

No. Time Source Q3 Destination Protocol Length Info
 1948 7.283230 192.168.43.112 128.119.245.12 HTTP 526 GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1 计算机地址

Frame 1948: 526 bytes on wire (4208 bits), 526 bytes captured (4208 bits) on interface
 \Device\NPF_{28F4B2F8-01FA-4861-94AA-BAA450D5F52E}, id 0
 Ethernet II, Src: IntelCor_14:76:ed (34:cf:f6:14:76:ed), Dst: be:4a:19:b7:3b:52 (be:4a:19:b7:3b:52)
 Internet Protocol Version 4, Src: 192.168.43.112, Dst: 128.119.245.12
 Transmission Control Protocol, Src Port: 10798, Dst Port: 80, Seq: 1, Ack: 1, Len: 472
 Hypertext Transfer Protocol

GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1\r\n Q1
 [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
 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/105.0.0.0 Safari/537.36\r\n
 Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q=0.9\r\n
 Accept-Encoding: gzip, deflate\r\n
 Accept-Language: zh-CN,zh;q=0.9\r\n Q2
 \r\n
 [Full request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html]
 [HTTP request 1/2]
 [Response in frame: 2016]
 [Next request in frame: 2018]

No. Time Source Q3 Destination Protocol Length Info
 2016 7.552100 128.119.245.12 192.168.43.112 HTTP 540 HTTP/1.1 200 OK (text/html)

Frame 2016: 540 bytes on wire (4320 bits), 540 bytes captured (4320 bits) on interface
 \Device\NPF_{28F4B2F8-01FA-4861-94AA-BAA450D5F52E}, id 0
 Ethernet II, Src: be:4a:19:b7:3b:52 (be:4a:19:b7:3b:52), Dst: IntelCor_14:76:ed (34:cf:f6:14:76:ed)
 Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.43.112
 Transmission Control Protocol, Src Port: 80, Dst Port: 10798, Seq: 1, Ack: 473, Len: 486
 Hypertext Transfer Protocol

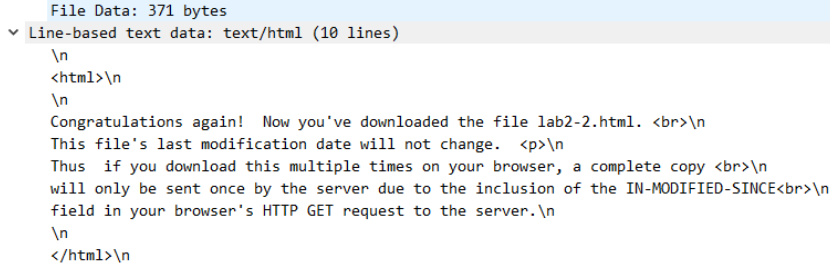
HTTP/1.1 200 OK\r\n
Q1 [Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]
 [HTTP/1.1 200 OK\r\n]
 [Severity level: Chat]
 [Group: Sequence]
 Response Version: HTTP/1.1
Status Code: 200 Q4
 [Status Code Description: OK]
 Response Phrase: OK
 Date: Wed, 14 Sep 2022 12:22:22 GMT\r\n
 Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/7.4.30 mod_perl/2.0.11 Perl/v5.16.3\r\n
 Last-Modified: Wed, 14 Sep 2022 05:59:01 GMT\r\n Q5
 ETag: "80-5e89cd352d012"\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 1/2]
 [Time since request: 0.268870000 seconds]
 [Request in frame: 1948]
 [Next request in frame: 2018]
 [Next response in frame: 2086]
 [Request URI: http://gaia.cs.umass.edu/favicon.ico]
 File Data: 128 bytes Q6
 Line-based text data: text/html (4 lines)

Q7=

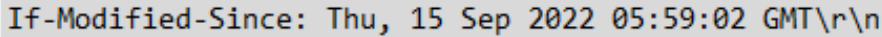
1922 82.246331	192.168.43.112	128.119.245.12	HTTP	472 GET /favicon.ico HTTP/1.1
2058 82.640990	128.119.245.12	192.168.43.112	HTTP	539 HTTP/1.1 404 Not Found (text/html)

根据NOTE应当忽略这个请求。

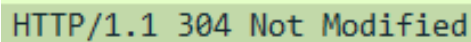
Q8. No, I don't.

Q9. File Data: 371 bytes
Line-based text data: text/html (10 lines)
\n
<html>\n
\n
Congratulations again! Now you've downloaded the file lab2-2.html.
\n
This file's last modification date will not change. <p>\n
Thus if you download this multiple times on your browser, a complete copy
\n
will only be sent once by the server due to the inclusion of the IN-MODIFIED-SINCE
\n
field in your browser's HTTP GET request to the server.\n
\n
</html>\n

如图, 服务器的确显式返回了文件内容。

Q10. If-Modified-Since: Thu, 15 Sep 2022 05:59:02 GMT\r\n

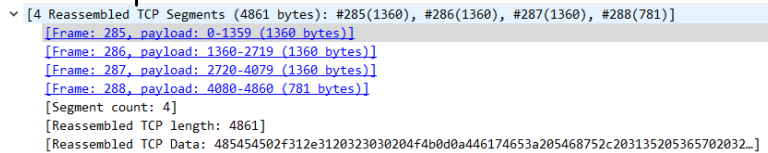
如图, 存在该字段, 包含上一次修改时间信息, 即Last-Modified中所包含信息。

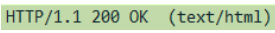
Q11. HTTP/1.1 304 Not Modified

由于未被修改, 因此服务器并不会返回文件的内容, 对请求对象, 带宽造成不必要浪费。

Q12. 1个 GET 请求, 所有分组都包含。

Q13. 第1个分组。

[4 Reassembled TCP Segments (4861 bytes): #285(1360), #286(1360), #287(1360), #288(781)]
[Frame: 285, payload: 0-1359 (1360 bytes)]
[Frame: 286, payload: 1360-2719 (1360 bytes)]
[Frame: 287, payload: 2720-4079 (1360 bytes)]
[Frame: 288, payload: 4080-4860 (781 bytes)]
[Segment count: 4]
[Reassembled TCP length: 4861]
[Reassembled TCP Data: 485454502f312e3120323030204f4b0d0a4461746553a205468752c203135205365702032...]

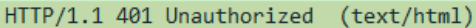
Q14. HTTP/1.1 200 OK (text/html)

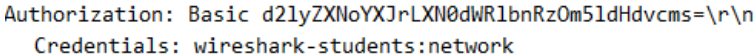
Q15. 如图, 共需4个。

Q16. 3个。

Time	Source	Destination	Protocol	Length	Info	Seq
4.929328	192.168.43.112	128.119.245.12	HTTP	526	GET /wireshark-labs/HTTP-wireshark-file4.html HTTP/1.1	1
5.200934	128.119.245.12	192.168.43.112	HTTP	1355	HTTP/1.1 200 OK (text/html)	
5.224336	192.168.43.112	128.119.245.12	HTTP	472	GET /pearson.png HTTP/1.1	2
5.495787	192.168.43.112	178.79.137.164	HTTP	439	GET /8E_cover_small.jpg HTTP/1.1	3

Q17. 如图, 请求2尚未有OK指令时请求3就已发出, 故此时应为并行。

Q18. HTTP/1.1 401 Unauthorized (text/html)

Q19. Authorization: Basic d2lyZXNoYXJrLXN0dWRlbnRzOm5ldHdvcm5=\r\n
Credentials: wireshark-students:network