

COMP3331 WK02 LAB REPORT

Exercise 3:

The image shows a Wireshark packet capture analysis of an HTTP response. The top pane displays a list of packets, with packet 12 selected. The middle pane shows the details of packet 12, which is an HTTP 200 OK response. The bottom pane shows the raw packet data in hexadecimal and ASCII.

No.	Time	Source	Destination	Protocol	Length	Info
10	4.694850	192.168.1.102	128.119.245.12	HTTP	555	GET /ethereal-labs/
12	4.718993	128.119.245.12	192.168.1.102	HTTP	439	HTTP/1.1 200 OK (t
13	4.724332	192.168.1.102	128.119.245.12	HTTP	541	GET /favicon.ico HT
14	4.750366	128.119.245.12	192.168.1.102	HTTP	1395	HTTP/1.1 404 Not Fo

Frame 12: 439 bytes on wire (3512 bits), 439 bytes captured (3512 bits)

Ethernet II, Src: LinksysG_da:af:73 (00:06:25:da:af:73), Dst: Dell_4f:36:23 (00:08:74:4f:36:23)

Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.1.102

Transmission Control Protocol, Src Port: 80, Dst Port: 4127, Seq: 1, Ack: 502, Len: 385

Hypertext Transfer Protocol

- HTTP/1.1 200 OK\r\n
- Date: Tue, 23 Sep 2003 05:29:50 GMT\r\n
- Server: Apache/2.0.40 (Red Hat Linux)\r\n
- Last-Modified: Tue, 23 Sep 2003 05:29:00 GMT\r\n
- ETag: "1bfed-49-79d5bf00"\r\n
- Accept-Ranges: bytes\r\n
- Content-Length: 73\r\n
- Keep-Alive: timeout=10, max=100\r\n
- Connection: Keep-Alive\r\n
- Content-Type: text/html; charset=ISO-8859-1\r\n
- \r\n
- [HTTP response 1/2]
- [Time since request: 0.024143000 seconds]
- [Request in frame: 10]
- [Next request in frame: 13]
- [Next response in frame: 14]
- [Request URI: http://gaia.cs.umass.edu/favicon.ico]
- File Data: 73 bytes

Line-based text data: text/html (3 lines)

```
<html>\n\nCongratulations. You've downloaded the file lab2-1.html!\n\n</html>\n
```

0030 19 20 7a 1c 00 00 48 54 54 50 2f 31 2e 31 20 32 · z · · HT TP/1.1 2

Hypertext Transfer Protocol (http), 312 bytes

Packets: 17 · Displayed: 4 (23.5%)

Profile: Default

Question 1:

Status Code: 200

Response Phrase: OK

Question 2:

Last-Modified: Tue, 23 Sep 2003 05:29:00 GMT\r\n

Date: Tue, 23 Sep 2003 05:29:50 GMT\r\n

The real response time is 50 seconds after the browser retrieves the HTML file.

Question 3:

It is persistent since the header shows that

Keep-Alive: timeout=10, max=100\r\n

Connection: Keep-Alive\r\n

Question 4:

File Data: 73 bytes.

Question 5:

The text which is: Congratulations. You've downloaded the file lab2-1.html!

Exercise 4:

Question1:

No, there do not have this line.

Question2:

Yes, it indicates that the last modified date is Tue, 23 Sep 2003 05:35:00 GMT.

Question3:

Yes, they show that

If-Modified-Since: Tue, 23 Sep 2003 05:35:00 GMT

If-None-Match: "1bfef-173-8f4ae900"

Question4:

Status Code: 304

Response Phrase: Not Modified

The server didn't return the contents of the file, because the GET requests can be cached and the contents hadn't been changed after the last modified.

Question5:

1st: ETag: "1bfef-173-8f4ae900"

2nd: ETag: "1bfef-173-8f4ae900"

It hasn't changed since the HTTP has been modified. The principle for ETag is that when you request an URL, the Web server will return a corresponding ETag, if the client want to request the same URL next time, a saved ETag will be sent.

Exercise 5:

Server output on the left and client output on the right.

```
uxterm                                     uxterm
Lab2.pdf PingClient.class PingClient.java PingServer.class PingServer.java lab01 lab02
z5191546@vx2:/tmp_and/reed/export/reed/3/z5191546/cs3331/lab/lab02$ java PingSer z5191546@vx2:/tmp_and/reed/export/reed/3/z5191546/cs3331/lab/lab02$ ls
ver 2019 lab01 lab02
Received from 127.0.0.1: PING 0 1561121791025 z5191546@vx2:/tmp_and/reed/export/reed/3/z5191546/cs3331/lab/lab02$ ls
Reply sent. lab01 lab02
Received from 127.0.0.1: PING 1 1561121791325 z5191546@vx2:/tmp_and/reed/export/reed/3/z5191546/cs3331/lab/lab02$ cd lab02
Reply sent. z5191546@vx2:/tmp_and/reed/export/reed/3/z5191546/cs3331/lab/lab02$ ls
Received from 127.0.0.1: PING 2 1561121791465 Lab2.pdf PingClient.class PingClient.java PingServer.class PingServer.java
Reply sent. z5191546@vx2:/tmp_and/reed/export/reed/3/z5191546/cs3331/lab/lab02$ ls
Received from 127.0.0.1: PING 3 1561121791570 Lab2.pdf PingClient.class PingClient.java PingServer.class PingServer.java
Reply sent. z5191546@vx2:/tmp_and/reed/export/reed/3/z5191546/cs3331/lab/lab02$ java PingCli
Received from 127.0.0.1: PING 4 1561121791571 ent 127.0.0.1 2019
Reply not sent. ping to 127.0.0.1, seq = 0, rtt = 245 ms
Received from 127.0.0.1: PING 5 1561121792601 ping to 127.0.0.1, seq = 1, rtt = 140 ms
Reply sent. ping to 127.0.0.1, seq = 2, rtt = 104 ms
Received from 127.0.0.1: PING 6 1561121792740 ping to 127.0.0.1, seq = 3, rtt = 1 ms
Reply sent. ping to 127.0.0.1, seq = 4, time out
Received from 127.0.0.1: PING 7 1561121792753 ping to 127.0.0.1, seq = 5, rtt = 138 ms
Reply not sent. ping to 127.0.0.1, seq = 6, rtt = 13 ms
Received from 127.0.0.1: PING 8 1561121793755 ping to 127.0.0.1, seq = 7, time out
Reply not sent. ping to 127.0.0.1, seq = 8, time out
Received from 127.0.0.1: PING 9 1561121794758 ping to 127.0.0.1, seq = 9, rtt = 41 ms
Reply sent. [ minRTT: 1, maxRTT: 245, avgRTT: 97.42857142857143 ]
z5191546@vx2:/tmp_and/reed/export/reed/3/z5191546/cs3331/lab/lab02$
```