumindo é CNAME.

1306 19:28:39,716850 18.229.78.240 192.168.0.10 TCP 60 443 → 49675 Ack=80 Win=204 Len=0

- 10) Não, as informações são enviadas diretamente pelas consultas DNS.
- 11) Porta de destino da consulta: 53

Porta de origem da resposta: 53

- 12) Estou usando wifi, meu endereço IP não aparece no wireshark. O destino da mensagem resposta é 2804:14c:5b70:8501:99cf:d090:ba38:8d58; que é um dos meus DNS locais.
- 13) Type: A (Host Address)

Não possui nenhum campo de resposta ("answer")

14) Existem 3 campos. Em comum, as três possuem: "Name"; "Type"; "Class"; "Time to live"; "Data lenght". Uma delas possui "Address" e duas possuem "CNAME".

```
Answers
  www.mit.edu: type CNAME, class IN, cname www.mit.edu.edgekey.net
       Name: www.mit.edu
       Type: CNAME (Canonical NAME for an alias) (5)
       Class: IN (0x0001)
       Time to live: 1800 (30 minutes)
       Data length: 25
       CNAME: www.mit.edu.edgekey.net
  www.mit.edu.edgekey.net: type CNAME, class IN, cname e9566.dscb.akamaiedge.net
       Name: www.mit.edu.edgekey.net
       Type: CNAME (Canonical NAME for an alias) (5)
       Class: IN (0x0001)
       Time to live: 60 (1 minute)
       Data length: 24
       CNAME: e9566.dscb.akamaiedge.net

    e9566.dscb.akamaiedge.net: type A, class IN, addr 23.77.110.137

       Name: e9566.dscb.akamaiedge.net
       Type: A (Host Address) (1)
       Class: IN (0x0001)
       Time to live: 20 (20 seconds)
       Data length: 4
       Address: 23.77.110.137
  [Request In: 13]
  [Time: 0.077118000 seconds]
```

15)

```
7 20:44:19.225993 2804:14c:5b70:8501:99cf:d090:ba38:8d58 2804:14d:1:0:181:213:132:2
                                                                                                                                         152 Standard guery 0x0001 PTR 2.0.0.0.2.3.1.0.3.1.2.0.1.8.1.0.0.0.0.0.1.0.0.0.d.4.1.0.4.6
                                                                                                                                         212 Standard query response 0x0001 No such name PTR 2.0.0.0.2.3.1.0.3.1.2.0.1.8.1.0.0.0.0
       12 20:44:19,247632 2804:14d:1:0:181:213:132:2
      13 20:44:19,253070 2804:14c:5b70:8501:99cf:d090:ba38:8d58 2804:14d:1:0:181:213:132:2
                                                                                                                                        91 Standard query 0x0002 A www.mit.edu
180 Standard query response 0x0002 A www.mit.edu CNAME www.mit.edu.edgekey.net CNAME e956
     14 20:44:19,330188 2804:14d:1:0:181:213:132:2
                                                                        2804:14c:5b70:8501:99cf:d090:ba38:8d58 DNS
      15 20:44:19,340231 2804:14c:5b70:8501:99cf:d090:ba38:8d58 2804:14d:1:0:181:213:132:2
                                                                                                                                          91 Standard guery 0x0003 AAAA www.mit.edu
      16 20:44:19,357657 2804:14d:1:0:181:213:132:2
                                                                        2804:14c:5b70:8501:99cf:d090:ba38:8d58 DNS
                                                                                                                                         220 Standard query response 0x0003 AAAA www.mit.edu CNAME www.mit.edu.edgekey.net CNA
> Frame 14: 180 bytes on wire (1440 bits), 180 bytes captured (1440 bits) on interface \Device\NPF_{09C6D243-6621-487A-83BB-D0B36146E086}, id 0
> Ethernet II, Src: ARRISGro_0d:54:c2 (5c:e3:0e:0d:54:c2), Dst: IntelCor_0c:52:15 (5c:cd:5b:0c:52:15)
 Internet Protocol Version 6, Src: 2804:14d:1:0:181:213:132:2, Dst: 2804:14c:5b70:8501:99cf:d090:ba38:8d58
  User Datagram Protocol, Src Port: 53, Dst Port: 64299
```

- 16) Estou usando wifi, meu endereço IP não aparece no wireshark. O destino da mensagem resposta é 2804:14c:5b70:8501:99cf:d090:ba38:8d58; que é um dos meus DNS locais.
- 17) Type: NS (Authoritative name server)

Não possui nenhum campo de resposta ("answer")

18) Os servidores ns.pucminas.br e server02.pucminas.br; não possui nenhuma informação sobre os endereços IP deles.

19)

```
107 Standard query 0x2826 A safebrowsing.googleapis.com
2804:14c:5b70:8501:99cf:d090:ba38:8d58
2804:14c:5b70:8501:99cf:d090:ba38:8d58
2804:14c:5b70:8501:99cf:d090:ba38:8d58
                                                                   2804:14d:1:0:181:213:132:2
2804:14d:1:0:181:213:132:3
                                                                                                                                                                  107 Standard query 0xfcb8 AAAA safebrowsing.googleapis.com
107 Standard query 0xfcb8 AAAA safebrowsing.googleapis.com
                                                                                                                                                                  107 Standard query 0x2826 A safebrowsing.googleapis.com and 172.217.162.170
123 Standard query response 0x2826 A safebrowsing.googleapis.com A 172.217.162.170
125 Standard query response 0xfcb8 AAAA safebrowsing.googleapis.com AAAA 2800:3f0:4004:808::200a
135 Standard query response 0xfcb8 AAAA safebrowsing.googleapis.com AAAA 2800:3f0:4004:806::200a
                                                                   2804:14d:1:0:181:213:132:3
                                                                                                                                     DNS
2804:14d:1:0:181:213:132:2
                                                                   2804:14c:5b70:8501:99cf:d090:ba38:8d58
                                                                   2804:14c:5b70:8501:99cf:d090:ba38:8d58
2804:14c:5b70:8501:99cf:d090:ba38:8d58
2804:14d:1:0:181:213:132:2
                                                                                                                                                                  123 Standard query response 0x2826 A safebrowsing.googleapis.com A 172.217.29.74

152 Standard query 0x0001 PTR 2.0.0.0.2.3.1.0.3.1.2.0.1.8.1.0.0.0.0.0.1.0.0.0.d.4.1.0.4.0.8.2.ip6.arpa

212 Standard query response 0x0001 No such name PTR 2.0.0.0.2.3.1.0.3.1.2.0.1.8.1.0.0.0.0.0.d.4.1.0.4.0.8.2.ip6.arpa
2804:14d:1:0:181:213:132:3
                                                                   2804:14c:5b70:8501:99cf:d090:ba38:8d58
2804:14d:1:0:101:215:132:3
2804:14d:5b70:8501:99cf:d090:ba38:8d58
2804:14d:1:0:181:213:132:2
                                                                   2804:14c:5b70:8501:99cf:d090:ba38:8d58
                                                                   2804:14d:1:0:181:213:132:2
                                                                                                                                                                    91 Standard guery 0x0002 NS pucminas.br
2804:14d:1:0:181:213:132:2
                                                                   2804:14c:5b70:8501:99cf:d090:ba38:8d58 DNS
                                                                                                                                                                  131 Standard query response 0x0002 NS pucminas.br NS ns.pucminas.br NS server02.pucminas.br
  Frame 80: 131 bytes on wire (1048 bits), 131 bytes captured (1048 bits) on interface \Device\NPF_{09C60243-6621-487A-8388-D0836146E086}, id 0 Ethernet II, Src: ARRISGro_0d:54:c2 (5c:e3:0e:0d:54:c2), Dst: IntelCor_0c:52:15 (5c:cd:5b:0c:52:15)
Internet Protocol Version 6, Src: 2804:14d:1:0:181:213:132:2, Dst: 2804:14c:5b70:8501:99cf:d090:ba38:8d58
   User Datagram Protocol, Src Port: 53, Dst Port: 64022
```

- 20) O destino da mensagem resposta é 192.168.0.10; que é meu endereço IP.
- 21) Type: A (Host Address)

Não possui nenhum campo de resposta ("answer")

22) Um campo de resposta que contém "Name"; "Type"; "Class"; "Time to live"; "Data lenght" e "Address" de ns.pucminaas.br

```
. -- -- - ---
Answers
  ns.pucminas.br: type A, class IN, addr 200.229.32.1
        Name: ns.pucminas.br
        Type: A (Host Address) (1)
        Class: IN (0x0001)
        Time to live: 60 (1 minute)
        Data length: 4
        Address: 200.229.32.1
  [Request In: 296]
  [Time: 0.180336000 seconds]
```

```
2804:14c:5b70:8501:99cf:d090:ba38:8d58
                                                                                                                           2804:14d:1:0:181:213:132:2
                                                                                                                                                                                                                                                                                                                  95 Standard query 0xd1a4 A ssl.gstatic.com
                                                                                                                                                                                                                                                                                                              95 Standard query 0x9afe ANAA ssl.gstatic.com
95 Standard query 0x9afe ANAA ssl.gstatic.com
95 Standard query 0x9afe AAAA ssl.gstatic.com
123 Standard query 0x9afe AAAA ssl.gstatic.com
123 Standard query 0x9afe AAAA ssl.gstatic.com AAAA 2800:3f0:4004:800::2003
2804:14c:5b70:8501:99cf:d090:ba38:8d58
                                                                                                                              2804:14d:1:0:181:213:132:2
2804:14c:5b70:8501:99cf:d090:ba38:8d58
2804:14c:5b70:8501:99cf:d090:ba38:8d58
2804:14d:1:0:181:213:132:2
                                                                                                                             2804:14d:1:0:181:213:132:3
2804:14d:1:0:181:213:132:3
                                                                                                                              2804:14c:5b70:8501:99cf:d090:ba38:8d58 DNS
                                                                                                                                                                                                                                                                                                              113 Standard query response 0xd1a4 A ssl.gstatic.com A 216.58.222.67
111 Standard query response 0xd1a4 A ssl.gstatic.com A 216.58.222.67
123 Standard query response 0xd1a4 A ssl.gstatic.com A 216.58.222.99
123 Standard query response 0x9afe AAAA ssl.gstatic.com AAAA 2800:3f0:4004:808::2003
2804:14d:1:0:181:213:132:2
                                                                                                                              2804:14c:5b70:8501:99cf:d090:ba38:8d58 DNS
                                                                                                                            2804:14c:5b70:8501:99cf:d090:ba38:8d58
2804:14c:5b70:8501:99cf:d090:ba38:8d58
2804:14d:1:0:181:213:132:2
2804:14d:1:0:181:213:132:3
2804:14d:1:0:181:213:132:3
2804:14c:5b70:8501:99cf:d090:ba38:8d58
                                                                                                                                                                                                                                                                                                                 94 Standard query 0xc699 A ns.pucminas.br
                                                                                                                                                                                                                                                                                                              94 Standard query 0xabel AAAA ns.pucminas.br
94 Standard query 0xabel AAAA ns.pucminas.br
94 Standard query 0xabel AAAA ns.pucminas.br
110 Standard query 0xc699 A ns.pucminas.br
110 Standard query response 0xc699 A ns.pucminas.br A 200.229.32.1
2804:14c:5b70:8501:99cf:d090:ba38:8d58
                                                                                                                             2804:14d:1:0:181:213:132:2
                                                                                                                             2804:14d:1:0:181:213:132:3 DNS
2804:14d:1:0:181:213:132:3 DNS
2804:14d:1:0:181:213:132:3 DNS
2804:14c:5b70:8501:99cf:d090:ba38:8d58
2804:14c:5b70:8501:99cf:d090:ba38:8d58
2804:14d:1:0:181:213:132:2
                                                                                                                                                                                                                                                                                                              115 Standard query response Øxabel AAAA ns.pucminas.br SOA ns.pucminas.br
85 Standard query 0x0001 PTR 1.32.229.200.in-addr.arpa
135 Standard query response Øxabel AAAA ns.pucminas.br SOA ns.pucminas.br
191 Standard query response Øxabel AAAA ns.pucminas.br SOA ns.pucminas.br
191 Standard query response Øx0001 PTR 1.32.229.200.in-addr.arpa PTR server01.pucminas.br NS ns.pucminas.br NS ns
2804 • 14d • 1 • 0 • 181 • 213 • 132 • 2
                                                                                                                             2804:14c:5b70:8501:99cf:d090:ba38:8d58 DNS
192.168.0.10
2804:14d:1:0:181:213:132:3
                                                                                                                             200.229.32.1
2804:14c:5b70:8501:99cf:d090:ba38:8d58
200.229.32.1
                                                                                                                             192.168.0.10
                                                                                                                                                                                                                                                                                                              191 Standard query response 0x0001 PlR 1.32.229.200.n-addr.arpa P 74 Standard query 0x0002 A www.ait.or.kr 74 Standard query response 0x0002 Refused A www.ait.or.kr 74 Standard query 0x0003 AAA www.ait.or.kr 74 Standard query presponse 0x0003 Refused AAAA www.ait.or.kr 74 Standard query response 0x0004 A www.ait.or.kr 74 Standard query response 0x0004 A sww.ait.or.kr 74 Standard query response 0x0004 A sww.ait.or.kr 74 Standard query response 0x0004 A www.ait.or.kr 74 Standard query 0x0006 AAAA www.ait.or.kr 34 Standard Query 0x006 AAAA www.ait.or.kr 34 Standard Query 0x006 AAAA www.ait.
                                                                                                                             200.229.32.1
192.168.0.10
200.229.32.1
192.168.0.10
200.229.32.1
 200.229.32.1
                                                                                                                             192.168.0.10
                                                                                                                             200.229.32.1
2804:14c:5b70:8501:99cf:d090:ba38:8d58
192.168.0.10
192.168.0.10
2804:14d:1:0:181:213:132:3
200.229.32.1
192,168,0,16
                                                                                                                              200.229.32.1
                                                                                                                                                                                                                                                                                                                  74 Standard guery 0x0005 AAAA www.aiit.or.k
 200.229.32.1
                                                                                                                             192.168.0.10
                                                                                                                                                                                                                                                                                                                 74 Standard query response 0x0005 Refused AAAA www.aiit.or.kr
```

> Frame 307: 110 bytes on wire (880 bits), 110 bytes captured (880 bits) on interface \Device\NPF_{09C6D243-6621-487A-838B-D0B36146E086}, id 0
> Ethernet II, Src: ARRISGro_0d:54:c2 (Sc:e3:0e:0d:54:c2), Dst: IntelCor_0c:52:15 (Sc:cd:5b:0e:52:15)
> Internet Protocol Version 6, Src: 2804:14d:1:0:181:213:132:3, Dst: 2804:14c:5b70:8501:99cf:d090:ba38:8d58

23)
> Domain Name System (response)

HTTP

01) O navegador executa HTTP 1.1, assim como o servidor.

Hypertext Transfer Protocol

- ✓ GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1\r\n
 - > [Expert Info (Chat/Sequence): GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1\r\n]

Request Method: GET

Request URI: /wireshark-labs/HTTP-wireshark-file1.html

Request Version: HTTP/1.1

∨ Hypertext Transfer Protocol

- HTTP/1.1 200 OK\r\n
 - > [Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]

Response Version: HTTP/1.1

Status Code: 200

[Status Code Description: OK]

Response Phrase: OK

02) Aceita pt-BR, pt, en, es, en-US

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/85.0.4183.83 Safari/537.36\r\n

Accept-Encoding: gzip, deflate\r\n

Accept-Language: pt-BR,pt;q=0.9,en-US;q=0.8,en;q=0.7,es;q=0.6\r\n

03) Meu IP: 192.168.0.10

IP de gaia.cs.umass.edu: 128.119.245.12

Time	Source	Destination	Protocol	Length Info
14:02:22,357840	192.168.0.10	128.119.245.12	HTTP	559 GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1

04) Status code: 200

HTTP/1.1 200 OK\r\n

> [Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]

Response Version: HTTP/1.1

Status Code: 200

[Status Code Description: OK]

Response Phrase: OK

05) Última vez que foi modificado: Sábado, 5 de setembro de 2020 05:59 GMT

Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/7.4.9 mod_perl/2.0.11 Perl/v5.16.3\r\n

Last-Modified: Sat, 05 Sep 2020 05:59:03 GMT\r\n

ETag: "80-5ae8aaeb91097"\r\n Accept-Ranges: bytes\r\n

```
Content-Type: text/html; charset=UTF-8\r\n
\r\n
[HTTP response 1/1]
[Time since request: 0.164679000 seconds]
[Request in frame: 336]
[Request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html]
File Data: 128 bytes
```

- 07) Todos os cabeçalhos estão na listagem.
- 08) Não vejo a linha "IF-MODIFIED-SINCE".

```
/ Hypertext Transfer Protocol
        ✓ GET /wireshark-labs/HTTP-wireshark-file2.html HTTP/1.1\r\n
                V [Expert Info (Chat/Sequence): GET /wireshark-labs/HTTP-wireshark-file2.html HTTP/1.1\r\n]
                                  [GET /wireshark-labs/HTTP-wireshark-file2.html HTTP/1.1\r\n]
                                  [Severity level: Chat]
                                 [Group: Sequence]
                       Request Method: GET
                       Request URI: /wireshark-labs/HTTP-wireshark-file2.html
                       Request Version: HTTP/1.1
              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/85.0.4183.83 Safari/537.36\r\n
              Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/appg,*/*;q=0.8,application/signed-exchange;v=b3;q=0.9\r\n
               Accept-Encoding: gzip, deflate\r\n
               \label{lem:accept-Language:pt-BR,pt;q=0.9,en-US;q=0.8,en;q=0.7,es;q=0.6\\ $r\in \mathbb{R}$. Accept-Language: pt-BR,pt;q=0.9,en-US;q=0.8,en;q=0.7,es;q=0.6\\ $r\in \mathbb{R}$. Accept-Language: pt-BR,pt;q=0.9,en-US;q=0.8,en;q=0.7,es;q=0.8\\ $r\in \mathbb{R}$. Accept-Language: pt-BR,pt;q=0.8,en;q=0.7,es;q=0.8\\ $r\in \mathbb{R}$. Accept-Language: pt-BR,pt;q=0.8,en;q=0.7,es;q=0.8\\ $r\in \mathbb{R}$. Accept-Language: pt-BR,pt;q=0.8,en;q=0.8\\ $r\in \mathbb{R}$. Accept-Language: pt-BR,pt;q=0.8\\ $r\in \mathbb{R}$. Accept-Language: pt-BR,pt;q=0.8
               [Full request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file2.html]
               [HTTP request 1/1]
               [Response in frame: 2975]
```

09) Sim, todo o arquivo html está exibido em line-based text data

10) Sim, eu vejo a linha. O que segue é a data de hoje com a hora de acesso no fuso GMT.

If-Modified-Since: Sat, 05 Sep 2020 05:59:03 GMT\r\n

11) Status 304

```
Hypertext Transfer Protocol

V HTTP/1.1 304 Not Modified\r\n

> [Expert Info (Chat/Sequence): HTTP/1.1 304 Not Modified\r\n]

Response Version: HTTP/1.1

Status Code: 304

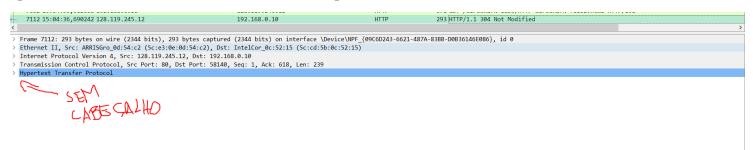
[Status Code Description: Not Modified]

Response Phrase: Not Modified

Date: Sat, 05 Sep 2020 18:04:36 GMT\r\n

Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/7.4.9 mod_perl/2.0.11 Perl/v5.16.3\r\n
```

O servidor não manda novamente o conteúdo pois não houveram modificações, não sendo necessário o reenvio da página. Consigo chegar a essa conclusão pois o cabeçalho de line-based text data não aparece novamente e devido ao status enviado pelo servidor (304-Not modified).



12) Apenas um HTTP GET foi enviado pelo meu navegador.

13) 4 segmentos de TCP foram necessários para carregar a resposta.

```
> [4 Reassembled TCP Segments (4860 bytes): #69(1460), #70(1460), #71(1460), #72(480)]
> Hypertext Transfer Protocol
> Line-based text data: text/html (98 lines)
```

14) Status code: 200. Description: OK

```
Hypertext Transfer Protocol

V HTTP/1.1 200 OK\r\n

V [Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]
      [HTTP/1.1 200 OK\r\n]
      [Severity level: Chat]
      [Group: Sequence]
    Response Version: HTTP/1.1

Status Code: 200
    [Status Code Description: OK]
    Response Phrase: OK
```

15) Não tem nenhuma linha de HTTP nos segmentos TCP.

```
V [4 Reassembled TCP Segments (4860 bytes): #69(1460), #70(1460), #71(1460), #72(480)]

[Frame: 69, payload: 0-1459 (1460 bytes)]

[Frame: 70, payload: 1460-2919 (1460 bytes)]

[Frame: 71, payload: 2920-4379 (1460 bytes)]

[Frame: 72, payload: 4380-4859 (480 bytes)]

[Segment count: 4]

[Reassembled TCP length: 4860]

[Reassembled TCP Data: 485454502f312e3120323030204f4b0d0a446174653a2053...]
```

16) 3 mensagens HTTP GET foram requisitadas para os endereços:

/wireshark-labs/HTTP-wireshark-file4.html HTTP/1.1

/pearson.png HTTP/1.1

/~kurose/cover_5th_ed.jpg HTTP/1.1

```
HTTP 559 GET /wireshark-labs/HTTP-wireshark-file4.html HTTP/1.1
HTTP 1126 HTTP/1.1 200 OK (text/html)
HTTP 491 GET /pearson.png HTTP/1.1
HTTP 744 HTTP/1.1 200 OK (PNG)
HTTP 505 GET /~kurose/cover_5th_ed.jpg HTTP/1.1
```

- 17) Sequência, pois o servidor esperou uma ser confirmada para requisitar a outra.
- 18) Código 401 Unauthorized

```
95 16:08:02,764525 128.119.245.12
                                                                192.168.0.10
                                                                                                                          770 HTTP/1.1 401 Unauthorized (text/html)
Transmission Control Protocol, Src Port: 80, Dst Port: 58348, Seq: 1, Ack: 522, Len: 716
Hypertext Transfer Protocol

✓ HTTP/1.1 401 Unauthorized\r\n

    ✓ [Expert Info (Chat/Sequence): HTTP/1.1 401 Unauthorized\r\n]
        [HTTP/1.1 401 Unauthorized\r\n]
         [Severity level: Chat]
        [Group: Sequence]
      Response Version: HTTP/1.1
      Status Code: 401
      [Status Code Description: Unauthorized]
      Response Phrase: Unauthorized
   Date: Sat, 05 Sep 2020 19:08:02 GMT\r\n
   Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/7.4.9 mod_perl/2.0.11 Perl/v5.16.3\r\n
   WWW-Authenticate: Basic realm="wireshark-students only"\r\n
 > Content-Length: 381\r\n
   Keep-Alive: timeout=5, max=100\r\n
   Connection: Keep-Alive\r\n
   Content-Type: text/html; charset=iso-8859-1\r\n
   [HTTP response 1/1]
   [Time since request: 0.230641000 seconds]
   [Request in frame: 91]
   [Request URI: http://gaia.cs.umass.edu/wireshark-labs/protected_pages/HTTP-wireshark-file5.html]
   File Data: 381 bytes
```

19) O campo "Authorization" com as credentials que eu inseri.

✓ Hypertext Transfer Protocol

> GET /wireshark-labs/protected_pages/HTTP-wireshark-file5.html HTTP/1.1\r\n

Host: gaia.cs.umass.edu\r\n
Connection: keep-alive\r\n
Cache-Control: max-age=0\r\n

✓ Authorization: Basic d2lyZXNoYXJrLXN0dWRlbnRzOm5ldHdvcms=\r\n

Credentials: wireshark-students:network

Upgrade-Insecure-Requests: 1\r\n