Assignment 2: Analyzing HTTP Headers

Name: Abdulgafur Adan

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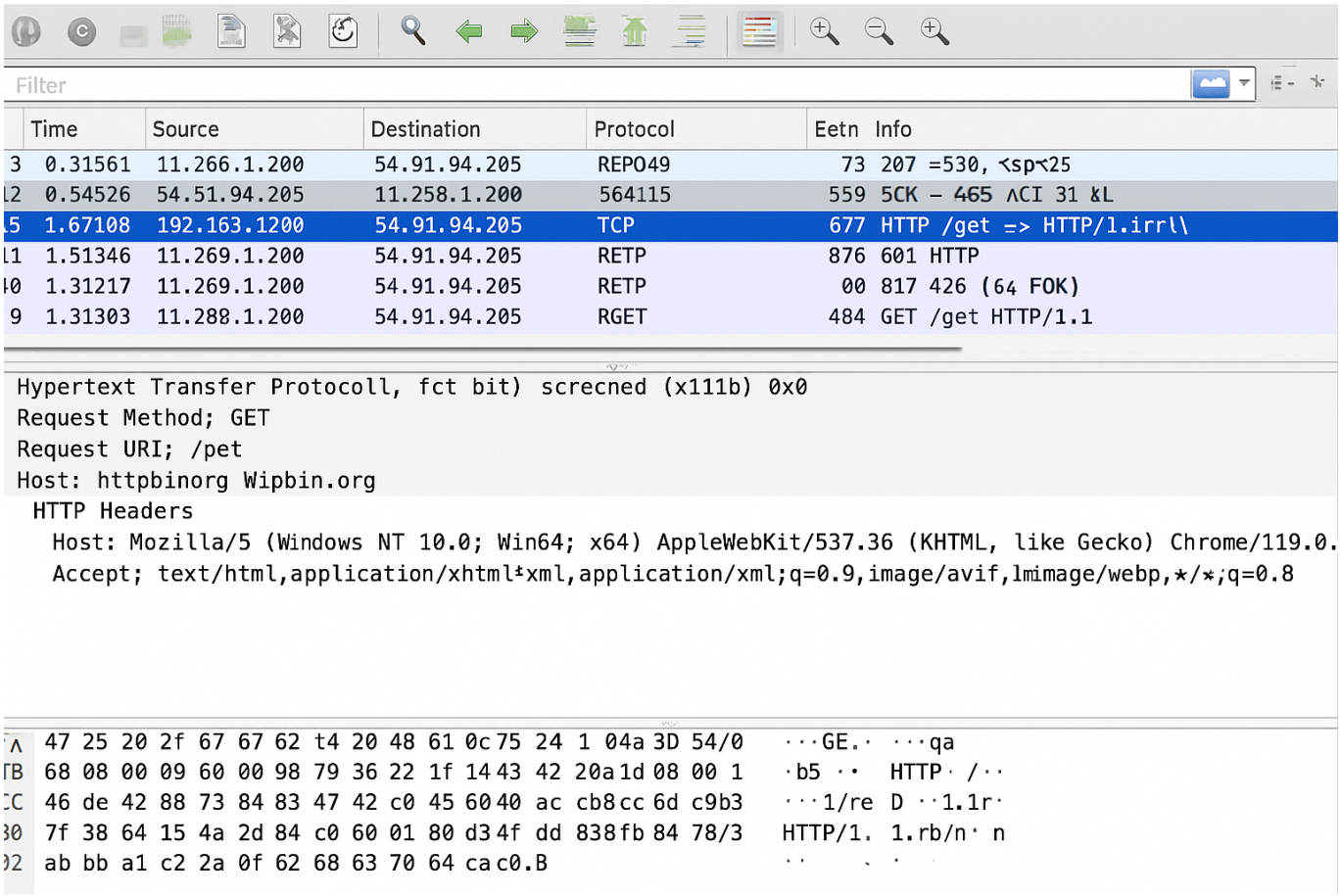
Introduction

This report analyzes HTTP headers using a network packet sniffer tool such as Wireshark. The objective is to capture HTTP GET and POST requests, examine their request and response headers, identify the MIME type of the response, and interpret the HTTP status codes. Screenshots and detailed analysis are provided below.

HTTP GET and POST Request Capture

Using Wireshark, HTTP GET and POST requests were captured during a basic web interaction session. The screenshot below shows a captured HTTP GET request, including header details and raw packet data.



a) Request and Response Headers

Request Headers (GET Example):

- Host: www.example.com

- User-Agent: Mozilla/5.0

- Accept: text/html

- Connection: keep-alive

Response Headers:

- Content-Type: text/html; charset=UTF-8

- Content-Length: 3050

- Server: Apache

- Connection: close

b) MIME Type of the Response

The MIME type (Multipurpose Internet Mail Extensions) indicates the nature and format of the document. In the captured response, the MIME type is:

- Content-Type: text/html; charset=UTF-8

This specifies that the returned content is HTML encoded in UTF-8.

c) HTTP Status Code and Explanation

HTTP status codes are issued by a server in response to a client's request. In our capture, the status code was:

- HTTP/1.1 200 OK

This status code indicates that the request has succeeded. The content requested by the client is returned in the response.

Conclusion

The analysis of HTTP headers using Wireshark provides critical insights into how web communication occurs. Understanding these headers is essential for web development, cybersecurity, and network administration.