МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ

НАВЧАЛЬНО-НАУКОВИЙ КОМПЛЕКС

«ІНСТИТУТ ПРИКЛАДНОГО СИСТЕМНОГО АНАЛІЗУ»

НАЦІОНАЛЬНОГО ТЕХНІЧНОГО УНІВЕРСИТЕТУ УКРАЇНИ

«КИЇВСЬКИЙ ПОЛІТЕХНІЧНИЙ ІНСТИТУТ»

КАФЕДРА МАТЕМАТИЧНИХ МЕТОДІВ СИСТЕМНОГО АНАЛІЗУ

Лабораторна робота №2

З дисципліни «Комп'ютерні мережі»

Виконала: *студентка 3-го курсу*

гр. КА-77

П'ятецька А.А

Прийняв: *Кухарєв С.О*

Київ 2020р.

Запит:

303   40.398134   192.168.1.8   128.119.245.12 HTTP   583   GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1

Frame 303: 583 bytes on wire (4664 bits), 583 bytes captured (4664 bits) on interface \Device\NPF_{28914AD0-AFA8-4C04-9620-406BD19AC601}, id 0

Ethernet II, Src: LiteonTe_12:30:a6 (3c:a0:67:12:30:a6), Dst: HuaweiTe_70:0d:6c (bc:76:70:70:0d:6c)

Internet Protocol Version 4, Src: 192.168.1.8, Dst: 128.119.245.12

Transmission Control Protocol, Src Port: 58773, Dst Port: 80, Seq: 1, Ack: 1, Len: 529

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]

      [GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1\r\n]

      [Severity level: Chat]

      [Group: Sequence]

    Request Method: GET

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

    Request Version: HTTP/1.1

Host: gaia.cs.umass.edu\r\n

Connection: keep-alive\r\n

Cache-Control: max-age=0\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/80.0.3987.132 Safari/537.36 OPR/67.0.3575.79\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: uk-UA,uk;q=0.9,en-US;q=0.8,en;q=0.7\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: 322]

Відповідь:

322   40.542883   128.119.245.12 192.168.1.8   HTTP   540   HTTP/1.1 200 OK (text/html)

Frame 322: 540 bytes on wire (4320 bits), 540 bytes captured (4320 bits) on interface \Device\NPF_{28914AD0-AFA8-4C04-9620-406BD19AC601}, id 0

Ethernet II, Src: HuaweiTe_70:0d:6c (bc:76:70:70:0d:6c), Dst: LiteonTe_12:30:a6 (3c:a0:67:12:30:a6)

Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.1.8

Transmission Control Protocol, Src Port: 80, Dst Port: 58773, Seq: 1, Ack: 530, Len: 486

Hypertext Transfer Protocol

HTTP/1.1 200 OK\r\n

[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

Date: Sun, 22 Mar 2020 16:47:20 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, 22 Mar 2020 05:59:02 GMT\r\n

ETag: "80-5a16b37295267"\r\n

Accept-Ranges: bytes\r\n

Content-Length: 128\r\n

[Content length: 128]

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: 0.144749000 seconds]

[Request in frame: 303]

[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)

Відповіді на 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?
Accept-Language: uk-UA,uk;q=0.9,en-US;q=0.8,en;q=0.7
3. Які IP-адреси вашого комп'ютера та цільового веб-сервера?
Адреса комп'ютера 192.168.1.8
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?
Last-Modified: Sun, 22 Mar 2020 05:59:02 GMT
6. Скільки байт контенту повертається сервером? 128 (Content-Length: 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.
Ні
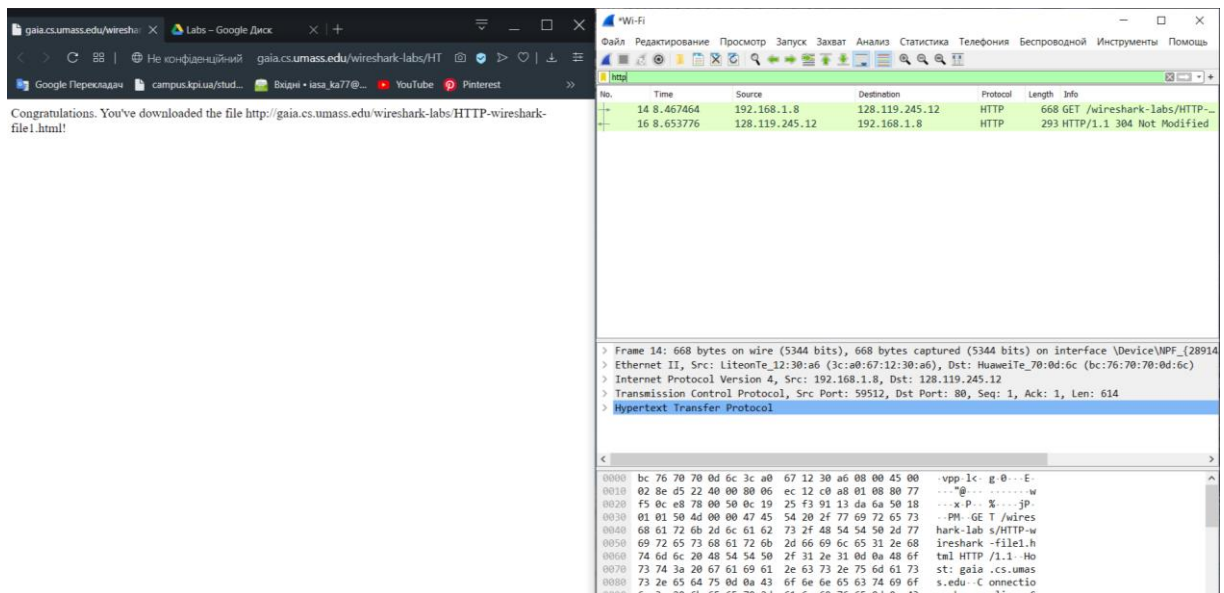
Запит:

14   8.467464   192.168.1.8   128.119.245.12 HTTP   668   GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1

Frame 14: 668 bytes on wire (5344 bits), 668 bytes captured (5344 bits) on interface \Device\NPF_{28914AD0-AFA8-4C04-9620-406BD19AC601}, id 0

Ethernet II, Src: LiteonTe_12:30:a6 (3c:a0:67:12:30:a6), Dst: HuaweiTe_70:0d:6c (bc:76:70:70:0d:6c)

Internet Protocol Version 4, Src: 192.168.1.8, Dst: 128.119.245.12

Transmission Control Protocol, Src Port: 59512, Dst Port: 80, Seq: 1, Ack: 1, Len: 614

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

   Cache-Control: max-age=0\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/80.0.3987.132 Safari/537.36 OPR/67.0.3575.79\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: uk-UA,uk;q=0.9,en-US;q=0.8,en;q=0.7\r\n

   If-None-Match: "80-5a16b37295267"\r\n

   If-Modified-Since: Sun, 22 Mar 2020 05:59:02 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: 16]

Відповідь:

16   8.653776   128.119.245.12 192.168.1.8   HTTP   293   HTTP/1.1 304 Not Modified

Frame 16: 293 bytes on wire (2344 bits), 293 bytes captured (2344 bits) on interface \Device\NPF_{28914AD0-AFA8-4C04-9620-406BD19AC601}, id 0

Ethernet II, Src: HuaweiTe_70:0d:6c (bc:76:70:70:0d:6c), Dst: LiteonTe_12:30:a6 (3c:a0:67:12:30:a6)

Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.1.8

Transmission Control Protocol, Src Port: 80, Dst Port: 59512, Seq: 1, Ack: 615, Len: 239

Hypertext Transfer Protocol

HTTP/1.1 304 Not Modified\r\n

Date: Sun, 22 Mar 2020 18:21:03 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: "80-5a16b37295267"\r\n

\r\n

[HTTP response 1/1]

[Time since request: 0.186312000 seconds]

[Request in frame: 14]

[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?
Ні

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?
Так
If-Modified-Since: Sun, 22 Mar 2020 05:59:02 GMT\r\n

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

113   11.927635   192.168.1.8   66.6.101.171   HTTP   573   GET /dyn/str_strip/000000000/00000000/0000000/000000/70000/3000 HTTP/1.1

Frame 113: 573 bytes on wire (4584 bits), 573 bytes captured (4584 bits) on interface \Device\NPF_{28914AD0-AFA8-4C04-9620-406BD19AC601}, id 0

Ethernet II, Src: LiteonTe_12:30:a6 (3c:a0:67:12:30:a6), Dst: HuaweiTe_70:0d:6c (bc:76:70:70:0d:6c)

Internet Protocol Version 4, Src: 192.168.1.8, Dst: 66.6.101.171

Transmission Control Protocol, Src Port: 59592, Dst Port: 80, Seq: 1, Ack: 1, Len: 519

Hypertext Transfer Protocol

 GET /dyn/str_strip/000000000/00000000/0000000/000000/70000/3000 HTTP/1.1\r\n
 Host: www.dilbert.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/80.0.3987.132 Safari/537.36 OPR/67.0.3575.79\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: uk-UA,uk;q=0.9,en-US;q=0.8,en;q=0.7\r\n
 \r\n
 [Full request URI: http://www.dilbert.com/dyn/str_strip/000000000/00000000/0000000/000000/70000/3000]
 [HTTP request 1/1]
 [Response in frame: 115]

115   12.096303   66.6.101.171   192.168.1.8   HTTP   241   HTTP/1.1 301 Moved Permanently

Frame 115: 241 bytes on wire (1928 bits), 241 bytes captured (1928 bits) on interface \Device\NPF_{28914AD0-AFA8-4C04-9620-406BD19AC601}, id 0

Ethernet II, Src: HuaweiTe_70:0d:6c (bc:76:70:70:0d:6c), Dst: LiteonTe_12:30:a6 (3c:a0:67:12:30:a6)

Internet Protocol Version 4, Src: 66.6.101.171, Dst: 192.168.1.8

Transmission Control Protocol, Src Port: 80, Dst Port: 59592, Seq: 1, Ack: 520, Len: 187

Hypertext Transfer Protocol

   HTTP/1.1 301 Moved Permanently\r\n

   Content-Type: text/html\r\n

   Content-length: 0\r\n

   Connection: Close\r\n

   Location: https://dilbert.com/dyn/str_strip/000000000/00000000/0000000/000000/70000/3000\r\n

   \r\n

   [HTTP response 1/1]

   [Time since request: 0.168668000 seconds]

   [Request in frame: 113]

   [Request URI: http://www.dilbert.com/dyn/str_strip/000000000/00000000/0000000/000000/70000/3000]

12. Скільки повідомлень HTTP GET було відправлено вашим браузером?
1

13. Скільки пакетів TCP було необхідно для доставки одної відповіді HTTP-сервера?
1

14. Який код та опис статусу був у відповіді сервера?
301 Moved Permanently

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

No.	Time	Source	Destination	Protocol	Length	Info
150	34.379642	192.168.1.8	128.119.245.12	HTTP	557	GET /wireshark-labs/HTTP-wireshark-file4.html HTTP/1.1
152	34.525621	128.119.245.12	192.168.1.8	HTTP	1127	HTTP/1.1 200 OK (text/html)
155	35.247708	192.168.1.8	128.119.245.12	HTTP	489	GET /pearson.png HTTP/1.1
158	35.396482	128.119.245.12	192.168.1.8	HTTP	865	HTTP/1.1 200 OK (PNG)
164	35.774593	192.168.1.8	128.119.245.12	HTTP	503	GET /~kurose/cover_5th_ed.jpg HTTP/1.1
267	36.551782	128.119.245.12	192.168.1.8	HTTP	572	HTTP/1.1 200 OK (JPEG JFIF image)

> Frame 150: 557 bytes on wire (4456 bits), 557 bytes captured (4456 bits) on interface \Device\NPF_{28914AD0-AFA8-4C04-9620-406BD19AC601}, id 0
> Ethernet II, Src: LiteonTe_12:30:a6 (3c:a0:67:12:30:a6), Dst: HuaweiTe_70:0d:6c (bc:76:70:70:0d:6c)
> Internet Protocol Version 4, Src: 192.168.1.8, Dst: 128.119.245.12
> Transmission Control Protocol, Src Port: 59682, Dst Port: 80, Seq: 1, Ack: 1, Len: 503
∨ 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/80.0.3987.132 Safari/537.36 OPR/67.0.3575.79\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: uk-UA,uk;q=0.9,en-US;q=0.8,en;q=0.7\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: 152]

15034.379642   192.168.1.8   128.119.245.12HTTP   557   GET /wireshark-labs/HTTP-wireshark-file4.html HTTP/1.1

Frame 150: 557 bytes on wire (4456 bits), 557 bytes captured (4456 bits) on interface \Device\NPF_{28914AD0-AFA8-4C04-9620-406BD19AC601}, id 0

Ethernet II, Src: LiteonTe_12:30:a6 (3c:a0:67:12:30:a6), Dst: HuaweiTe_70:0d:6c (bc:76:70:70:0d:6c)

Internet Protocol Version 4, Src: 192.168.1.8, Dst: 128.119.245.12

Transmission Control Protocol, Src Port: 59682, Dst Port: 80, Seq: 1, Ack: 1, Len: 503

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/80.0.3987.132 Safari/537.36 OPR/67.0.3575.79\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: uk-UA,uk;q=0.9,en-US;q=0.8,en;q=0.7\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: 152]

[Next request in frame: 155]

152 34.525621   128.119.245.12 192.168.1.8   HTTP   1127   HTTP/1.1 200 OK (text/html)

Frame 152: 1127 bytes on wire (9016 bits), 1127 bytes captured (9016 bits) on interface \Device\NPF_{28914AD0-AFA8-4C04-9620-406BD19AC601}, id 0

Ethernet II, Src: HuaweiTe_70:0d:6c (bc:76:70:70:0d:6c), Dst: LiteonTe_12:30:a6 (3c:a0:67:12:30:a6)

Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.1.8

Transmission Control Protocol, Src Port: 80, Dst Port: 59682, Seq: 1, Ack: 504, Len: 1073

Hypertext Transfer Protocol

  HTTP/1.1 200 OK\r\n

  Date: Sun, 22 Mar 2020 18:54:20 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, 22 Mar 2020 05:59:02 GMT\r\n

  ETag: "2ca-5a16b3728d17e"\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: 0.145979000 seconds]

  [Request in frame: 150]

  [Next request in frame: 155]

  [Next response in frame: 158]

  [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)

155 35.247708   192.168.1.8   128.119.245.12 HTTP   489   GET /pearson.png HTTP/1.1

Frame 155: 489 bytes on wire (3912 bits), 489 bytes captured (3912 bits) on interface \Device\NPF_{28914AD0-AFA8-4C04-9620-406BD19AC601}, id 0

Ethernet II, Src: LiteonTe_12:30:a6 (3c:a0:67:12:30:a6), Dst: HuaweiTe_70:0d:6c (bc:76:70:70:0d:6c)

Internet Protocol Version 4, Src: 192.168.1.8, Dst: 128.119.245.12

Transmission Control Protocol, Src Port: 59682, Dst Port: 80, Seq: 504, Ack: 1074, Len: 435

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/80.0.3987.132 Safari/537.36 OPR/67.0.3575.79\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: uk-UA,uk;q=0.9,en-US;q=0.8,en;q=0.7\r\n

\r\n

[Full request URI: http://gaia.cs.umass.edu/pearson.png]

[HTTP request 2/2]

[Prev request in frame: 150]

[Response in frame: 158]

15835.396482   128.119.245.12 192.168.1.8   HTTP   865   HTTP/1.1 200 OK (PNG)

Frame 158: 865 bytes on wire (6920 bits), 865 bytes captured (6920 bits) on interface \Device\NPF_{28914AD0-AFA8-4C04-9620-406BD19AC601}, id 0

Ethernet II, Src: HuaweiTe_70:0d:6c (bc:76:70:70:0d:6c), Dst: LiteonTe_12:30:a6 (3c:a0:67:12:30:a6)

Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.1.8

Transmission Control Protocol, Src Port: 80, Dst Port: 59682, Seq: 3874, Ack: 939, Len: 811

[3 Reassembled TCP Segments (3611 bytes): #156(1400), #157(1400), #158(811)]

Hypertext Transfer Protocol

HTTP/1.1 200 OK\r\n

Date: Sun, 22 Mar 2020 18:54:21 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: 0.148774000 seconds]

[Prev request in frame: 150]

[Prev response in frame: 152]

[Request in frame: 155]

[Request URI: http://gaia.cs.umass.edu/pearson.png]

File Data: 3267 bytes

Portable Network Graphics

164 35.774593   192.168.1.8   128.119.245.12 HTTP   503   GET /~kurose/cover_5th_ed.jpg HTTP/1.1

Frame 164: 503 bytes on wire (4024 bits), 503 bytes captured (4024 bits) on interface \Device\NPF_{28914AD0-AFA8-4C04-9620-406BD19AC601}, id 0

Ethernet II, Src: LiteonTe_12:30:a6 (3c:a0:67:12:30:a6), Dst: HuaweiTe_70:0d:6c (bc:76:70:70:0d:6c)

Internet Protocol Version 4, Src: 192.168.1.8, Dst: 128.119.245.12

Transmission Control Protocol, Src Port: 59683, Dst Port: 80, Seq: 1, Ack: 1, Len: 449

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/80.0.3987.132 Safari/537.36 OPR/67.0.3575.79\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: uk-UA,uk;q=0.9,en-US;q=0.8,en;q=0.7\r\n

\r\n

[Full request URI: http://manic.cs.umass.edu/~kurose/cover_5th_ed.jpg]

[HTTP request 1/1]

[Response in frame: 267]

267 36.551782   128.119.245.12 192.168.1.8   HTTP   572   HTTP/1.1 200 OK (JPEG JFIF image)

Frame 267: 572 bytes on wire (4576 bits), 572 bytes captured (4576 bits) on interface \Device\NPF_{28914AD0-AFA8-4C04-9620-406BD19AC601}, id 0

Ethernet II, Src: HuaweiTe_70:0d:6c (bc:76:70:70:0d:6c), Dst: LiteonTe_12:30:a6 (3c:a0:67:12:30:a6)

Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.1.8

Transmission Control Protocol, Src Port: 80, Dst Port: 59683, Seq: 100801, Ack: 450, Len: 518

[73 Reassembled TCP Segments (101318 bytes): #166(1400), #167(1400), #168(1400), #170(1400), #171(1400), #173(1400), #174(1400), #176(1400), #178(1400), #179(1400), #181(1400), #182(1400), #183(1400), #184(1400), #185(1400), #187(1400), #18]

Hypertext Transfer Protocol

  HTTP/1.1 200 OK\r\n

  Date: Sun, 22 Mar 2020 18:54:22 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: 0.777189000 seconds]

  [Request in frame: 164]

  [Request URI: http://manic.cs.umass.edu/~kurose/cover_5th_ed.jpg]

  File Data: 100968 bytes

JPEG File Interchange Format

16. Скільки запитів HTTP GET було відправлено вашим браузером?

3

Якими були цільові IP-адреси запитів?

128.119.245.12

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

Висновки: Я ознайомилась з середовищем Wireshark, його інтерфейсом та оволоділа базовими методами перехоплення та аналізу пакетів,

використовуваними для дослідження мережевих протоколів а також зрозумів як саме передається різноманітний контент.