

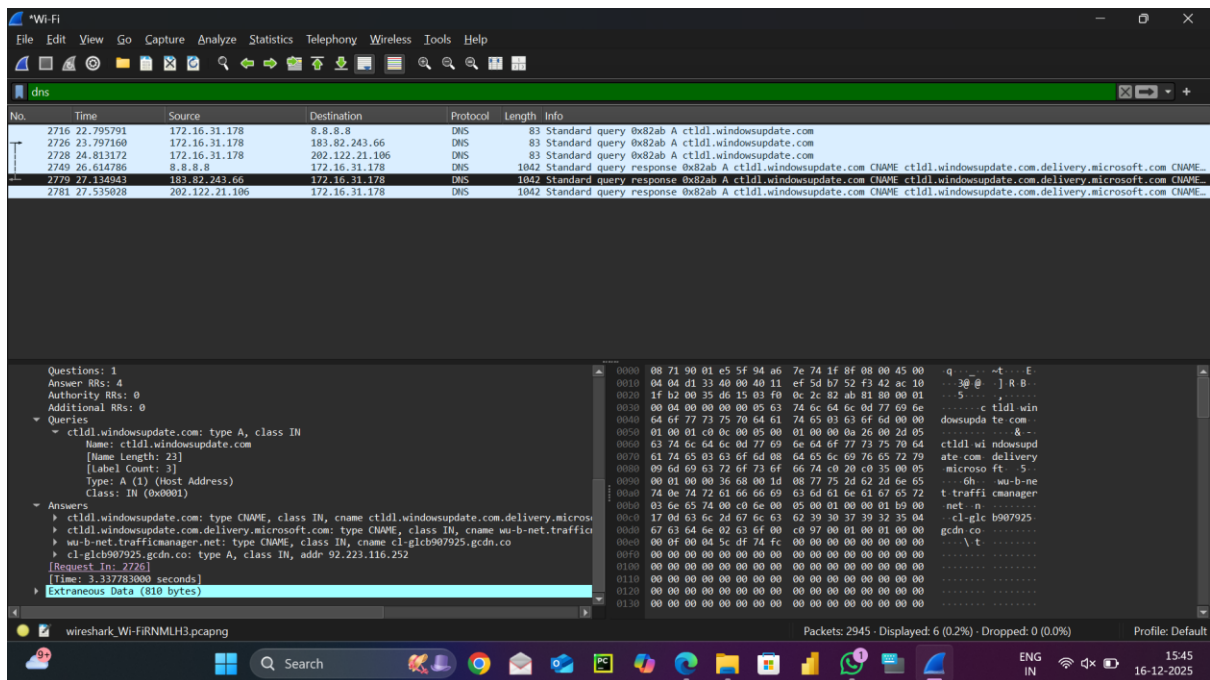
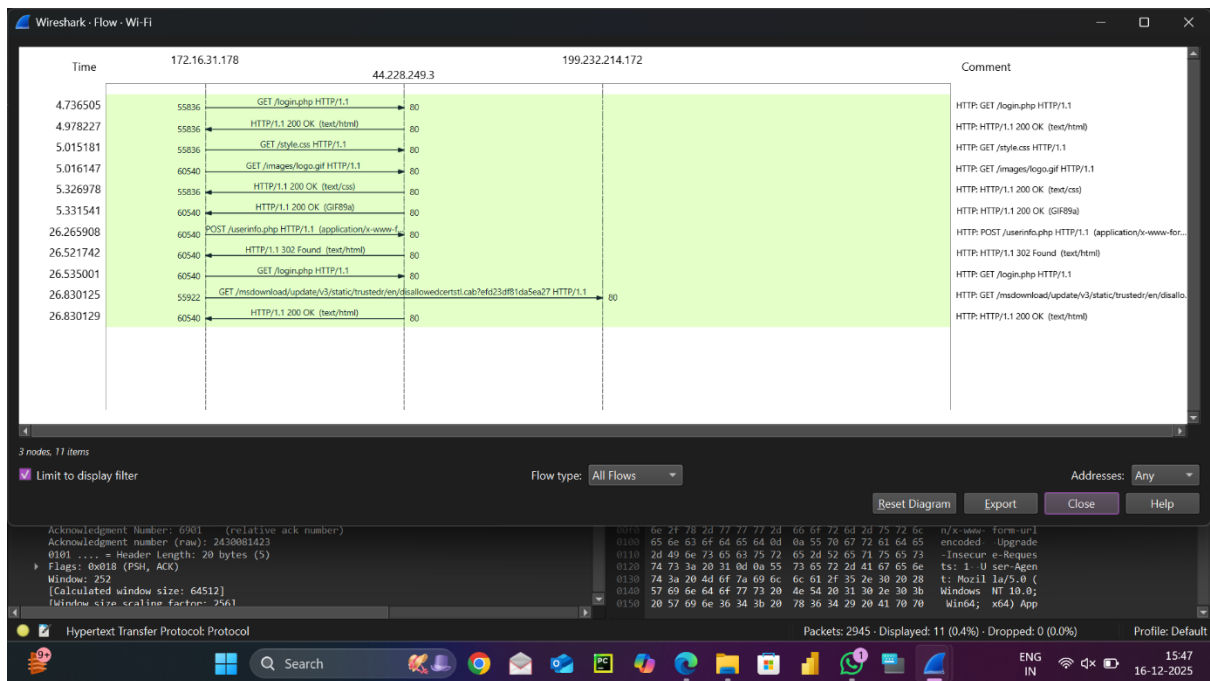
Q1)

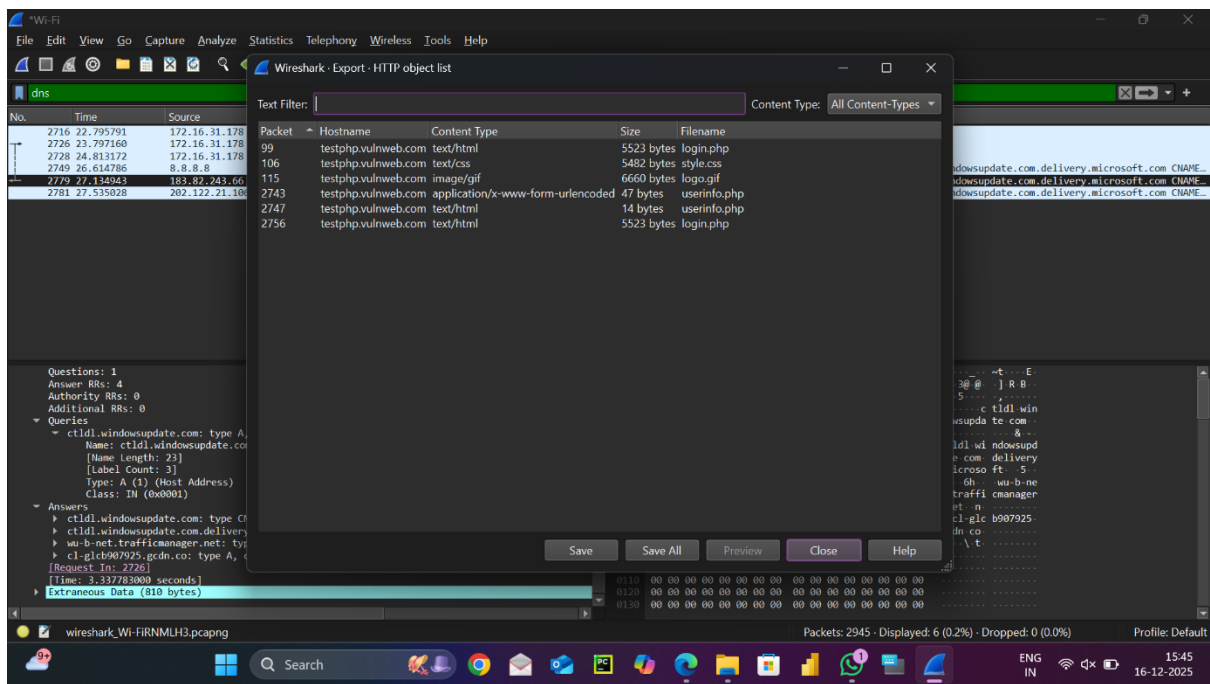
The screenshot displays the Wireshark network protocol analyzer interface. The top menu bar includes File, Edit, View, Go, Capture, Analyze, Statistics, Telephony, Wireless, Tools, Help, and a search bar. The toolbar contains icons for various functions like opening files, saving, and analyzing.

The main window is titled "Wireshark - IPv6 Statistics / All Addresses - Wi-Fi". It features a tree view on the left showing the packet list, packet details, and packet bytes. The packet list shows a single packet (No. 2779) of type "Domain Name System (response)" with a source of "172.16.31.1" and a destination of "172.16.31.1". The packet details pane shows the "Domain Name System (response)" section, indicating a transaction ID of 0x82ab and a flags field of 0x8180. The packet bytes pane shows the raw data of the packet.

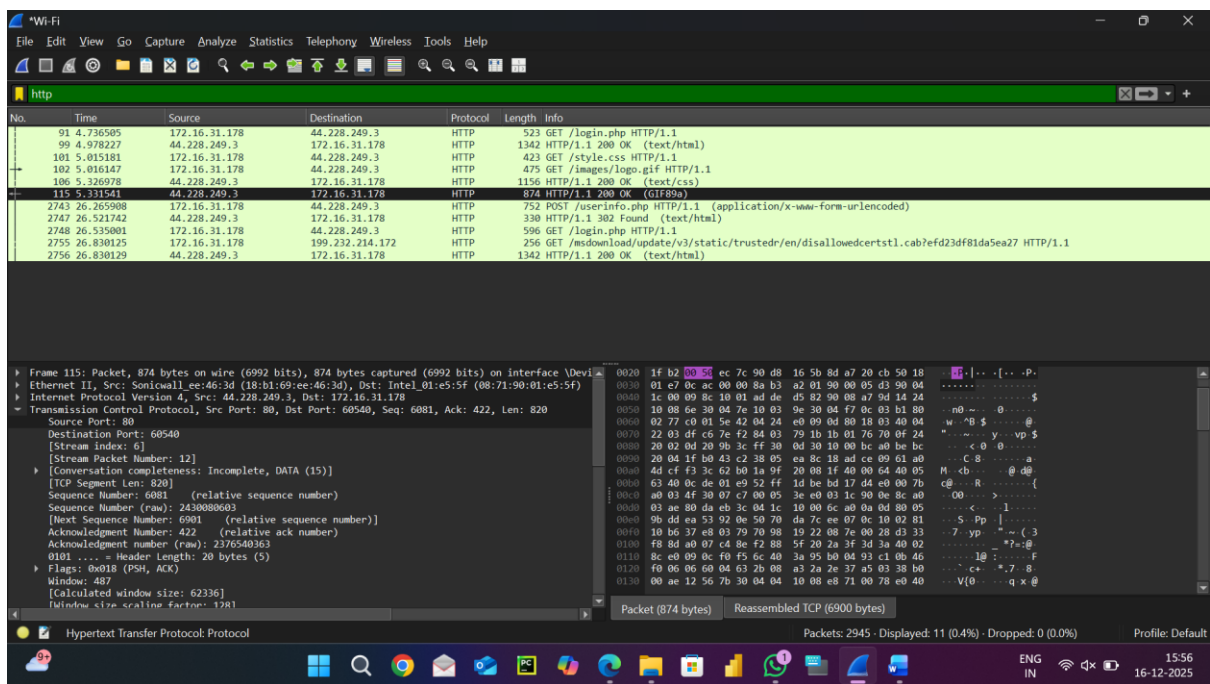
The "Statistics" window is open, displaying the "IPv6 Statistics / All Addresses" section. It shows a table of statistics for various IPv6 addresses, including the number of packets, average rate, and burst rate. The table has columns for "Topic / Item", "Count", "Average", "Min Val", "Max Val", "Rate (ms)", "Percent", "Burst Rate", and "Burst Start". The statistics are grouped by "IPv6 Statistics / All Addresses" and "IPv6 Statistics / All Addresses - Wi-Fi".

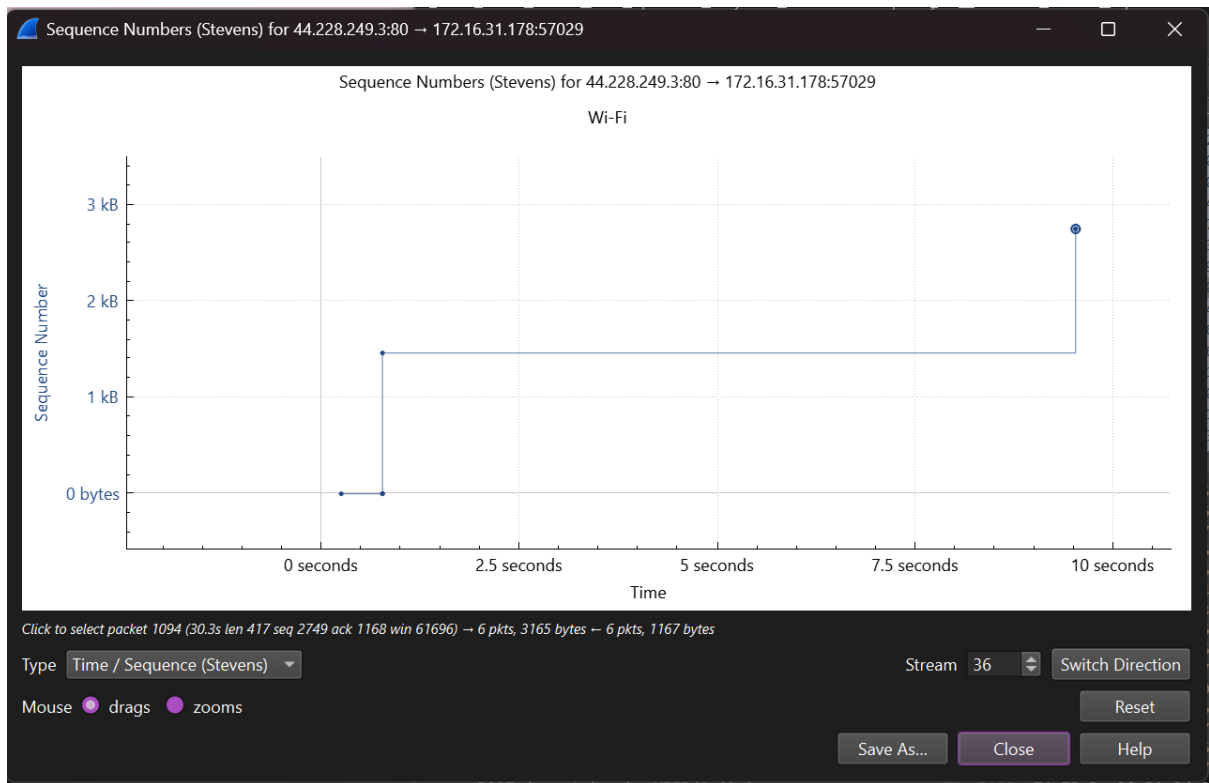
The bottom status bar shows the current capture file "wireshark-Wi-Fi-NMHL3.pcapng", the number of packets (2945), the display filter (6 (0.2%)), the number of dropped packets (0 (0.0%)), and the profile (Default).





Q2)





Task 2

Q1)

Wi-Fi

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

http.request.method=="GET"

No.	Time	Source	Destination	Protocol	Length	Info
91	4.736595	172.16.31.178	44.228.249.3	HTTP	523	GET /login.php HTTP/1.1
101	5.015181	172.16.31.178	44.228.249.3	HTTP	423	GET /style.css HTTP/1.1
102	5.015147	172.16.31.178	44.228.249.3	HTTP	475	GET /images/logo.gif HTTP/1.1
2748	26.535001	172.16.31.178	44.228.249.3	HTTP	596	GET /login.php HTTP/1.1
2755	26.830125	172.16.31.178	199.232.214.172	HTTP	256	GET /msdownload/update/v3/static/trusted/en/disallowedcertst1_cab7efd3df81da5ea27 HTTP/1.1

Frame 91: Packet, 523 bytes on wire (4184 bits), 523 bytes captured (4184 bits) on interface \Device\NPF...

Ethernet II, Src: Intel_01:e5:5f (08:71:90:01:e5:5f), Dst: Sonicwall_ee:46:3d (18:b1:69:ee:46:3d)

Internet Protocol Version 4, Src: 172.16.31.178, Dst: 44.228.249.3

Transmission Control Protocol, Src Port: 55836, Dst Port: 80, Seq: 1, Ack: 1, Len: 469

Hypertext Transfer Protocol

GET /login.php HTTP/1.1

User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/143.0.0.0 Safari/537.36 Edg/143.0.0.0 Accept: text/html,application/javascript;q=0.9,*/*;q=0.8

Packets: 2945 - Displayed: 5 (0.2%) - Dropped: 0 (0.0%) Profile: Default

Q2)

The image shows a Wireshark capture of an HTTP response. The packet list on the left shows a packet of 1342 bytes from 172.16.31.178 to 172.16.31.178. The packet details pane shows the following structure:

- Frame 99: Packet, 1342 bytes on wire (10736 bits), 1342 bytes captured (10736 bits) on interface \Device\NPF...
- Ethernet II, Src: Sordicell ee:46:3d (18:b1:69:ee:46:3d), Dst: Intel_01:e5:5f (08:71:90:01:e5:5f)
- Internet Protocol Version 4, Src: 44.228.249.3, Dst: 172.16.31.178
- Transmission Control Protocol, Src Port: 80, Dst Port: 55836, Seq: 1461, Ack: 470, Len: 1288
- [2 Reassembled TCP Segments (2748 bytes): #98(1460), #99(1288)]
- Hypertext Transfer Protocol, has 2 chunks (including last chunk)
- Line-based text data: text/html (119 lines)

The packet bytes pane shows the raw data of the response, including the status bar "200 OK (text/html)" and the beginning of the HTML document structure.

Q3)

The image shows a Wireshark capture of an HTTP request. The packet list on the left shows a packet of 1342 bytes from 172.16.31.178 to 44.228.249.3. The packet details pane shows the following structure:

- Frame 99: Packet, 1342 bytes on wire (10736 bits), 1342 bytes captured (10736 bits) on interface \Device\NPF...
- Ethernet II, Src: Sordicell ee:46:3d (18:b1:69:ee:46:3d), Dst: Intel_01:e5:5f (08:71:90:01:e5:5f)
- Internet Protocol Version 4, Src: 172.16.31.178, Dst: 44.228.249.3
- Transmission Control Protocol, Src Port: 55836, Dst Port: 80, Seq: 470, Len: 1288
- [2 Reassembled TCP Segments (2748 bytes): #2754(1460), #2756(1288)]
- Hypertext Transfer Protocol, has 2 chunks (including last chunk)
- Server: nginx/1.19.0\r\n
- Date: Tue, 16 Dec 2025 09:31:19 GMT\r\n
- Content-Type: text/html; charset=UTF-8\r\n
- Transfer-Encoding: chunked\r\n
- Connection: keep-alive\r\n
- X-Powered-By: PHP/5.6.40-38+ubuntu20.04.1+deb.sury.org-1\r\n
- Content-Encoding: gzip\r\n
- [Request in frame: 2748]
- [Time since request: 295.128000 milliseconds]
- [Request URI: /login.php]
- [Full request URI: http://testphp.vulnweb.com/login.php]
- HTTP chunked response
- Content-encoded entity body (gzip): 2484 bytes -> 5523 bytes
- File Data: 5523 bytes
- Line-based text data: text/html (119 lines)

The packet bytes pane shows the raw data of the request, including the status bar "200 OK (text/html)" and the beginning of the HTML document structure.

Q4)

The screenshot shows a Wireshark capture of an HTTP 200 OK response. The packet list on the left shows packet 115 (5.331541) as the selected item. The packet details pane on the left shows the structure of the packet: Ethernet II, Internet Protocol Version 4, Transmission Control Protocol, and Hypertext Transfer Protocol. The packet bytes pane on the right shows the raw data of the packet, including the HTTP status bar and the CSS content. The status bar at the bottom indicates that the packet is 1156 bytes and has been reassembled into 5721 bytes.

No.	Time	Source	Destination	Protocol	Length	Info
106	5.326978	44.228.249.3	172.16.31.178	HTTP	1156	HTTP/1.1 200 OK (text/css)
115	5.331541	44.228.249.3	172.16.31.178	HTTP	874	HTTP/1.1 200 OK (GIF89a)

Task3

Q1)

The screenshot shows a Wireshark capture of an HTTP 200 OK response. The packet list on the left shows packet 2756 (26.830129) as the selected item. The packet details pane on the left shows the structure of the packet: Ethernet II, Internet Protocol Version 4, Transmission Control Protocol, and Hypertext Transfer Protocol. The packet bytes pane on the right shows the raw data of the packet, including the HTTP status bar and the HTML content. The status bar at the bottom indicates that the packet is 1342 bytes and has been reassembled into 2748 bytes.

No.	Time	Source	Destination	Protocol	Length	Info
91	4.736595	172.16.31.178	44.228.249.3	HTTP	523	GET /login.php HTTP/1.1
99	4.978227	44.228.249.3	172.16.31.178	HTTP	1342	HTTP/1.1 200 OK (text/html)
101	5.015181	172.16.31.178	44.228.249.3	HTTP	423	GET /style.css HTTP/1.1
102	5.016147	172.16.31.178	44.228.249.3	HTTP	475	GET /images/logo.gif HTTP/1.1
106	5.326978	44.228.249.3	172.16.31.178	HTTP	1156	HTTP/1.1 200 OK (text/css)
115	5.331541	44.228.249.3	172.16.31.178	HTTP	874	HTTP/1.1 200 OK (GIF89a)
2743	26.265908	172.16.31.178	44.228.249.3	HTTP	752	POST /userinfo.php HTTP/1.1 (application/x-www-form-urlencoded)
2747	26.521742	44.228.249.3	172.16.31.178	HTTP	330	HTTP/1.1 302 Found (text/html)
2748	26.535801	172.16.31.178	44.228.249.3	HTTP	596	GET /login.php HTTP/1.1
2755	26.830125	172.16.31.178	199.232.214.172	HTTP	256	GET /msdownload/update/v3/static/trusted/en/disallowedcertst1.cab?ef023df81da5ea27 HTTP/1.1
2756	26.830129	44.228.249.3	172.16.31.178	HTTP	1342	HTTP/1.1 200 OK (text/html)

Q2)

http2-h2c[1].pcap

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tcp.stream eq 0 and http2.streamid eq 0

No.	Time	Source	Destination	Protocol	Length	Info
2	0.600079	139.162.123.134	10.9.0.2	HTTP2	164	HTTP/1.1 200 Switching Protocols , SETTINGS[0]
4	0.600541	10.9.0.2	139.162.123.134	HTTP2	93	SETTINGS[0]
5	0.600575	10.9.0.2	139.162.123.134	HTTP2	75	SETTINGS[0]
7	0.600603	10.9.0.2	139.162.123.134	HTTP2	79	WINDOW_UPDATE[0]
9	0.912304	139.162.123.134	10.9.0.2	HTTP2	75	SETTINGS[0]

http2-h2c[1].pcap

Packets: 10 · Displayed: 5 (50.0%)

Profile: Default

15:31 16-12-2025

Q3)

http2-h2c[1].pcap

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

Apply a display filter ... <Ctrl-/>

Frame 2: Packet, 164 bytes on wire (1312 bits), 164 bytes captured (1312 bits) on interface 0

Ethernet II, Src: 8a:7d:40:9e:52:1b (8a:7d:40:9e:52:1b), Dst: 92:76:39:be:c1:81 (92:76:39:be:c1:81)

Internet Protocol Version 4, Src: 139.162.123.134, Dst: 10.9.0.2

Transmission Control Protocol, Src Port: 80, Dst Port: 58038, Seq: 1, Ack: 179, Len: 98

Hypertext Transfer Protocol

HTTP/1.1 200 Switching Protocols

Response Version: HTTP/1.1

Status Code: 200

[Status Code Description: Switching Protocols]

Response Phrase: Switching Protocols

Connection: Upgrade

Upgrade: h2c

Upgrade: h2c

[Request in frame: 1]

[Time since request: 600.079000 milliseconds]

[Request URI: /robots.txt]

[Full request (URI: http://nghttp2.org/robots.txt)]

HyperText Transfer Protocol 2

Stream: SETTINGS, Stream ID: 0, Length: 18

Type: SETTINGS (4)

Flags: 0x00

0000 0000 = Unused: 0x00

0000 0000 = ACK: False

0000 0000 0000 0000 0000 0000 0000 0000 = Reserved: 0x0

0000 0000 0000 0000 0000 0000 0000 0000 = Stream Identifier: 0

Settings - Max concurrent streams: 100

Settings Identifier: Max concurrent streams (3)

Settings - Initial Windows size: 1048576

Settings Identifier: Initial Windows size (4)

Initial Window Size: 1048576

Settings - Header table size: 8192

Settings Identifier: Header table size (1)

Header table size: 8192

Must be zero (http.flags.unused_settings), 7 bits

Packets: 10

Profile: Default

16:44 16-12-2025