

1. The Basic HTTP GET/response interaction

1. HTTP 1.1 version

Response Version: HTTP/1.1

2. Accept language is Turkish

Accept-Language: tr-TR, tr; q=0.8, en-US; q=0.5, en; q=0.3\r\n

3. My IP address is 192.168.1.39

gaia.cs.umass.edu server is 128.119.245.12

Source	Destination
192.168.1.39	128.119.245.12

4. Status code was 200 OK

HTTP/1.1 200 OK (text/html)

5. The last modified date is:

Last-Modified: Wed, 23 Oct 2019 05:59:02 GMT\r\n

6. Content length is 128 bytes

Content-Length: 128\r\n

[Content length: 128]

7. No, I do not see any headers that are not displayed in the packet window.

2. The HTTP CONDITIONAL GET/response interaction

8. No, I have not seen.

9. Yes because I have seen the contents in the Line-based text data fields, the server explicitly returned the contents of the file.

Line-based text data: text/html (10 lines)

```
\n
<html>\n
\n
Congratulations again! Now you've downloaded the file lab2-2.html. <br>\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 <br>\n
will only be sent once by the server due to the inclusion of the IN-MODIFIED-SINCE<br>\n
field in your browser's HTTP GET request to the server.\n
\n
</html>\n
```

10. Yes, I have seen. Date of my first reach to the URL (cached time) information follows the "If-Modified-Since:" header.

If-Modified-Since: Wed, 23 Oct 2019 05:59:02 GMT\r\n

11. The status code is "304" and the phrase returned from the server is "Not modified". No, the server does not explicitly return the contents of the file because it has not changed, it is same with cached file. Thus, to obtain the same file is not necessary.

Response Version: HTTP/1.1
Status Code: 304
[Status Code Description: Not Modified]
Response Phrase: Not Modified

2. Retrieving Long Documents Only one HTTP GET request message has sent.

12. Only 1 HTTP GET request message has sent. Packet 14 contains the GET message for the Bill of Rights.

No.	Time	Source	Destination	Protocol	Length	Info
14	1.514940	192.168.1.39	128.119.245.12	HTTP	450	GET /wireshark-labs/HTTP-wireshark-file3.html HTTP/1.1

13. Packet 23 contains the status code and phrase associated with the response to the HTTP GET request.

23	1.655854	128.119.245.12	192.168.1.39	HTTP	559	HTTP/1.1 200 OK (text/html)
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14. Status code is "200" and phrase is "OK" in the response.

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

15. 4 data-containing TCP segments were needed to carry the single HTTP response and the text of the Bill of Rights.

[4 Reassembled TCP Segments (4861 bytes): #19(1452), #20(1452), #22(1452), #23(505)]
[Frame: 19, payload: 0-1451 (1452 bytes)]
[Frame: 20, payload: 1452-2903 (1452 bytes)]
[Frame: 22, payload: 2904-4355 (1452 bytes)]
[Frame: 23, payload: 4356-4860 (505 bytes)]
[Segment count: 4]
[Reassembled TCP length: 4861]
[Reassembled TCP Data: 485454502f312e3120323030204f4b0d0a4461746553a2057...]

4. HTML Documents with Embedded Objects

16. 3 HTTP GET request messages sent.

```
GET /wireshark-labs/HTTP-wireshark-file4.html HTTP/1.1
HTTP/1.1 200 OK (text/html)
GET /pearson.png HTTP/1.1
GET /~kurose/cover_5th_ed.jpg HTTP/1.1
HTTP/1.1 200 OK (PNG)
HTTP/1.1 200 OK (JPEG JFIF image)
```

These GET requests sent to Internet addresses below:

[Full request URI: <http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file4.html>]

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

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

17. The images are on two different servers, thus we need to open two separate connections. The request for the second image file was made after the first image file was received. Images were downloaded from the websites in serial, but I think it depends on internet connection speed. If my network speed will be slow, I could see they requested in parallel.

16	1.453980	192.168.1.39	128.119.245.12	HTTP	418	GET /pearson.png HTTP/1.1
22	1.597533	128.119.245.12	192.168.1.39	HTTP	761	HTTP/1.1 200 OK (PNG)
29	1.767090	192.168.1.39	128.119.245.12	HTTP	392	GET /~kurose/cover_5th_ed.jpg HTTP/1.1
137	2.234964	128.119.245.12	192.168.1.39	HTTP	1184	HTTP/1.1 200 OK (JPEG JFIF image)

5. HTTP Authentication

18. Response to the initial HTTP GET message from your browser is:

```
Response Version: HTTP/1.1
Status Code: 401
[Status Code Description: Unauthorized]
Response Phrase: Unauthorized
```

19. Authorization, Credential field is included in the HTTP GET message.

```
✓ Authorization: Basic d2lyZXNoYXJrLXN0dWRlbmRzOm5ldHdvcm5=\r\n
  Credentials: wireshark-students:network
```

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