Computer Networks

LAB 1b

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1. List 3 different protocols that appear in the protocol column in the unfiltered packet-listing window in step 7 above.

   - HTTP
   - DNS
   - TCP

2. How long did it take from when the HTTP GET message was sent until the HTTP OK reply was received? (By default, the value of the Time column in the packetlisting window is the amount of time, in seconds, since Wireshark tracing began. To display the Time field in time-of-day format, select the Wireshark View pull down menu, then select Time Display Format, then select Time-of-day.)

Time	Source	Destination	Protocol	Length	Info
2024-10-11 15:33:48.988392	192.168.2.41	128.119.245.12	HTTP	506	GET /wireshark-labs/INTRO-wireshark-file1.html HTTP/1.1
2024-10-11 15:33:49.296589	128.119.245.12	192.168.2.41	HTTP	492	HTTP/1.1 200 OK (text/html)

0.3 second

3. What is the Internet address of the gaia.cs.umass.edu (also known as wwwnet.cs.umass.edu)? What is the Internet address of your computer?

Source	Destination	Protocol	Length	Info
192.168.2.41	128.119.245.12	HTTP	506	GET /wireshark-labs/INTRO-wireshark-file1.html HTTP/1.1
128.119.245.12	192.168.2.41	HTTP	492	HTTP/1.1 200 OK (text/html)
192.168.2.41	128.119.245.12	HTTP	491	GET /favicon.ico HTTP/1.1
128.119.245.12	192.168.2.41	HTTP	539	HTTP/1.1 404 Not Found (text/html)

   - The IP address of gaia.cs.umass.edu is `128.119.245.12`
   - The IP address of my computer is `192.168.2.41`

4. Print the two HTTP messages (GET and OK) referred to in question 2 above. To do so, select Print from the Wireshark File command menu, and select the "Selected Packet Only" and "Print as displayed" radial buttons, and then click OK.

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No.      Time                          Source              Destination          Protocol
Length Info
   10200 2024-10-11 15:33:48.988392    192.168.2.41        128.119.245.12       HTTP    506
GET /wireshark-labs/INTRO-wireshark-file1.html HTTP/1.1
Frame 10200: 506 bytes on wire (4048 bits), 506 bytes captured (4048 bits) on interface en0, id
0
Ethernet II, Src: Apple_47:e6:b3 (b0:be:83:47:e6:b3), Dst: zte_ab:73:2c (28:77:77:ab:73:2c)
Internet Protocol Version 4, Src: 192.168.2.41, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 52799, Dst Port: 80, Seq: 1, Ack: 1, Len: 452
     Source Port: 52799
     Destination Port: 80
     [Stream index: 131]
     [Stream Packet Number: 4]
     [Conversation completeness: Complete, WITH_DATA (31)]
     [TCP Segment Len: 452]
     Sequence Number: 1     (relative sequence number)
     Sequence Number (raw): 3427792739
     [Next Sequence Number: 453     (relative sequence number)]
     Acknowledgment Number: 1     (relative ack number)
     Acknowledgment number (raw): 2412628018
     0101 .... = Header Length: 20 bytes (5)
     Flags: 0x018 (PSH, ACK)
     Window: 4096
     [Calculated window size: 262144]
     [Window size scaling factor: 64]
     Checksum: 0x46e5 [unverified]
     [Checksum Status: Unverified]
     Urgent Pointer: 0
     [Timestamps]
     [SEQ/ACK analysis]
     TCP payload (452 bytes)
Hypertext Transfer Protocol
     GET /wireshark-labs/INTRO-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 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like
Gecko) Chrome/129.0.0.0 Safari/537.36\r\n
     Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/
apng,*/*;q=0.8\r\n
     Sec-GPC: 1\r\n
     Accept-Language: en-US,en;q=0.6\r\n
     Accept-Encoding: gzip, deflate\r\n
     \r\n
     [Response in frame: 10416]
     [Full request URI: http://gaia.cs.umass.edu/wireshark-labs/INTRO-wireshark-file1.html]
```