**Lab 2a**

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

Answer: Both of my computer an server are using HTTP version 1.1

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

Answer:



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

Answer:

IP address of my computer: 10.229.29.120

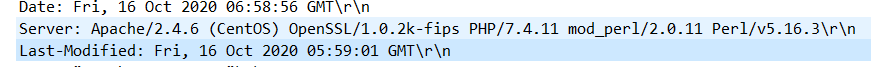
IP address of server: 128.119.245.12

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

Status code: 200

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

Answer:



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

Answer: Content – length: 128 byte

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

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

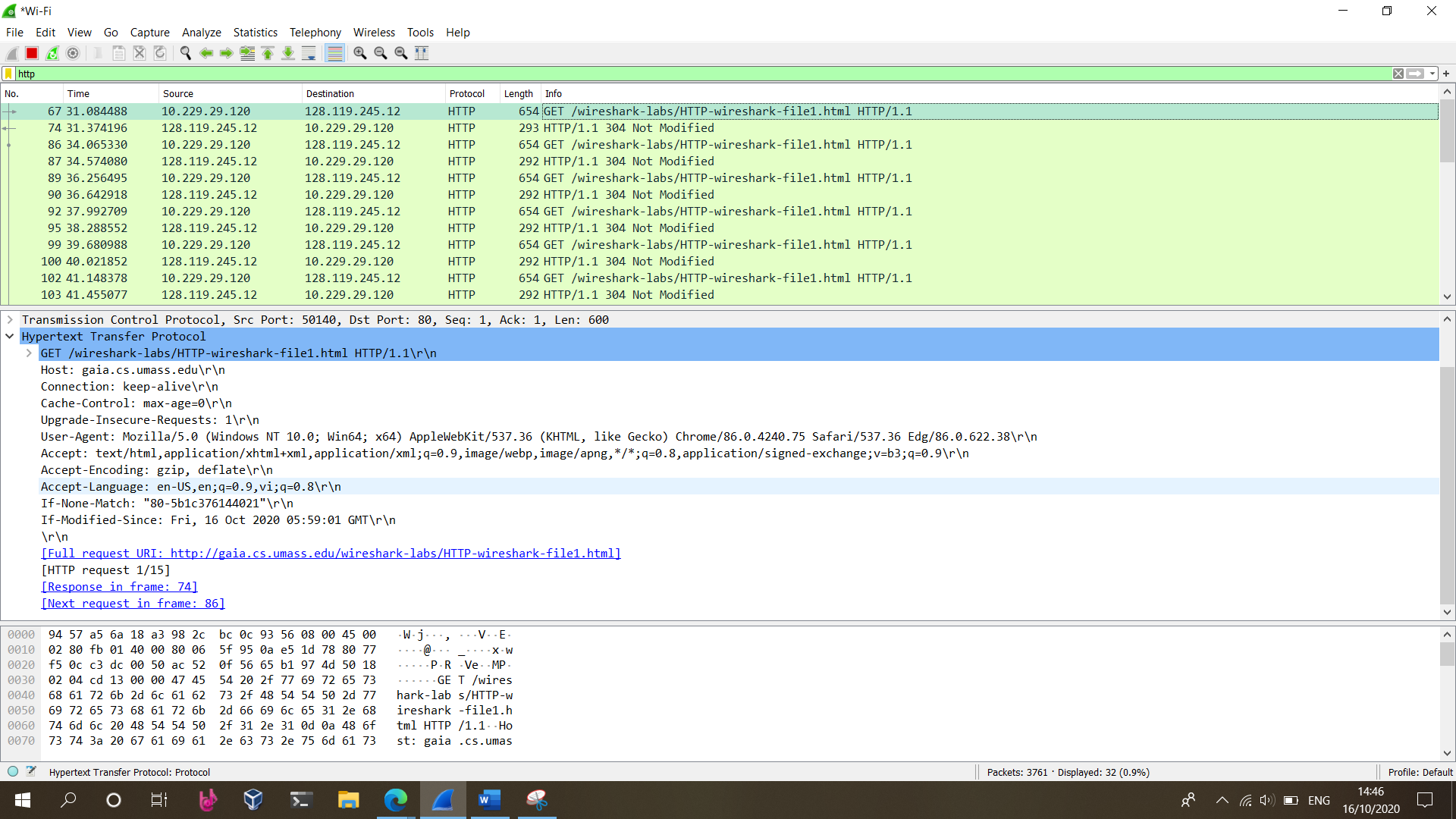
1. Inspect the contents of the first HTTP GET request from your browser to the server. Do you see an “IF-MODIFIED-SINCE” line in the HTTP GET?

Answer: No there is no IF-MODIFIED-SINCE line in the GET message.

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

Answer: Yes because we can see the contents in the Line-based text data field.

1. 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?

Answer: Yes in the second HTTP message an IF-MODIFIED-SINCE line is included. The information that follows is the date and time that I last accessed the webpage

1. 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.

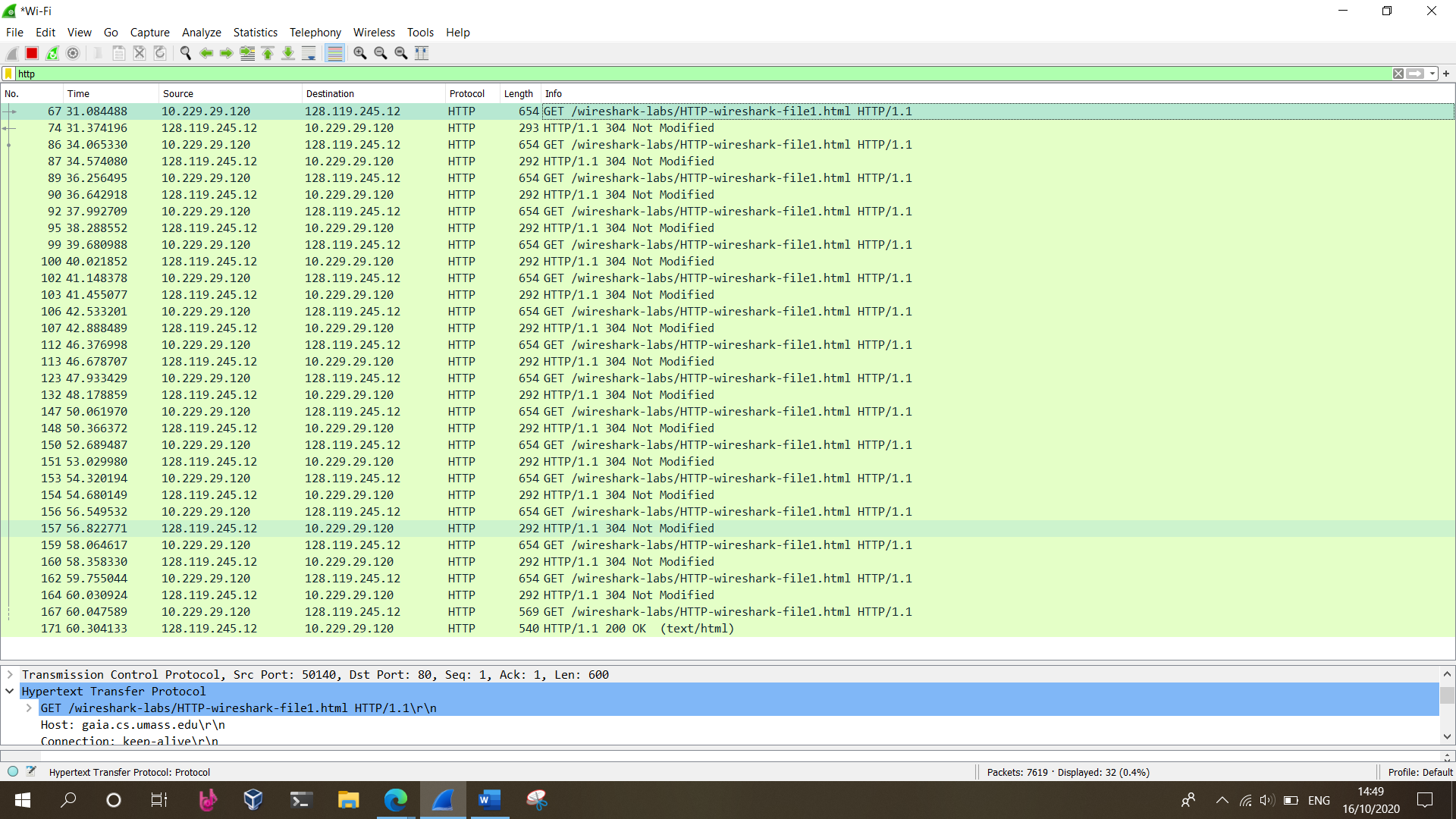
Answer:

The HTTP status code is “304: Not Modified”

The server did not return the contents of the file because the browser simply retrieved the contents from its cache. Had the file been modified since it was last accessed, it would have returned the contents of the file, instead it simply told my browser to retrieve the old file from its cached memory.

1. 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?

Answer: There are 16 HTTP GET request



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

Answer:

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

Answer: 304 Not Modified and 200 OK

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

The data was sent in 5 TCP segments to the browser, then reassembled.

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

Answer: As you can see from the above screenshot there were 3 HTTP GET requests sent to the following Internet addresses: a. 128.119.245.12 b. 165.193.123.218 c. 134.241.6.82

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

Answer: By checking the TCP ports we can see if our files were downloaded serially or in parallel. In this case the 2 images were transmitted over 2 TCP connections therefore they were downloaded serially.

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

Answer: Status code: 401 , Phrase: Authorization Required

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

Answer: As seen in the screenshot the new field (highlighted) is Authorization. Authorization: Basic ZXRoLXN0dWRlbnRzOm5ldHdvcmtz\r\n

