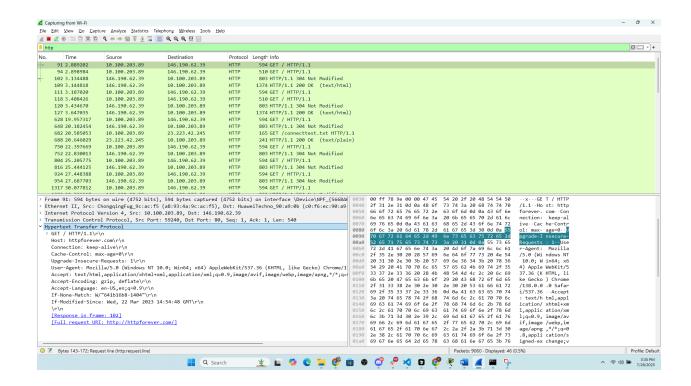
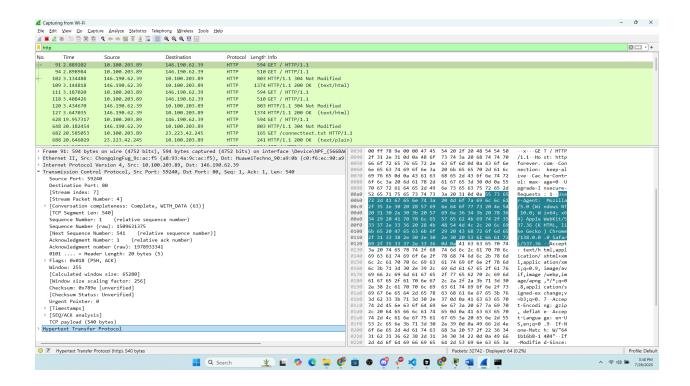


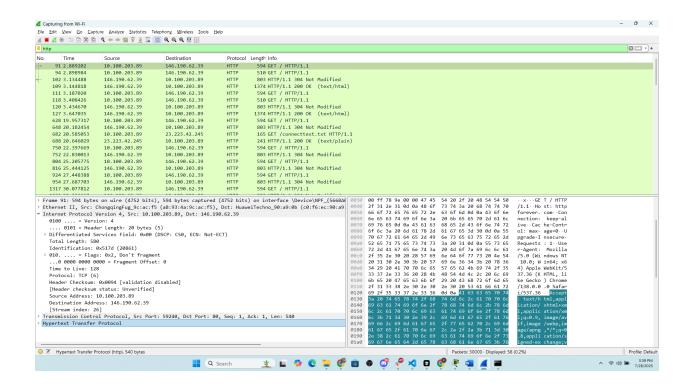
This shows the network traffic log with emphasis on different concurrent HTTP dialogues. The main activity is a web surfing session between a client (10.100.203.89) and a web server (146.190.62.39) with a sequence of requests and responses from HTTP/1.1 200 OK dispensing content to, as we can observe in Frame 1709, HTTP/1.1 304 Not Modified, requesting that the browser utilize its locally stored copy of the webpage. Concurrently, the capture illustrates, at the same time, communication by the client to a different server (23.223.42.245) by requesting a connecttest.txt file, which can be an ordinary request to test internet network operation. Overall, the log provides an extensive view of all communications that take place in a web session.



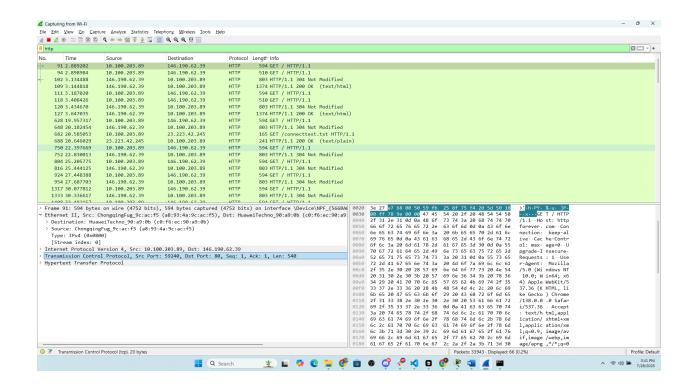
Here are some details of an HTTP request by a client (10.100.203.89) to a server (146.190.62.39). The additional section provides details of HTTP GET request headers. It's a "conditional GET" due to the If-None-Match and If-Modified-Since headers. That instructs the server to return the web page only if it has been modified after the client last downloaded it, which aids web caching.



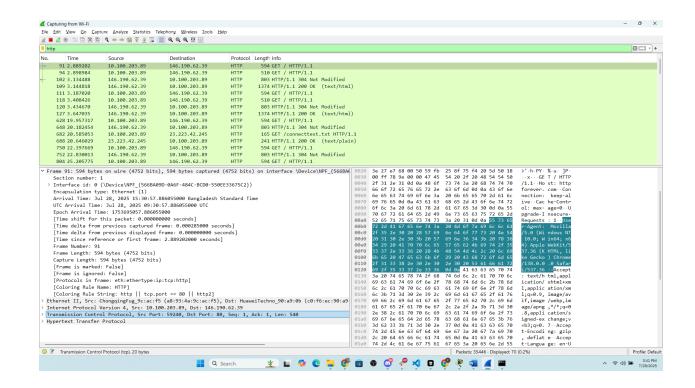
The HTTP request is encapsulated within a Transmission Control Protocol, or TCP, segment. The TCP protocol ensures there's a better connection and data will be transmitted properly. The TCP segment indicates communication from client port 59240 to port 80, which happens to be the primary HTTP port on the server. The push flag, or PSH, is set on at the receiving end, instructing it to forward this data immediately to the web application server.



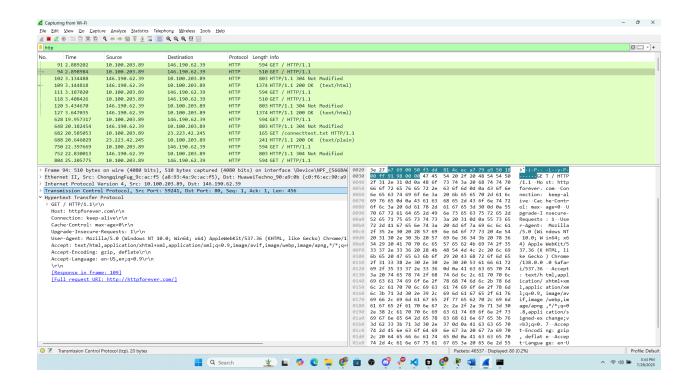
The TCP segment is encapsulated within an IPv4 packet. IPv4 assists in the locating of addresses and delivers the packet from the source computer to the destination computer via the internet. The IPv4 header includes significant details, such as the source IP address and destination IP address. It also indicates in the "Protocol" field that the payload is a TCP segment (protocol number 6). The Time to Live (TTL) is 64, the highest number of times a packet can pass across the network before it is discarded.



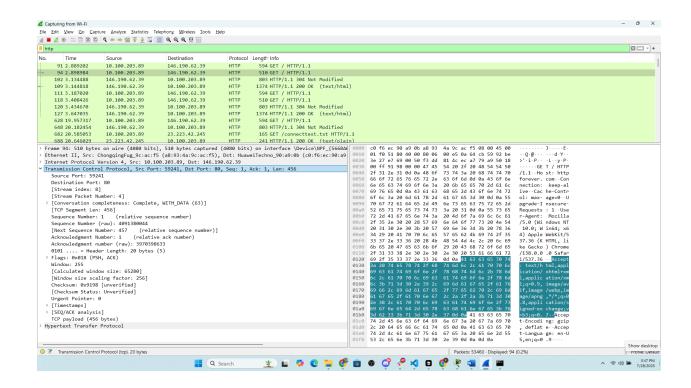
Here we can see the contents of Ethernet II frame, running on the data link level. The data link level task is to forward data from some particular local network's node to another, respective local network's node. The expanded header defines the source MAC address (c8:ff:ac:9b:a5:db) and Destination MAC address (a0:91:c8:9c:ac:f5), physically identifying the receiving and sending device network interface cards. The Type has IPv4 (0x0800) defined, which tells us the data payload encapsulated in this Ethernet frame forms an IPv4 packet.



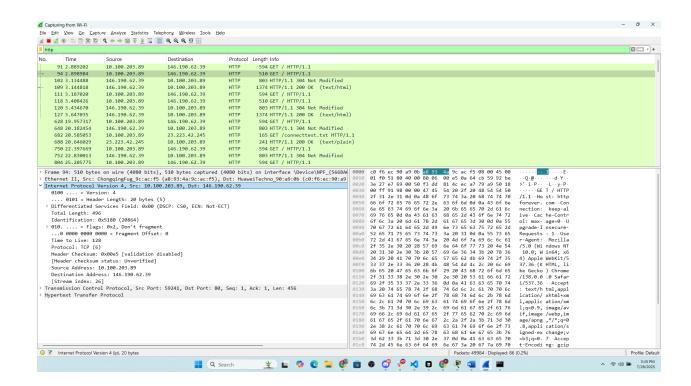
This gives us all of our data at the Frame level, which is the whole packet captured off of the physical network cable. That's including Wireshark-injected metadata, not protocol data. We can see this is Frame #91 of its capture stream, has a Total Frame Length of 594 bytes, and we have an absolute Arrival Time of when it was captured by the capture interface, and we can see it informs us it has an Encapsulation type of Ethernet.



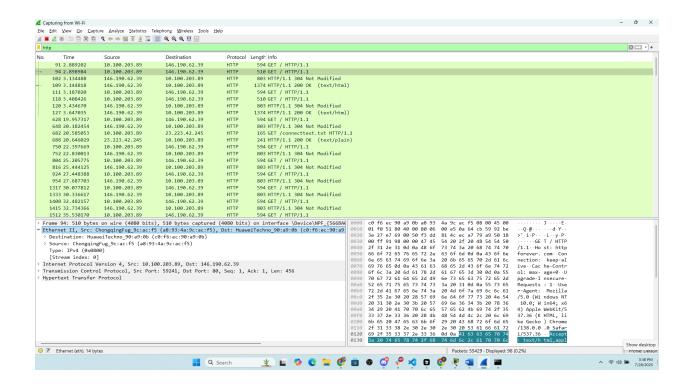
This Hypertext Transfer Protocol (HTTP) response is given to the client by the server. The HTTP/1.1 304 Not Modified response line informs us that nothing has been changed about the requested resource since it was last downloaded. Nothing has been changed, and thus the server's response doesn't contain actual webpage material, and its body is blank. It tells the browser on the client to load the page in its local cache, conserving bandwidth and increasing speed.



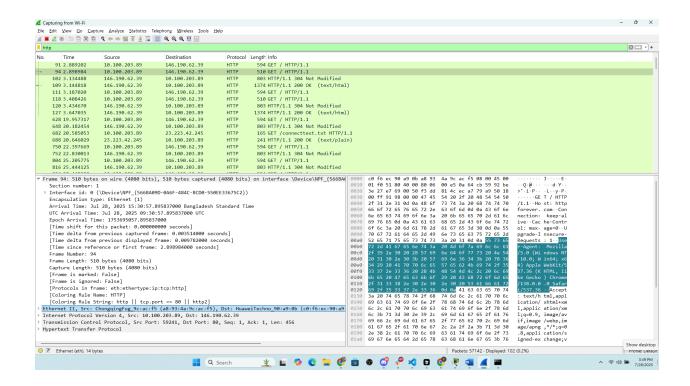
The server's 304 Not Modified response is being carried in the Transmission Control Protocol (TCP) segment. The direction of communication is determined by port numbers: the Destination Port is 80 (the standard port of the HTTP server), and the Source Port is 59241 (the port that the client is contacting for the request). The ACK (Acknowledgment) bit is set, which is a response to the original HTTP GET request sent by the client.



The IPv4 packet of the response is in the reverse direction of traffic. The Source IP is the server IP (146.190.62.39), and the Destination is the client IP (10.100.203.89). IPv4 sends this response packet from the server via the internet to the client. The protocol field is a reflection of the information to be a TCP segment of it.



This specified content of the Ethernet II frame of the request packet from the client (Frame 91). Operating at the data link level, Ethernet has to transmit data from one to another machine within a similar local network segment. The extended header specifies the Destination MAC address (c8:ff:ac:9b:a5:db), the hardware address for the local router or gateway, and the Source MAC address (a0:91:c8:9c:ac:f5), the hardware address for the client machine. The type field (IPv4) indicates data carried inside this frame to be an IPv4 packet.



This includes frame-level information of the server response packet (Frame 94). That bears no relation to any protocol but is some metadata added by the Wireshark capture process. We can see it informs us to be Frame Number 94 in capture order and defines 510 bytes as Total Frame Length in wire. There also arrives some Arrival Time timestamp when captured, and it also verifies the encapsulation as Ethernet.