

From PC to destination website:

```
▼ Frame 546: 136 bytes on wire (1088 bits), 136 bytes captured (1088 bits) on interface \Device\NPF_{80BEE9C0-59B9-469D-BA32-A12F1388B1FC}, id 0
  Section number: 1
  ▶ Interface id: 0 (\Device\NPF_{80BEE9C0-59B9-469D-BA32-A12F1388B1FC})
    Encapsulation type: Ethernet (1)
    Arrival Time: Jul 13, 2025 03:54:24.437052000 Bangladesh Standard Time
    UTC Arrival Time: Jul 12, 2025 21:54:24.437052000 UTC
    Epoch Arrival Time: 1752357264.437052000
    [Time shift for this packet: 0.000000000 seconds]
    [Time delta from previous captured frame: 0.000069000 seconds]
    [Time delta from previous displayed frame: 0.000000000 seconds]
    [Time since reference or first frame: 5.695578000 seconds]
    Frame Number: 546
    Frame Length: 136 bytes (1088 bits)
    Capture Length: 136 bytes (1088 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: ASUSTekCOMPU_a0:47:c0 (7c:10:c9:a0:47:c0), Dst: TPLink_21:53:13 (3c:64:cf:21:53:13)
  ▶ Destination: TPLink_21:53:13 (3c:64:cf:21:53:13)
  ▶ Source: ASUSTekCOMPU_a0:47:c0 (7c:10:c9:a0:47:c0)
  Type: IPv4 (0x0800)
  [Stream index: 0]
```

```
▼ Internet Protocol Version 4, Src: 192.168.0.142, Dst: 23.58.120.130
  0100 .... = Version: 4
  .... 0101 = Header Length: 20 bytes (5)
  ▶ Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)
    Total Length: 122
    Identification: 0x1bf9 (7161)
  ▶ 010. .... = Flags: 0x2, Don't fragment
    ...0 0000 0000 0000 = Fragment Offset: 0
    Time to Live: 128
    Protocol: TCP (6)
    Header Checksum: 0x0000 [validation disabled]
    [Header checksum status: Unverified]
    Source Address: 192.168.0.142
    Destination Address: 23.58.120.130
    [Stream index: 15]
```

```
▼ Transmission Control Protocol, Src Port: 53194, Dst Port: 80, Seq: 1, Ack: 1, Len: 82
  Source Port: 53194
  Destination Port: 80
  [Stream index: 12]
  [Stream Packet Number: 4]
  ▶ [Conversation completeness: Complete, WITH_DATA (31)]
  [TCP Segment Len: 82]
  Sequence Number: 1 (relative sequence number)
  Sequence Number (raw): 2946985367
  [Next Sequence Number: 83 (relative sequence number)]
  Acknowledgment Number: 1 (relative ack number)
  Acknowledgment number (raw): 1208553850
  0101 .... = Header Length: 20 bytes (5)
  ▶ Flags: 0x018 (PSH, ACK)
  Window: 255
  [Calculated window size: 65280]
  [Window size scaling factor: 256]
  Checksum: 0x515f [unverified]
  [Checksum Status: Unverified]
  Urgent Pointer: 0
  ▶ [Timestamps]
  ▶ [SEQ/ACK analysis]
  TCP payload (82 bytes)
```

```

▼ Hypertext Transfer Protocol
  ▶ GET /ncc.txt HTTP/1.1\r\n
    Host: ncc.avast.com\r\n
    User-Agent: Avast NCC\r\n
    Accept: */*\r\n
    \r\n
    [Response in frame: 548]
    [Full request URI: http://ncc.avast.com/ncc.txt]

```

From other-side (web) to PC:

```

▼ Frame 548: 205 bytes on wire (1640 bits), 205 bytes captured (1640 bits) on interface \Device\NPF_{8DBEE9C0-59B9-469D-BA32-A12F1388B1FC}, id 0
  Section number: 1
  ▶ Interface id: 0 (\Device\NPF_{8DBEE9C0-59B9-469D-BA32-A12F1388B1FC})
    Encapsulation type: Ethernet (1)
    Arrival Time: Jul 13, 2025 03:54:24.447757000 Bangladesh Standard Time
    UTC Arrival Time: Jul 12, 2025 21:54:24.447757000 UTC
    Epoch Arrival Time: 1752357264.447757000
    [Time shift for this packet: 0.000000000 seconds]
    [Time delta from previous captured frame: 0.008495000 seconds]
    [Time delta from previous displayed frame: 0.010705000 seconds]
    [Time since reference or first frame: 5.706283000 seconds]
    Frame Number: 548
    Frame Length: 205 bytes (1640 bits)
    Capture Length: 205 bytes (1640 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: TPLink_21:53:13 (3c:64:cf:21:53:13), Dst: ASUSTekCOMPU_a0:47:c0 (7c:10:c9:a0:47:c0)
  ▼ Destination: ASUSTekCOMPU_a0:47:c0 (7c:10:c9:a0:47:c0)
    .... 0. .... = LG bit: Globally unique address (factory default)
    .... 0. .... = IG bit: Individual address (unicast)
  ▼ Source: TPLink_21:53:13 (3c:64:cf:21:53:13)
    .... 0. .... = LG bit: Globally unique address (factory default)
    .... 0. .... = IG bit: Individual address (unicast)
  Type: IPv4 (0x0800)
  [Stream index: 0]

```

```

▼ Internet Protocol Version 4, Src: 23.58.120.130, Dst: 192.168.0.142
  0100 .... = Version: 4
  .... 0101 = Header Length: 20 bytes (5)
  ▶ Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)
    Total Length: 191
    Identification: 0xe5f1 (58865)
  ▶ 000. .... = Flags: 0x0
    ...0 0000 0000 0000 = Fragment Offset: 0
    Time to Live: 55
    Protocol: TCP (6)
    Header Checksum: 0x4c55 [validation disabled]
    [Header checksum status: Unverified]
    Source Address: 23.58.120.130
    Destination Address: 192.168.0.142
    [Stream index: 15]

```

```

Transmission Control Protocol, Src Port: 80, Dst Port: 53194, Seq: 1, Ack: 83, Len: 151
  Source Port: 80
  Destination Port: 53194
  [Stream index: 12]
  [Stream Packet Number: 6]
  ▶ [Conversation completeness: Complete, WITH_DATA (31)]
  [TCP Segment Len: 151]
  Sequence Number: 1 (relative sequence number)
  Sequence Number (raw): 1208553850
  [Next Sequence Number: 152 (relative sequence number)]
  Acknowledgment Number: 83 (relative ack number)
  Acknowledgment number (raw): 2946985449
  0101 .... = Header Length: 20 bytes (5)
  ▶ Flags: 0x018 (PSH, ACK)
  Window: 768
  [Calculated window size: 98304]
  [Window size scaling factor: 128]
  Checksum: 0xc268 [unverified]
  [Checksum Status: Unverified]
  Urgent Pointer: 0
  ▶ [Timestamps]
  ▶ [SEQ/ACK analysis]
  TCP payload (151 bytes)

```

```

Hypertext Transfer Protocol
  ▶ HTTP/1.1 200 OK\r\n
    Content-Type: text/html\r\n
  ▶ Content-Length: 26\r\n
    Date: Sat, 12 Jul 2025 21:54:20 GMT\r\n
    Connection: keep-alive\r\n
    \r\n
    [Request in frame: 546]
    [Time since request: 0.010705000 seconds]
    [Request URI: /ncc.txt]
    [Full request URI: http://ncc.avast.com/ncc.txt]
    File Data: 26 bytes

```

Description by protocols

Frame: The Physical Layer is responsible for transmitting raw bits over the cables or wireless.

Ethernet II: Data-Link, Handles local delivery of frames within the same network segment using MAC addresses.

Internet-Protocol: Network Layer, Provides logical addressing and routing so packets can travel across different networks.

Transmission Control: Transport Layer, Ensures accurate, ordered, and reliable delivery of data.

Hypertext Transfer: Application Layer, Communication between web browsers and servers. Mainly initially takes the steps towards connecting to the server through application end like browser.