

**Computer Network**

**Task No 01**

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https://lh7-rt.googleusercontent.com/docsz/AD_4nXdVQ8OUBR_dhCrOWV1vxlqoLBzyJs70xCYbzvgAIFmfaWpFIdo2pXDaYOKmtp_vrwUYfft8dgX6ZR4ULRPnkssCqn40PP5czpDoNF8Wv8rX95d9oFefvexKWheM6s0jgWZ-dZ4C1u_sld56EN9HgaXiiTc?key=Wa7SeqjkZKC1QT8VhWH50Q **Assignment N0 01**

**Task NO 01:**

**For HTTP:**

For the HTTP based website access, answer the following after analysing collected traces of HTTP:

1. What is the name of website?

**Solution:**

**Name of website:**

**Explanation:**  
 The IP address recorded in the packet capture is 34.223.124.45. When this IP is resolved, it corresponds to the domain neverssl.com. The HTTP requests shown in the trace are to the resource /online on this host.

**Conclusion:**  
 The website accessed during this capture was neverssl.com.

2-Find the packet that contains the first GET request for the website you have accessed.

**Solution:**

**First Packet Containing the GET Request:**

**Explanation:**  
The earliest client request shown in the trace is:

"2379","35.902717","10.1.77.141","34.223.124.45","HTTP","565","GET /online HTTP/1.1"

This entry shows the client IP (10.1.77.141) sending an HTTP/1.1 GET to the server IP (34.223.124.45). This is the first request to the site.

**Conclusion:**  
 We can concluded that The first GET request for the website is found in **Packet 2379**.

3-Describe all headers and their values in this GET request message.

**Solution:**

**3. Headers and Values in the GET Request:**

**Explanation:**  
 The trace only contains the request line (GET /online HTTP/1.1) and does not display the full header block. In HTTP/1.1, the following headers are normally included with such a request:

* **Host:** neverssl.com (required by HTTP/1.1 to indicate the target host)
* **User-Agent:** <browser information> (describes the client)
* **Accept:** <list of MIME types> (declares what content types the client accepts)
* **Accept-Encoding:** <compression methods> (specifies supported compression)
* **Accept-Language:** <preferred languages>
* **Connection:** keep-alive (or no header; HTTP/1.1 defaults to persistence)
* To obtain the exact header values, you would need to open packet 2379 in Wireshark and expand the **Hypertext Transfer Protocol** section.

**Conclusion:**  
 We can concluded that GET request in packet 2379 at minimum contains the **Host** header and likely the typical HTTP/1.1 request headers listed above.

4-Identify the status code in the first server response.

**Solution:**

**Status Code in the First Server Response:**

**Explanation:**After the first GET request, the server responds with:

HTTP/1.1 301 Moved Permanently (text/html)

This is a standard redirect response used to tell the client to use another URL.

**Conclusion:**  
We can concluded that status code in the first server response is 301 Moved Permanently.

5-How many HTTP response messages are exchanged in total?

**Solution:**

**Solution:**

**Total HTTP Response Messages in the Capture:**

**Explanation:**  
Based on the provided lines, the server responses visible are:

1. Packet 2452 — HTTP/1.1 301 Moved Permanently (text/html)
2. Packet 2550 — HTTP/1.1 301 Moved Permanently (text/html)
3. Packet 2592 — HTTP/1.1 200 OK (text/html)
4. Packet 2696 — HTTP/1.1 200 OK (PNG)

**Conclusion:**  
 We can concluded that there are **four HTTP response messages** in the portion of the trace you provided.

6-Determine whether the connection is persistent or not. Justify with evidence from packet captures.

**Solution:**

**Persistence of the Connection:**

**Explanation:** HTTP/1.1 uses persistent connections by default unless a Connection: close header is explicitly sent. The capture shows several GET requests and responses between the same client and server without any indication of a new TCP handshake or termination between them. This pattern suggests that the same TCP connection was kept open to handle multiple requests such as /online, /online/, and /favicon.ico.

To verify this completely, one would:

* Check packet 2379 and 2452 for a Connection: header.
* Follow the TCP stream in Wireshark to ensure there is no FIN or RST between requests.

**Conclusion:**  
 We can concluded that based on the evidence, the HTTP connection in this capture is persistent .

**CONCLUSION:**

We can concluded that packet capture shows that a client at 10.1.77.141 accessed the website neverssl.com hosted at 34.223.124.45. The first GET request appears in Packet 2379, and the server initially responds with a 301 Moved Permanently redirect. In total, four HTTP response messages are exchanged, including two redirects and two successful 200 OK responses. The pattern of repeated requests and responses over the same client–server pair without teardown indicates a persistent HTTP/1.1 connection was used.

**Thank You**