



Lab Report

Computer Networks Lab

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1 Wireshark Lab: HTTP

1.1 Question 1

List 3 different protocols that appear in the protocol column in the unfiltered packet-listing window.

- TCP
- TLSv1.2
- ARP



Figure 1: Showing 3 Different Protocols

1.2 Question 2

How long did it take from when the HTTP GET message was sent until the HTTP OK reply was received?

Solution: 408.154 milliseconds. (Figure 3)

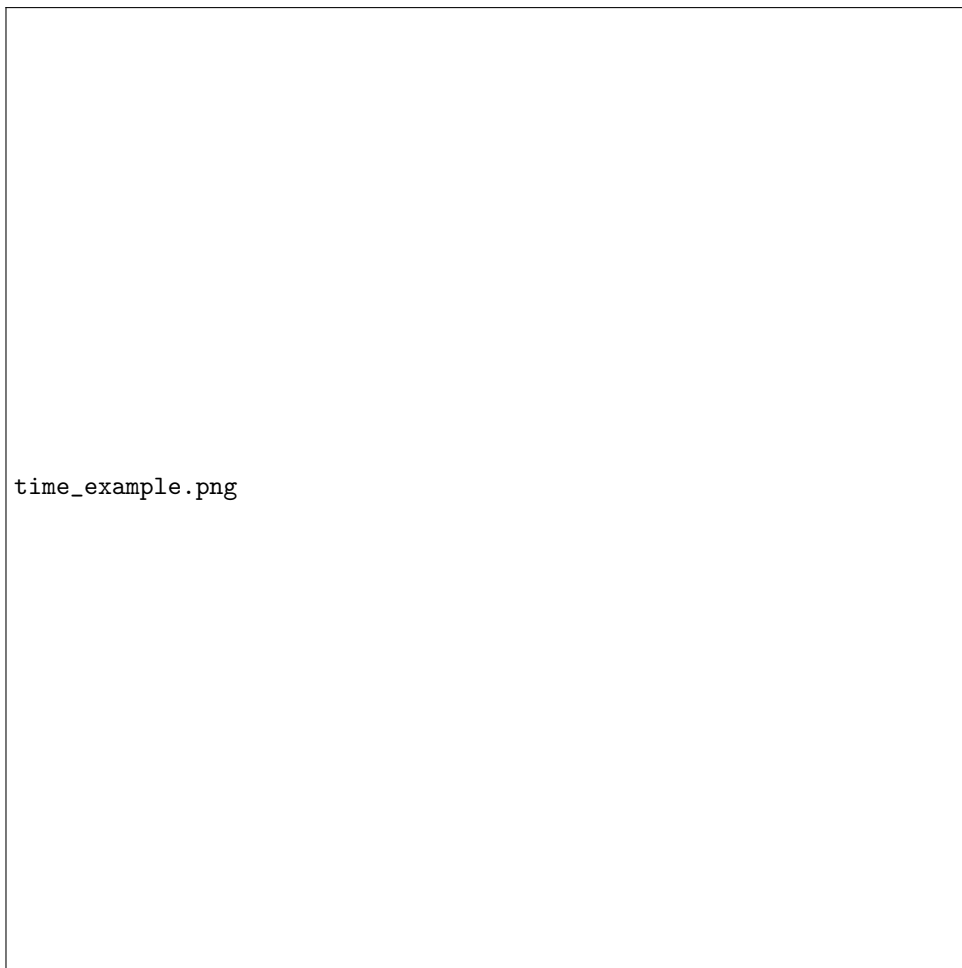


Figure 2: Time Taken between HTTP GET Request Sent and Received

2 Wireshark Lab: HTTP

2.1 The Basic HTTP GET/Response interaction

Question 1

Is your browser running HTTP version 1.0 or 1.1? What version of HTTP is the server running?

Solution:

Both my browser and the server are using HTTP version 1.1

Options: Narrow & Wide <input type="checkbox"/> Case sensitive <input type="checkbox"/> Backwards <input type="checkbox"/> Multiple occurrences						
No.	Time	Source	Destination	Protocol	Length	Info
1765	39.836192	192.168.0.105	204.79.197.203	HTTP	305	GET /ocsp/MFQwUjBQME4wTDAJBgUrDgMCGGUABBSzT%2FzqwcqNvhP9i4c4sCf
1901	39.889504	204.79.197.203	192.168.0.105	OCSP	1061	Response
52677	363.643621	192.168.0.105	128.119.245.12	HTTP	635	GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1
52684	363.984556	128.119.245.12	192.168.0.105	HTTP	540	HTTP/1.1 200 OK (text/html)
52773	364.070027	192.168.0.105	128.119.245.12	HTTP	581	GET /favicon.ico HTTP/1.1
52798	364.345061	128.119.245.12	192.168.0.105	HTTP	538	HTTP/1.1 404 Not Found (text/html)
> Frame 52677: 635 bytes on wire (5080 bits), 635 bytes captured (5080 bits) on interface \Device\NPF_{CC6E5D1C-551A-45E0-B7DE-C8BA1D3E4C00},						
> Ethernet II, Src: AzureWaveTec 52:f8:79 (14:13:33:52:f8:79), Dst: TPLink_89:00:00 (5c:e9:31:89:00:00)						
> Internet Protocol Version 4, Src: 192.168.0.105, Dst: 128.119.245.12						
> Transmission Control Protocol, Src Port: 50454, Dst Port: 80, Seq: 1, Ack: 1, Len: 581						
▼ Hypertext Transfer Protocol						
> GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1\r\n						
Host: gaia.cs.umass.edu\r\n						
Connection: keep-alive\r\n						
Upgrade-Insecure-Requests: 1\r\n						
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/129.0.0.0 Safari/537.36 Edg/129.0.0.0						
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b						
Accept-Encoding: gzip, deflate\r\n						
Accept-Language: en-US,en;q=0.9\r\n						
> Cookie: _ga=GA1.1.284868734.1708497322; _ga_348604LFFQ=GS1.1.1708497324.1.1.1708498127.59.0.0\r\n						
\r\n						
[Response in frame: 52684]						
[Full request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html]						

Figure 3: Time Taken between HTTP GET Request Sent and Received

2.1.1 Question 2

What languages (if any) does your browser indicate it can accept?

Solution: British English (en-GB), US English (en-US), general English (en), and Bengali (bn).

3 Wireshark Lab: DNS

3.1 nslookup

3.1.1 Question 1

Run nslookup to obtain the IP address of a Web server in Asia. What is the IP address of that server?

Solution: The IP address of `www.prothomalo.com` is 104.17.145.114 and 104.17.144.114.

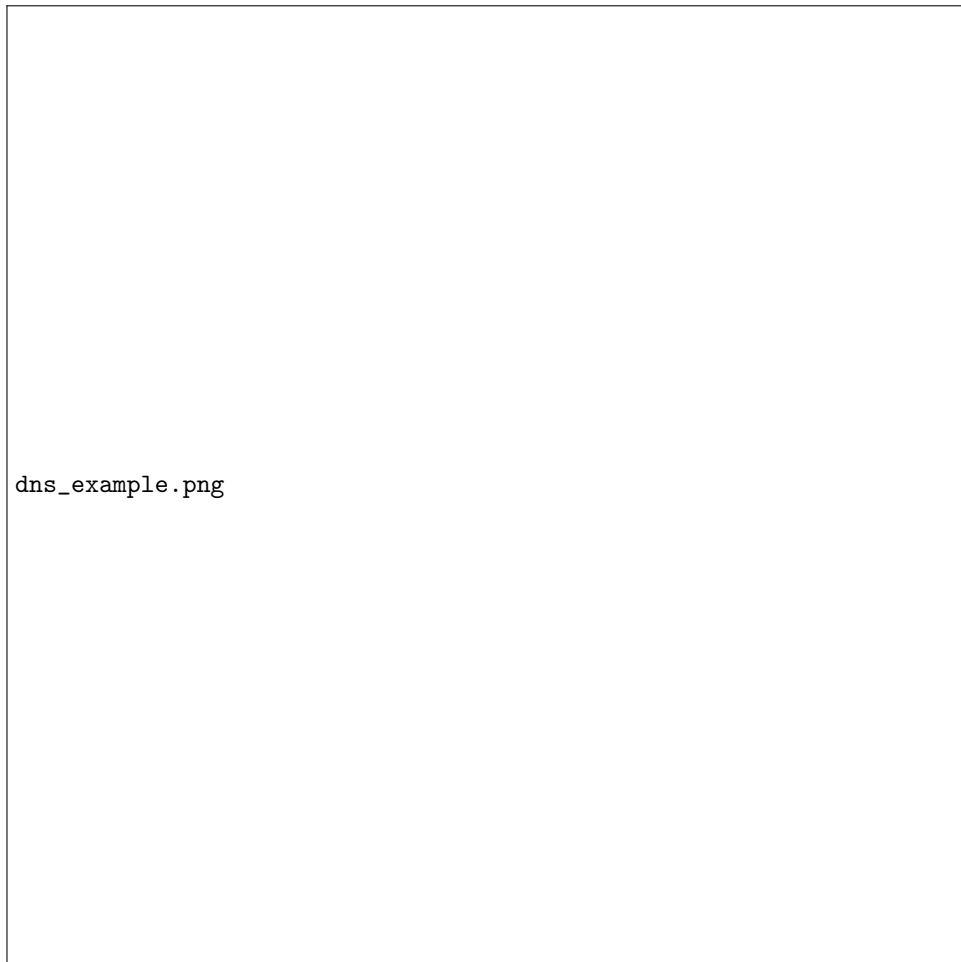


Figure 4: Finding IP Address Using nslookup