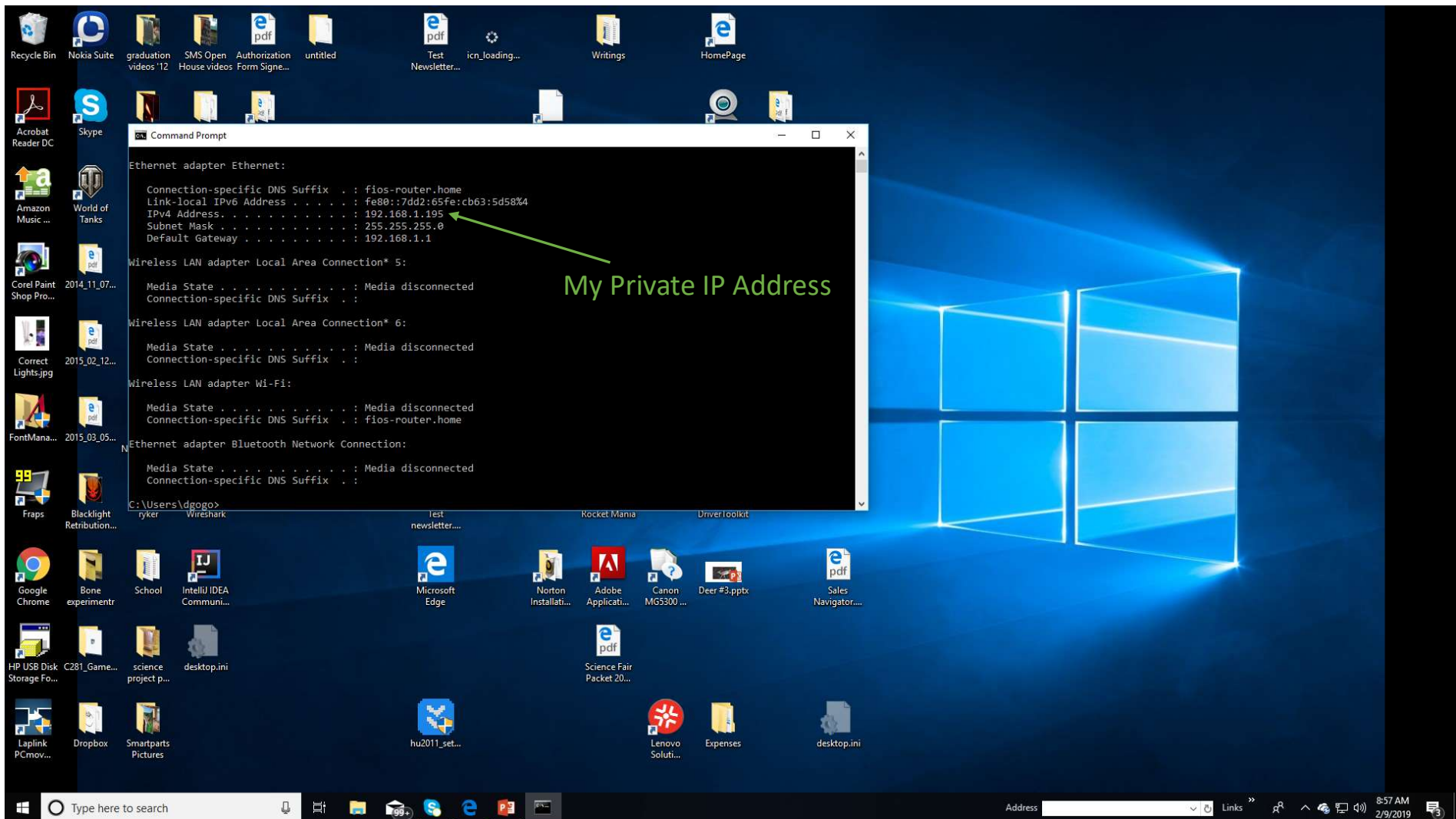


Wireshark Lab 2 - HTTP

IT 520 –A – Enterprise Infrastructure & Networks

David Gogolkiewicz

IP Address



Question 1

Ethernet

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

http

No.	Time	Source	Destination	Protocol	Length	Info
90	37.258710	54.236.106.22	192.168.1.195	HTTP	79	HTTP/1.1 100 Continue
91	37.259134	192.168.1.195	54.236.106.22	HTTP	165	POST /configserver-gateway/configurations HTTP/1.1 (application/json)
137	47.256805	54.236.106.22	192.168.1.195	HTTP	362	HTTP/1.1 504 Gateway Time-out (text/html)
209	77.655082	192.168.1.195	192.168.1.7	HTTP/XML	899	POST /wsd/scanservice.cgi HTTP/1.1
213	77.876949	192.168.1.7	192.168.1.195	HTTP/XML	883	HTTP/1.1 200 OK
395	144.011...	192.168.1.195	128.119.245.12	HTTP	472	GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1
404	144.041...	128.119.245.12	192.168.1.195	HTTP	540	HTTP/1.1 200 OK (text/html)

What HTTP version? : 1.1

> Frame 395: 472 bytes on wire (3776 bits), 472 bytes captured (3776 bits) on interface 0
> Ethernet II, Src: Foxconn_d1:d3:8c (00:01:6c:d1:d3:8c), Dst: Verizon_68:c5:b8 (48:5d:36:68:c5:b8)
> Internet Protocol Version 4, Src: 192.168.1.195, Dst: 128.119.245.12
> Transmission Control Protocol, Src Port: 50737, Dst Port: 80, Seq: 1, Ack: 1, Len: 418
v Hypertext Transfer Protocol
GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1\r\nUser-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/64.0.3282.140 Safari/537.36 Edge/17.17134\r\nAccept-Language: en-US,en;q=0.5\r\nAccept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8\r\nUpgrade-Insecure-Requests: 1\r\nAccept-Encoding: gzip, deflate\r\nHost: gaia.cs.umass.edu\r\nConnection: Keep-Alive\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: 404]

0000 48 5d 36 68 c5 b8 00 01 6c d1 d3 8c 08 00 45 00 H]6h.... 1....E-
0010 01 ca 46 21 40 00 00 06 00 00 c0 a8 01 c3 80 77 ..F!@.....w
0020 f5 0c c6 31 00 50 1b 71 19 3d 7d 03 60 eb 50 18 ...1.P.q.=-.P-
0030 04 00 39 ac 00 00 47 45 54 20 2f 77 69 72 65 73 --9...GE T /wires
0040 68 61 72 6b 2d 6c 61 62 73 2f 48 54 54 50 2d 77 hark-lab s/HTTP-w
0050 69 72 65 73 68 61 72 6b 2d 66 69 6c 65 31 2e 68 iredshark -file1.h
0060 74 6d 6c 20 48 54 54 50 2f 31 2e 31 0d 0a 55 73 tml HTTP /1.1..Us
0070 65 72 2d 41 67 65 6e 74 3a 20 4d 6f 7a 69 6c 6c er-Agent : Mozill
0080 61 2f 35 2e 30 20 28 57 69 6e 64 6f 77 73 20 4e a/5.0 (Windows N
0090 54 20 31 30 2e 30 3b 20 57 69 6e 36 34 3b 20 78 T 10.0; Win64; x
00a0 36 34 29 20 41 70 70 6c 65 57 65 62 4b 69 74 2f 64) Appl eWebKit/
00b0 35 33 37 2e 33 36 20 28 4b 48 54 4d 4c 2c 20 6c 537.36 (KHTML, l
00c0 69 6b 65 20 47 65 63 6b 6f 29 20 43 68 72 6f 6d ike Geck o) Chrom
00d0 65 2f 36 34 2e 30 2e 33 32 38 32 2e 31 34 30 20 e/64.0.3 282.140
00e0 53 61 66 61 72 69 2f 35 33 37 2e 33 36 20 45 64 Safari/5 37.36 Ed
00f0 67 65 2f 31 37 2e 31 37 31 33 34 0d 0a 41 63 63 ge/17.17 134·Acc
0100 65 70 74 2d 4c 61 6e 67 75 61 67 65 3a 20 65 6e ept-Lang uage: en
0110 2d 55 53 2c 65 6e 3b 71 3d 30 2e 35 0d 0a 41 63 -US,en;q =0.5·Ac
0120 63 65 70 74 3a 20 74 65 78 74 2f 68 74 6d 6c 2c cept: te xt/html,
0130 61 70 70 6c 69 63 61 74 69 6f 6e 2f 78 68 74 6d applicat ion/xhtml

wireshark_OAEACC56-2C54-40D3-A2B1-ESA421CEA2E2_20190209090117_a08040.pcapng

Packets: 436 · Displayed: 7 (1.6%) · Dropped: 0 (0.0%) Profile: Default

Address Links 9:05 AM 2/9/2019

Question 2

Wireshark interface showing a packet capture on the http interface. The packet list shows a GET request for /wireshark-labs/HTTP-wireshark-file1.html. The packet details pane shows the HTTP response structure, including the status line: 200 OK. The packet bytes pane shows the raw data of the response, including the status line and the body content.

When was the HTML file last modified?
- Saturday, 09 Feb 2019, 06:59:01 GMT

Wireshark expert severity level (ws.expert.severity)

Packets: 436 · Displayed: 7 (1.6%) · Dropped: 0 (0.0%) Profile: Default

9:10 AM 2/9/2019

Question 3

Wireshark interface showing network traffic analysis. The top pane displays a list of captured packets. The bottom pane shows the details of the selected packet (No. 404).

Packet List:

No.	Time	Source	Destination	Protocol	Length	Info
90	37.258710	54.236.106.22	192.168.1.195	HTTP	79	HTTP/1.1 100 Continue
91	37.259134	192.168.1.195	54.236.106.22	HTTP	165	POST /configserver-gateway/configurations HTTP/1.1 (application/json)
137	47.256805	54.236.106.22	192.168.1.195	HTTP	362	HTTP/1.1 504 Gateway Time-out (text/html)
209	77.655082	192.168.1.195	192.168.1.7	HTTP/XML	899	POST /wsd/scanservice.cgi HTTP/1.1
213	77.876949	192.168.1.7	192.168.1.195	HTTP/XML	883	HTTP/1.1 200 OK
395	144.011...	192.168.1.195	128.119.245.12	HTTP	472	GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1
404	144.041...	128.119.245.12	192.168.1.195	HTTP	540	HTTP/1.1 200 OK (text/html)

Packet Details (No. 404):

```
[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: Sat, 09 Feb 2019 14:03:42 GMT\r\n
Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/5.4.16 mod_perl/2.0.10 Perl/v5.16.3\r\n
Last-Modified: Sat, 09 Feb 2019 06:59:01 GMT\r\n
ETag: "80-581709c493f8f"\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 1/1]
```

Packet Bytes:

```
0000 00 01 6c d1 d3 8c 48 5d 36 68 c5 b8 08 00 45 00  --[...H] 6h...E-
0010 02 0e 41 b1 40 00 35 06 ca 49 80 77 f5 0c c0 a8  --A:@5-.I.w...
0020 01 c3 00 50 c6 31 7d 03 60 eb 1b 71 1a df 50 18  --P-1}-...q...P-
0030 00 ed 67 53 00 00 48 54 54 50 2f 31 2e 31 20 32  --gS...HT TP/1.1 2
0040 30 30 20 4f 4b 0d 0a 44 61 74 65 3a 20 53 61 74  00 OK-D ate: Sat
0050 2c 20 30 39 20 46 65 62 20 32 30 31 39 20 31 34  , 09 Feb 2019 14
0060 3a 30 33 3a 34 32 20 47 4d 54 0d 0a 53 65 72 76  :03:42 G MT-Serv
0070 65 72 3a 20 41 70 61 63 68 65 2f 32 2e 34 2e 36  er: Apac he/2.4.6
0080 20 28 43 65 6e 74 4f 53 29 20 4f 70 65 6e 53 53  (CentOS ) OpenSS
0090 4c 2f 31 2e 30 2e 32 6b 2d 66 69 70 73 20 50 48  L/1.0.2k -fips PH
00a0 50 2f 35 2e 34 2e 31 36 20 6d 6f 64 5f 70 65 72  P/5.4.16 mod_per
00b0 6c 2f 32 2e 30 2e 31 30 20 50 65 72 6c 2f 76 35  l/2.0.10 Perl/v5
00c0 2e 31 36 2e 33 0d 0a 4c 61 73 74 2d 4d 6f 64 69  .16.3-L ast-Modi
00d0 66 69 65 64 3a 20 53 61 74 2c 20 30 39 20 46 65  fied: Sa t, 09 Fe
00e0 62 20 32 30 31 39 20 30 36 3a 35 39 3a 30 31 20  b 2019 0 6:59:01
00f0 47 4d 54 0d 0a 45 54 61 67 3a 20 22 38 30 2d 35  GMT-ETa g: "80-5
0100 38 31 37 30 39 63 34 39 33 66 38 66 22 0d 0a 41  81709c49 3f8f"-A
0110 63 65 70 74 2d 52 61 6e 67 65 73 3a 20 62 79  ccept-Ra nges: by
0120 74 65 73 0d 0a 43 6f 6e 74 65 6e 74 2d 4c 65 6e  tes-Con tent-Len
0130 67 74 68 3a 20 31 32 38 0d 0a 4b 65 65 70 2d 41  gth: 128 -Keep-A
```

Question 4

Ethernet

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

http

No.	Time	Source	Destination	Protocol	Length	Info
90	37.258710	54.236.106.22	192.168.1.195	HTTP	79	HTTP/1.1 100 Continue
91	37.259134	192.168.1.195	54.236.106.22	HTTP	165	POST /configserver-gateway/configurations HTTP/1.1 (application/json)
137	47.256805	54.236.106.22	192.168.1.195	HTTP	362	HTTP/1.1 504 Gateway Time-out (text/html)
209	77.655082	192.168.1.195	192.168.1.7	HTTP/XML	899	POST /wsd/scanservice.cgi HTTP/1.1
213	77.876949	192.168.1.7	192.168.1.195	HTTP/XML	883	HTTP/1.1 200 OK
395	144.011...	192.168.1.195	128.119.245.12	HTTP	472	GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1
404	144.041...	128.119.245.12	192.168.1.195	HTTP	540	HTTP/1.1 200 OK (text/html)

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

User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/64.0.3282.140 Safari/537.36 Edge/17.17134\r\n

Accept-Language: en-US,en;q=0.5\r\n

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8\r\n

Upgrade-Insecure-Requests: 1\r\n

Accept-Encoding: gzip, deflate\r\n

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

Connection: Keep-Alive\r\n

\r\n

[Full request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html]

00a0 36 34 29 20 41 70 70 6c 65 57 65 62 4b 69 74 2f 64) Appl eWebKit/

00b0 35 33 37 2e 33 36 20 28 4b 48 54 4d 4c 2c 20 6c 537.36 (KHTML, l

00c0 69 6b 65 20 47 65 63 6b 6f 29 20 43 68 72 6f 6d ike Gecko o) Chrom

00d0 65 2f 36 34 2e 30 2e 33 32 38 32 2e 31 34 30 20 e/64.0.3 282.140

00e0 53 61 66 61 72 69 2f 35 33 37 2e 33 36 20 45 64 Safari/5 37.36 Ed

00f0 67 65 2f 31 37 2e 31 37 31 33 34 0d 0a 41 63 63 ge/17.17 134 Acc

0100 65 70 74 2d 4c 61 6e 67 75 61 67 65 3a 20 65 6e ept-Lang uage: en

0110 2d 55 53 2c 65 6e 3b 71 3d 30 2e 35 0d 0a 41 63 -US,en;q =0.5 Ac

0120 63 65 70 74 3a 20 74 65 78 74 2f 68 74 6d 6c 2c cept: te xt/html,

0130 61 70 70 6c 69 63 61 74 69 6f 6e 2f 78 68 74 6d applicat ion/xhtm

0140 6c 2b 78 6d 6c 2c 61 70 70 6c 69 63 61 74 69 6f l+xml,ap plicatio

0150 6e 2f 78 6d 6c 3b 71 3d 30 2e 39 2c 2a 2f 2a 3b n/xml;q= 0.9,*/*;

0160 71 3d 30 2e 38 0d 0a 55 70 67 72 61 64 65 2d 49 q=0.8 U pgrade-I

0170 6e 73 65 63 75 72 65 2d 52 65 71 75 65 73 74 73 nsecure- Requests

0180 3a 20 31 0d 0a 41 63 63 65 70 74 2d 45 6e 63 6f : 1 Acc pt-Enco

0190 64 69 6e 67 3a 20 67 7a 69 70 2c 20 64 65 66 6c ding: gz ip, defl

01a0 61 74 65 0d 0a 48 6f 73 74 3a 20 67 61 69 61 2e ate Hos t: gaia.

01b0 63 73 2e 75 6d 61 73 73 2e 65 64 75 0d 0a 43 6f cs.umass .edu Co

01c0 6e 6e 65 63 74 69 6f 6e 3a 20 4b 65 65 70 2d 41 nnection : Keep-A

01d0 6c 69 76 65 0d 0a 0d 0a live----

Bytes 253-285: Accept-Language (http.accept_language)

Packets: 436 · Displayed: 7 (1.6%) · Dropped: 0 (0.0%) Profile: Default

Address Links 9:18 AM 2/9/2019

What languages does your browser indicate that it can accept to the server?
- US English

Question 5

Ethernet

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

http

No.	Time	Source	Destination	Protocol	Length	Info
90	37.258710	54.236.106.22	192.168.1.195	HTTP	79	HTTP/1.1 100 Continue
91	37.259134	192.168.1.195	54.236.106.22	HTTP	165	POST /configserver-gateway/configurations HTTP/1.1 (application/json)
137	47.256805	54.236.106.22	192.168.1.195	HTTP	362	HTTP/1.1 504 Gateway Time-out (text/html)
209	77.655082	192.168.1.195	192.168.1.7	HTTP/XML	899	POST /wsd/scanservice.cgi HTTP/1.1
213	77.876949	192.168.1.7	192.168.1.195	HTTP/XML	883	HTTP/1.1 200 OK
395	144.011...	192.168.1.195	128.119.245.12	HTTP	472	GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1
404	144.041...	128.119.245.12	192.168.1.195	HTTP	540	HTTP/1.1 200 OK (text/html)

Source: 128.119.245.12
Destination: 192.168.1.195
> Transmission Control Protocol, Src Port: 80, Dst Port: 50737, Seq: 1, Ack: 419, 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: Sat, 09 Feb 2019 14:03:42 GMT\r\n

Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/5.4.16 mod_perl/2.0.10 Perl/v5.16.3\r\n

Last-Modified: Sat, 09 Feb 2019 06:59:01 GMT\r\n

ETag: "80-581709c493f8f"\r\n

Accept-Ranges: bytes\r\n

0040 30 30 20 4f 4b 0d 0a 44 61 74 65 3a 20 53 61 74 00 OK Date: Sat
0050 2c 20 30 39 20 46 65 62 20 32 30 31 39 20 31 34 , 09 Feb 2019 14
0060 3a 30 33 3a 34 32 20 47 4d 54 0d 0a 53 65 72 76 :03:42 GMT Serv
0070 65 72 3a 20 41 70 61 63 68 65 2f 32 2e 34 2e 36 er: Apache/2.4.6
0080 20 28 43 65 6e 74 4f 53 29 20 4f 70 65 6e 53 53 (CentOS) OpenSS
0090 4c 2f 31 2e 30 2e 32 6b 2d 66 69 70 73 20 50 48 L/1.0.2k-fips PH
00a0 50 2f 35 2e 34 2e 31 36 20 6d 6f 64 5f 70 65 72 P/5.4.16 mod_per
00b0 6c 2f 32 2e 30 2e 31 30 20 50 65 72 6c 2f 76 35 l/2.0.10 Perl/v5
00c0 2e 31 36 2e 33 0d 0a 4c 61 73 74 2d 4d 6f 64 69 .16.3 Last-Modi
00d0 66 69 65 64 3a 20 53 61 74 2c 20 30 39 20 46 65 fied: Sat, 09 Fe
00e0 62 20 32 30 31 39 20 30 36 3a 35 39 3a 30 31 20 b 2019 06:59:01
00f0 47 4d 54 0d 0a 45 54 61 67 3a 20 22 38 30 2d 35 GMT ETag: "80-5
0100 38 31 37 30 39 63 3a 39 33 66 38 66 22 0d 0a 41 81709c493f8f" A
0110 63 63 65 70 74 2d 52 61 6e 67 65 73 3a 20 62 79 ccept-Ranges: by
0120 74 65 73 0d 0a 43 6f 6e 74 65 6e 74 2d 4c 65 6e tes Content-Len
0130 67 74 68 3a 20 31 32 38 0d 0a 4b 65 65 70 2d 41 gth: 128 Keep-A
0140 6c 69 76 65 3a 20 74 69 6d 65 6f 75 74 3d 35 2c live: timeout=5,
0150 20 6d 61 78 3d 31 30 30 0d 0a 43 6f 6e 6e 65 63 max=100 Connec
0160 74 69 6f 6e 3a 20 4b 65 65 70 2d 41 6c 69 76 65 tion: Keep-Alive
0170 0d 0a 43 6f 6e 74 65 6e 74 2d 54 79 70 65 3a 20 ..Content-Type:

HTTP Date (http.date), 37 bytes

Packets: 436 · Displayed: 7 (1.6%) · Dropped: 0 (0.0%) Profile: Default

Address Links 9:24 AM 2/9/2019

When was the HTML file that you are retrieving created at the server?

- Saturday, 09 Feb 2019 14:03:42 GMT

C:\Users\dgogo\AppData\Local\Temp\wireshark_0AEACCS6-2C54-40D3-A2B1-ESA421CEA2E2_20190209090117_a08040.pcapng 436 total packets, 7 shown

```
No.      Time      Source        Destination    Protocol Length Info
404 144.041870 128.119.245.12 192.168.1.195 HTTP 540 HTTP/1.1 200 OK (text/html)
Frame 404: 540 bytes on wire (4320 bits), 540 bytes captured (4320 bits) on interface 0
Interface id: 0 (\Device\NPF_{0AEACCS6-2C54-40D3-A2B1-ESA421CEA2E2})
Encapsulation type: Ethernet (1)
Arrival Time: Feb 9, 2019 09:03:41.791187000 Eastern Standard Time
[Time shift for this packet: 0.000000000 seconds]
Epoch Time: 1549721021.791187000 seconds
[Time delta from previous captured frame: 0.000598000 seconds]
[Time delta from previous displayed frame: 0.030861000 seconds]
[Time since reference or first frame: 144.041870000 seconds]
Frame Number: 404
Frame Length: 540 bytes (4320 bits)
Capture Length: 540 bytes (4320 bits)
[Frame is marked: False]
[Frame is ignored: False]
[Protocols in frame: eth:ethertype:ip:tcp:http:data-text-lines]
[Coloring Rule Name: HTTP]
[Coloring Rule String: http || tcp.port == 80 || http2]
Ethernet II, Src: Verizon_68:c5:b8 (48:5d:36:68:c5:b8), Dst: Foxconn_d1:d3:8c (00:01:6c:d1:d3:8c)
Destination: Foxconn_d1:d3:8c (00:01:6c:d1:d3:8c)
Source: Verizon_68:c5:b8 (48:5d:36:68:c5:b8)
Type: IPv4 (0x0800)
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.1.195
Transmission Control Protocol, Src Port: 80, Dst Port: 50737, Seq: 1, Ack: 419, 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: Sat, 09 Feb 2019 14:03:42 GMT\r\n
    Server: Apache/2.4.6 (Centos) OpenSSL/1.0.2k-fips PHP/5.4.16 mod_perl/2.0.10 Perl/v5.16.3\r\n
    Last-Modified: Sat, 09 Feb 2019 06:59:01 GMT\r\n
    ETag: "00-581709c493f8f"\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 1/1]
    [Time since request: 0.030861000 seconds]
    [Request in frame: 395]
    File Data: 128 bytes
  Line-based text data: text/html (4 lines)
```