

No.	Time	Source	Destination	Protocol	Length	Info
422	5.198156	10.0.0.230	128.119.245.12	HTTP	575	GET /wireshark-labs/HTTP-wireshark-file2.html HTTP/1.1

Frame 422: 575 bytes on wire (4600 bits), 575 bytes captured (4600 bits) on interface \Device\NPF_{FC8D8711-F625-4DBB-8844-C9FDA940F434}, id 0

```

Interface id: 0 (\Device\NPF_{FC8D8711-F625-4DBB-8844-C9FDA940F434})
Interface name: \Device\NPF_{FC8D8711-F625-4DBB-8844-C9FDA940F434}
Interface description: Wi-Fi
Encapsulation type: Ethernet (1)
Arrival Time: Jan 31, 2021 17:52:02.827545000 Eastern Standard Time
[Time shift for this packet: 0.000000000 seconds]
Epoch Time: 1612133522.827545000 seconds
[Time delta from previous captured frame: 0.000186000 seconds]
[Time delta from previous displayed frame: 0.000000000 seconds]
[Time since reference or first frame: 5.198156000 seconds]
Frame Number: 422
Frame Length: 575 bytes (4600 bits)
Capture Length: 575 bytes (4600 bits)
[Frame is marked: False]
[Frame is ignored: False]
[Protocols in frame: eth:ethertype:ip:tcp:http]
[Coloring Rule Name: HTTP]
[Coloring Rule String: http || tcp.port == 80 || http2]
Ethernet II, Src: IntelCor_14:e9:39 (38:00:25:14:e9:39), Dst: Technico_dd:47:ae (80:d0:4a:dd:47:ae)
Destination: Technico_dd:47:ae (80:d0:4a:dd:47:ae)
Address: Technico_dd:47:ae (80:d0:4a:dd:47:ae)
.... 0. .... = LG bit: Globally unique address (factory default)
.... 0. .... = IG bit: Individual address (unicast)
Source: IntelCor_14:e9:39 (38:00:25:14:e9:39)
Address: IntelCor_14:e9:39 (38:00:25:14:e9:39)
.... 0. .... = LG bit: Globally unique address (factory default)
.... 0. .... = IG bit: Individual address (unicast)
Type: IPv4 (0x0800)
Internet Protocol Version 4, Src: 10.0.0.230, Dst: 128.119.245.12
0100 .... = Version: 4
.... 0101 = Header Length: 20 bytes (5)
Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)
0000 00.. = Differentiated Services Codepoint: Default (0)
.... 00.. = Explicit Congestion Notification: Not ECN-Capable Transport (0)
Total Length: 561
Identification: 0xd2e3 (53987)
Flags: 0x40, Don't fragment
0... .... = Reserved bit: Not set
.1.. .... = Don't fragment: Set
..0. .... = More fragments: Not set
Fragment Offset: 0
Time to Live: 128
Protocol: TCP (6)
Header Checksum: 0x0000 [validation disabled]
[Header checksum status: Unverified]
Source Address: 10.0.0.230
Destination Address: 128.119.245.12
Transmission Control Protocol, Src Port: 62707, Dst Port: 80, Seq: 1, Ack: 1, Len: 521
Source Port: 62707
Destination Port: 80
[Stream index: 30]
[TCP Segment Len: 521]
Sequence Number: 1 (relative sequence number)
Sequence Number (raw): 492898333
[Next Sequence Number: 522 (relative sequence number)]
Acknowledgment Number: 1 (relative ack number)
Acknowledgment number (raw): 995790565
0101 .... = Header Length: 20 bytes (5)
Flags: 0x018 (PSH, ACK)
000. .... = Reserved: Not set
...0 .... = Nonce: Not set
.... 0... = Congestion Window Reduced (CWR): Not set
.... 0.. = ECN-Echo: Not set
.... 0. .... = Urgent: Not set
.... 1... = Acknowledgment: Set
.... 1... = Push: Set
.... 0.. = Reset: Not set
.... 0. .... = Syn: Not set
.... 0. .... = Fin: Not set
[TCP Flags: .....AP...]
Window: 513
[Calculated window size: 131328]
[Window size scaling factor: 256]
Checksum: 0x828d [unverified]
[Checksum Status: Unverified]

```

Urgent Pointer: 0
[SEQ/ACK analysis]
[iRTT: 0.076413000 seconds]
[Bytes in flight: 521]
[Bytes sent since last PSH flag: 521]
[Timestamps]
[Time since first frame in this TCP stream: 0.076599000 seconds]
[Time since previous frame in this TCP stream: 0.000186000 seconds]
TCP payload (521 bytes)
Hypertext Transfer Protocol
GET /wireshark-labs/HTTP-wireshark-file2.html HTTP/1.1\r\n
[Expert Info (Chat/Sequence): GET /wireshark-labs/HTTP-wireshark-file2.html HTTP/1.1\r\n]
[GET /wireshark-labs/HTTP-wireshark-file2.html HTTP/1.1\r\n]
[Severity level: Chat]
[Group: Sequence]
Request Method: GET
Request URI: /wireshark-labs/HTTP-wireshark-file2.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/88.0.4324.104 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: en-CA,en;q=0.9,fr-CA;q=0.8,fr;q=0.7,en-GB;q=0.6,en-US;q=0.5\r\n
\r\n
[Full request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file2.html]
[HTTP request 1/2]
[Response in frame: 433]
[Next request in frame: 469]

No.	Time	Source	Destination	Protocol	Length	Info
433	5.254927	128.119.245.12	10.0.0.230	HTTP	784	HTTP/1.1 200 OK (text/html)

Frame 433: 784 bytes on wire (6272 bits), 784 bytes captured (6272 bits) on interface \Device\NPF_{FC8D8711-F625-4DBB-8844-C9FDA940F434}, id 0

Interface id: 0 (\Device\NPF_{FC8D8711-F625-4DBB-8844-C9FDA940F434})

Interface name: \Device\NPF_{FC8D8711-F625-4DBB-8844-C9FDA940F434}

Interface description: Wi-Fi

Encapsulation type: Ethernet (1)

Arrival Time: Jan 31, 2021 17:52:02.884316000 Eastern Standard Time

[Time shift for this packet: 0.000000000 seconds]

Epoch Time: 1612133522.884316000 seconds

[Time delta from previous captured frame: 0.000000000 seconds]

[Time delta from previous displayed frame: 0.056771000 seconds]

[Time since reference or first frame: 5.254927000 seconds]

Frame Number: 433

Frame Length: 784 bytes (6272 bits)

Capture Length: 784 bytes (6272 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: ae:47:dd:4a:d0:80 (ae:47:dd:4a:d0:80), Dst: IntelCor_14:e9:39 (38:00:25:14:e9:39)

Destination: IntelCor_14:e9:39 (38:00:25:14:e9:39)

Address: IntelCor_14:e9:39 (38:00:25:14:e9:39)

.... ..0. = LG bit: Globally unique address (factory default)

.... ...0 = IG bit: Individual address (unicast)

Source: ae:47:dd:4a:d0:80 (ae:47:dd:4a:d0:80)

Address: ae:47:dd:4a:d0:80 (ae:47:dd:4a:d0:80)

.... ..1. = LG bit: Locally administered address (this is NOT the factory default)

.... ...0 = IG bit: Individual address (unicast)

Type: IPv4 (0x0800)

Internet Protocol Version 4, Src: 128.119.245.12, Dst: 10.0.0.230

0100 = Version: 4

.... 0101 = Header Length: 20 bytes (5)

Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)

0000 00.. = Differentiated Services Codepoint: Default (0)

.... ..00 = Explicit Congestion Notification: Not ECN-Capable Transport (0)

Total Length: 770

Identification: 0x9f89 (40841)

Flags: 0x40, Don't fragment

0... = Reserved bit: Not set

.1.. = Don't fragment: Set

..0. = More fragments: Not set

Fragment Offset: 0

Time to Live: 46

Protocol: TCP (6)

Header Checksum: 0x2a03 [validation disabled]

[Header checksum status: Unverified]

Source Address: 128.119.245.12

Destination Address: 10.0.0.230

Transmission Control Protocol, Src Port: 80, Dst Port: 62707, Seq: 1, Ack: 522, Len: 730

Source Port: 80

Destination Port: 62707

[Stream index: 30]

[TCP Segment Len: 730]

Sequence Number: 1 (relative sequence number)

Sequence Number (raw): 995790565

[Next Sequence Number: 731 (relative sequence number)]

Acknowledgment Number: 522 (relative ack number)

Acknowledgment number (raw): 492898854

0101 = Header Length: 20 bytes (5)

Flags: 0x018 (PSH, ACK)

000. = Reserved: Not set

...0 = Nonce: Not set

.... 0... = Congestion Window Reduced (CWR): Not set

.... .0.. = ECN-Echo: Not set

.... ..0. = Urgent: Not set

.... ...1 = Acknowledgment: Set

....1.. = Push: Set

....0.. = Reset: Not set

....0. = Syn: Not set

....0 = Fin: Not set

[TCP Flags:AP...]

Window: 237

[Calculated window size: 30336]

[Window size scaling factor: 128]

Checksum: 0x734e [unverified]

[Checksum Status: Unverified]

Urgent Pointer: 0

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[SEQ/ACK analysis]
  [iRTT: 0.076413000 seconds]
  [Bytes in flight: 730]
  [Bytes sent since last PSH flag: 730]
[Timestamps]
  [Time since first frame in this TCP stream: 0.133370000 seconds]
  [Time since previous frame in this TCP stream: 0.000000000 seconds]
TCP payload (730 bytes)
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: Sun, 31 Jan 2021 22:52:03 GMT\r\n
Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/7.4.14 mod_perl/2.0.11 Perl/v5.16.3\r\n
Last-Modified: Sun, 31 Jan 2021 06:59:01 GMT\r\n
ETag: "173-5ba2cc5affd71"\r\n
Accept-Ranges: bytes\r\n
Content-Length: 371\r\n
  [Content length: 371]
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: 0.056771000 seconds]
[Request in frame: 422]
[Next request in frame: 469]
[Next response in frame: 472]
[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)
\r\n
<html>\r\n
\r\n
Congratulations again! Now you've downloaded the file lab2-2.html. <br>\r\n
This file's last modification date will not change. <p>\r\n
Thus if you download this multiple times on your browser, a complete copy <br>\r\n
will only be sent once by the server due to the inclusion of the IN-MODIFIED-SINCE<br>\r\n
field in your browser's HTTP GET request to the server.\r\n
\r\n
</html>\r\n
```

No.	Time	Source	Destination	Protocol	Length	Info
469	7.208373	10.0.0.230	128.119.245.12	HTTP	687	GET /wireshark-labs/HTTP-wireshark-file2.html HTTP/1.1

Frame 469: 687 bytes on wire (5496 bits), 687 bytes captured (5496 bits) on interface \Device\NPF_{FC8D8711-F625-4DBB-8844-C9FDA940F434}, id 0

Interface id: 0 (\Device\NPF_{FC8D8711-F625-4DBB-8844-C9FDA940F434})
Interface name: \Device\NPF_{FC8D8711-F625-4DBB-8844-C9FDA940F434}
Interface description: Wi-Fi
Encapsulation type: Ethernet (1)
Arrival Time: Jan 31, 2021 17:52:04.837762000 Eastern Standard Time
[Time shift for this packet: 0.000000000 seconds]
Epoch Time: 1612133524.837762000 seconds
[Time delta from previous captured frame: 0.163509000 seconds]
[Time delta from previous displayed frame: 1.953446000 seconds]
[Time since reference or first frame: 7.208373000 seconds]
Frame Number: 469
Frame Length: 687 bytes (5496 bits)
Capture Length: 687 bytes (5496 bits)
[Frame is marked: False]
[Frame is ignored: False]
[Protocols in frame: eth:ethertype:ip:tcp:http]
[Coloring Rule Name: HTTP]
[Coloring Rule String: http || tcp.port == 80 || http2]

Ethernet II, Src: IntelCor_14:e9:39 (38:00:25:14:e9:39), Dst: Technico_dd:47:ae (80:d0:4a:dd:47:ae)
Destination: Technico_dd:47:ae (80:d0:4a:dd:47:ae)
Address: Technico_dd:47:ae (80:d0:4a:dd:47:ae)
.... 0. = LG bit: Globally unique address (factory default)
.... 0. = IG bit: Individual address (unicast)
Source: IntelCor_14:e9:39 (38:00:25:14:e9:39)
Address: IntelCor_14:e9:39 (38:00:25:14:e9:39)
.... 0. = LG bit: Globally unique address (factory default)
.... 0. = IG bit: Individual address (unicast)
Type: IPv4 (0x0800)

Internet Protocol Version 4, Src: 10.0.0.230, Dst: 128.119.245.12
0100 = Version: 4
.... 0101 = Header Length: 20 bytes (5)
Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)
0000 00.. = Differentiated Services Codepoint: Default (0)
.... 00.. = Explicit Congestion Notification: Not ECN-Capable Transport (0)
Total Length: 673
Identification: 0xd2e6 (53990)
Flags: 0x40, Don't fragment
0... = Reserved bit: Not set
.1.. = Don't fragment: Set
..0. = More fragments: Not set
Fragment Offset: 0
Time to Live: 128
Protocol: TCP (6)
Header Checksum: 0x0000 [validation disabled]
[Header checksum status: Unverified]
Source Address: 10.0.0.230
Destination Address: 128.119.245.12

Transmission Control Protocol, Src Port: 62707, Dst Port: 80, Seq: 522, Ack: 731, Len: 633
Source Port: 62707
Destination Port: 80
[Stream index: 30]
[TCP Segment Len: 633]
Sequence Number: 522 (relative sequence number)
Sequence Number (raw): 492898854
[Next Sequence Number: 1155 (relative sequence number)]
Acknowledgment Number: 731 (relative ack number)
Acknowledgment number (raw): 995791295
0101 = Header Length: 20 bytes (5)
Flags: 0x018 (PSH, ACK)
000. = Reserved: Not set
...0 = Nonce: Not set
.... 0... = Congestion Window Reduced (CWR): Not set
.... .0.. = ECN-Echo: Not set
.... ..0. = Urgent: Not set
.... ...1 = Acknowledgment: Set
.... 1... = Push: Set
....0.. = Reset: Not set
....0. = Syn: Not set
....0 = Fin: Not set
[TCP Flags:AP...]
Window: 510
[Calculated window size: 130560]
[Window size scaling factor: 256]
Checksum: 0x82fd [unverified]
[Checksum Status: Unverified]

Urgent Pointer: 0
[SEQ/ACK analysis]
[iRTT: 0.076413000 seconds]
[Bytes in flight: 633]
[Bytes sent since last PSH flag: 633]
[Timestamps]
[Time since first frame in this TCP stream: 2.086816000 seconds]
[Time since previous frame in this TCP stream: 1.912353000 seconds]
TCP payload (633 bytes)
Hypertext Transfer Protocol
GET /wireshark-labs/HTTP-wireshark-file2.html HTTP/1.1\r\n
[Expert Info (Chat/Sequence): GET /wireshark-labs/HTTP-wireshark-file2.html HTTP/1.1\r\n]
[GET /wireshark-labs/HTTP-wireshark-file2.html HTTP/1.1\r\n]
[Severity level: Chat]
[Group: Sequence]
Request Method: GET
Request URI: /wireshark-labs/HTTP-wireshark-file2.html
Request Version: HTTP/1.1
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/88.0.4324.104 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: en-CA,en;q=0.9,fr-CA;q=0.8,fr;q=0.7,en-GB;q=0.6,en-US;q=0.5\r\n
If-None-Match: "173-5ba2cc5affd71"\r\n
If-Modified-Since: Sun, 31 Jan 2021 06:59:01 GMT\r\n
\r\n
[Full request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file2.html]
[HTTP request 2/2]
[Prev request in frame: 422]
[Response in frame: 472]

No.	Time	Source	Destination	Protocol	Length	Info
472	7.320472	128.119.245.12	10.0.0.230	HTTP	293	HTTP/1.1 304 Not Modified

Frame 472: 293 bytes on wire (2344 bits), 293 bytes captured (2344 bits) on interface \Device\NPF_{FC8D8711-F625-4DBB-8844-C9FDA940F434}, id 0

Interface id: 0 (\Device\NPF_{FC8D8711-F625-4DBB-8844-C9FDA940F434})
Interface name: \Device\NPF_{FC8D8711-F625-4DBB-8844-C9FDA940F434}
Interface description: Wi-Fi
Encapsulation type: Ethernet (1)
Arrival Time: Jan 31, 2021 17:52:04.949861000 Eastern Standard Time
[Time shift for this packet: 0.000000000 seconds]
Epoch Time: 1612133524.949861000 seconds
[Time delta from previous captured frame: 0.033923000 seconds]
[Time delta from previous displayed frame: 0.112099000 seconds]
[Time since reference or first frame: 7.320472000 seconds]
Frame Number: 472
Frame Length: 293 bytes (2344 bits)
Capture Length: 293 bytes (2344 bits)
[Frame is marked: False]
[Frame is ignored: False]
[Protocols in frame: eth:ethertype:ip:tcp:http]
[Coloring Rule Name: HTTP]
[Coloring Rule String: http || tcp.port == 80 || http2]

Ethernet II, Src: ae:47:dd:4a:d0:80 (ae:47:dd:4a:d0:80), Dst: IntelCor_14:e9:39 (38:00:25:14:e9:39)
Destination: IntelCor_14:e9:39 (38:00:25:14:e9:39)
Address: IntelCor_14:e9:39 (38:00:25:14:e9:39)
.... ..0. = LG bit: Globally unique address (factory default)
.... ...0 = IG bit: Individual address (unicast)
Source: ae:47:dd:4a:d0:80 (ae:47:dd:4a:d0:80)
Address: ae:47:dd:4a:d0:80 (ae:47:dd:4a:d0:80)
.... ..1. = LG bit: Locally administered address (this is NOT the factory default)
.... ...0 = IG bit: Individual address (unicast)
Type: IPv4 (0x0800)

Internet Protocol Version 4, Src: 128.119.245.12, Dst: 10.0.0.230
0100 = Version: 4
.... 0101 = Header Length: 20 bytes (5)
Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)
0000 00.. = Differentiated Services Codepoint: Default (0)
.... ..00 = Explicit Congestion Notification: Not ECN-Capable Transport (0)
Total Length: 279
Identification: 0x9f8a (40842)
Flags: 0x40, Don't fragment
0... = Reserved bit: Not set
.1.. = Don't fragment: Set
..0. = More fragments: Not set
Fragment Offset: 0
Time to Live: 46
Protocol: TCP (6)
Header Checksum: 0x2bed [validation disabled]
[Header checksum status: Unverified]
Source Address: 128.119.245.12
Destination Address: 10.0.0.230

Transmission Control Protocol, Src Port: 80, Dst Port: 62707, Seq: 731, Ack: 1155, Len: 239
Source Port: 80
Destination Port: 62707
[Stream index: 30]
[TCP Segment Len: 239]
Sequence Number: 731 (relative sequence number)
Sequence Number (raw): 995791295
[Next Sequence Number: 970 (relative sequence number)]
Acknowledgment Number: 1155 (relative ack number)
Acknowledgment number (raw): 492899487
0101 = Header Length: 20 bytes (5)
Flags: 0x018 (PSH, ACK)
000. = Reserved: Not set
...0 = Nonce: Not set
.... 0... = Congestion Window Reduced (CWR): Not set
.... .0.. = ECN-Echo: Not set
.... ..0. = Urgent: Not set
.... ...1 = Acknowledgment: Set
.... 1... = Push: Set
....0.. = Reset: Not set
....0. = Syn: Not set
....0 = Fin: Not set
[TCP Flags:AP...]
Window: 247
[Calculated window size: 31616]
[Window size scaling factor: 128]
Checksum: 0x1c3d [unverified]
[Checksum Status: Unverified]
Urgent Pointer: 0

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[SEQ/ACK analysis]
  [This is an ACK to the segment in frame: 469]
  [The RTT to ACK the segment was: 0.112099000 seconds]
  [iRTT: 0.076413000 seconds]
  [Bytes in flight: 239]
  [Bytes sent since last PSH flag: 239]
[Timestamps]
  [Time since first frame in this TCP stream: 2.198915000 seconds]
  [Time since previous frame in this TCP stream: 0.112099000 seconds]
TCP payload (239 bytes)
Hypertext Transfer Protocol
HTTP/1.1 304 Not Modified\r\n
  [Expert Info (Chat/Sequence): HTTP/1.1 304 Not Modified\r\n]
    [HTTP/1.1 304 Not Modified\r\n]
    [Severity level: Chat]
    [Group: Sequence]
  Response Version: HTTP/1.1
  Status Code: 304
  [Status Code Description: Not Modified]
  Response Phrase: Not Modified
Date: Sun, 31 Jan 2021 22:52:05 GMT\r\n
Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/7.4.14 mod_perl/2.0.11 Perl/v5.16.3\r\n
Connection: Keep-Alive\r\n
Keep-Alive: timeout=5, max=99\r\n
ETag: "173-5ba2cc5affd71"\r\n
\r\n
[HTTP response 2/2]
[Time since request: 0.112099000 seconds]
[Prev request in frame: 422]
[Prev response in frame: 433]
[Request in frame: 469]
[Request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file2.html]
```