1. TCP，UDP，ARP
2. 0.68009s
3. 169.254.75.214,fe80::de57:2984:a9f:5592 srcport of Post:9959 srcport of Post:8080

4.Post:

Frame 12: 60 bytes on wire (480 bits), 60 bytes captured (480 bits) on interface \Device\NPF\_{B556E8DB-875B-45ED-B4D4-00832D7BC113}, id 0

Section number: 1

Interface id: 0 (\Device\NPF\_{B556E8DB-875B-45ED-B4D4-00832D7BC113})

Interface name: \Device\NPF\_{B556E8DB-875B-45ED-B4D4-00832D7BC113}

Interface description: WLAN

Encapsulation type: Ethernet (1)

Arrival Time: Nov 23, 2023 00:43:24.626928000 中国标准时间

UTC Arrival Time: Nov 22, 2023 16:43:24.626928000 UTC

Epoch Arrival Time: 1700671404.626928000

[Time shift for this packet: 0.000000000 seconds]

[Time delta from previous captured frame: 0.000662000 seconds]

[Time delta from previous displayed frame: 0.068009000 seconds]

[Time since reference or first frame: 1.965576000 seconds]

Frame Number: 12

Frame Length: 60 bytes (480 bits)

Capture Length: 60 bytes (480 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: HuaweiTechno\_1b:24:9f (10:51:72:1b:24:9f), Dst: AzureWaveTec\_50:59:c3 (b4:8c:9d:50:59:c3)

Destination: AzureWaveTec\_50:59:c3 (b4:8c:9d:50:59:c3)

Address: AzureWaveTec\_50:59:c3 (b4:8c:9d:50:59:c3)

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

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

Source: HuaweiTechno\_1b:24:9f (10:51:72:1b:24:9f)

Address: HuaweiTechno\_1b:24:9f (10:51:72:1b:24:9f)

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

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

Type: IPv4 (0x0800)

Padding: 00

Internet Protocol Version 4, Src: 114.212.10.193, Dst: 172.24.113.127

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: 45

Identification: 0x3300 (13056)

010. .... = Flags: 0x2, Don't fragment

0... .... = Reserved bit: Not set

.1.. .... = Don't fragment: Set

..0. .... = More fragments: Not set

...0 0000 0000 0000 = Fragment Offset: 0

Time to Live: 61

Protocol: TCP (6)

Header Checksum: 0x6f9e [validation disabled]

[Header checksum status: Unverified]

Source Address: 114.212.10.193

Destination Address: 172.24.113.127

Transmission Control Protocol, Src Port: 8080, Dst Port: 9959, Seq: 309, Ack: 705, Len: 5

Source Port: 8080

Destination Port: 9959

[Stream index: 3]

[Conversation completeness: Incomplete, DATA (15)]

..0. .... = RST: Absent

...0 .... = FIN: Absent

.... 1... = Data: Present

.... .1.. = ACK: Present

.... ..1. = SYN-ACK: Present

.... ...1 = SYN: Present

[Completeness Flags: ··DASS]

[TCP Segment Len: 5]

Sequence Number: 309 (relative sequence number)

Sequence Number (raw): 3289738549

[Next Sequence Number: 314 (relative sequence number)]

Acknowledgment Number: 705 (relative ack number)

Acknowledgment number (raw): 3992207148

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

Flags: 0x018 (PSH, ACK)

000. .... .... = Reserved: Not set

...0 .... .... = Accurate ECN: Not set

.... 0... .... = Congestion Window Reduced: 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: 240

[Calculated window size: 30720]

[Window size scaling factor: 128]

Checksum: 0x2aad [unverified]

[Checksum Status: Unverified]

Urgent Pointer: 0

[Timestamps]

[Time since first frame in this TCP stream: 0.069570000 seconds]

[Time since previous frame in this TCP stream: 0.000662000 seconds]

[SEQ/ACK analysis]

[iRTT: 0.001466000 seconds]

[Bytes in flight: 313]

[Bytes sent since last PSH flag: 5]

TCP payload (5 bytes)

TCP segment data (5 bytes)

[2 Reassembled TCP Segments (313 bytes): #11(308), #12(5)]

[Frame: 11, payload: 0-307 (308 bytes)]

[Frame: 12, payload: 308-312 (5 bytes)]

[Segment count: 2]

[Reassembled TCP length: 313]

[Reassembled TCP Data [truncated]: 485454502f312e3120323030204f4b0d0a446174653a205765642c203232204e6f7620323032332031363a34333a323520474d540d0a5365727665723a204170616368652f322e342e36202843656e744f5329204f70656e53534c2f312e302e326b2d6669707]

Hypertext Transfer Protocol, has 2 chunks (including last chunk)

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: Wed, 22 Nov 2023 16:43:25 GMT\r\n

Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips\r\n

Keep-Alive: timeout=5, max=100\r\n

Connection: Keep-Alive\r\n

Transfer-Encoding: chunked\r\n

Content-Type: text/html; charset=utf-8\r\n

\r\n

[HTTP response 1/1]

[Time since request: 0.068009000 seconds]

[Request in frame: 9]

[Request URI: http://114.212.10.193:8080/course/net23/pcaplab.py]

HTTP chunked response

Data chunk (71 octets)

Chunk size: 71 octets

Chunk data: 0a3c48544d4c3e3c424f44593e0a3c48323e62626533393064326663613439616532613736343261373463393134623038343c2f48323e0a3c2f424f44593e3c2f48544d4c3e0a

Chunk boundary: 0d0a

End of chunked encoding

Chunk size: 0 octets

\r\n

File Data: 71 bytes

Line-based text data: text/html (4 lines)

\n

<HTML><BODY>\n

<H2>bbe390d2fca49ae2a7642a74c914b084</H2>\n

</BODY></HTML>\n

OK:

Frame 9: 758 bytes on wire (6064 bits), 758 bytes captured (6064 bits) on interface \Device\NPF\_{B556E8DB-875B-45ED-B4D4-00832D7BC113}, id 0

Section number: 1

Interface id: 0 (\Device\NPF\_{B556E8DB-875B-45ED-B4D4-00832D7BC113})

Interface name: \Device\NPF\_{B556E8DB-875B-45ED-B4D4-00832D7BC113}

Interface description: WLAN

Encapsulation type: Ethernet (1)

Arrival Time: Nov 23, 2023 00:43:24.558919000 中国标准时间

UTC Arrival Time: Nov 22, 2023 16:43:24.558919000 UTC

Epoch Arrival Time: 1700671404.558919000

[Time shift for this packet: 0.000000000 seconds]

[Time delta from previous captured frame: 0.000095000 seconds]

[Time delta from previous displayed frame: 0.000000000 seconds]

[Time since reference or first frame: 1.897567000 seconds]

Frame Number: 9

Frame Length: 758 bytes (6064 bits)

Capture Length: 758 bytes (6064 bits)

[Frame is marked: False]

[Frame is ignored: False]

[Protocols in frame: eth:ethertype:ip:tcp:http:urlencoded-form]

[Coloring Rule Name: HTTP]

[Coloring Rule String: http || tcp.port == 80 || http2]

Ethernet II, Src: AzureWaveTec\_50:59:c3 (b4:8c:9d:50:59:c3), Dst: HuaweiTechno\_1b:24:9f (10:51:72:1b:24:9f)

Destination: HuaweiTechno\_1b:24:9f (10:51:72:1b:24:9f)

Address: HuaweiTechno\_1b:24:9f (10:51:72:1b:24:9f)

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

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

Source: AzureWaveTec\_50:59:c3 (b4:8c:9d:50:59:c3)

Address: AzureWaveTec\_50:59:c3 (b4:8c:9d:50:59:c3)

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

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

Type: IPv4 (0x0800)

Internet Protocol Version 4, Src: 172.24.113.127, Dst: 114.212.10.193

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: 744

Identification: 0x87a8 (34728)

010. .... = Flags: 0x2, Don't fragment

0... .... = Reserved bit: Not set

.1.. .... = Don't fragment: Set

..0. .... = More fragments: Not set

...0 0000 0000 0000 = Fragment Offset: 0

Time to Live: 128

Protocol: TCP (6)

Header Checksum: 0xd53a [validation disabled]

[Header checksum status: Unverified]

Source Address: 172.24.113.127

Destination Address: 114.212.10.193

Transmission Control Protocol, Src Port: 9959, Dst Port: 8080, Seq: 1, Ack: 1, Len: 704

Source Port: 9959

Destination Port: 8080

[Stream index: 3]

[Conversation completeness: Incomplete, DATA (15)]

..0. .... = RST: Absent

...0 .... = FIN: Absent

.... 1... = Data: Present

.... .1.. = ACK: Present

.... ..1. = SYN-ACK: Present

.... ...1 = SYN: Present

[Completeness Flags: ··DASS]

[TCP Segment Len: 704]

Sequence Number: 1 (relative sequence number)

Sequence Number (raw): 3992206444

[Next Sequence Number: 705 (relative sequence number)]

Acknowledgment Number: 1 (relative ack number)

Acknowledgment number (raw): 3289738241

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

Flags: 0x018 (PSH, ACK)

000. .... .... = Reserved: Not set

...0 .... .... = Accurate ECN: Not set

.... 0... .... = Congestion Window Reduced: 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: 0x880f [unverified]

[Checksum Status: Unverified]

Urgent Pointer: 0

[Timestamps]

[Time since first frame in this TCP stream: 0.001561000 seconds]

[Time since previous frame in this TCP stream: 0.000095000 seconds]

[SEQ/ACK analysis]

[iRTT: 0.001466000 seconds]

[Bytes in flight: 704]

[Bytes sent since last PSH flag: 704]

TCP payload (704 bytes)

Hypertext Transfer Protocol

POST /course/net23/pcaplab.py HTTP/1.1\r\n

[Expert Info (Chat/Sequence): POST /course/net23/pcaplab.py HTTP/1.1\r\n]

[POST /course/net23/pcaplab.py HTTP/1.1\r\n]

[Severity level: Chat]

[Group: Sequence]

Request Method: POST

Request URI: /course/net23/pcaplab.py

Request Version: HTTP/1.1

Host: 114.212.10.193:8080\r\n

Connection: keep-alive\r\n

Content-Length: 17\r\n

Cache-Control: max-age=0\r\n

Upgrade-Insecure-Requests: 1\r\n

Origin: http://114.212.10.193:8080\r\n

Content-Type: application/x-www-form-urlencoded\r\n

User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/119.0.0.0 Safari/537.36 Edg/119.0.0.0\r\n

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,\*/\*;q=0.8,application/signed-exchange;v=b3;q=0.7\r\n

Referer: http://114.212.10.193:8080/course/net23/pcaplab.htm\r\n

Accept-Encoding: gzip, deflate\r\n

Accept-Language: zh-CN,zh;q=0.9,en;q=0.8,en-GB;q=0.7,en-US;q=0.6\r\n

\r\n

[Full request URI: http://114.212.10.193:8080/course/net23/pcaplab.py]

[HTTP request 1/1]

[Response in frame: 12]

File Data: 17 bytes

HTML Form URL Encoded: application/x-www-form-urlencoded