Packet Sniffer Analysis Report

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Tools Used

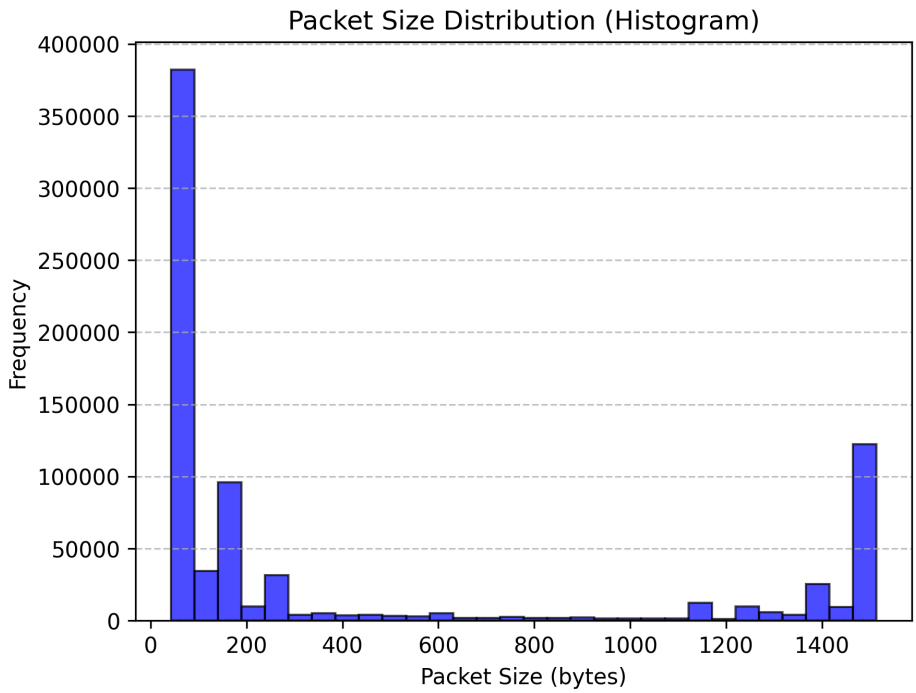
- **tcpreplay**: To replay captured packets.
- **Wireshark**: For detailed network analysis.
- **Matplotlib, Pandas**: For data visualization.

3. Part 1: Metrics and Plots

1. Data Transfer Analysis -

```
snehagautam@DESKTOP-KQ5P00A:/mnt/c/Users/Sneha Gautam/CS331_A1/packet_replayer$ sudo tcpreplay -i eth0 --topspeed 0.pcap
[sudo] password for snehagautam:
Actual: 805995 packets (364641929 bytes) sent in 302.60 seconds
Rated: 1204998.2 Bps, 9.63 Mbps, 2663.49 pps
Statistics for network device: eth0
        Successful packets:        805995
        Failed packets:            0
        Truncated packets:         0
        Retried packets (ENOBUFS): 0
        Retried packets (EAGAIN):  0
```

```
Total Data Transferred: 353512704 bytes
Min Packet Size: 42 bytes
Max Packet Size: 1514 bytes
Avg Packet Size: 456.005 bytes
Most data transferred by: 172.16.133.95:49358 -> 157.56.240.102:443 with 17342229 bytes
Packet size histogram saved to histogram_data.csv.
Detailed statistics saved to packet_statistics.txt
```



2. **Source-Destination Pair Analysis -** saved to packet_statistics.txt

3. **IP Flow Analysis -** saved to packet_statistics.txt

4. Part 2: Catch Me If You Can

(1) IMS Server Connections - How many unique connections were made to the IMS server ?

50

(2) Course Registration Tracking - I have registered for a course in IMS. What course did I register for?

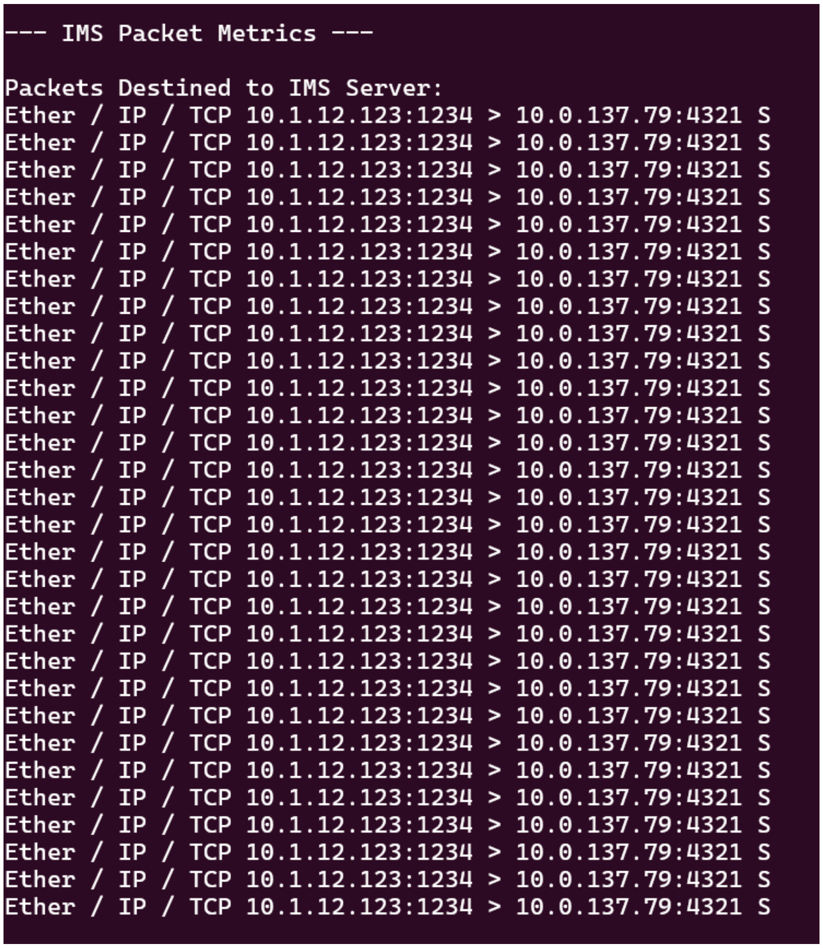
Embedded Systems

(3) Total amount of data transferred over a port 4321 - What is the total amount of data (in bytes) transferred over a port 4321 ?

2970 bytes

(4) SuperUsers - There are many Superuser. Find how many SuperUsers are there?

69



```
--- IMS Packet Metrics ---

Packets Destined to IMS Server:
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
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Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
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Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
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Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
```
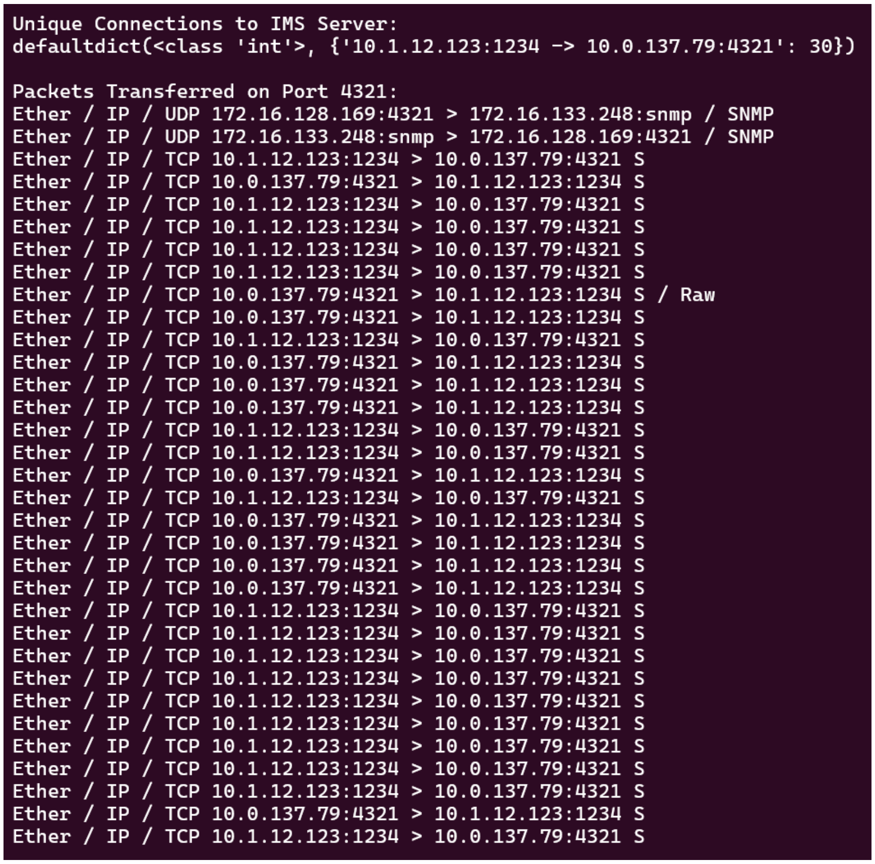
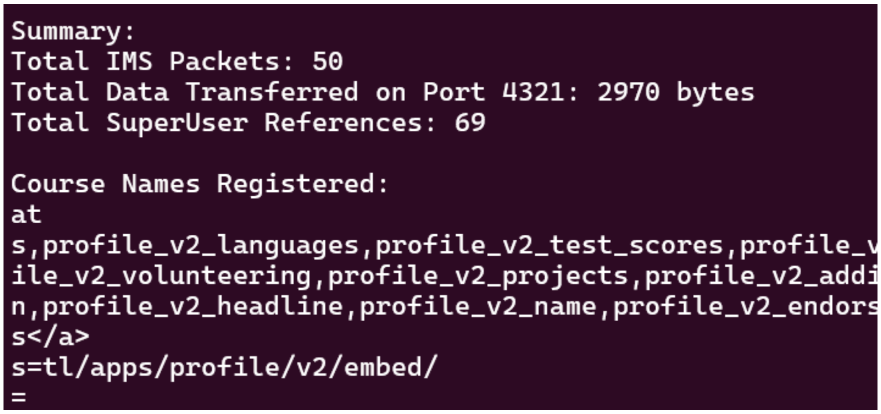



```
Unique Connections to IMS Server:
defaultdict(<class 'int'>, {'10.1.12.123:1234 -> 10.0.137.79:4321': 30})

Packets Transferred on Port 4321:
Ether / IP / UDP 172.16.128.169:4321 > 172.16.133.248:snmp / SNMP
Ether / IP / UDP 172.16.133.248:snmp > 172.16.128.169:4321 / SNMP
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.0.137.79:4321 > 10.1.12.123:1234 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.0.137.79:4321 > 10.1.12.123:1234 S / Raw
Ether / IP / TCP 10.0.137.79:4321 > 10.1.12.123:1234 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.0.137.79:4321 > 10.1.12.123:1234 S
Ether / IP / TCP 10.0.137.79:4321 > 10.1.12.123:1234 S
Ether / IP / TCP 10.0.137.79:4321 > 10.1.12.123:1234 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.0.137.79:4321 > 10.1.12.123:1234 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.0.137.79:4321 > 10.1.12.123:1234 S
Ether / IP / TCP 10.0.137.79:4321 > 10.1.12.123:1234 S
Ether / IP / TCP 10.0.137.79:4321 > 10.1.12.123:1234 S
Ether / IP / TCP 10.0.137.79:4321 > 10.1.12.123:1234 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
Ether / IP / TCP 10.0.137.79:4321 > 10.1.12.123:1234 S
Ether / IP / TCP 10.1.12.123:1234 > 10.0.137.79:4321 S
```



```
Summary:
Total IMS Packets: 50
Total Data Transferred on Port 4321: 2970 bytes
Total SuperUser References: 69

Course Names Registered:
at
s,profile_v2_languages,profile_v2_test_scores,profile_v
ile_v2_volunteering,profile_v2_projects,profile_v2_addi
n,profile_v2_headline,profile_v2_name,profile_v2_endors
s</a>
s=tl/apps/profile/v2/embed/
=
```

5. Part 3: Capturing the Packets

(1) **Wireshark Analysis and Protocols -** Run the Wireshark tool and capture the trace of the network packets on your host device. We expect you would be connected to the Internet and perform regular network activities.

a. List at-least 5 different application layer protocols that we have not discussed so far in the classroom and describe in 1-2 sentences the operation/usage of protocol and its layer of operation and indicate the associated RFC number if any.

1. **NTP (Network Time Protocol)**

NTP is used to synchronize the clocks of computers over a network. It allows devices to obtain accurate time from a time server, ensuring that all devices in the network are synchronized to the same time source. It's commonly used in applications where accurate time is crucial, like logging, file systems, and communication protocols.

Application (Layer 7)

RFC: RFC 5905

ntp

No.	Time	Source	Destination	Protocol	Length	Info
85862	495.241382	10.7.44.154	160.250.111.68	NTP	90	NTP Version 1, client
85880	498.258552	10.7.44.154	160.250.111.68	NTP	90	NTP Version 1, client
85911	501.269919	10.7.44.154	160.250.111.68	NTP	90	NTP Version 1, client
85982	504.285765	10.7.44.154	160.250.111.68	NTP	90	NTP Version 1, client
86052	507.302757	10.7.44.154	160.250.111.68	NTP	90	NTP Version 1, client

2. **MDNS (Multicast DNS)**

mDNS allows devices on a local network to resolve hostnames to IP addresses without requiring a DNS server. It uses multicast IP addressing to send queries for names and respond to those queries within the local network. It’s commonly used for service discovery on home networks, such as discovering printers, cameras, and other devices in environments like home automation systems.

Application (Layer 7)

RFC: RFC 6762

mdns

	Time	Source	Destination	Protocol	Length	Info
2865	80.296042	10.7.44.154	224.0.0.251	MDNS	234	Standard query response 0x0000 PTR DESKTOP-KQ5P0OA._dosvc._tcp.local SRV 0 0 7680 DES
2866	80.297711	fe80::1fac:3c3a:1f6…	ff02::fb	MDNS	254	Standard query response 0x0000 PTR DESKTOP-KQ5P0OA._dosvc._tcp.local SRV 0 0 7680 DES
2867	80.299142	10.7.44.154	224.0.0.251	MDNS	93	Standard query 0x0000 ANY DESKTOP-KQ5P0OA._dosvc._tcp.local, "QM" question
2868	80.300420	fe80::1fac:3c3a:1f6…	ff02::fb	MDNS	113	Standard query 0x0000 ANY DESKTOP-KQ5P0OA._dosvc._tcp.local, "QM" question
2893	80.556012	10.7.44.154	224.0.0.251	MDNS	93	Standard query 0x0000 ANY DESKTOP-KQ5P0OA._dosvc._tcp.local, "QM" question
2894	80.557096	fe80::1fac:3c3a:1f6…	ff02::fb	MDNS	113	Standard query 0x0000 ANY DESKTOP-KQ5P0OA._dosvc._tcp.local, "QM" question
2921	80.822226	10.7.44.154	224.0.0.251	MDNS	93	Standard query 0x0000 ANY DESKTOP-KQ5P0OA._dosvc._tcp.local, "QM" question
2922	80.824769	fe80::1fac:3c3a:1f6…	ff02::fb	MDNS	113	Standard query 0x0000 ANY DESKTOP-KQ5P0OA._dosvc._tcp.local, "QM" question
2934	81.082593	10.7.44.154	224.0.0.251	MDNS	299	Standard query response 0x0000 PTR, cache flush DESKTOP-KQ5P0OA._dosvc._tcp.local SRV
2935	81.084650	fe80::1fac:3c3a:1f6…	ff02::fb	MDNS	319	Standard query response 0x0000 PTR, cache flush DESKTOP-KQ5P0OA._dosvc._tcp.local SRV
2936	81.085688	10.7.44.154	224.0.0.251	MDNS	235	Standard query response 0x0000 SRV, cache flush 0 0 7680 DESKTOP-KQ5P0OA.local TXT, ca
2937	81.088025	fe80::1fac:3c3a:1f6…	ff02::fb	MDNS	255	Standard query response 0x0000 SRV, cache flush 0 0 7680 DESKTOP-KQ5P0OA.local TXT, ca
16165	201.098805	10.7.44.154	224.0.0.251	MDNS	234	Standard query response 0x0000 PTR DESKTOP-KQ5P0OA._dosvc._tcp.local SRV 0 0 7680 DES
16166	201.102258	fe80::1fac:3c3a:1f6…	ff02::fb	MDNS	254	Standard query response 0x0000 PTR DESKTOP-KQ5P0OA._dosvc._tcp.local SRV 0 0 7680 DES
16167	201.104895	10.7.44.154	224.0.0.251	MDNS	93	Standard query 0x0000 ANY DESKTOP-KQ5P0OA._dosvc._tcp.local, "QM" question
16168	201.105391	fe80::1fac:3c3a:1f6…	ff02::fb	MDNS	113	Standard query 0x0000 ANY DESKTOP-KQ5P0OA._dosvc._tcp.local, "QM" question
16175	201.369651	10.7.44.154	224.0.0.251	MDNS	93	Standard query 0x0000 ANY DESKTOP-KQ5P0OA._dosvc._tcp.local, "QM" question
16176	201.370971	fe80::1fac:3c3a:1f6…	ff02::fb	MDNS	113	Standard query 0x0000 ANY DESKTOP-KQ5P0OA._dosvc._tcp.local, "QM" question
16196	201.623351	10.7.44.154	224.0.0.251	MDNS	93	Standard query 0x0000 ANY DESKTOP-KQ5P0OA._dosvc._tcp.local, "QM" question
16197	201.628614	fe80::1fac:3c3a:1f6…	ff02::fb	MDNS	113	Standard query 0x0000 ANY DESKTOP-KQ5P0OA._dosvc._tcp.local, "QM" question
16212	201.880710	10.7.44.154	224.0.0.251	MDNS	299	Standard query response 0x0000 PTR, cache flush DESKTOP-KQ5P0OA._dosvc._tcp.local SRV
16213	201.885601	fe80::1fac:3c3a:1f6…	ff02::fb	MDNS	319	Standard query response 0x0000 PTR, cache flush DESKTOP-KQ5P0OA._dosvc._tcp.local SRV
16214	201.889646	10.7.44.154	224.0.0.251	MDNS	235	Standard query response 0x0000 SRV, cache flush 0 0 7680 DESKTOP-KQ5P0OA.local TXT, ca
16216	201.893377	fe80::1fac:3c3a:1f6…	ff02::fb	MDNS	255	Standard query response 0x0000 SRV, cache flush 0 0 7680 DESKTOP-KQ5P0OA.local TXT, ca
17952	239.915899	10.7.44.154	224.0.0.251	MDNS	74	Standard query 0x0000 A mydevice.local, "QM" question
17953	239.946718	fe80::1fac:3c3a:1f6…	ff02::fb	MDNS	94	Standard query 0x0000 A mydevice.local, "QM" question
17954	239.947569	10.7.44.154	224.0.0.251	MDNS	74	Standard query 0x0000 AAAA mydevice.local, "QU" question
17955	239.948250	fe80::1fac:3c3a:1f6…	ff02::fb	MDNS	94	Standard query 0x0000 AAAA mydevice.local, "QU" question
17965	240.326170	10.7.44.154	224.0.0.251	MDNS	74	Standard query 0x0000 A mydevice.local, "QM" question

3. **NBNS (NetBIOS Name Service)**

NBNS is used for name resolution in local area networks (LANs), primarily in **Windows** environments. It allows computers to register and resolve **NetBIOS** names (hostnames) to **IP addresses**. NBNS is typically used to resolve names for network services such as file sharing and printer access in Windows networks. It functions similarly to DNS, but it is designed for local network use.

Application (Layer 7)

RFC: RFC 1001, RFC 1002

nbns

	Time	Source	Destination	Protocol	Length	Info
17969	240.362553	10.7.44.154	10.7.63.255	NBNS	92	Name query NB MYDEVICE<00>
17999	241.110391	10.7.44.154	10.7.63.255	NBNS	92	Name query NB MYDEVICE<00>
18026	241.875447	10.7.44.154	10.7.63.255	NBNS	92	Name query NB MYDEVICE<00>
20828	351.139636	10.7.44.154	10.7.63.255	NBNS	92	Name query NB DOWNLOADS<00>
20848	351.895040	10.7.44.154	10.7.63.255	NBNS	92	Name query NB DOWNLOADS<00>
20856	352.650665	10.7.44.154	10.7.63.255	NBNS	92	Name query NB DOWNLOADS<00>

4. LLMNR **(Link-Local Multicast Name Resolution)**

LLMNR allows devices on the same local network to resolve hostnames to IP addresses without the need for a DNS server. It is used primarily in IPv6 networks but can also operate in IPv4 networks. LLMNR is used when a DNS server is unavailable, enabling name resolution for services on the local network. It typically works over **UDP** and uses multicast to query other devices in the local network.

Application (Layer 7)

RFC: RFC 4795

llmnr

	Time	Source	Destination	Protocol	Length	Info
17970	240.363317	fe80::1fac:3c3a:1f6…	ff02::1:3	LLMNR	88	Standard query 0xc647 A mydevice
17971	240.363569	10.7.44.154	224.0.0.252	LLMNR	68	Standard query 0xc647 A mydevice
17972	240.364072	fe80::1fac:3c3a:1f6…	ff02::1:3	LLMNR	88	Standard query 0x4061 AAAA mydevice
17973	240.364294	10.7.44.154	224.0.0.252	LLMNR	68	Standard query 0x4061 AAAA mydevice
17985	240.777231	fe80::1fac:3c3a:1f6…	ff02::1:3	LLMNR	88	Standard query 0x4061 AAAA mydevice
17986	240.777426	10.7.44.154	224.0.0.252	LLMNR	68	Standard query 0x4061 AAAA mydevice
17988	240.778348	fe80::1fac:3c3a:1f6…	ff02::1:3	LLMNR	88	Standard query 0xc647 A mydevice
17989	240.778845	10.7.44.154	224.0.0.252	LLMNR	68	Standard query 0xc647 A mydevice
18196	246.155276	fe80::1fac:3c3a:1f6…	ff02::1:3	LLMNR	88	Standard query 0x76e2 A mydevice
18197	246.155667	10.7.44.154	224.0.0.252	LLMNR	68	Standard query 0x76e2 A mydevice
18201	246.569755	fe80::1fac:3c3a:1f6…	ff02::1:3	LLMNR	88	Standard query 0x76e2 A mydevice
18202	246.569998	10.7.44.154	224.0.0.252	LLMNR	68	Standard query 0x76e2 A mydevice
20829	351.140630	fe80::1fac:3c3a:1f6…	ff02::1:3	LLMNR	89	Standard query 0xa81f A downloads
20830	351.140921	10.7.44.154	224.0.0.252	LLMNR	69	Standard query 0xa81f A downloads
20832	351.141602	fe80::1fac:3c3a:1f6…	ff02::1:3	LLMNR	89	Standard query 0xbf8a AAAA downloads
20833	351.141927	10.7.44.154	224.0.0.252	LLMNR	69	Standard query 0xbf8a AAAA downloads
20839	351.562591	fe80::1fac:3c3a:1f6…	ff02::1:3	LLMNR	89	Standard query 0xbf8a AAAA downloads
20840	351.562838	10.7.44.154	224.0.0.252	LLMNR	69	Standard query 0xbf8a AAAA downloads
20841	351.562842	fe80::1fac:3c3a:1f6…	ff02::1:3	LLMNR	89	Standard query 0xa81f A downloads
20842	351.562989	10.7.44.154	224.0.0.252	LLMNR	69	Standard query 0xa81f A downloads
20852	352.587794	fe80::1fac:3c3a:1f6…	ff02::1:3	LLMNR	89	Standard query 0xd4f1 AAAA downloads
20853	352.588142	10.7.44.154	224.0.0.252	LLMNR	69	Standard query 0xd4f1 AAAA downloads
20858	352.999821	fe80::1fac:3c3a:1f6…	ff02::1:3	LLMNR	89	Standard query 0xd4f1 AAAA downloads
20859	352.999937	10.7.44.154	224.0.0.252	LLMNR	69	Standard query 0xd4f1 AAAA downloads

5. **OCSP (Online Certificate Status Protocol)**

OCSP is used to check the revocation status of digital certificates in real time. It is an alternative to Certificate Revocation Lists (CRLs). When a client (such as a browser) connects to a server using SSL/TLS, it may query the OCSP responder to determine whether the server's certificate is still valid or if it has been revoked. OCSP enhances security by providing up-to-date certificate status information during secure communications, ensuring that the certificate is not compromised or revoked.

Application (Layer 7)

RFC: RFC 6960

11478	165.024202	23.15.111.5	10.7.44.154	OCSP	520	Response
13502	165.112959	23.15.111.5	10.7.44.154	OCSP	521	Response
14684	165.521240	23.15.111.5	10.7.44.154	OCSP	521	Response
14689	165.602257	23.15.111.5	10.7.44.154	OCSP	521	Response

(2) Website Request Line and Headers - Analyze the following details by visiting the following websites in your favourite browser.

i) canarabank.in

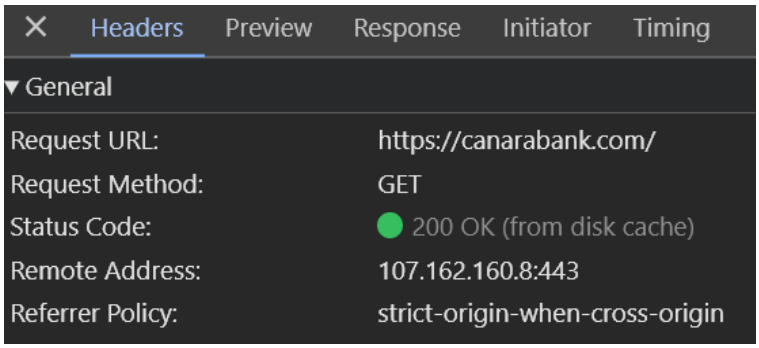
ii) github.com

iii) netflix.com

A. Identify `request line` with the version of the application layer protocol and the IP address. Also, identify whether the connection(s) is/are persistent or not.

1.Canarabank.com

Request line:GET / HTTP/1.1
IP address:107.162.160.8:443
Connection: close (non-persistent)



2.Github.com

Protocol: HTTP/2
IP Address: 20.207.73.82:443

Connection: Persistent

3.Netflix.com

Protocol: HTTP/2
IP Address: 3.251.50.149:443

Connection : **persistent**

B. **For any one of the websites, list any three header field names and corresponding values in the request and response message. Any three HTTP error codes obtained while loading one of the pages with a brief description.**

Response Header

▼ General

Request URL:	https://canarabank.com/
Request Method:	GET
Status Code:	200 OK (from disk cache)
Remote Address:	107.162.160.8:443
Referrer Policy:	strict-origin-when-cross-origin

▼ Response Headers

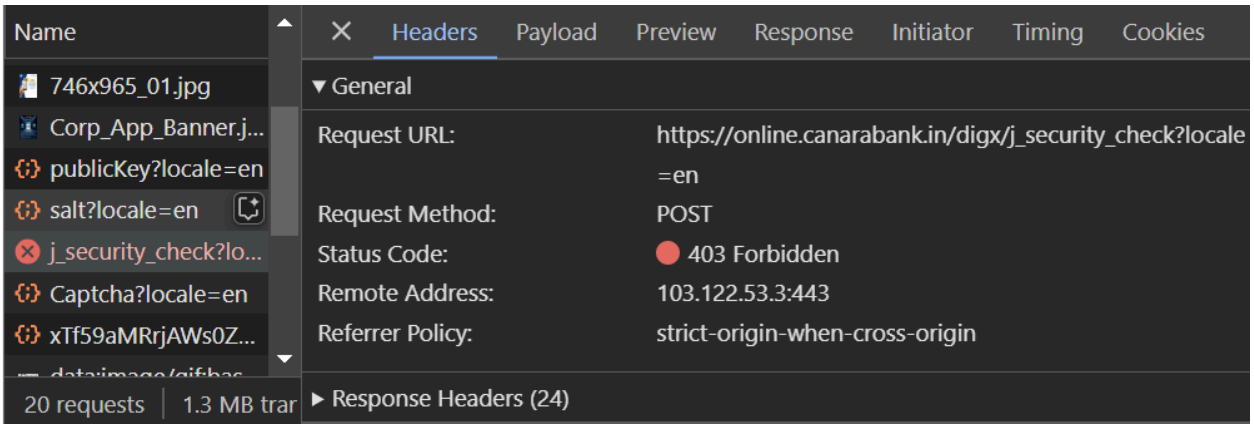
Cache-Control:	public, max-age=36000
Content-Security-Policy:	default-src data: https:; img-src * 'self' data: https:; style-src 'self' 'unsafe-inline' fonts.googleapis.com stackpath.bootstrapcdn.com cdnjs.cloudflare.com cdn.jsdelivr.net; script-src 'self' cdnjs.cloudflare.com cdn.jsdelivr.net www.googletagmanager.com cabprod.gupshup.io code.highcharts.com 'unsafe-inline' 'unsafe-eval';
Content-Type:	text/html; charset=utf-8
Date:	Sat, 01 Feb 2025 16:13:49 GMT
Permissions-Policy:	keyboard-map=(), attribution-reporting=(), run-ad-auction=(), private-state-token-redemption=(), private-state-token-issuance=(), join-ad-interest-group=(), idle-detection=(), compute-pressure=(), browsing-topics=()
Referrer-Policy:	no-referrer-when-downgrade
Via:	1.1 sin1-bit10037
X-Content-Type-Options:	nosniff
X-Dns-Prefetch-Control:	off
X-F5-Cache:	MEM_MISS
X-Frame-Options:	SAMEORIGIN
X-Xss-Protection:	1; mode=block

Request Header

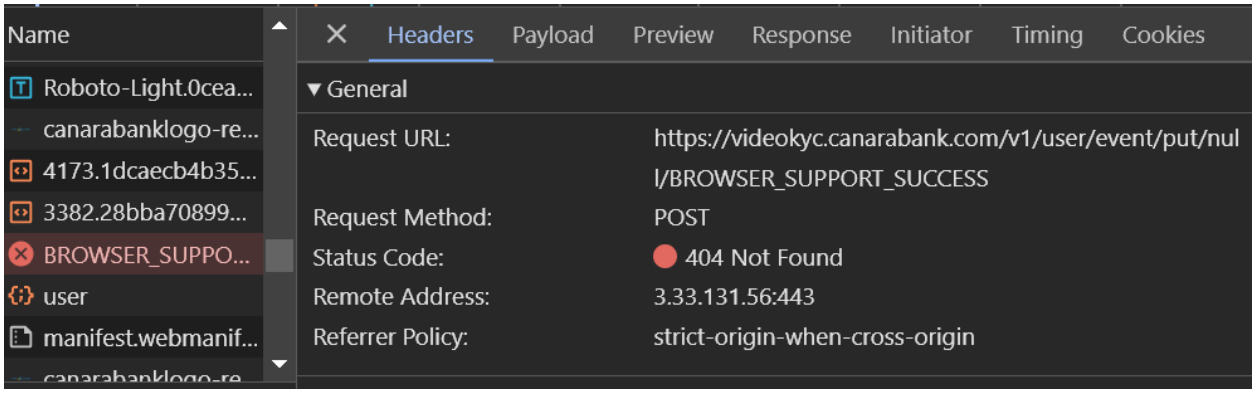
Sec-Ch-Ua:	"Not A(Brand";v="8", "Chromium";v="132", "Google Chrome";v="132"
Sec-Ch-Ua-Mobile:	?0
Sec-Ch-Ua-Platform:	"Windows"
Upgrade-Insecure-Requests:	1
User-Agent:	Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/132.0.0.0 Safari/537.36

Errors for canarabank.in

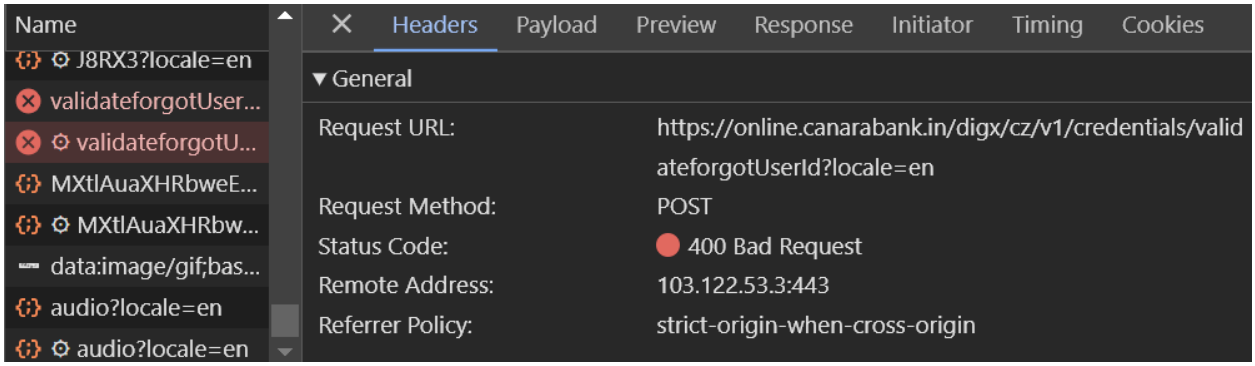
1. **403** Forbidden error occurs when you attempt to access a resource that you don't have permission to view.



2. **404 Not Found:** happen if you try to access a URL or page that doesn't exist on the server.

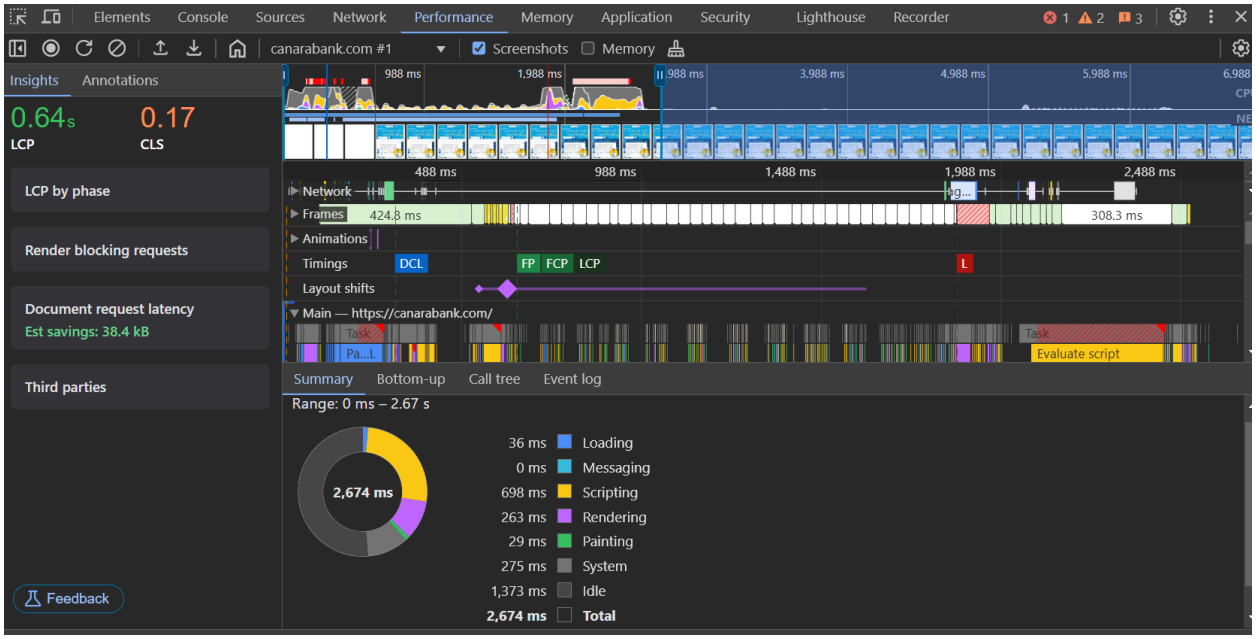


3. **400 Bad Request:** Happens when the request format is invalid (e.g., incorrect URL structure or missing parameters).



C. Capture the Performance metrics that your browser records when a page is loaded and also report the list the cookies used and the associated flags in the request and response headers. Please report the browser name and screenshot of the performance metrics reported for any one of the page loads.

1. Canara bank



INP : 59ms
DCL : 301.11 ms
FP : 643.20 ms
FCP : 643.20 ms
L: 1.87 s

Cookies:

Response Cookies

Name	Value	Do...	Path	Ex...	Size	Ht...	Sec...	SameSi...	Partiti...	Cr...	Priority
_gh_sess	qPKP7sRig...	git...	/	Se...	867	✓	✓	Lax			Medium

Request Cookies show filtered out request cookies

Name	Value	Do...	Path	Ex...	Size	Ht...	Sec...	SameSi...	Partiti...	Cr...	Priority
__Host-user_sessio...	U8FmvuPo...	git...	/	20...	77	✓	✓	Strict			Medium
_device_id	439f6d1f0...	git...	/	20...	42	✓	✓	Lax			Medium
_gh_sess	YtVR%2Fx...	git...	/	Se...	854	✓	✓	Lax			Medium
_octo	GH1.1.163...	.git...	/	20...	32		✓	Lax			Medium
color_mode	%7B%22co...	.git...	/	Se...	214		✓	Lax			Medium
cpu_bucket	xlg	.git...	/	Se...	13		✓	Lax			Medium
dotcom_user	SG00428	.git...	/	20...	18	✓	✓	Lax			Medium
logged_in	yes	.git...	/	20...	12	✓	✓	Lax			Medium
preferred_color_m...	dark	.git...	/	Se...	24		✓	Lax			Medium
saved_user_sessions	130676806...	git...	/	20...	79	✓	✓	Lax			Medium
tz	Asia%2FCa...	.git...	/	Se...	17		✓	Lax			Medium
tz	Asia%2FCa...	git...	/	Se...	17	✓	✓	Lax			Medium
user_session	U8FmvuPo...	git...	/	20...	60	✓	✓	Lax			Medium

1. **_Host-user_session_same_site - Flags: HttpOnly,Secure, Samesite(strict)**
2. **_device_id - Flags:HttpOnly,Secure, SameSite(Lax)**
3. **_gh_sess - Flags:HttpOnly,Secure, SameSite(Lax)**
4. **_octo - Flags:Secure, SameSite(Lax)**
5. **color_mode - Flags:Secure, SameSite(Lax)**
6. **cpu_bucket - Flags:,Secure, SameSite(Lax)**
7. **dotcom_user - Flags:HttpOnly,Secure, SameSite(Lax)**
8. **logged_in - Flags:HttpOnly,Secure, SameSite(Lax)**
9. **preferred_color_mode - Flags:Secure, SameSite(Lax)**
10. **saved_user_sessions - Flags:HttpOnly,Secure, SameSite(Lax)**
11. **tz - Flags:Secure, SameSite(Lax)**
12. **user_session - Flags:HttpOnly,Secure, SameSite(Lax)**

6. Conclusion

Summarize the insights gained from network traffic analysis, unique packet queries, and live packet capture.

7. References

[List sources, RFCs, and documentation]
