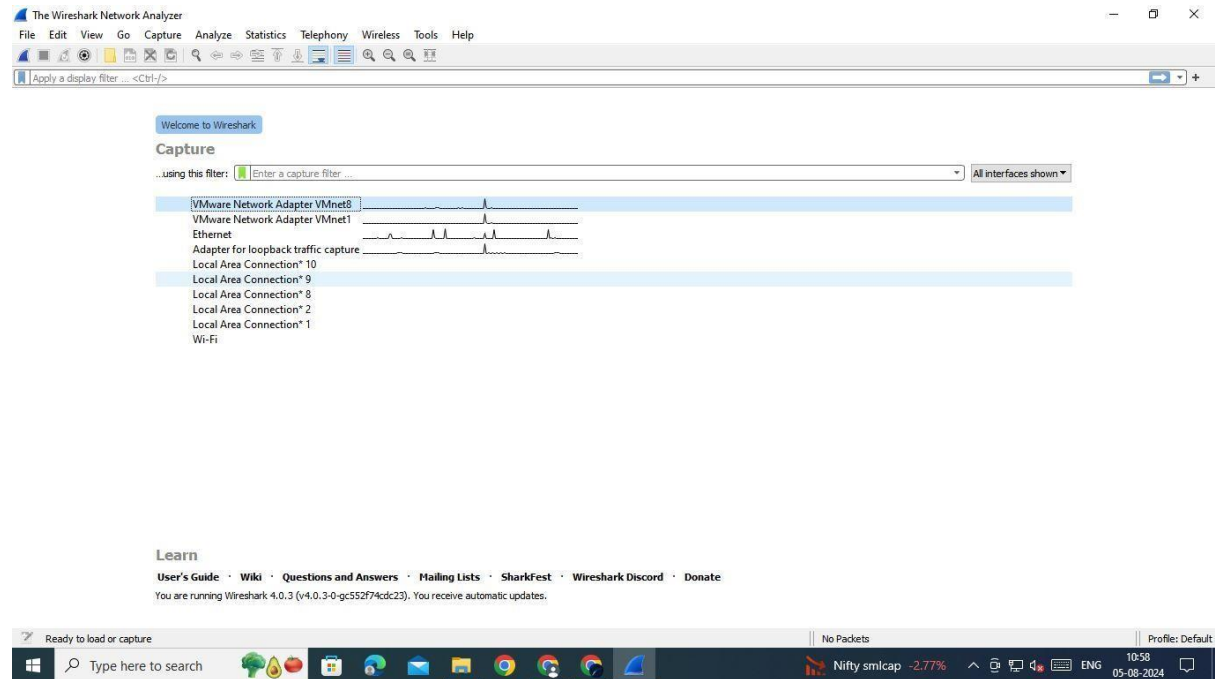


EX-NO : 05

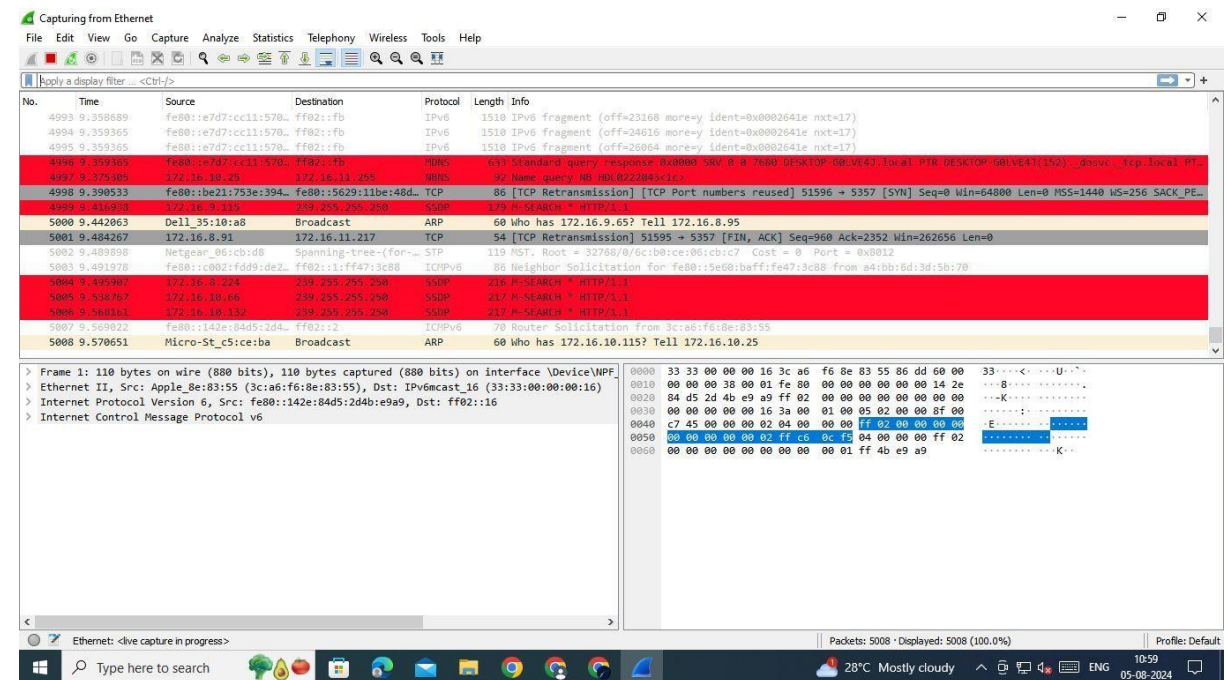
DATE : 05 -08-2024

## EXPERIMENTS ON PACKET CAPTURE TOOL: WIRESHARK

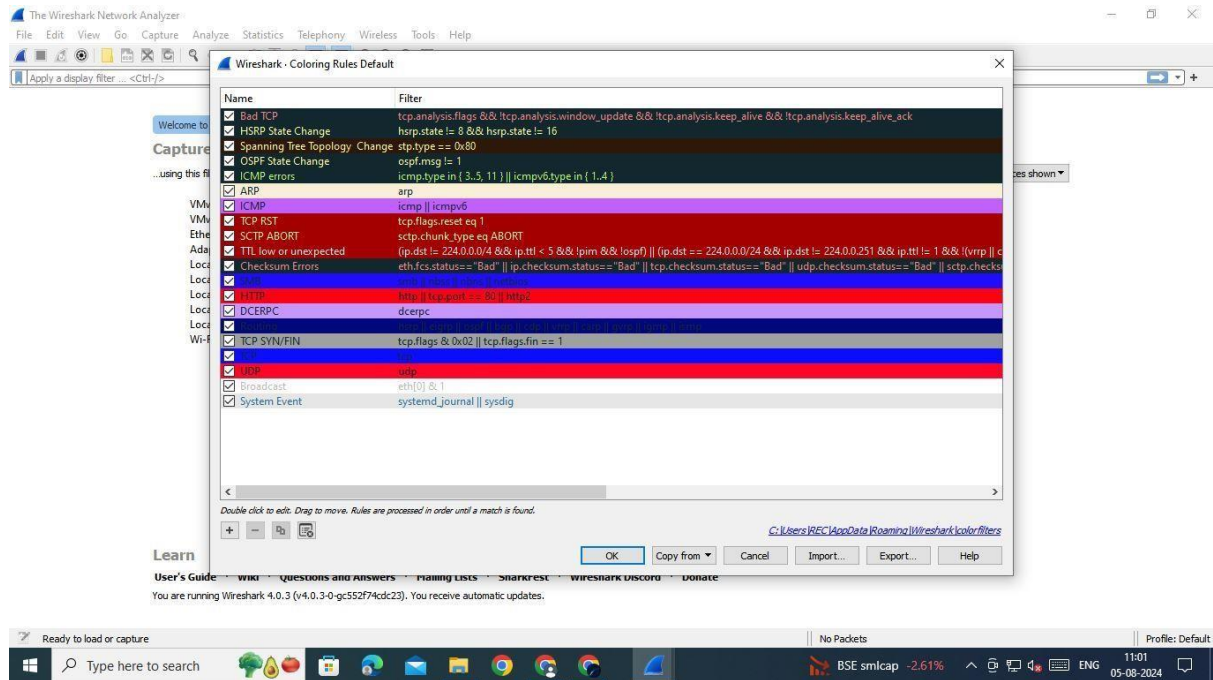
### CAPTURING PACKETS:



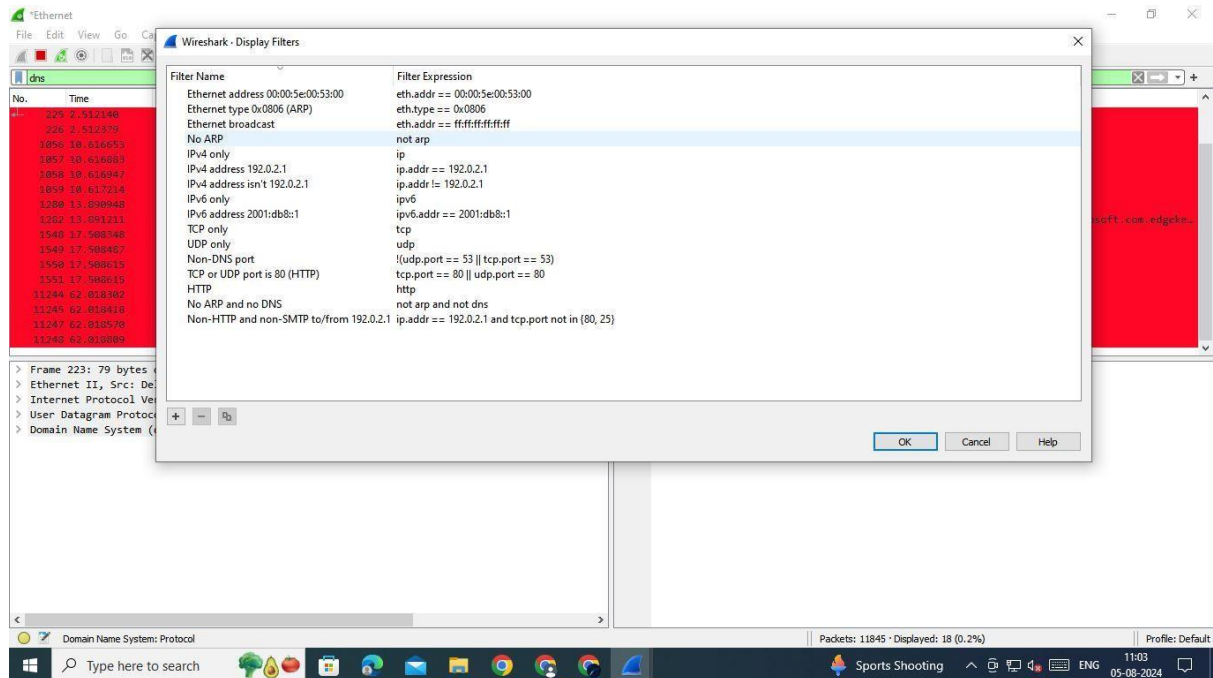
### PACKET LISTS, DETAILS AND BYTES:



## COLORING RULES:



## BUILDING DISPLAY FILTER EXPRESSIONS:



## FILTERING PACKETS:

The screenshot shows the Wireshark interface with a packet capture on the 'eth0' interface. The packet list pane shows several DNS packets. The packet details pane for packet 223 shows the following information:

- Frame 223: 79 bytes on wire (632 bits), 79 bytes captured (632 bits) on interface \Device\NPF...
- Ethernet II, Src: Dell\_34:d8:90 (50:9a:4c:34:d8:90), Dst: Sophos\_cf:be:45 (7c:5a:1c:cf:be:45)
- Internet Protocol Version 4, Src: 172.16.8.91, Dst: 172.16.8.1
- User Datagram Protocol, Src Port: 49445, Dst Port: 53
- Domain Name System (query)

The packet bytes pane shows the raw data of the DNS query, including the question section for 'accounts.google.com'.

## APPLY FILTERS:

The screenshot shows the Wireshark interface with a packet capture on the 'eth0' interface. The packet list pane shows several packets. The packet details pane for packet 2244 shows the following information:

- Frame 2244: 12 client pkts, 12 server pkts, 23 turns. Click to select.
- Ethernet II, Src: Sophos\_cf:be:45 (7c:5a:1c:cf:be:45), Dst: Dell\_34:d8:90 (50:9a:4c:34:d8:90)
- Internet Protocol Version 4, Src: 172.16.8.91, Dst: 172.16.8.1
- Transmission Control Protocol, Src Port: 49445, Dst Port: 80
- Hypertext Transfer Protocol, GET /edgedl/diffgen-puffin/jflhccmpkpkfbkiamineehmchikw/1.784380cf25ca5bcea20f8e8646bec7503a3c8760e96c7505b537c6bfb39aef/1.962e5a5ee8b1a9dfc92c5339c47fd6124a3f1aae2d2d75d88b55c25308bc54/d126b0e6ddc6a4c7e011056c2e1b07fcc2e8c4409c06c680268a1e9e14dbb88 HTTP/1.1

The packet bytes pane shows the raw data of the HTTP request, including the request line and headers.

## INSPECTING AND FILTERING PACKETS:

The screenshot shows the Wireshark interface with a packet capture on the 'tcp.stream eq 35' filter. The packet list shows several packets, with packet 32 selected. The packet details pane shows the structure of the packet, including the Ethernet II header, Internet Protocol Version 4 header, and Transmission Control Protocol (TCP) header. The packet bytes pane shows the raw data of the packet, including the Ethernet II header, Internet Protocol Version 4 header, and Transmission Control Protocol (TCP) header.

Packet 32: 172.16.0.91 → 34.104.35.123 [RST] Seq=226834976 Len=0 MSS=1460 SACK\_PERM=1

Packet details:

- Ethernet II, Src: IntelE100 (08:00:27:00:00:00), Dst: IntelE100 (08:00:27:00:00:00)
- Internet Protocol Version 4, Src: 172.16.0.91, Dst: 34.104.35.123
- Transmission Control Protocol, Src Port: 80, Dst Port: 51648, Seq: 1, Ack: 467, Len: 0

Packet bytes:

0000 50 9a 4c 34 d8 90 7c 5a 1c cf be 45 00 00 45 00 P: L4...Z...E...E  
0010 00 28 88 cb 40 00 40 06 b7 b6 22 68 23 7b ac 10 ..@...h{...  
0020 08 5b 00 50 c9 c0 ae 91 d4 26 86 ba bc d0 50 10 [-P....&....P  
0030 00 ed 24 45 00 00 00 00 00 00 00 00 00 00 00 ..\$E.....

The screenshot shows the Wireshark interface with a packet capture on the 'ip.src == 34.104.35.123' filter. The packet list shows several packets, with packet 32 selected. The packet details pane shows the structure of the packet, including the Ethernet II header, Internet Protocol Version 4 header, and Transmission Control Protocol (TCP) header. The packet bytes pane shows the raw data of the packet, including the Ethernet II header, Internet Protocol Version 4 header, and Transmission Control Protocol (TCP) header.

Packet 32: 172.16.0.91 → 34.104.35.123 [RST] Seq=226834976 Len=0 MSS=1460 SACK\_PERM=1

Packet details:

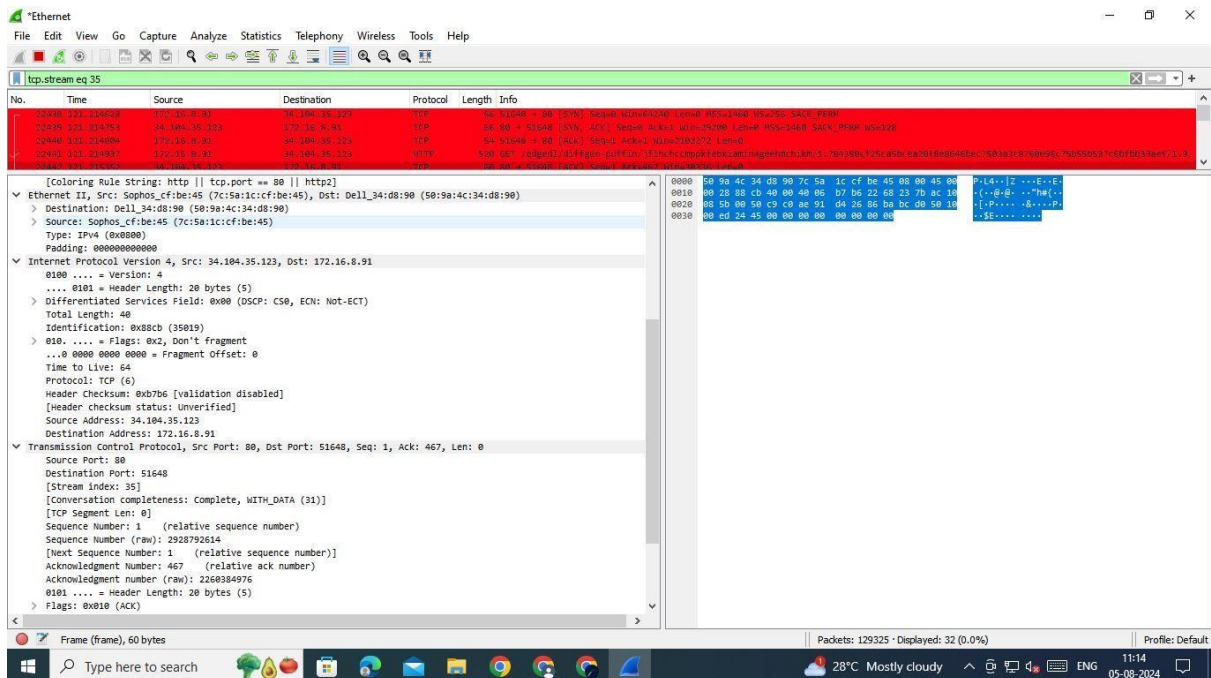
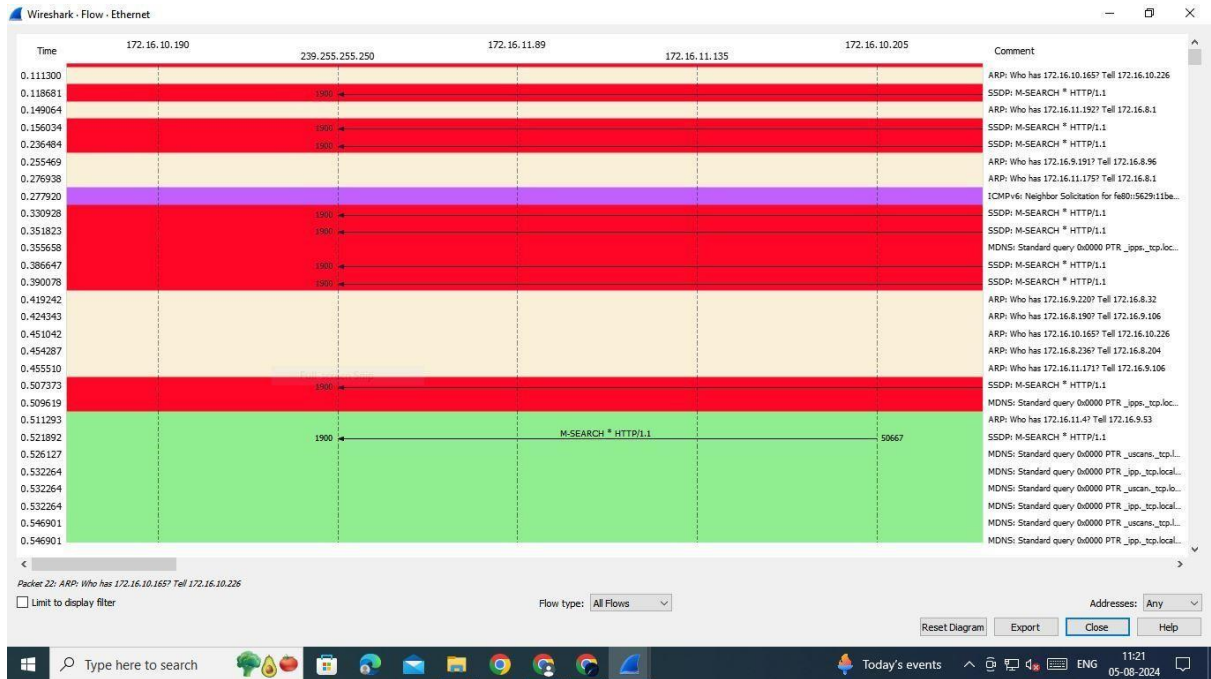
- Ethernet II, Src: IntelE100 (08:00:27:00:00:00), Dst: IntelE100 (08:00:27:00:00:00)
- Internet Protocol Version 4, Src: 172.16.0.91, Dst: 34.104.35.123
- Transmission Control Protocol, Src Port: 80, Dst Port: 51648, Seq: 1, Ack: 467, Len: 0

Packet bytes:

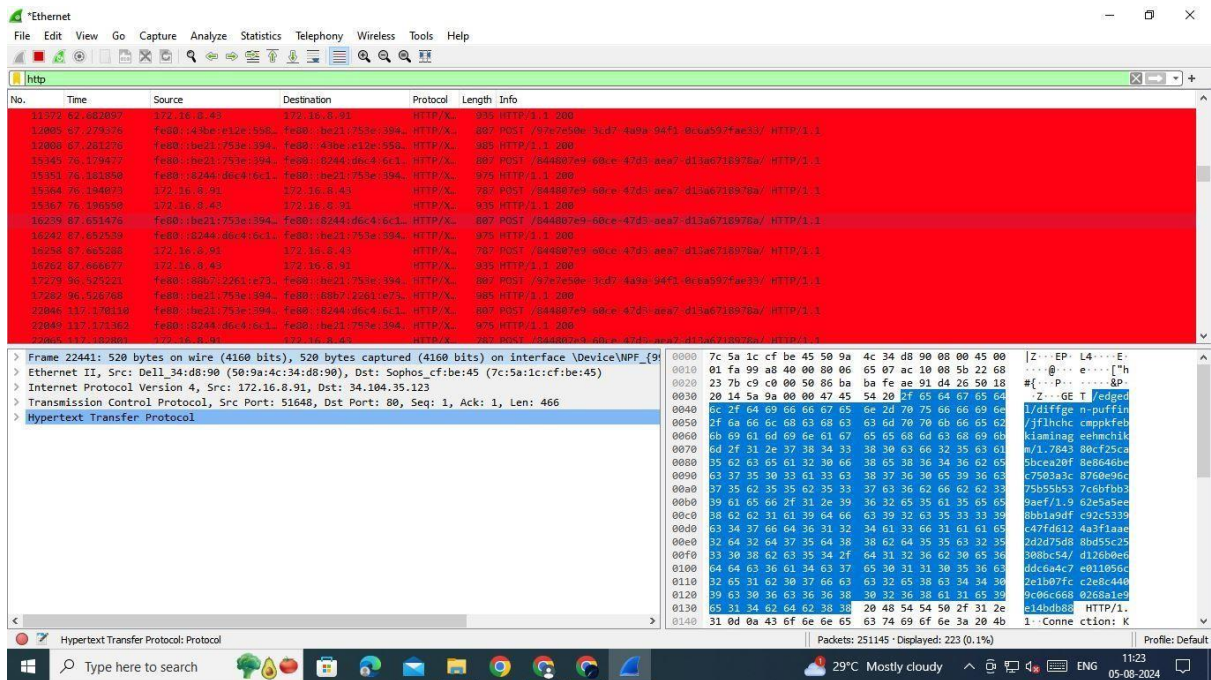
0000 50 9a 4c 34 d8 90 7c 5a 1c cf be 45 00 00 45 00 P: L4...Z...E...E  
0010 00 28 88 cb 40 00 40 06 b7 b6 22 68 23 7b ac 10 ..@...h{...  
0020 08 5b 00 50 c9 c0 ae 91 d4 26 86 ba bc d0 50 10 [-P....&....P  
0030 00 ed 24 45 00 00 00 00 00 00 00 00 00 00 00 ..\$E.....



## WORKFLOW GRAPH:

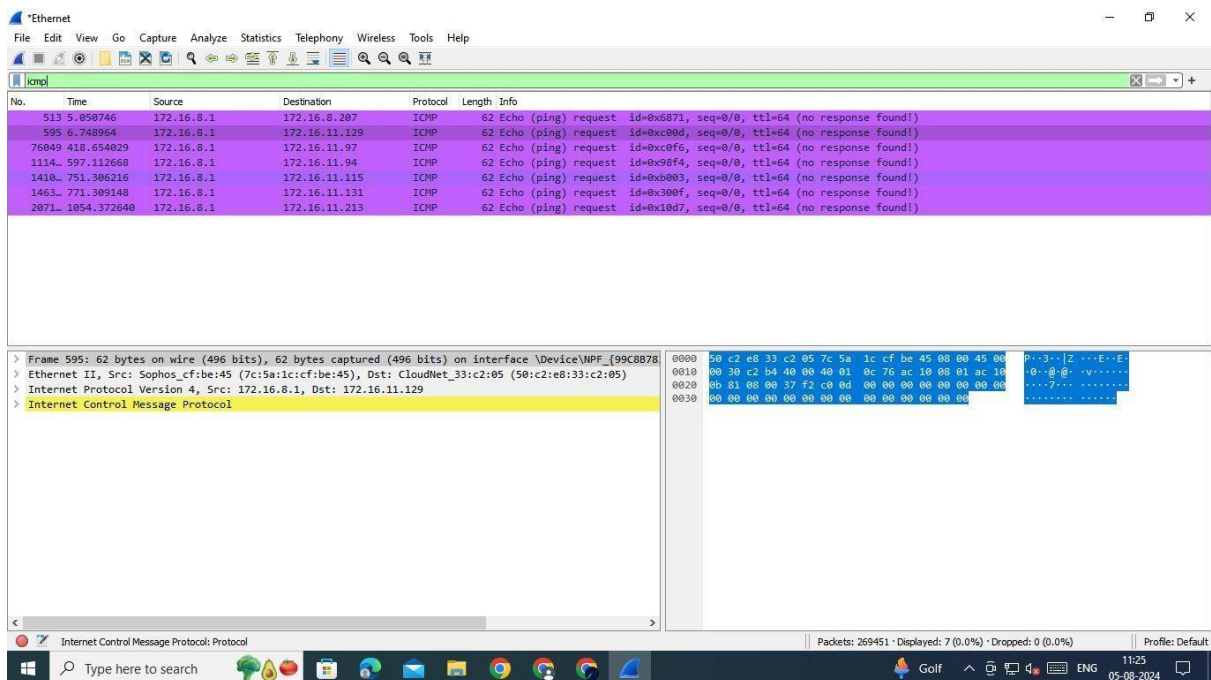


## DISPLAY HTTP PACKETS:



The image shows a Wireshark capture of HTTP traffic on the 'eth0' interface. The packet list on the left shows several HTTP GET requests from 172.16.8.45 to 172.16.8.91. The selected packet (No. 1000) is an HTTP 200 OK response. The packet details pane shows the structure of the HTTP response, including the status bar (200 OK) and the response body (HTML). The packet bytes pane shows the raw data of the response body, which appears to be a large block of text (likely a log or a large document) starting with 'Z...EP...L4...'. The status bar at the bottom indicates that 251145 packets are displayed, with 223 (0.1%) shown.

## DISPLAYING ICMP PACKETS:



The image shows a Wireshark capture of ICMP traffic on the 'eth0' interface. The packet list on the left shows several ICMP Echo (ping) requests from 172.16.8.1 to 172.16.11.129. The selected packet (No. 595) is an ICMP Echo (ping) request. The packet details pane shows the structure of the ICMP request, including the type (Echo) and the sequence number (0). The packet bytes pane shows the raw data of the ICMP request, which is a 62-byte packet. The status bar at the bottom indicates that 269451 packets are displayed, with 7 (0.0%) shown and 0 dropped.

# DISPLAYING DHCP PACKETS:

DHCP.pcapng

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

dhcpi

No. Time Source Destination Protocol Length Info

512	5.659543	0.0.0.0	255.255.255.255	DHCP	348	DHCP Discover Transaction ID 0x5594e312
548	5.536827	0.0.0.0	255.255.255.255	DHCP	348	DHCP Discover Transaction ID 0x5594e312
504	5.748384	0.0.0.0	255.255.255.255	DHCP	342	DHCP Discover Transaction ID 0xa8f0bcaf
536	8.686055	0.0.0.0	255.255.255.255	DHCP	352	DHCP Request Transaction ID 0xa8f0bcaf
4498	23.712763	0.0.0.0	255.255.255.255	DHCP	342	DHCP Request Transaction ID 0x2dcf973c
4753	27.179232	0.0.0.0	255.255.255.255	DHCP	342	DHCP Request Transaction ID 0x2dcf973c
18398	68.609444	0.0.0.0	255.255.255.255	DHCP	368	DHCP Request Transaction ID 0x7b51fb1e
13482	63.822158	0.0.0.0	255.255.255.255	DHCP	348	DHCP Discover Transaction ID 0x1df05683
13415	63.286686	0.0.0.0	255.255.255.255	DHCP	348	DHCP Discover Transaction ID 0x1df05683
13527	63.432232	0.0.0.0	255.255.255.255	DHCP	368	DHCP Request Transaction ID 0x1df05683
13592	63.888722	0.0.0.0	255.255.255.255	DHCP	342	DHCP Discover Transaction ID 0xabec2d86
13869	64.696588	0.0.0.0	255.255.255.255	DHCP	342	DHCP Discover Transaction ID 0xabec2d86
13875	64.956426	0.0.0.0	255.255.255.255	DHCP	352	DHCP Request Transaction ID 0xabec2d86
13932	65.981043	0.0.0.0	255.255.255.255	DHCP	352	DHCP Request Transaction ID 0xabec2d86
15922	83.979498	0.0.0.0	255.255.255.255	DHCP	342	DHCP Request Transaction ID 0xa274402b
17034	85.100084	0.0.0.0	255.255.255.255	DHCP	348	DHCP Request Transaction ID 0xa274402b

> Frame 512: 348 bytes on wire (2784 bits), 348 bytes captured (2784 bits) on Interface \Device\NPF\_{99C...}

> Ethernet II, Src: Xiaomico\_ca:83:76 (20:a6:0c:ca:83:76), Dst: Broadcast (ff:ff:ff:ff:ff:ff)

> Internet Protocol Version 4, Src: 0.0.0.0, Dst: 255.255.255.255

> User Datagram Protocol, Src Port: 68, Dst Port: 67

> Dynamic Host Configuration Protocol (Discover)

0000 ff ff ff ff ff 20 a6 0c ca 83 76 00 00 45 00 .....V...E...  
0010 01 4e 00 00 40 00 11 39 a0 00 00 00 00 ff ff ...W...@...9...  
0020 ff ff 00 44 00 43 01 3a 13 e2 01 01 06 00 55 98 ...D.C.1.....U...  
0030 c3 12 00 00 00 00 00 00 00 00 00 00 00 00 00 ...  
0040 00 00 00 00 00 20 a6 0c ca 83 76 00 00 00 00 .....V...  
0050 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....  
0060 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....  
0070 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....  
0080 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....  
0090 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....  
00a0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....  
00b0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....  
00c0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....  
00d0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....  
00e0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....  
00f0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....  
0100 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....  
0110 00 00 00 00 00 63 82 53 63 35 01 01 3d 07 01 .....c: 5c5...  
0120 20 a6 0c ca 83 76 39 02 05 dc 3c 0e 01 ca 83 76 ...vO...Red  
0130 6f 69 64 20 64 68 63 70 21 32 0c 13 52 65 64 6d old-dhcp...Red  
0140 69 36 50 72 6f 2d 52 65 64 6d 69 36 50 72 6f 37 16Pro-Re dm16Pro7

Dynamic Host Configuration Protocol: Protocol

Packets: 269451 • Displayed: 184 (0.1%) Profile: Default

Type here to search

29°C Mostly cloudy 11:32 05-08-2024