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HTTP Trace Analysis Report

1. What is the name of website?

The name of the website, as shown in the Host field of the GET request, is httpbin.org.

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

The first GET request is:

GET /basic-auth/user/passwd HTTP/1.1

Host: httpbin.org

Connection: keep-alive

Upgrade-Insecure-Requests: 1

User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 ...

Sec-Purpose: prefetch;prerender

Purpose: prefetch

Accept:

text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/ap

ng,*/*;q=0.8,application/signed-exchange;v=b3;q=0.7

Accept-Encoding: gzip, deflate

Accept-Language: en-US,en;q=0.9

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

- Host: httpbin.org → The target server.

- Connection: keep-alive → Client requests a persistent connection.

- Upgrade-Insecure-Requests: 1 → Browser prefers secure resources if possible.

- User-Agent: Identifies the browser and operating system.

- Sec-Purpose: prefetch;prerender → Request was preloaded.

- Purpose: prefetch → Confirms prefetching.

- Accept: Lists acceptable content types.

- Accept-Encoding: gzip, deflate → Supported compression formats.

- Accept-Language: en-US,en;q=0.9 → Preferred languages.

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

The status code in the first server response is 401 Unauthorized.

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

There are 4 HTTP response messages exchanged in total:

1. 401 Unauthorized

2. 401 Unauthorized

3. 200 OK

4. 404 Not Found

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

The connection is persistent. Evidence is the use of 'Connection: keep-alive' in both client requests and server responses, and multiple requests and responses are exchanged over the same TCP session without closing after each response.