Практична робота №2 з
курсу «Комп'ютерні мережі»

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Київ – 2020р.

Frame 84: 594 bytes on wire (4752 bits), 594 bytes captured (4752 bits) on interface
\Device\NPF_{9942D681-10B5-45DA-B428-41575E5AAC5B}, id 0
Ethernet II, Src: IntelCor_aa:4b:78 (80:00:0b:aa:4b:78), Dst: ASUSTekC_af:e3:ec
(70:8b:cd:af:e3:ec)
Internet Protocol Version 4, Src: 192.168.1.100, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 58977, Dst Port: 80, Seq: 1, Ack: 1, Len: 540
Hypertext Transfer Protocol
    GET /wireshark-labs/HTTP-wireshark-file1.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/80.0.3987.149 Safari/537.36\r\n   Accept:
text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8,applica
tion/signed-exchange;v=b3;q=0.9\r\n
    Accept-Encoding: gzip, deflate\r\n
    Accept-Language: en-GB,en;q=0.9,ru-RU;q=0.8,ru;q=0.7,uk-
UA;q=0.6,uk;q=0.5,koKR;q=0.4,ko;q=0.3,en-US;q=0.2\r\n
    \r\n
    [Full request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html]
[HTTP request 1/1]
    [Response in frame: 88]

Frame 88: 540 bytes on wire (4320 bits), 540 bytes captured (4320 bits) on interface
\Device\NPF_{9942D681-10B5-45DA-B428-41575E5AAC5B}, id 0
Ethernet II, Src: ASUSTekC_af:e3:ec (70:8b:cd:af:e3:ec), Dst:
IntelCor_aa:4b:78 (80:00:0b:aa:4b:78)
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.1.100
Transmission Control Protocol, Src Port: 80, Dst Port: 58977, Seq: 1, Ack: 541, Len: 486
Hypertext Transfer Protocol
    HTTP/1.1 200 OK\r\n
    Date: Sun, 29 Mar 2020 08:30:44 GMT\r\n
    Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/5.4.16 mod_perl/2.0.11
Perl/v5.16.3\r\n
    Last-Modified: Sun, 29 Mar 2020 05:59:04 GMT\r\n
    ETag: "80-5a1f80826eccd"\r\n
    Accept-Ranges: bytes\r\n
    Content-Length: 128\r\n
    Keep-Alive: timeout=5, max=100\r\n
    Connection: Keep-Alive\r\n
    Content-Type: text/html; charset=UTF-8\r\n
    \r\n
    [HTTP response 1/1]
    [Time since request: 0.150164000 seconds]
    [Request in frame: 84]
    [Request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html]
File Data: 128 bytes
Line-based text data: text/html (4 lines)

Контрольні запитання:

1. Яку версію протоколу HTTP використовує ваш браузер (1.0 чи 1.1)? **GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1\r\n** Яку версію протоколу використовує сервер? **HTTP/1.1 200 OK\r\n**

2. Які мови (якщо вказано) браузер може прийняти від сервера? **en-GB,en;q=0.9,ru-RU;q=0.8,ru;q=0.7,uk-UA;q=0.6,uk;q=0.5,ko-KR;q=0.4,ko;q=0.3,en-US;q=0.2 Британська англійська, російська, українська, корейська, американська англійська**

3. Які IP-адреси вашого комп'ютера та цільового веб-сервера? **Адреса комп'ютера 192.168.1.100 цільова адреса веб-сервера 128.119.245.12**

4. Який статусний код сервер повернув у відповіді вашому браузеру? **200**

5. Коли на сервері в останній раз був модифікований файл, який запитується браузером? **Sun, 29 Mar 2020 05:59:04 GMT**

6. Скільки байт контенту повертається сервером? **128 ContentLength: 128\r\n**

7. Переглядаючи нерозібраний байтовий потік пакету, чи бачите ви деякі заголовки в потоці, які не відображаються у вікні деталей пакету? Якщо так, назвіть один з них. **Таких немає**

Frame 189: 679 bytes on wire (5432 bits), 679 bytes captured (5432 bits) on interface \Device\NPF_{9942D681-10B5-45DA-B428-41575E5AAC5B}, id 0
Ethernet II, Src: IntelCor_aa:4b:78 (80:00:0b:aa:4b:78), Dst: ASUSTekC_af:e3:ec (70:8b:cd:af:e3:ec)
Internet Protocol Version 4, Src: 192.168.1.100, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 59183, Dst Port: 80, Seq: 1, Ack: 1, Len: 625
Hypertext Transfer Protocol
  GET /wireshark-labs/HTTP-wireshark-file1.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/80.0.3987.149 Safari/537.36\r\n   Accept: text/html,application/xhtml+xml,application/xml;q=0.9,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: en-GB,en;q=0.9,ru-RU;q=0.8,ru;q=0.7,uk-UA;q=0.6,uk;q=0.5,koKR;q=0.4,ko;q=0.3,en-US;q=0.2\r\n
  If-None-Match: "80-5a1f80826eccd"\r\n
  If-Modified-Since: Sun, 29 Mar 2020 05:59:04 GMT\r\n
  \r\n
  [Full request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html]
  [HTTP request 1/1]

[Response in frame: 191]

Frame 191: 293 bytes on wire (2344 bits), 293 bytes captured (2344 bits) on interface \Device\NPF_{9942D681-10B5-45DA-B428-41575E5AAC5B}, id 0
Ethernet II, Src: ASUSTekC_af:e3:ec (70:8b:cd:af:e3:ec), Dst: IntelCor_aa:4b:78 (80:00:0b:aa:4b:78)
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.1.100
Transmission Control Protocol, Src Port: 80, Dst Port: 59183, Seq: 1, Ack: 626, Len: 239
Hypertext Transfer Protocol
    HTTP/1.1 304 Not Modified\r\n
    Date: Sun, 29 Mar 2020 09:02:12 GMT\r\n
    Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/5.4.16 mod_perl/2.0.11 Perl/v5.16.3\r\n
    Connection: Keep-Alive\r\n
    Keep-Alive: timeout=5, max=100\r\n
    ETag: "80-5a1f80826eccd"\r\n
    \r\n
    [HTTP response 1/1]
    [Time since request: 0.131638000 seconds]
    [Request in frame: 189]
    [Request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html]

8. Перевірте вміст першого запиту HTTP GET від вашого браузера до сервера. Чи є в ньому заголовок IF-MODIFIED-SINCE? **Hi** 9. Перевірте вміст першої відповіді сервера. Чи повернув сервер вміст файлу безпосередньо у відповіді? **Так**

10. Перевірте вміст другого запиту HTTP GET. Чи є в ньому заголовок IF-MODIFIED-SINCE? Якщо так, яке значення йому відповідає?

   If-Modified-Since: Sun, 29 Mar 2020 05:59:04 GMT\r\n

11. Який код та опис статусу другої відповіді сервера? Чи повернув сервер вміст файлу безпосередньо у відповіді? **304 Not Modified, ні**

Frame 152: 569 bytes on wire (4552 bits), 569 bytes captured (4552 bits) on interface \Device\NPF_{9942D681-10B5-45DA-B428-41575E5AAC5B}, id 0
Ethernet II, Src: IntelCor_aa:4b:78 (80:00:0b:aa:4b:78), Dst: ASUSTekC_af:e3:ec (70:8b:cd:af:e3:ec)
Internet Protocol Version 4, Src: 192.168.1.100, Dst: 104.28.25.14
Transmission Control Protocol, Src Port: 52559, Dst Port: 80, Seq: 1, Ack: 1, Len: 515
Hypertext Transfer Protocol
    GET /r/dreams.gif HTTP/1.1\r\n
    Host: www.reactiongifs.com\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/80.0.3987.149 Safari/537.36\r\n   Accept: text/html,application/xhtml+xml,application/xml;q=0.9,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: en-GB,en;q=0.9,ru-RU;q=0.8,ru;q=0.7,uk-UA;q=0.6,uk;q=0.5,koKR;q=0.4,ko;q=0.3,en-US;q=0.2\r\n
\r\n
[Full request URI: http://www.reactiongifs.com/r/dreams.gif]
[HTTP request 1/2]
[Response in frame: 1142]
[Next request in frame: 1148]

Frame 1142: 358 bytes on wire (2864 bits), 358 bytes captured (2864 bits) on interface
\Device\NPF_{9942D681-10B5-45DA-B428-41575E5AAC5B}, id 0
Ethernet   II,   Src: ASUSTekC_af:e3:ec   (70:8b:cd:af:e3:ec),   Dst:
    IntelCor_aa:4b:78 (80:00:0b:aa:4b:78)
Internet Protocol Version 4, Src: 104.28.25.14, Dst: 192.168.1.100
Transmission Control Protocol, Src Port: 80, Dst Port: 52559, Seq: 953381, Ack: 516, Len:
304
[654 Reassembled TCP Segments (953684 bytes): #154(1460), #155(1460), #156(1460),
#158(1460), #159(1460), #161(1460), #162(1460), #164(1460), #165(1460), #167(1460),
#168(1460), #170(1460), #171(1460), #173(1460), #174(1460), #176(1460), #1]
Hypertext Transfer Protocol
    HTTP/1.1 200 OK\r\n
    Date: Sun, 29 Mar 2020 09:28:28 GMT\r\n
    Content-Type: image/gif\r\n
    Content-Length: 953181\r\n
    Connection: keep-alive\r\n
    Set-Cookie: __cfduid=d16d153125785fa58aaa2a1d5c54419ee1585474108; expires=Tue,
28-Apr-20 09:28:28 GMT; path=/; domain=.reactiongifs.com; HttpOnly; SameSite=Lax\r\n
    Last-Modified: Mon, 26 Dec 2016 21:03:23 GMT\r\n
    Cache-control: public, max-age=2678400\r\n
    CF-Cache-Status: HIT\r\n
    Age: 342\r\n
    Accept-Ranges: bytes\r\n
    Vary: Accept-Encoding\r\n
    Server: cloudflare\r\n
    CF-RAY: 57b88f989ade3d71-KBP\r\n
    \r\n
    [HTTP response 1/2]
    [Time since request: 1.826131000 seconds]
    [Request in frame: 152]
    [Next request in frame: 1148]
    [Next response in frame: 1178]
    [Request URI: http://www.reactiongifs.com/r/dreams.gif]
    File Data: 953181 bytes
Compuserve GIF, Version: GIF89a

Frame 1148: 566 bytes on wire (4528 bits), 566 bytes captured (4528 bits) on interface
\Device\NPF_{9942D681-10B5-45DA-B428-41575E5AAC5B}, id 0
Ethernet   II,   Src: IntelCor_aa:4b:78   (80:00:0b:aa:4b:78),   Dst:
    ASUSTekC_af:e3:ec (70:8b:cd:af:e3:ec)
Internet Protocol Version 4, Src: 192.168.1.100, Dst: 104.28.25.14
Transmission Control Protocol, Src Port: 52559, Dst Port: 80, Seq: 516, Ack: 953685, Len:
512
Hypertext Transfer Protocol
    GET /favicon.ico HTTP/1.1\r\n

Host: www.reactiongifs.com\r\n

Connection: keep-alive\r\n

User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/80.0.3987.149 Safari/537.36\r\n Accept: image/webp,image/apng,image/*,*/*;q=0.8\r\n

Referer: http://www.reactiongifs.com/r/dreams.gif\r\n

Accept-Encoding: gzip, deflate\r\n

Accept-Language: en-GB,en;q=0.9,ru-RU;q=0.8,ru;q=0.7,uk-UA;q=0.6,uk;q=0.5,koKR;q=0.4,ko;q=0.3,en-US;q=0.2\r\n

Cookie: __cfduid=d16d153125785fa58aaa2a1d5c54419ee1585474108\r\n

\r\n

[Full request URI: http://www.reactiongifs.com/favicon.ico]

[HTTP request 2/2]

[Prev request in frame: 152]

[Response in frame: 1178]

Frame 1178: 393 bytes on wire (3144 bits), 393 bytes captured (3144 bits) on interface \Device\NPF_{9942D681-10B5-45DA-B428-41575E5AAC5B}, id 0

Ethernet II, Src: ASUSTekC_af:e3:ec (70:8b:cd:af:e3:ec), Dst: IntelCor_aa:4b:78 (80:00:0b:aa:4b:78)

Internet Protocol Version 4, Src: 104.28.25.14, Dst: 192.168.1.100

Transmission Control Protocol, Src Port: 80, Dst Port: 52559, Seq: 953685, Ack: 1028, Len: 339

Hypertext Transfer Protocol

HTTP/1.1 200 OK\r\n

Date: Sun, 29 Mar 2020 09:28:30 GMT\r\n

Content-Type: image/vnd.microsoft.icon\r\n

Content-Length: 0\r\n

Connection: keep-alive\r\n

X-Powered-By: PHP/5.6.32\r\n

Cache-Control: private, max-age=360, must-revalidate\r\n

CF-Cache-Status: BYPASS\r\n

Accept-Ranges: bytes\r\n

Vary: Accept-Encoding\r\n

Server: cloudflare\r\n

CF-RAY: 57b88fa499033d71-KBP\r\n

\r\n

[HTTP response 2/2]

[Time since request: 0.348608000 seconds]

[Prev request in frame: 152]

[Prev response in frame: 1142]

[Request in frame: 1148]

[Request URI: http://www.reactiongifs.com/favicon.ico]

12. Скільки повідомлень HTTP GET було відправлено вашим браузером? **2**

13. Скільки пакетів TCP було необхідно для доставки одної відповіді HTTP-сервера? **2**

14. Який код та опис статусу був у відповіді сервера? **200 OK (GIF89a)**

15. Чи зустрічаються у даних пакетів-продовжень протоколу TCP стрічки з кодом та описом статусу відповіді, або ж якісь заголовки протоколу HTTP? **Hi**

Frame 470: 594 bytes on wire (4752 bits), 594 bytes captured (4752 bits) on interface \Device\NPF_{9942D681-10B5-45DA-B428-41575E5AAC5B}, id 0
Ethernet II, Src: IntelCor_aa:4b:78 (80:00:0b:aa:4b:78), Dst: ASUSTekC_af:e3:ec (70:8b:cd:af:e3:ec)
Internet Protocol Version 4, Src: 192.168.1.100, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 53059, Dst Port: 80, Seq: 1, Ack: 1, Len: 540
Hypertext Transfer Protocol
    GET /wireshark-labs/HTTP-wireshark-file4.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/80.0.3987.149 Safari/537.36\r\n   Accept: text/html,application/xhtml+xml,application/xml;q=0.9,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: en-GB,en;q=0.9,ru-RU;q=0.8,ru;q=0.7,uk-UA;q=0.6,uk;q=0.5,ko-KR;q=0.4,ko;q=0.3,en-US;q=0.2\r\n
    \r\n
    [Full request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file4.html]
[HTTP request 1/2]
    [Response in frame: 559]
    [Next request in frame: 602]

Frame 559: 1127 bytes on wire (9016 bits), 1127 bytes captured (9016 bits) on interface \Device\NPF_{9942D681-10B5-45DA-B428-41575E5AAC5B}, id 0
Ethernet   II,   Src: ASUSTekC_af:e3:ec   (70:8b:cd:af:e3:ec),   Dst: IntelCor_aa:4b:78 (80:00:0b:aa:4b:78)
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.1.100
Transmission Control Protocol, Src Port: 80, Dst Port: 53059, Seq: 1, Ack: 541, Len: 1073
Hypertext Transfer Protocol
    HTTP/1.1 200 OK\r\n
    Date: Sun, 29 Mar 2020 09:59:26 GMT\r\n
    Server: Apache/2.4.6   (CentOS)   OpenSSL/1.0.2k-fips   PHP/5.4.16   mod_perl/2.0.11 Perl/v5.16.3\r\n
    Last-Modified: Sun, 29 Mar 2020 05:59:04 GMT\r\n
    ETag: "2ca-5a1f80825b44b"\r\n
    Accept-Ranges: bytes\r\n
    Content-Length: 714\r\n
    Keep-Alive: timeout=5, max=100\r\n
    Connection: Keep-Alive\r\n
    Content-Type: text/html; charset=UTF-8\r\n
    \r\n
    [HTTP response 1/2]
    [Time since request: 0.829777000 seconds]
    [Request in frame: 470]
    [Next request in frame: 602]
    [Next response in frame: 657]

[Request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file4.html]
File Data: 714 bytes
Line-based text data: text/html (17 lines)

Frame 602: 526 bytes on wire (4208 bits), 526 bytes captured (4208 bits) on interface
\Device\NPF_{9942D681-10B5-45DA-B428-41575E5AAC5B}, id 0
Ethernet   II,   Src: IntelCor_aa:4b:78   (80:00:0b:aa:4b:78),   Dst: ASUSTekC_af:e3:ec
(70:8b:cd:af:e3:ec)
Internet Protocol Version 4, Src: 192.168.1.100, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 53059, Dst Port: 80, Seq: 541, Ack: 1074, Len: 472
Hypertext Transfer Protocol
    GET /pearson.png HTTP/1.1\r\n
    Host: gaia.cs.umass.edu\r\n
    Connection: keep-alive\r\n
    User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like
Gecko) Chrome/80.0.3987.149 Safari/537.36\r\n
    Accept: image/webp,image/apng,image/*,*/*;q=0.8\r\n
    Referer: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file4.html\r\n
    Accept-Encoding: gzip, deflate\r\n
    Accept-Language: en-GB,en;q=0.9,ru-RU;q=0.8,ru;q=0.7,uk-
UA;q=0.6,uk;q=0.5,koKR;q=0.4,ko;q=0.3,en-US;q=0.2\r\n
    \r\n
    [Full request URI: http://gaia.cs.umass.edu/pearson.png]
    [HTTP request 2/2]
    [Prev request in frame: 470]
    [Response in frame: 657]

Frame 654: 540 bytes on wire (4320 bits), 540 bytes captured (4320 bits) on interface
\Device\NPF_{9942D681-10B5-45DA-B428-41575E5AAC5B}, id 0
Ethernet   II,   Src: IntelCor_aa:4b:78   (80:00:0b:aa:4b:78),   Dst: ASUSTekC_af:e3:ec
(70:8b:cd:af:e3:ec)
Internet Protocol Version 4, Src: 192.168.1.100, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 53064, Dst Port: 80, Seq: 1, Ack: 1, Len: 486
Hypertext Transfer Protocol
    GET /~kurose/cover_5th_ed.jpg HTTP/1.1\r\n
    Host: manic.cs.umass.edu\r\n
    Connection: keep-alive\r\n
    User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like
Gecko) Chrome/80.0.3987.149 Safari/537.36\r\n
    Accept: image/webp,image/apng,image/*,*/*;q=0.8\r\n
    Referer: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file4.html\r\n
    Accept-Encoding: gzip, deflate\r\n
    Accept-Language: en-GB,en;q=0.9,ru-RU;q=0.8,ru;q=0.7,uk-UA;q=0.6,uk;q=0.5,ko-
KR;q=0.4,ko;q=0.3,en-US;q=0.2\r\n
    \r\n
    [Full request URI: http://manic.cs.umass.edu/~kurose/cover_5th_ed.jpg]
    [HTTP request 1/1]
    [Response in frame: 925]

Frame 657: 745 bytes on wire (5960 bits), 745 bytes captured (5960 bits) on interface
\Device\NPF_{9942D681-10B5-45DA-B428-41575E5AAC5B}, id 0
Ethernet   II,   Src: ASUSTekC_af:e3:ec   (70:8b:cd:af:e3:ec),   Dst:
IntelCor_aa:4b:78 (80:00:0b:aa:4b:78)

Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.1.100
Transmission Control Protocol, Src Port: 80, Dst Port: 53059, Seq: 3994, Ack: 1013, Len: 691
[3 Reassembled TCP Segments (3611 bytes): #655(1460), #656(1460), #657(691)]
Hypertext Transfer Protocol
    HTTP/1.1 200 OK\r\n
    Date: Sun, 29 Mar 2020 09:59:26 GMT\r\n
    Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/5.4.16 mod_perl/2.0.11
Perl/v5.16.3\r\n
    Last-Modified: Sat, 06 Aug 2016 10:08:14 GMT\r\n
    ETag: "cc3-539645c7f1ee7"\r\n
    Accept-Ranges: bytes\r\n
    Content-Length: 3267\r\n
    Keep-Alive: timeout=5, max=99\r\n
    Connection: Keep-Alive\r\n
    Content-Type: image/png\r\n
    \r\n
    [HTTP response 2/2]
    [Time since request: 0.297237000 seconds]
    [Prev request in frame: 470]
    [Prev response in frame: 559]
    [Request in frame: 602]
    [Request URI: http://gaia.cs.umass.edu/pearson.png]
    File Data: 3267 bytes
Portable Network Graphics

Frame 925: 632 bytes on wire (5056 bits), 632 bytes captured (5056 bits) on interface
\Device\NPF_{9942D681-10B5-45DA-B428-41575E5AAC5B}, id 0
Ethernet II, Src: ASUSTekC_af:e3:ec (70:8b:cd:af:e3:ec), Dst:
IntelCor_aa:4b:78 (80:00:0b:aa:4b:78)
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.1.100
Transmission Control Protocol, Src Port: 80, Dst Port: 53064, Seq: 100741, Ack: 487, Len: 578
[70 Reassembled TCP Segments (101318 bytes): #692(1460), #693(1460), #694(1460),
#696(1460), #697(1460), #699(1460), #700(1460), #701(1460), #703(1460), #704(1460),
#772(1460),
#773(1460), #775(1460), #776(1460), #778(1460), #779(1460), #78]
Hypertext Transfer Protocol
    HTTP/1.1 200 OK\r\n
    Date: Sun, 29 Mar 2020 09:59:27 GMT\r\n
    Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/5.4.16 mod_perl/2.0.11
Perl/v5.16.3\r\n
    Last-Modified: Tue, 15 Sep 2009 18:23:27 GMT\r\n
    ETag: "18a68-473a1e0e6e5c0"\r\n
    Accept-Ranges: bytes\r\n
    Content-Length: 100968\r\n
    Keep-Alive: timeout=5, max=100\r\n
    Connection: Keep-Alive\r\n
    Content-Type: image/jpeg\r\n
    \r\n
    [HTTP response 1/1]
    [Time since request: 1.329910000 seconds]
    [Request in frame: 654]
    [Request URI: http://manic.cs.umass.edu/~kurose/cover_5th_ed.jpg]
    File Data: 100968 bytes

16. Скільки запитів HTTP GET було відправлено вашим браузером? Якими були цільові IP-адреси запитів? **3, 192.168.1.100/ 128.119.245.12**

17. Чи можете ви встановити, чи були ресурси отримані паралельно чи послідовно? Яким чином? **Послідовно, за часом**

Висновки: Я ознайомилась з середовищем Wireshark, його інтерфейсом та оволоділа базовими методами перехоплення та аналізу пакетів, використовуваними для дослідження мережевих протоколів.