Session Persistence with Cookies in HTTP

This report investigates the utilization of HTTP cookies in preserving session state between a client and a server. By employing Wireshark, we recorded network traffic throughout a website login session and scrutinized HTTP packets to discern and comprehend the function of cookies.

1. Capturing Network Traffic in Wireshark

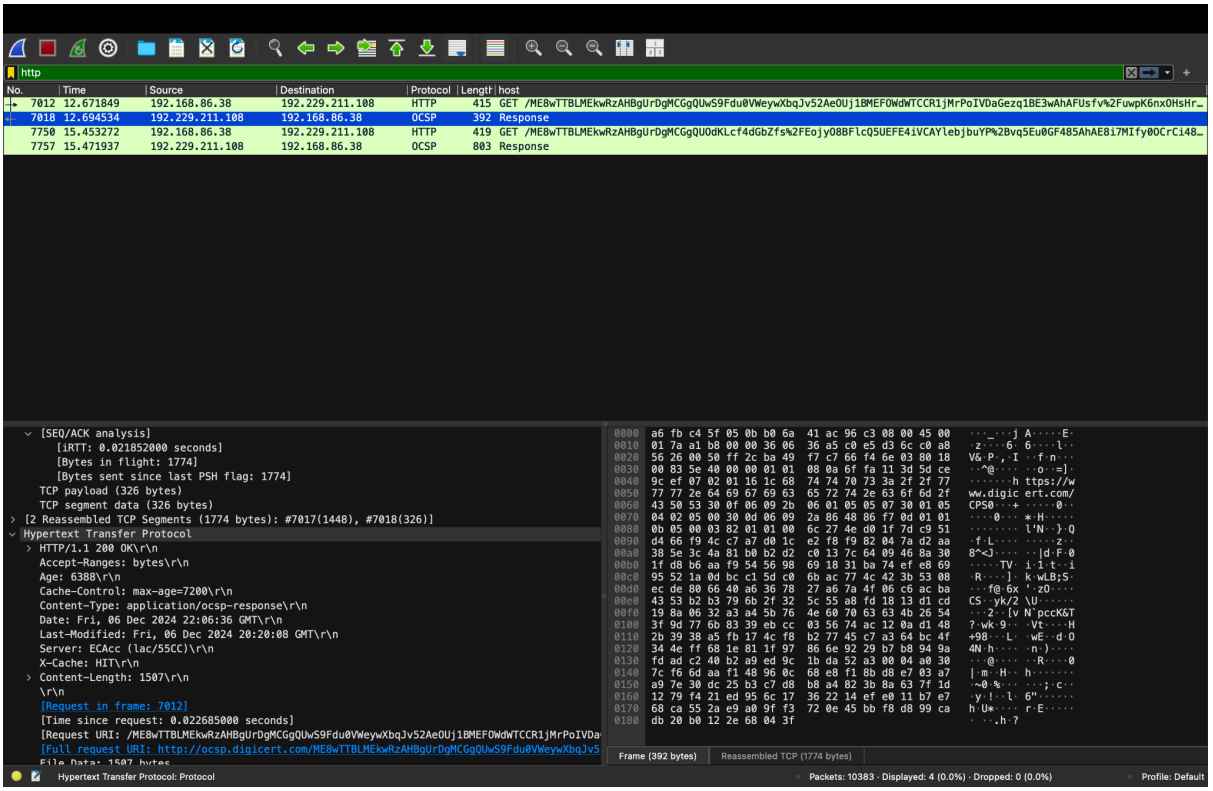
Launched Wireshark and chose the active network interface for monitoring.
Initiated packet capture while logging into a test website.
Concluded the traffic capture once the login process was finalized.

2. Filtering for HTTP Traffic

Utilized the http filter in Wireshark to extract HTTP packets from the collected data.

3. Identifying Important Packets

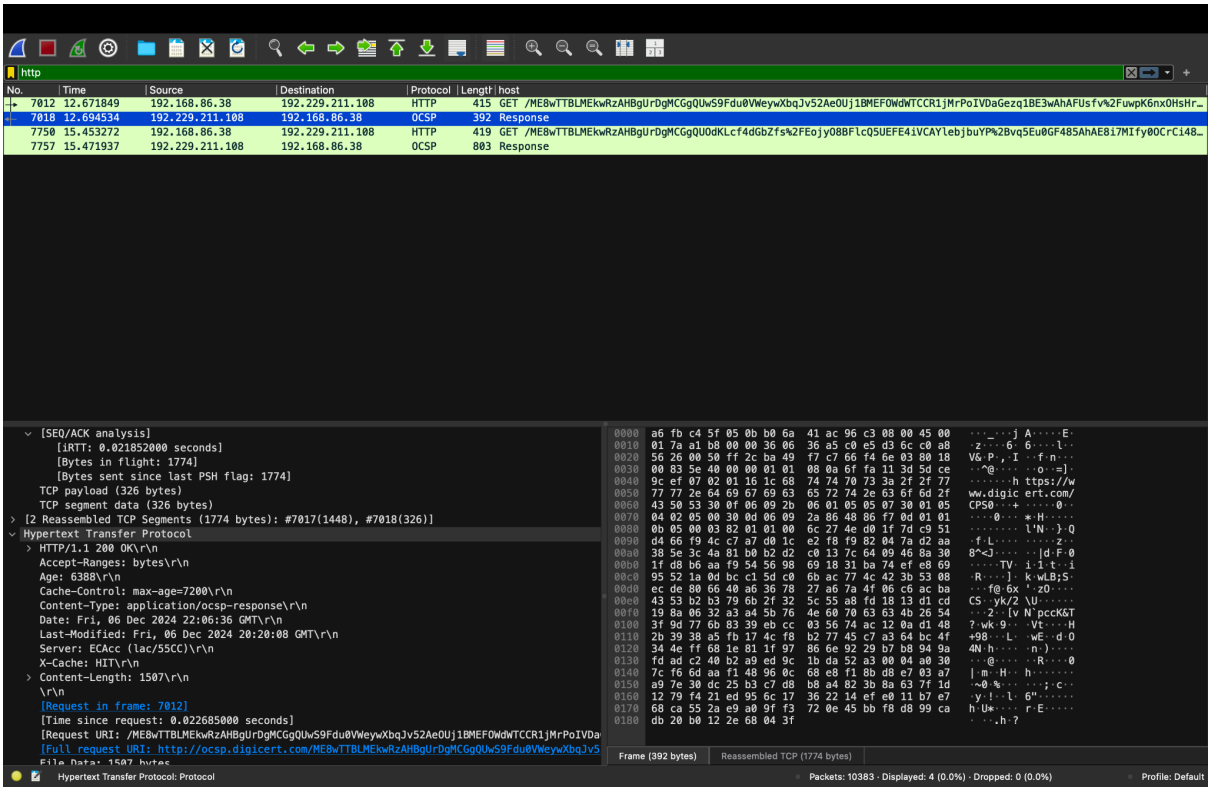
Recognized:
HTTP response packets that included the Set-Cookie header sent by the server.
HTTP request packets that contained the Cookie header from the client.



This screenshot contains HTTP cookies in HTTP/1.1 200 OK/r/n
Cookies and Session cookie
Objective:

Cookies allow the server to recognize the client during multiple requests. In the absence of cookies, the stateless nature of HTTP prevents the maintenance of session continuity.

Process:
The server transmits a Set-Cookie header containing a unique session identifier. The client retains the cookie and incorporates it into future Cookie headers. The server utilizes the session identifier to access data specific to the session.



In the GET response we can see the set cookies