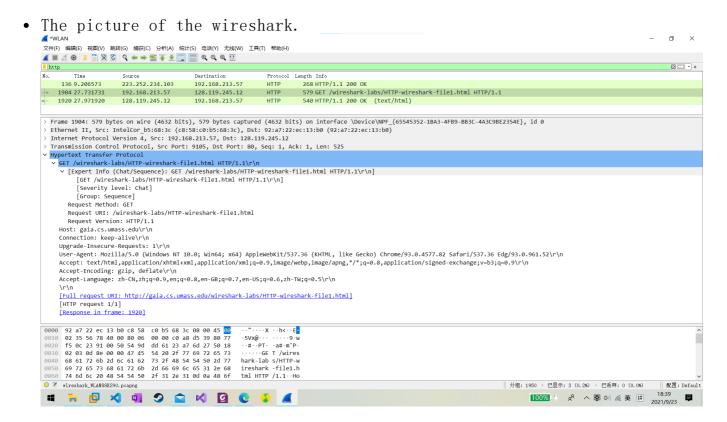
Computer Network Study Lab 2

• Author: PB19000362 钟书锐

• Time: 2021. 9. 23

1. The Basic HTTP GET/response interaction



• The picture of the http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html

Congratulations. You've downloaded the file http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html!

Q1 Is your browser running HTTP version 1.0 or 1.1? What version of HTTP is the server running?

Both are HTTP 1.1

Q2. What languages (if any) does your browser indicate that it can accept to the server?

Accept-Language:

zh-CN, zh; q=0. 9, en; q=0. 8, en-GB; q=0. 7, en-US; q=0. 6, zh-TW; q=0. 5

Q3. What is the IP address of your computer? Of the gaia.cs.umass.edu server?

- IP address of my computer:192.168.213.57
- IP address of the server: 128.119.245.12

Q4. What is the status code returned from the server to your browser?

200

Q5. When was the HTML file that you are retrieving last modified at the server?

Last-Modified: Thu, 23 Sep 2021 05:59:02 GMT

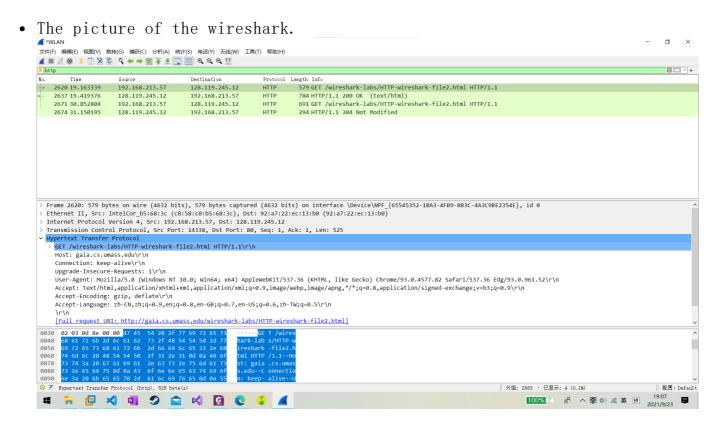
Q6. How many bytes of content are being returned to your browser?

128

Q7. By inspecting the raw data in the packet content window, do you see any headerswithin the data that are not displayed in the packet-listing window? If so, name one.

No, all of the headers can be found in the raw data.

2. The HTTP CONDITIONAL GET/response interaction



• The picture of the http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file2.html

Congratulations again! Now you've downloaded the file lab2-2.html. This file's last modification date will not change.

Thus if you download this multiple times on your browser, a complete copy will only be sent once by the server due to the inclusion of the IN-MODIFIED-SINCE field in your browser's HTTP GET request to the server.

Q8. Inspect the contents of the first HTTP GET request from your browser to the server. Do you see an "IF-MODIFIED-SINCE" line in the HTTP GET?

No.

Q9. Inspect the contents of the server response. Did the server explicitly return the contents of the file? How can you tell?

Yes, we can see the contents in the Line-based text data field, and the content-Length is 371.

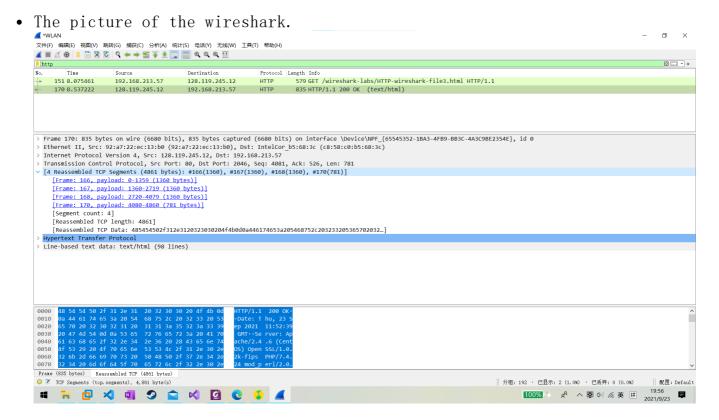
Q10. Now inspect the contents of the second HTTP GET request from your browser to the server. Do you see an "IF-MODIFIED-SINCE:" line in the HTTP GET? If so, what information follows the "IF-MODIFIED-SINCE:" header?

- Yes.
- If-Modified-Since: Thu, 23 Sep 2021 05:59:02 GMT\r\n
- This is the date of the last modification of the file from the previous get request.

Q11. What is the HTTP status code and phrase returned from the server in response to this second HTTP GET? Did the server explicitly return the contents of the file? Explain.

- 304 Not Modified
- No, The server didn't return the contents of the file since the browser loaded it from its cache. Return the contents will just waste time.

3. Retrieving Long Documents



The picture of the http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file3.html

THE BILL OF RIGHTS Amendments 1-10 of the Constitution

The Conventions of a number of the States having, at the time of adopting the Constitution, expressed a desire, in order to prevent misconstruction or abuse of its powers, that further declaratory and restrictive clauses should be added, and as extending the ground of public confidence in the Government will best insure the beneficent ends of its institution;

Resolved, by the Senate and House of Representatives of the United States of America, in Congress assembled, two-thirds of both Houses concurring, that the following articles be proposed to the Legislatures of the several States, as amendments to the Constitution of the United States; all or any of which articles, when ratified by three-fourths of the said Legislatures, to be valid to all intents and purposes as part of the said Constitution, namely:

Amendment I

Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the government for a redress of grievances.

Amendment I

A well regulated militia, being necessary to the security of a free state, the right of the people to keep and bear arms, shall not be infringed.

Amendment III

No soldier shall, in time of peace be quartered in any house, without the consent of the owner, nor in time of war, but in a manner to be prescribed by law.

Amendment IV

The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no warrants shall issue, but upon probable cause, supported by oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.

Amendment V

No person shall be held to answer for a capital, or otherwise infamous crime, unless on a presentment or indictment of a grand jury, except in cases arising in the land or naval forces, or in the militia, when in actual service in time of war or public danger, nor shall any person be subject for the same offense to be twice put in jeopardy of life or limb; nor shall be compelled in any criminal case to be a witness against himself nor be deprived of life liberty or property without process of law nor shall private property be taken for public use without just compensation

Q12. How many HTTP GET request messages did your browser send? Which packet number in the trace contains the GET message for the Bill or Rights?

- My browser send 1 HTTP GET request message.
- All the 4 packets contains the GET message for the Bill or Rights. (166, 167, 168, 170)

Q13. Which packet number in the trace contains the status code and phrase associated with the response to the HTTP GET request?

The first packet (166).

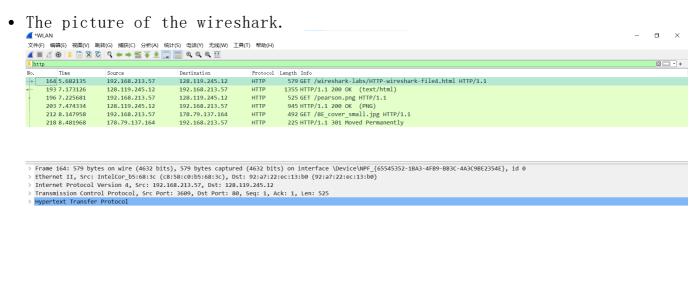
Q14. What is the status code and phrase in the response?

200 OK

Q15. How many data-containing TCP segments were needed to carry the single HTTP response and the text of the Bill of Rights?

4

4.HTML Documents with Embedded Objects





• The picture of the http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file3.html



This little HTML file is being served by gaia.cs.umass.edu. It contains two embedded images. The image above, also served from the gaia.cs.umass.edu web site, is the logo of our publisher, Pearson. The image of our 8th edition book cover below is stored at, and served from, a WWW server kurose.cslash.net in France:



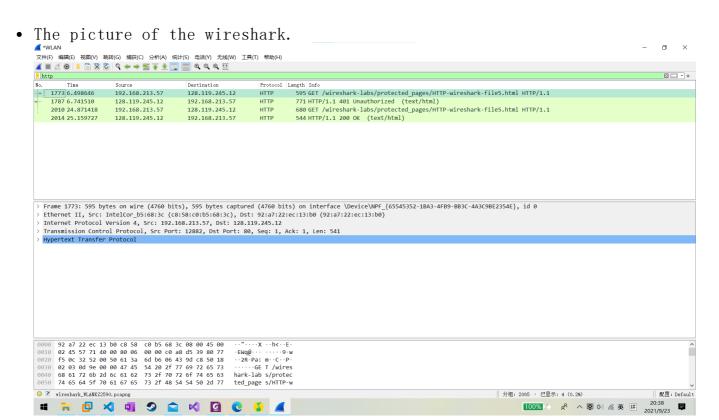
And while we have your attention, you might want to take time to check out the available open resources for this book at http://gaia.cs.umass.edu/kurose_ross.

Q16. How many HTTP GET request messages did your browser send? To which Internet addresses were these GET requests sent?

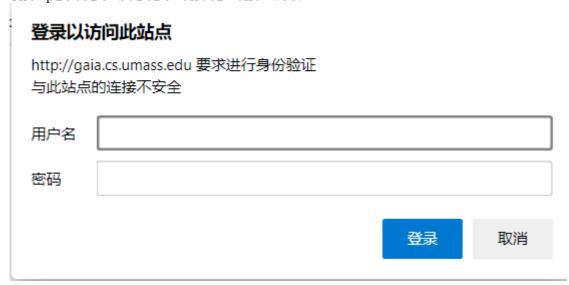
Q17. Can you tell whether your browser downloaded the two images serially, orwhether they were downloaded from the two web sites in parallel?Explain

- Serially, see the time.
- The first image (send request at 7.225681, and receive at 7.474334)
- The second image (send request at 8.147958, and receive at 8.481968)

5.HTTP Authentication



• The picture before enter the web.



• The picture of the http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file5.html

This page is password protected! If you're seeing this, you've downloaded the page correctly Congratulations!

Q18. What is the server's response (status code and phrase) in response to the initial HTTP GET message from your browser?

401 Unauthorized

Q19. When your browser's sends the HTTP GET message for the second time, what new field is included in the HTTP GET message?

Authorization: Basic d21yZXNoYXJrLXNOdWR1bnRzOm51dHdvcms=\r\n

No. Time Source Destination Protocol Length Info 47 7.513536 579 192.168.213.57 128.119.245.12 HTTP GET /wireshark-labs/HTTP-wiresharkfile1.html HTTP/1.1 Frame 47: 579 bytes on wire (4632 bits), 579 bytes captured (4632 bits) on interface \Device\NPF_{65545352-1BA3-4FB9-BB3C-4A3C9BE2354E}, id 0 Ethernet II, Src: IntelCor_b5:68:3c (c8:58:c0:b5:68:3c), Dst: 92:a7:22:ec:13:b0 (92:a7:22:ec:13:b0) Internet Protocol Version 4, Src: 192.168.213.57, Dst: 128.119.245.12 Transmission Control Protocol, Src Port: 4819, Dst Port: 80, Seq: 1, Ack: 1, Len: 525 Hypertext Transfer Protocol Destination No. Time Protocol Length Info Source 51 7.755362 128.119.245.12 192.168.213.57 HTTP 540 HTTP/1.1 200 OK (text/html) Frame 51: 540 bytes on wire (4320 bits), 540 bytes captured (4320 bits) on interface \Device\NPF_{65545352-1BA3-4FB9-BB3C-4A3C9BE2354E}, id 0 Ethernet II, Src: 92:a7:22:ec:13:b0 (92:a7:22:ec:13:b0), Dst: IntelCor_b5:68:3c (c8:58:c0:b5:68:3c)

Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.213.57

Transmission Control Protocol, Src Port: 80, Dst Port: 4819, Seq: 1, Ack: 526, Len: 486

Hypertext Transfer Protocol

Line-based text data: text/html (4 lines)

The Basic HTTP GET/response interaction

```
U:\Users\13418\AppData\Local\1emp\wireshark_WLANP10Z90.pcapng 2683 总分组数,4 凸显示
        Time
                       Source
                                              Destination
                                                                    Protocol Length Info
                       192.168.213.57
   2620 19.163339
                                              128.119.245.12
                                                                    HTTP
                                                                              579
                                                                                     GET /wireshark-labs/HTTP-wireshark-
file2.html HTTP/1.1
Frame 2620: 579 bytes on wire (4632 bits), 579 bytes captured (4632 bits) on interface \Device\NPF {65545352-1BA3-4FB9-
BB3C-4A3C9BE2354E}, id 0
Ethernet II, Src: IntelCor b5:68:3c (c8:58:c0:b5:68:3c), Dst: 92:a7:22:ec:13:b0 (92:a7:22:ec:13:b0)
Internet Protocol Version 4, Src: 192.168.213.57, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 14338, Dst Port: 80, Seq: 1, Ack: 1, Len: 525
Hypertext Transfer Protocol
    GET /wireshark-labs/HTTP-wireshark-file2.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/93.0.4577.82
Safari/537.36 Edg/93.0.961.52\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: zh-CN, zh; q=0.9, en; q=0.8, en-GB; q=0.7, en-US; q=0.6, zh-TW; q=0.5\r\n
    [Full request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file2.html]
    [HTTP request 1/1]
    [Response in frame: 2637]
        Time
                       Source
No.
                                              Destination
                                                                     Protocol Length Info
                                                                    HTTP
   2637 19.419376
                       128.119.245.12
                                              192.168.213.57
                                                                              784
                                                                                     HTTP/1.1 200 OK (text/html)
Frame 2637: 784 bytes on wire (6272 bits), 784 bytes captured (6272 bits) on interface \Device\NPF_{65545352-1BA3-4FB9-
BB3C-4A3C9BE2354E}, id 0
Ethernet II, Src: 92:a7:22:ec:13:b0 (92:a7:22:ec:13:b0), Dst: IntelCor_b5:68:3c (c8:58:c0:b5:68:3c)
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.213.57
Transmission Control Protocol, Src Port: 80, Dst Port: 14338, Seq: 1, Ack: 526, Len: 730
Hypertext Transfer Protocol
    HTTP/1.1 200 OK\r\n
    Date: Thu, 23 Sep 2021 11:06:15 GMT\r\n
    Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/7.4.24 mod_perl/2.0.11 Perl/v5.16.3\r\n
    Last-Modified: Thu, 23 Sep 2021 05:59:02 GMT\r\n
    ETag: "173-5cca353dcd1f3"\r\n
    Accept-Ranges: bytes\r\n
    Content-Length: 371\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: 0.256037000 seconds]
    [Request in frame: 2620]
    [Request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file2.html]
    File Data: 371 bytes
Line-based text data: text/html (10 lines)
        Time
                       Source
                                              Destination
                                                                    Protocol Length Info
No.
   2671 30.852804
                       192.168.213.57
                                              128.119.245.12
                                                                    HTTP
                                                                              691
                                                                                     GET /wireshark-labs/HTTP-wireshark-
file2.html HTTP/1.1
Frame 2671: 691 bytes on wire (5528 bits), 691 bytes captured (5528 bits) on interface \Device\NPF_{65545352-1BA3-4FB9-
BB3C-4A3C9BE2354E}, id 0
Ethernet II, Src: IntelCor_b5:68:3c (c8:58:c0:b5:68:3c), Dst: 92:a7:22:ec:13:b0 (92:a7:22:ec:13:b0)
Internet Protocol Version 4, Src: 192.168.213.57, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 14900, Dst Port: 80, Seq: 1, Ack: 1, Len: 637
Hypertext Transfer Protocol
    GET /wireshark-labs/HTTP-wireshark-file2.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/93.0.4577.82
Safari/537.36 Edg/93.0.961.52\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: zh-CN, zh; q=0.9, en; q=0.8, en-GB; q=0.7, en-US; q=0.6, zh-TW; q=0.5\r\n
    If-None-Match: "173-5cca353dcd1f3"\r\n
    If-Modified-Since: Thu, 23 Sep 2021 05:59:02 GMT\r\n
    [Full request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file2.html]
    [HTTP request 1/1]
    [Response in frame: 2674]
```

Protocol Length Info

294

HTTP

HTTP/1.1 304 Not Modified

No.

Time

2674 31.150195

Source

128.119.245.12

Destination

192.168.213.57

E:\Users\13418\AppData\Local\Temp\wiresnark_wLANP10290.pcapng 2083 总分组数, 4 已並示

Frame 2674: 294 bytes on wire (2352 bits), 294 bytes captured (2352 bits) on interface \Device\NPF_{65545352-1BA3-4FB9-BB3C-4A3C9BE2354E}, id 0

Ethernet II, Src: 92:a7:22:ec:13:b0 (92:a7:22:ec:13:b0), Dst: IntelCor_b5:68:3c (c8:58:c0:b5:68:3c)

Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.213.57

Transmission Control Protocol, Src Port: 80, Dst Port: 14900, Seq: 1, Ack: 638, Len: 240

Hypertext Transfer Protocol

HTTP/1.1 304 Not Modified\r\n

Date: Thu, 23 Sep 2021 11:06:26 GMT\r\n

Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/7.4.24 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: "173-5cca353dcd1f3"\r\n

\r\n

[HTTP response 1/1]

[Time since request: 0.297391000 seconds]

[Request in frame: 2671]

[Request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file2.html]

The HTTP CONDITIONAL GET/response interaction

```
file3.html HTTP/1.1
Frame 151: 579 bytes on wire (4632 bits), 579 bytes captured (4632 bits) on interface \Device\NPF_{65545352-1BA3-4FB9-
BB3C-4A3C9BE2354E}, id 0
Ethernet II, Src: IntelCor_b5:68:3c (c8:58:c0:b5:68:3c), Dst: 92:a7:22:ec:13:b0 (92:a7:22:ec:13:b0)
Internet Protocol Version 4, Src: 192.168.213.57, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 2046, Dst Port: 80, Seq: 1, Ack: 1, Len: 525
Hypertext Transfer Protocol
                                             Destination
No.
       Time
                      Source
                                                                   Protocol Length Info
                      128.119.245.12
   170 8.537222
                                             192.168.213.57
                                                                           835
                                                                                  HTTP/1.1 200 OK (text/html)
Frame 170: 835 bytes on wire (6680 bits), 835 bytes captured (6680 bits) on interface \Device\NPF_{65545352-1BA3-4FB9-
BB3C-4A3C9BE2354E}, id 0
Ethernet II, Src: 92:a7:22:ec:13:b0 (92:a7:22:ec:13:b0), Dst: IntelCor_b5:68:3c (c8:58:c0:b5:68:3c)
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.213.57
Transmission Control Protocol, Src Port: 80, Dst Port: 2046, Seq: 4081, Ack: 526, Len: 781
[4 Reassembled TCP Segments (4861 bytes): #166(1360), #167(1360), #168(1360), #170(781)]
   [Frame: 166, payload: 0-1359 (1360 bytes)]
   [Frame: 167, payload: 1360-2719 (1360 bytes)]
   [Frame: 168, payload: 2720-4079 (1360 bytes)]
   [Frame: 170, payload: 4080-4860 (781 bytes)]
   [Segment count: 4]
   [Reassembled TCP length: 4861]
   [Reassembled TCP Data: 485454502f312e3120323030204f4b0d0a446174653a205468752c203233205365702032...]
Hypertext Transfer Protocol
Line-based text data: text/html (98 lines)
```

Protocol Length Info 579

GET /wireshark-labs/HTTP-wireshark-

HTTP

Destination

128.119.245.12

Retrieving Long Documents

Source

192.168.213.57

No.

Time

151 8.075461

```
file4.html HTTP/1.1
Frame 164: 579 bytes on wire (4632 bits), 579 bytes captured (4632 bits) on interface \Device\NPF_{65545352-1BA3-4FB9-
BB3C-4A3C9BE2354E}, id 0
Ethernet II, Src: IntelCor_b5:68:3c (c8:58:c0:b5:68:3c), Dst: 92:a7:22:ec:13:b0 (92:a7:22:ec:13:b0)
Internet Protocol Version 4, Src: 192.168.213.57, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 3609, Dst Port: 80, Seq: 1, Ack: 1, Len: 525
Hypertext Transfer Protocol
No.
       Time
                      Source
                                            Destination
                                                                   Protocol Length Info
   193 7.173126
                      128.119.245.12
                                            192.168.213.57
                                                                           1355
                                                                                  HTTP/1.1 200 OK (text/html)
Frame 193: 1355 bytes on wire (10840 bits), 1355 bytes captured (10840 bits) on interface \Device\NPF {65545352-1BA3-4FB9-
BB3C-4A3C9BE2354E}, id 0
Ethernet II, Src: 92:a7:22:ec:13:b0 (92:a7:22:ec:13:b0), Dst: IntelCor_b5:68:3c (c8:58:c0:b5:68:3c)
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.213.57
Transmission Control Protocol, Src Port: 80, Dst Port: 3609, Seq: 1, Ack: 526, Len: 1301
Hypertext Transfer Protocol
Line-based text data: text/html (23 lines)
                                            Destination
       Time
                      Source
                                                                   Protocol Length Info
                      192.168.213.57
   196 7.225681
                                            128.119.245.12
                                                                  HTTP
                                                                            525
                                                                                   GET /pearson.png HTTP/1.1
Frame 196: 525 bytes on wire (4200 bits), 525 bytes captured (4200 bits) on interface \Device\NPF_{65545352-1BA3-4FB9-
BB3C-4A3C9BE2354E}, id 0
Ethernet II, Src: IntelCor_b5:68:3c (c8:58:c0:b5:68:3c), Dst: 92:a7:22:ec:13:b0 (92:a7:22:ec:13:b0)
Internet Protocol Version 4, Src: 192.168.213.57, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 3609, Dst Port: 80, Seq: 526, Ack: 1302, Len: 471
Hypertext Transfer Protocol
No.
       Time
                      Source
                                            Destination
                                                                   Protocol Length Info
   203 7.474334
                      128.119.245.12
                                            192.168.213.57
                                                                            945
                                                                  HTTP
                                                                                  HTTP/1.1 200 OK (PNG)
Frame 203: 945 bytes on wire (7560 bits), 945 bytes captured (7560 bits) on interface \Device\NPF_{65545352-1BA3-4FB9-
BB3C-4A3C9BE2354E}, id 0
Ethernet II, Src: 92:a7:22:ec:13:b0 (92:a7:22:ec:13:b0), Dst: IntelCor_b5:68:3c (c8:58:c0:b5:68:3c)
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.213.57
Transmission Control Protocol, Src Port: 80, Dst Port: 3609, Seq: 4022, Ack: 997, Len: 891
[3 Reassembled TCP Segments (3611 bytes): #200(1360), #201(1360), #203(891)]
Hypertext Transfer Protocol
Portable Network Graphics
       Time
No.
                      Source
                                            Destination
                                                                   Protocol Length Info
   212 8.147958
                      192.168.213.57
                                            178.79.137.164
                                                                           492
                                                                                   GET /8E cover small.jpg HTTP/1.1
Frame 212: 492 bytes on wire (3936 bits), 492 bytes captured (3936 bits) on interface \Device\NPF_{65545352-1BA3-4FB9-
BB3C-4A3C9BE2354E}, id 0
Ethernet II, Src: IntelCor_b5:68:3c (c8:58:c0:b5:68:3c), Dst: 92:a7:22:ec:13:b0 (92:a7:22:ec:13:b0)
Internet Protocol Version 4, Src: 192.168.213.57, Dst: 178.79.137.164
Transmission Control Protocol, Src Port: 3935, Dst Port: 80, Seq: 1, Ack: 1, Len: 438
Hypertext Transfer Protocol
                                            Destination
                                                                   Protocol Length Info
   218 8.481968
                      178.79.137.164
                                            192.168.213.57
                                                                  HTTP
                                                                            225
                                                                                   HTTP/1.1 301 Moved Permanently
Frame 218: 225 bytes on wire (1800 bits), 225 bytes captured (1800 bits) on interface \Device\NPF {65545352-1BA3-4FB9-
BB3C-4A3C9BE2354E}, id 0
Ethernet II, Src: 92:a7:22:ec:13:b0 (92:a7:22:ec:13:b0), Dst: IntelCor_b5:68:3c (c8:58:c0:b5:68:3c)
```

Destination

128.119.245.12

Protocol Length Info

HTTP

579

GET /wireshark-labs/HTTP-wireshark-

Internet Protocol Version 4, Src: 178.79.137.164, Dst: 192.168.213.57 Transmission Control Protocol, Src Port: 80, Dst Port: 3935, Seq: 1, Ack: 439, Len: 171 Hypertext Transfer Protocol

HTML Documents with Embedded Objects

No.

Time

164 5.682135

Source

192.168.213.57

```
wireshark-file5.html HTTP/1.1
Frame 1773: 595 bytes on wire (4760 bits), 595 bytes captured (4760 bits) on interface \Device\NPF_{65545352-1BA3-4FB9-
BB3C-4A3C9BE2354E}, id 0
Ethernet II, Src: IntelCor_b5:68:3c (c8:58:c0:b5:68:3c), Dst: 92:a7:22:ec:13:b0 (92:a7:22:ec:13:b0)
Internet Protocol Version 4, Src: 192.168.213.57, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 12882, Dst Port: 80, Seq: 1, Ack: 1, Len: 541
Hypertext Transfer Protocol
No.
       Time
                      Source
                                             Destination
                                                                   Protocol Length Info
  1787 6.741510
                      128.119.245.12
                                             192.168.213.57
                                                                   HTTP
                                                                            771
                                                                                   HTTP/1.1 401 Unauthorized (text/html)
Frame 1787: 771 bytes on wire (6168 bits), 771 bytes captured (6168 bits) on interface \Device\NPF {65545352-1BA3-4FB9-
BB3C-4A3C9BE2354E}, id 0
Ethernet II, Src: 92:a7:22:ec:13:b0 (92:a7:22:ec:13:b0), Dst: IntelCor_b5:68:3c (c8:58:c0:b5:68:3c)
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.213.57
Transmission Control Protocol, Src Port: 80, Dst Port: 12882, Seq: 1, Ack: 542, Len: 717
Hypertext Transfer Protocol
Line-based text data: text/html (12 lines)
                                             Destination
                                                                   Protocol Length Info
       Time
                      Source
  2010 24.871418
                      192.168.213.57
                                             128.119.245.12
                                                                   HTTP
                                                                            680
                                                                                   GET /wireshark-labs/protected pages/HTTP-
wireshark-file5.html HTTP/1.1
Frame 2010: 680 bytes on wire (5440 bits), 680 bytes captured (5440 bits) on interface \Device\NPF_{65545352-1BA3-4FB9-
BB3C-4A3C9BE2354E}, id 0
Ethernet II, Src: IntelCor b5:68:3c (c8:58:c0:b5:68:3c), Dst: 92:a7:22:ec:13:b0 (92:a7:22:ec:13:b0)
Internet Protocol Version 4, Src: 192.168.213.57, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 14772, Dst Port: 80, Seq: 1, Ack: 1, Len: 626
Hypertext Transfer Protocol
                                                                   Protocol Length Info
No.
       Time
                      Source
                                             Destination
  2014 25.159727
                      128.119.245.12
                                             192.168.213.57
                                                                            544
                                                                   HTTP
                                                                                   HTTP/1.1 200 OK (text/html)
Frame 2014: 544 bytes on wire (4352 bits), 544 bytes captured (4352 bits) on interface \Device\NPF_{65545352-1BA3-4FB9-
BB3C-4A3C9BE2354E}, id 0
Ethernet II, Src: 92:a7:22:ec:13:b0 (92:a7:22:ec:13:b0), Dst: IntelCor b5:68:3c (c8:58:c0:b5:68:3c)
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.213.57
Transmission Control Protocol, Src Port: 80, Dst Port: 14772, Seq: 1, Ack: 627, Len: 490
Hypertext Transfer Protocol
Line-based text data: text/html (6 lines)
```

Protocol Length Info

HTTP

595

GET /wireshark-labs/protected_pages/HTTP-

Destination

128.119.245.12

HTTP Authentication

No.

Time

1773 6.498646

Source

192.168.213.57