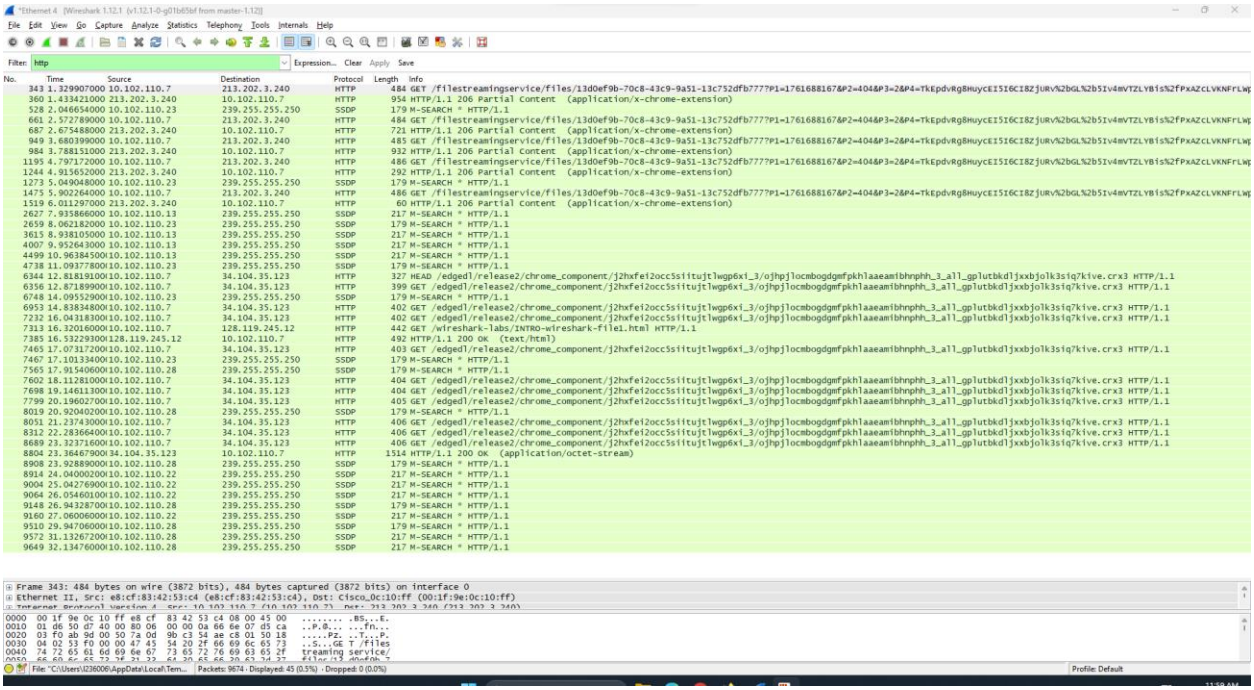
Lab 8

Filter = HTTP

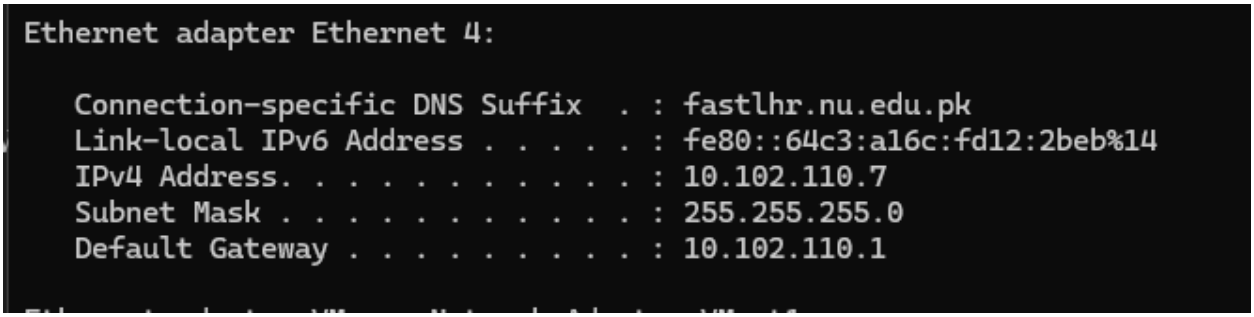


List up to 10 protocols that appear in the protocol column

following are 10 protocols:

- TCP
- UDP
- MDNS
- HTTP
- SSDP
- LLMNR
- DNS
- NBNS
- TLSv1.3
- DHCP

Cmd ipconfig



How long did it take from when the HTTP GET message was sent until the HTTP OK reply was received?

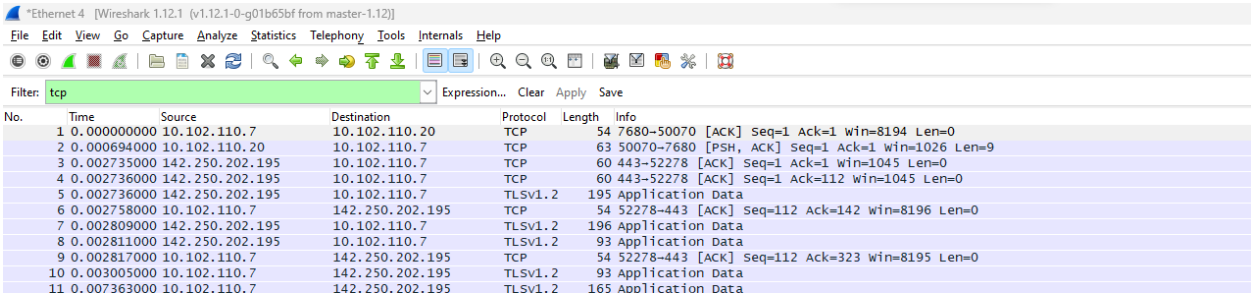
23.364 – 23.237 = 0.127s

What is the Internet address of the gaia.cs.umass.edu? What is the Internet address of your computer?

Address of gaia.cs.umass.edu: 34.104.35.123
Address of my computer: 10.102.110.1

Write down the sequence number of the first TCP packet.

Seq=1



POST-LAB

Q: What do you mean by TCP three-way handshaking? Identify SYN, SYN-ACK and ACK packets generated for TCP connection setup.

Three-way handshaking is a procedure followed by the connection-oriented protocol TCP. TCP ensures reliable data delivery across the network. The three-way handshake involves the following three steps:

- synchronize (SYN)
- synchronize-acknowledge (SYN-ACK)
- acknowledge (ACK)

The client sends a synchronization SYN request requesting to initiate the TCP connection. The server responds by sending a SYN-ACK reply which is an acknowledgment to the request sent by the client. Finally, the client again responds with an acknowledgment ACK to complete the TCP connection and this forms the three-way handshaking.

Q: What is the purpose of FIN and ACK flags in TCP header?

In the TCP header, the FIN and ACK are flags in the TCP header which are used to indicate the closing of the TCP connection. The FIN flag is set when the client requests to finish the TCP connection. The ACK flag is then set to acknowledge this request, thus closing the TCP connection.