

Junhyeok Jeong

Bill Pfeil

CS 372-X001

10/13/2019

### Lab 1

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

- DNS, UDP, ICMPv6

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.)

- Sent at 14:53:08.459453, and received at 14:53:08.564320. Therefore, it took 0.104867

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?

- gaia.cs.umass.edu: 128.119.245.12 (IPv4)

My computer: 10.0.0.24 (IPv4) / 2601:1c0:8600:4bc0:2887:a612:e034:fdad

4. Screenshot the two HTTP messages (GET and OK) referred to in question 2 above. Make sure to include all pertinent information in the screenshot (Time field, Internet addresses, etc). Paste these screenshots into your lab report.

The screenshot shows a Wireshark packet capture of an HTTP transaction. The packet list pane at the top displays several packets, with packet 72 selected. The packet details pane shows the structure of the selected HTTP response, and the packet bytes pane shows the raw data.

Time	Source	Destination	Protocol	Length	Info
76	14:51:35.018562	10.0.0.168	10.0.0.24	HTTP/...	961 HTTP/1.1 200 OK
78	14:51:35.019084	10.0.0.24	10.0.0.168	HTTP	288 GET /upnp/dev/e910017c-aaef-90a0-0000-0000018736f3
80	14:51:35.030389	10.0.0.168	10.0.0.24	HTTP/...	961 HTTP/1.1 200 OK
67	14:53:08.459453	10.0.0.24	128.119.245.12	HTTP	708 GET /wireshark-labs/INTRO-wireshark-file1.html HTTP
72	14:53:08.564320	128.119.245.12	10.0.0.24	HTTP	492 HTTP/1.1 200 OK (text/html)
73	14:53:08.586446	10.0.0.24	128.119.245.12	HTTP	561 GET /favicon.ico HTTP/1.1
74	14:53:08.687191	128.119.245.12	10.0.0.24	HTTP	538 HTTP/1.1 404 Not Found (text/html)
18	14:54:29.116935	10.0.0.24	72.21.91.29	HTTP	290 GET /MFEwTzBNMEswSTAJBgUrDgMCGGUABBTBL0V27RVZ7LBdu
30	14:54:29.141549	72.21.91.29	10.0.0.24	OCSP	419 Response

**Packet 72 Details:**

- Keep-Alive: timeout=5, max=100\r\n
- Connection: Keep-Alive\r\n
- Content-Type: text/html; charset=UTF-8\r\n
- \r\n
- [HTTP response 1/2]
- [Time since request: 0.104867000 seconds]
- [Request in frame: 6867]
- [Next request in frame: 6873]
- [Next response in frame: 6874]
- [Request URI: http://gaia.cs.umass.edu/favicon.ico]
- File Data: 81 bytes

**Packet 72 Bytes:**

```

0130 67 74 68 3a 20 38 31 0d 0a 4b 65 65 70 2d 41 6c  gth: 81· ·Keep-Al
0140 69 76 65 3a 20 74 69 6d 65 6f 75 74 3d 35 2c 20  ive: tim eout=5,
0150 6d 61 78 3d 31 30 30 0d 0a 43 6f 6e 6e 65 63 74  max=100· ·Connect
0160 69 6f 6e 3a 20 4b 65 65 70 2d 41 6c 69 76 65 0d  ion: Kee p-Alive·
0170 0a 43 6f 6e 74 65 6e 74 2d 54 79 70 65 3a 20 74  ·Content -Type: t
0180 65 78 74 2f 68 74 6d 6c 3b 20 63 68 61 72 73 65  ext/html ; charse
0190 74 3d 55 54 46 2d 38 0d 0a 0d 0a 3c 68 74 6d 6c  t=UTF-8· ···<html
01a0 3e 0a 43 6f 6e 67 72 61 74 75 6c 61 74 69 6f 6e  >>Congra tulation
01b0 73 21 20 20 59 6f 75 27 76 65 20 64 6f 77 6e 6c  s! You' ve downl
01c0 6f 61 64 65 64 20 74 68 65 20 66 69 72 73 74 20  oaded th e first
01d0 57 69 72 65 73 68 61 72 6b 20 6c 61 62 20 66 69  Wireshar k lab fi
01e0 6c 65 21 0a 3c 2f 68 74 6d 6c 3e 0a  le!·</ht ml>·
  
```

Text item (text), 66 bytes | Packets: 10576 · Displayed: 46 (0.4%) | Profile: Default

\*Ethernet

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

http

No.	Time	Source	Destination	Protocol	Length	Info
236...	15:01:01.276451	128.193.40.12	10.0.0.24	HTTP	620	HTTP/1.1 200 OK (text/html)
237...	15:01:01.328244	10.0.0.24	128.193.40.12	HTTP	770	GET /Favicon.ico HTTP/1.1
237...	15:01:01.339714	128.193.40.12	10.0.0.24	HTTP	608	HTTP/1.1 200 OK (image/vnd.microsoft.icon)
237...	15:01:10.134864	10.0.0.24	128.193.40.12	HTTP	887	GET /~jeongju/index.html HTTP/1.1
237...	15:01:10.148839	128.193.40.12	10.0.0.24	HTTP	620	HTTP/1.1 200 OK (text/html)
237...	15:01:10.156509	10.0.0.24	128.193.40.12	HTTP	775	GET /~jeongju/me.jpg HTTP/1.1
238...	15:01:10.198980	128.193.40.12	10.0.0.24	HTTP	95	HTTP/1.1 200 OK (JPEG JFIF image)
238...	15:01:13.415501	10.0.0.24	128.193.40.12	HTTP	948	GET /~jeongju/index.html HTTP/1.1
238...	15:01:13.428331	128.193.40.12	10.0.0.24	HTTP	244	HTTP/1.1 304 Not Modified

```

<h3>Your name and what you prefer to be called? (if it's different)</h3>\r\n
<ul>\r\n
  <li>Junhyeok Jeong, Derek</li>\r\n
</ul>\r\n
<h3>Your OSU email address?</h3>\r\n
<ul>\r\n
  <li>jeongju@oregonstate.edu</li>\r\n
</ul>\r\n
<h3>Your major and year of study?</h3>\r\n
<ul>\r\n

```

0130	65 61 2c 20 6e 6f 74 20 6e 6f 72 74 68 2e 3c 2f	lea, not north.</
0140	6c 69 3e 0d 0a 20 20 20 20 20 20 20 3c 6c 69 3e 49	li>.. <li>I
0150	20 73 65 72 76 65 64 20 41 72 6d 79 20 69 6e 20	served Army in
0160	4b 6f 72 65 61 20 66 6f 72 20 32 20 79 65 61 72	Korea fo r 2 year
0170	73 20 61 73 20 61 20 6d 65 63 68 61 6e 69 63 2e	s as a m echanic.
0180	20 4d 79 20 6d 61 69 6e 20 74 61 73 6b 20 77 61	My main task wa
0190	73 20 67 75 6e 73 6d 69 74 68 2c 20 73 6f 20 49	s gunsmi th, so I
01a0	20 63 61 6e 20 72 65 70 61 69 72 20 61 6e 79 20	can rep air any
01b0	74 79 70 65 73 20 6f 66 20 67 75 6e 20 61 6e 64	types of gun and
01c0	20 61 73 73 65 6d 62 6c 65 20 6c 69 6b 65 20 30	assembl e like 0
01d0	30 37 2e 3c 2f 6c 69 3e 0d 0a 20 20 20 20 3c 2f	07.</li> .. </

Frame (620 bytes) Reassembled TCP (2026 bytes)

wireshark\_Ethernet\_20191002145018\_a13692.pcapng

Packets: 24747 · Displayed: 227 (0.9%) Profile: Default

## Extra credit

```

1 #written by Junhyeok Jeong
2 #CS 372 - Lab1 extra credit
3 #Language: python 3.x
4
5 import socket
6 import sys
7 import http.client
8 import urllib
9
10 #create an INET and STREAM socket
11 try:
12     sc = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
13     print ("Socket Successfully created")
14 #error handling
15 except socket.error as err:
16     print ("Socket creation failed with error {}".format(err))
17
18 #default port for socket
19 port = 80
20
21 #set host by internet address
22 try:
23     host_ip = socket.gethostbyname('gaia.cs.umass.edu')
24 #error handling
25 except socket.gaierror:
26     print ("there was an error resolving the host")
27     sys.exit()
28
29 sc.connect((host_ip, port))
30
31 print ("the socket has successfully connected to gaia.cs.umass.edu: {}".format(host_ip))
32
33 connection = http.client.HTTPSConnection('gaia.cs.umass.edu')
34 connection.request("GET", "/")
35 response = connection.getresponse()
36 print ("connection status: {} and reason: {}".format(response.status, response.reason))
37
38 connection.close()
39
40 #references
41 #python documents site: docs.python.org/3/howto/sockets.html
42 # docs.python.org/3/library/http.client.html

```

```

[jeongju@flip3 ~/cs372]$ python3 ec_lab1.py
Socket Successfully created
the socket has successfully connected to gaia.cs.umass.edu: 128.119.245.12
connection status: 200 and reason: OK

```