

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
НАВЧАЛЬНО-НАУКОВИЙ КОМПЛЕКС
«ІНСТИТУТ ПРИКЛАДНОГО СИСТЕМНОГО АНАЛІЗУ»
НАЦІОНАЛЬНОГО ТЕХНІЧНОГО УНІВЕРСИТЕТУ УКРАЇНИ
«КИЇВСЬКИЙ ПОЛІТЕХНІЧНИЙ ІНСТИТУТ ІМЕНІ ІГОРЯ
СІКОРСЬКОГО»
КАФЕДРА МАТЕМАТИЧНИХ МЕТОДІВ СИСТЕМНОГО АНАЛІЗУ

Лабораторна робота №2
з курсу «Комп'ютерні мережі»

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Прийняв: Кухарєв С.О.

Пакети для відповідей 1-7 та 8-11:

No. Time Source Destination Protocol Length Info
132 72.936895000 192.168.1.245 128.119.245.12 HTTP 401 GET /wireshark-labs/HTTP-wireshark-file1.html
HTTP/1.1
Frame 132: 401 bytes on wire (3208 bits), 401 bytes captured (3208 bits) on interface 0
Ethernet II, Src: b4:6d:83:64:24:b3 (b4:6d:83:64:24:b3), Dst: Tp-LinkT_2c:bf:a3 (e8:94:f6:2c:bf:a3)
Internet Protocol Version 4, Src: 192.168.1.245 (192.168.1.245), Dst: 128.119.245.12 (128.119.245.12)
Transmission Control Protocol, Src Port: 52912 (52912), Dst Port: http (80), Seq: 1, Ack: 1, Len: 335
Hypertext Transfer Protocol
GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1\r\n
Host: gaia.cs.umass.edu\r\n
User-Agent: Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:45.0) Gecko/20100101 Firefox/45.0\r\n
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8\r\n
Accept-Language: en-US,en;q=0.5\r\n
Accept-Encoding: gzip, deflate\r\n
Connection: keep-alive\r\n
\r\n
[Full request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html]
[HTTP request 1/3]
[Response in frame: 134]
[Next request in frame: 136]

No. Time Source Destination Protocol Length Info
134 73.062917000 128.119.245.12 192.168.1.245 HTTP 554 HTTP/1.1 200 OK (text/html)
Frame 134: 554 bytes on wire (4432 bits), 554 bytes captured (4432 bits) on interface 0
Ethernet II, Src: Tp-LinkT_2c:bf:a3 (e8:94:f6:2c:bf:a3), Dst: b4:6d:83:64:24:b3 (b4:6d:83:64:24:b3)
Internet Protocol Version 4, Src: 128.119.245.12 (128.119.245.12), Dst: 192.168.1.245 (192.168.1.245)
Transmission Control Protocol, Src Port: http (80), Dst Port: 52912 (52912), Seq: 1, Ack: 336, Len: 488
Hypertext Transfer Protocol
HTTP/1.1 200 OK\r\n
Date: Wed, 13 Apr 2016 20:45:59 GMT\r\n

Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.1e-fips PHP/5.4.16 mod_perl/2.0.9dev Perl/v5.16.3\r\n
Last-Modified: Wed, 13 Apr 2016 05:59:02 GMT\r\n
ETag: "80-53057797dab45"\r\n
Accept-Ranges: bytes\r\n
Content-Length: 128\r\n
[Content length: 128]
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 1/3]
[Time since request: 0.126022000 seconds]
[Request in frame: 132]
[Next request in frame: 136]
[Next response in frame: 137]
Line-based text data: text/html
<html>\r\n
Congratulations. You've downloaded the file \r\n
<http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html>!\r\n
</html>\r\n

No. Time Source Destination Protocol Length Info
39 9.328493000 192.168.1.245 128.119.245.12 HTTP 512 GET /wireshark-labs/HTTP-wireshark-file1.html
HTTP/1.1
Frame 39: 512 bytes on wire (4096 bits), 512 bytes captured (4096 bits) on interface 0
Ethernet II, Src: b4:6d:83:64:24:b3 (b4:6d:83:64:24:b3), Dst: Tp-LinkT_2c:bf:a3 (e8:94:f6:2c:bf:a3)
Internet Protocol Version 4, Src: 192.168.1.245 (192.168.1.245), Dst: 128.119.245.12 (128.119.245.12)
Transmission Control Protocol, Src Port: 52918 (52918), Dst Port: http (80), Seq: 1, Ack: 1, Len: 446
Hypertext Transfer Protocol
GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1\r\n
Host: gaia.cs.umass.edu\r\n
User-Agent: Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:45.0) Gecko/20100101 Firefox/45.0\r\n

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8\r\n
Accept-Language: en-US,en;q=0.5\r\n
Accept-Encoding: gzip, deflate\r\n
Connection: keep-alive\r\n
If-Modified-Since: Wed, 13 Apr 2016 05:59:02 GMT\r\n
If-None-Match: "80-53057797dab45"\r\n
Cache-Control: max-age=0\r\n
\r\n
[Full request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html]
[HTTP request 1/1]
[Response in frame: 41]

No. Time Source Destination Protocol Length Info

41 9.453198000 128.119.245.12 192.168.1.245 HTTP 307 HTTP/1.1 304 Not Modified
Frame 41: 307 bytes on wire (2456 bits), 307 bytes captured (2456 bits) on interface 0
Ethernet II, Src: Tp-LinkT_2c:bf:a3 (e8:94:f6:2c:bf:a3), Dst: b4:6d:83:64:24:b3 (b4:6d:83:64:24:b3)
Internet Protocol Version 4, Src: 128.119.245.12 (128.119.245.12), Dst: 192.168.1.245 (192.168.1.245)
Transmission Control Protocol, Src Port: http (80), Dst Port: 52918 (52918), Seq: 1, Ack: 447, Len: 241
Hypertext Transfer Protocol
HTTP/1.1 304 Not Modified\r\n
Date: Wed, 13 Apr 2016 20:51:22 GMT\r\n
Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.1e-fips PHP/5.4.16 mod_perl/2.0.9dev Perl/v5.16.3\r\n
Connection: Keep-Alive\r\n
Keep-Alive: timeout=5, max=100\r\n
ETag: "80-53057797dab45"\r\n
\r\n
[HTTP response 1/1]
[Time since request: 0.124705000 seconds]
[Request in frame: 39]

Пакети для відповідей 12-15:

No. Time Source Destination Protocol Length Info

93 4.046235000 192.168.1.245 77.222.57.253 HTTP 359 GET /admin/pictures/33320543s.jpg HTTP/1.1

Frame 93: 359 bytes on wire (2872 bits), 359 bytes captured (2872 bits) on interface 0

Ethernet II, Src: b4:6d:83:64:24:b3 (b4:6d:83:64:24:b3), Dst: Tp-LinkT_2c:bf:a3 (e8:94:f6:2c:bf:a3)

Internet Protocol Version 4, Src: 192.168.1.245 (192.168.1.245), Dst: 77.222.57.253 (77.222.57.253)

Transmission Control Protocol, Src Port: 51168 (51168), Dst Port: http (80), Seq: 1, Ack: 1, Len: 293

Hypertext Transfer Protocol

GET /admin/pictures/33320543s.jpg HTTP/1.1\r\n

[Expert Info (Chat/Sequence): GET /admin/pictures/33320543s.jpg HTTP/1.1\r\n]

[Message: GET /admin/pictures/33320543s.jpg HTTP/1.1\r\n]

[Severity level: Chat]

[Group: Sequence]

Request Method: GET

Request URI: /admin/pictures/33320543s.jpg

Request Version: HTTP/1.1

Host: www.elkamarket.ru\r\n

User-Agent: Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:45.0) Gecko/20100101 Firefox/45.0\r\n

Accept: image/png,image/*;q=0.8,*/*;q=0.5\r\n

Accept-Language: en-US,en;q=0.5\r\n

Accept-Encoding: gzip, deflate\r\n

Connection: keep-alive\r\n

\r\n

[Full request URI: http://www.elkamarket.ru/admin/pictures/33320543s.jpg]

[HTTP request 1/1]

[Response in frame: 150]

No. Time Source Destination Protocol Length Info

150 4.275628000 77.222.57.253 192.168.1.245 HTTP 3394 HTTP/1.1 200 OK (JPEG JFIF image)

Frame 150: 3394 bytes on wire (27152 bits), 3394 bytes captured (27152 bits) on interface 0

Ethernet II, Src: Tp-LinkT_2c:bf:a3 (e8:94:f6:2c:bf:a3), Dst: b4:6d:83:64:24:b3 (b4:6d:83:64:24:b3)
Internet Protocol Version 4, Src: 77.222.57.253 (77.222.57.253), Dst: 192.168.1.245 (192.168.1.245)
Transmission Control Protocol, Src Port: http (80), Dst Port: 51168 (51168), Seq: 43441, Ack: 294, Len: 3328
[14 Reassembled TCP Segments (46768 bytes): #106(2896), #108(4344), #110(5792), #112(1448),
#118(2896), #120(2896), #122(2896), #124(5792), #126(5792), #142(2896), #144(2896), #146(1448),
#148(1448), #150(3328)]
Hypertext Transfer Protocol
HTTP/1.1 200 OK\r\n
[Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]
[Message: HTTP/1.1 200 OK\r\n]
[Severity level: Chat]
[Group: Sequence]
Request Version: HTTP/1.1
Status Code: 200
Response Phrase: OK
Server: nginx/1.7.6\r\n
Date: Wed, 13 Apr 2016 21:03:18 GMT\r\n
Content-Type: image/jpeg\r\n
Content-Length: 46491\r\n
Connection: keep-alive\r\n
Keep-Alive: timeout=10\r\n
Last-Modified: Sat, 17 Oct 2015 15:54:37 GMT\r\n
ETag: "5b3854-b59b-5224eeddc8940"\r\n
Accept-Ranges: bytes\r\n
\r\n
[HTTP response 1/1]
[Time since request: 0.229393000 seconds]
[Request in frame: 93]
JPEG File Interchange Format

Пакети для відповідей 16-17:

No.	Time	Source	Destination	Protocol	Length	Info
176	12.456787000	192.168.1.245	128.119.245.12	HTTP	401	GET /wireshark-labs/HTTP-wireshark-file4.html HTTP/1.1

Frame 176: 401 bytes on wire (3208 bits), 401 bytes captured (3208 bits) on interface 0
Ethernet II, Src: b4:6d:83:64:24:b3 (b4:6d:83:64:24:b3), Dst: Tp-LinkT_2c:bf:a3 (e8:94:f6:2c:bf:a3)
Internet Protocol Version 4, Src: 192.168.1.245 (192.168.1.245), Dst: 128.119.245.12 (128.119.245.12)
Transmission Control Protocol, Src Port: 54352 (54352), Dst Port: http (80), Seq: 1, Ack: 1, Len: 335
Hypertext Transfer Protocol
GET /wireshark-labs/HTTP-wireshark-file4.html HTTP/1.1\r\n
Host: gaia.cs.umass.edu\r\n
User-Agent: Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:45.0) Gecko/20100101 Firefox/45.0\r\n
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8\r\n
Accept-Language: en-US,en;q=0.5\r\n
Accept-Encoding: gzip, deflate\r\n
Connection: keep-alive\r\n
\r\n
[Full request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file4.html]
[HTTP request 1/3]
[Response in frame: 178]
[Next request in frame: 309]

-----No. Time Source

Destination Protocol Length Info

178 12.579343000 128.119.245.12 192.168.1.245 HTTP 1168 HTTP/1.1 200 OK (text/html)

Frame 178: 1168 bytes on wire (9344 bits), 1168 bytes captured (9344 bits) on interface 0
Ethernet II, Src: Tp-LinkT_2c:bf:a3 (e8:94:f6:2c:bf:a3), Dst: b4:6d:83:64:24:b3 (b4:6d:83:64:24:b3)
Internet Protocol Version 4, Src: 128.119.245.12 (128.119.245.12), Dst: 192.168.1.245 (192.168.1.245)
Transmission Control Protocol, Src Port: http (80), Dst Port: 54352 (54352), Seq: 1, Ack: 336, Len: 1102
Hypertext Transfer Protocol
HTTP/1.1 200 OK\r\n
Date: Wed, 13 Apr 2016 21:05:08 GMT\r\n
Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.1e-fips PHP/5.4.16 mod_perl/2.0.9dev Perl/v5.16.3\r\n
Last-Modified: Wed, 13 Apr 2016 05:59:02 GMT\r\n
ETag: "2e5-53057797d97bd"\r\n
Accept-Ranges: bytes\r\n
Content-Length: 741\r\n

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 1/3]
[Time since request: 0.122556000 seconds]
[Request in frame: 176]
[Next request in frame: 309]
[Next response in frame: 311]
Line-based text data: text/html

-----No. Time Source

Destination Protocol Length Info

189 12.804023000 192.168.1.245 23.0.37.195 HTTP 473 GET
/assets/hip/us/hip_us_pearsonhighered/images/pearson_logo.gif HTTP/1.1
Frame 189: 473 bytes on wire (3784 bits), 473 bytes captured (3784 bits) on interface 0
Ethernet II, Src: b4:6d:83:64:24:b3 (b4:6d:83:64:24:b3), Dst: Tp-LinkT_2c:bf:a3 (e8:94:f6:2c:bf:a3)
Internet Protocol Version 4, Src: 192.168.1.245 (192.168.1.245), Dst: 23.0.37.195 (23.0.37.195)
Transmission Control Protocol, Src Port: 49382 (49382), Dst Port: http (80), Seq: 1, Ack: 1, Len: 407
Hypertext Transfer Protocol
GET /assets/hip/us/hip_us_pearsonhighered/images/pearson_logo.gif HTTP/1.1\r\n
Host: www.pearsonhighered.com\r\n
User-Agent: Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:45.0) Gecko/20100101 Firefox/45.0\r\n
Accept: image/png,image/*;q=0.8,*/*;q=0.5\r\n
Accept-Language: en-US,en;q=0.5\r\n
Accept-Encoding: gzip, deflate\r\n
Referer: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file4.html\r\n
Connection: keep-alive\r\n
\r\n

[Full request URI:
http://www.pearsonhighered.com/assets/hip/us/hip_us_pearsonhighered/images/pearson_logo.gif]
[HTTP request 1/1]
[Response in frame: 191]

-----No. Time Source

Destination Protocol Length Info

191 12.833498000 23.0.37.195 192.168.1.245 HTTP 305 HTTP/1.1 301 Moved Permanently
Frame 191: 305 bytes on wire (2440 bits), 305 bytes captured (2440 bits) on interface 0
Ethernet II, Src: Tp-LinkT_2c:bf:a3 (e8:94:f6:2c:bf:a3), Dst: b4:6d:83:64:24:b3 (b4:6d:83:64:24:b3)
Internet Protocol Version 4, Src: 23.0.37.195 (23.0.37.195), Dst: 192.168.1.245 (192.168.1.245)
Transmission Control Protocol, Src Port: http (80), Dst Port: 49382 (49382), Seq: 1, Ack: 408, Len: 239
Hypertext Transfer Protocol
HTTP/1.1 301 Moved Permanently\r\n
Server: AkamaiGHost\r\n
Content-Length: 0\r\n
Location:
https://www.pearsonhighered.com/assets/hip/us/hip_us_pearsonhighered/images/pearson_logo.gif\r\n
Date: Wed, 13 Apr 2016 21:05:08 GMT\r\n
Connection: keep-alive\r\n
\r\n
[HTTP response 1/1]
[Time since request: 0.029475000 seconds]
[Request in frame: 189]

-----No. Time Source

Destination Protocol Length Info
220 12.992862000 192.168.1.245 128.119.240.90 HTTP 432 GET /~kurose/cover_5th_ed.jpg HTTP/1.1
Frame 220: 432 bytes on wire (3456 bits), 432 bytes captured (3456 bits) on interface 0
Ethernet II, Src: b4:6d:83:64:24:b3 (b4:6d:83:64:24:b3), Dst: Tp-LinkT_2c:bf:a3 (e8:94:f6:2c:bf:a3)
Internet Protocol Version 4, Src: 192.168.1.245 (192.168.1.245), Dst: 128.119.240.90 (128.119.240.90)
Transmission Control Protocol, Src Port: 54646 (54646), Dst Port: http (80), Seq: 1, Ack: 1, Len: 366
Hypertext Transfer Protocol
GET /~kurose/cover_5th_ed.jpg HTTP/1.1\r\n
Host: manic.cs.umass.edu\r\n
User-Agent: Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:45.0) Gecko/20100101 Firefox/45.0\r\n
Accept: image/png,image/*;q=0.8,*/*;q=0.5\r\n
Accept-Language: en-US,en;q=0.5\r\n
Accept-Encoding: gzip, deflate\r\n

Referer: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file4.html\r\n
Connection: keep-alive\r\n
\r\n
[Full request URI: http://manic.cs.umass.edu/~kurose/cover_5th_ed.jpg]
[HTTP request 1/1]
[Response in frame: 237]

-----No. Time Source

Destination Protocol Length Info

237 13.109964000 128.119.240.90 192.168.1.245 HTTP 522 HTTP/1.1 302 Found (text/html)
Frame 237: 522 bytes on wire (4176 bits), 522 bytes captured (4176 bits) on interface 0
Ethernet II, Src: Tp-LinkT_2c:bf:a3 (e8:94:f6:2c:bf:a3), Dst: b4:6d:83:64:24:b3 (b4:6d:83:64:24:b3)
Internet Protocol Version 4, Src: 128.119.240.90 (128.119.240.90), Dst: 192.168.1.245 (192.168.1.245)
Transmission Control Protocol, Src Port: http (80), Dst Port: 54646 (54646), Seq: 1, Ack: 367, Len: 456
Hypertext Transfer Protocol
HTTP/1.1 302 Found\r\n
Date: Wed, 13 Apr 2016 21:05:07 GMT\r\n
Server: Apache\r\n
Location: http://caite.cs.umass.edu/~kurose/cover_5th_ed.jpg\r\n
Content-Length: 234\r\n
Connection: close\r\n
Content-Type: text/html; charset=iso-8859-1\r\n
\r\n

[HTTP response 1/1]
[Time since request: 0.117102000 seconds]
[Request in frame: 220]
Line-based text data: text/html

-----No. Time Source

Destination Protocol Length Info

252 13.258104000 192.168.1.245 128.119.240.90 HTTP 432 GET /~kurose/cover_5th_ed.jpg HTTP/1.1
Frame 252: 432 bytes on wire (3456 bits), 432 bytes captured (3456 bits) on interface 0
Ethernet II, Src: b4:6d:83:64:24:b3 (b4:6d:83:64:24:b3), Dst: Tp-LinkT_2c:bf:a3 (e8:94:f6:2c:bf:a3)

Internet Protocol Version 4, Src: 192.168.1.245 (192.168.1.245), Dst: 128.119.240.90 (128.119.240.90)
Transmission Control Protocol, Src Port: 54654 (54654), Dst Port: http (80), Seq: 1, Ack: 1, Len: 366
Hypertext Transfer Protocol
GET /~kurose/cover_5th_ed.jpg HTTP/1.1\r\n
Host: caite.cs.umass.edu\r\n
User-Agent: Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:45.0) Gecko/20100101 Firefox/45.0\r\n
Accept: image/png,image/*;q=0.8,*/*;q=0.5\r\n
Accept-Language: en-US,en;q=0.5\r\n
Accept-Encoding: gzip, deflate\r\n
Referer: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file4.html\r\n
Connection: keep-alive\r\n
\r\n
[Full request URI: http://caite.cs.umass.edu/~kurose/cover_5th_ed.jpg]
[HTTP request 1/1]
[Response in frame: 302]

-----No. Time Source

Destination Protocol Length Info

302 13.856007000 128.119.240.90 192.168.1.245 HTTP 2814 HTTP/1.1 200 OK (JPEG JFIF image)
Frame 302: 2814 bytes on wire (22512 bits), 2814 bytes captured (22512 bits) on interface 0
Ethernet II, Src: Tp-LinkT_2c:bf:a3 (e8:94:f6:2c:bf:a3), Dst: b4:6d:83:64:24:b3 (b4:6d:83:64:24:b3)
Internet Protocol Version 4, Src: 128.119.240.90 (128.119.240.90), Dst: 192.168.1.245 (192.168.1.245)
Transmission Control Protocol, Src Port: http (80), Dst Port: 54654 (54654), Seq: 98465, Ack: 367, Len: 2748
[25 Reassembled TCP Segments (101212 bytes): #254(4344), #256(8688), #258(1448), #260(2896),
#262(1448), #264(1448), #266(4344), #268(4344), #270(2896), #272(4344), #274(2896), #276(1448),
#278(13032), #280(4344), #282(1448), #284(2896), #2]
Hypertext Transfer Protocol
HTTP/1.1 200 OK\r\n
Date: Wed, 13 Apr 2016 21:05:07 GMT\r\n
Server: Apache\r\n
Last-Modified: Tue, 15 Sep 2009 18:23:27 GMT\r\n
ETag: "78004-18a68-473a1e0e6e5c0"\r\n
Accept-Ranges: bytes\r\n
Content-Length: 100968\r\n

Connection: close\r\n
Content-Type: image/jpeg\r\n
\r\n
[HTTP response 1/1]
[Time since request: 0.597903000 seconds]
[Request in frame: 252]
JPEG File Interchange Format

-----No. Time Source

Destination Protocol Length Info
309 14.059260000 192.168.1.245 128.119.245.12 HTTP 342 GET /favicon.ico HTTP/1.1
Frame 309: 342 bytes on wire (2736 bits), 342 bytes captured (2736 bits) on interface 0
Ethernet II, Src: b4:6d:83:64:24:b3 (b4:6d:83:64:24:b3), Dst: Tp-LinkT_2c:bf:a3 (e8:94:f6:2c:bf:a3)
Internet Protocol Version 4, Src: 192.168.1.245 (192.168.1.245), Dst: 128.119.245.12 (128.119.245.12)
Transmission Control Protocol, Src Port: 54352 (54352), Dst Port: http (80), Seq: 336, Ack: 1103, Len: 276
Hypertext Transfer Protocol
GET /favicon.ico HTTP/1.1\r\n
Host: gaia.cs.umass.edu\r\n
User-Agent: Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:45.0) Gecko/20100101 Firefox/45.0\r\n
Accept: image/png,image/*;q=0.8,*/*;q=0.5\r\n
Accept-Language: en-US,en;q=0.5\r\n
Accept-Encoding: gzip, deflate\r\n
Connection: keep-alive\r\n
\r\n
[Full request URI: http://gaia.cs.umass.edu/favicon.ico]
[HTTP request 2/3]
[Prev request in frame: 176]
[Response in frame: 311]
[Next request in frame: 315]

-----No. Time Source

Destination Protocol Length Info
311 14.180595000 128.119.245.12 192.168.1.245 HTTP 552 HTTP/1.1 404 Not Found (text/html)

Frame 311: 552 bytes on wire (4416 bits), 552 bytes captured (4416 bits) on interface 0
Ethernet II, Src: Tp-LinkT_2c:bf:a3 (e8:94:f6:2c:bf:a3), Dst: b4:6d:83:64:24:b3 (b4:6d:83:64:24:b3)
Internet Protocol Version 4, Src: 128.119.245.12 (128.119.245.12), Dst: 192.168.1.245 (192.168.1.245)
Transmission Control Protocol, Src Port: http (80), Dst Port: 54352 (54352), Seq: 1103, Ack: 612, Len: 486
Hypertext Transfer Protocol
HTTP/1.1 404 Not Found\r\n
Date: Wed, 13 Apr 2016 21:05:09 GMT\r\n
Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.1e-fips PHP/5.4.16 mod_perl/2.0.9dev Perl/v5.16.3\r\n
Content-Length: 209\r\n
Keep-Alive: timeout=5, max=99\r\n
Connection: Keep-Alive\r\n
Content-Type: text/html; charset=iso-8859-1\r\n
\r\n
[HTTP response 2/3]
[Time since request: 0.121335000 seconds]
[Prev request in frame: 176]
[Prev response in frame: 178]
[Request in frame: 309]
[Next request in frame: 315]
[Next response in frame: 318]
Line-based text data: text/html

-----No. Time Source
Destination Protocol Length Info
315 14.181505000 192.168.1.245 128.119.245.12 HTTP 372 GET /favicon.ico HTTP/1.1
Frame 315: 372 bytes on wire (2976 bits), 372 bytes captured (2976 bits) on interface 0
Ethernet II, Src: b4:6d:83:64:24:b3 (b4:6d:83:64:24:b3), Dst: Tp-LinkT_2c:bf:a3 (e8:94:f6:2c:bf:a3)
Internet Protocol Version 4, Src: 192.168.1.245 (192.168.1.245), Dst: 128.119.245.12 (128.119.245.12)
Transmission Control Protocol, Src Port: 54352 (54352), Dst Port: http (80), Seq: 612, Ack: 1589, Len: 306
Hypertext Transfer Protocol
GET /favicon.ico HTTP/1.1\r\n
Host: gaia.cs.umass.edu\r\n
User-Agent: Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:45.0) Gecko/20100101 Firefox/45.0\r\n

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8\r\n
Accept-Language: en-US,en;q=0.5\r\n
Accept-Encoding: gzip, deflate\r\n
Connection: keep-alive\r\n
\r\n

[Full request URI: http://gaia.cs.umass.edu/favicon.ico]

[HTTP request 3/3]

[Prev request in frame: 309]

[Response in frame: 318]

-----No. Time Source

Destination Protocol Length Info

318 14.301840000 128.119.245.12 192.168.1.245 HTTP 552 HTTP/1.1 404 Not Found (text/html)

Frame 318: 552 bytes on wire (4416 bits), 552 bytes captured (4416 bits) on interface 0

Ethernet II, Src: Tp-LinkT_2c:bf:a3 (e8:94:f6:2c:bf:a3), Dst: b4:6d:83:64:24:b3 (b4:6d:83:64:24:b3)

Internet Protocol Version 4, Src: 128.119.245.12 (128.119.245.12), Dst: 192.168.1.245 (192.168.1.245)

Transmission Control Protocol, Src Port: http (80), Dst Port: 54352 (54352), Seq: 1589, Ack: 918, Len: 486

Hypertext Transfer Protocol

HTTP/1.1 404 Not Found\r\n

Date: Wed, 13 Apr 2016 21:05:10 GMT\r\n

Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.1e-fips PHP/5.4.16 mod_perl/2.0.9dev Perl/v5.16.3\r\n

Content-Length: 209\r\n

Keep-Alive: timeout=5, max=98\r\n

Connection: Keep-Alive\r\n

Content-Type: text/html; charset=iso-8859-1\r\n

\r\n

[HTTP response 3/3]

[Time since request: 0.120335000 seconds]

[Prev request in frame: 309]

[Prev response in frame: 311]

[Request in frame: 315]

Line-based text data: text/html

Контрольні запитання:

1. Яку версію протоколу HTTP використовує ваш браузер (1.0 чи 1.1)? Яку версію протоколу використовує сервер?
 - a. Обидва використовують версію 1.1
2. Які мови (якщо вказано) браузер може прийняти від сервера?
 - a. Американську англійську мову
 - b. Accept-Language: en-US,en;q=0.5\r\n
3. Які IP-адреси вашого комп'ютера та цільового веб-сервера?
 - a. Мого комп'ютера: 192.168.1.245
 - b. Веб-сервера: 128.119.245.12
4. Який статусний код сервер повернув у відповіді вашому браузеру?
 - a. 200
5. Коли на сервері в останній раз був модифікований файл, який запитується браузером?
 - a. Wed, 13 Apr 2016 05:59:02 GMT
6. Скільки байт контенту повертається сервером?
 - a. 128
7. Переглядаючи нерозібраний байтовий потік пакету, чи бачите ви деякі заголовки в потоці, які не відображаються у вікні деталей пакету? Якщо так, назвіть один з них.
 - a. Не помітив
8. Перевірте вміст першого запиту HTTP GET від вашого браузера до сервера. Чи є в ньому заголовок IF-MODIFIED-SINCE?
 - a. Ні, немає
9. Перевірте вміст першої відповіді сервера. Чи повернув сервер вміст файлу безпосередньо у відповіді?
 - a. Так

10. Перевірте вміст другого запиту HTTP GET. Чи є в ньому заголовок IF-MODIFIED-SINCE? Якщо так, яке значення йому відповідає?
 - a. Так, Wed, 13 Apr 2016 05:59:02 GMT\r\n
11. Який код та опис статусу другої відповіді сервера? Чи повернув сервер вміст файлу безпосередньо у відповіді?
 - a. 304 Not Modified, ні
12. Скільки повідомлень HTTP GET було відправлено вашим браузером?
 - a. Одне
13. Скільки пакетів TCP було необхідно для доставки одної відповіді HTTP-сервера?
 - a. 14
14. Який код та опис статусу був у відповіді сервера?
 - a. 200 OK
15. Чи зустрічаються у даних пакетів-продовжень протоколу TCP стрічки з кодом та описом статусу відповіді, або ж якісь заголовки протоколу HTTP?
 - a. Так, таким чином починається перший пакет протоколу TCP
16. Скільки запитів HTTP GET було відправлено вашим браузером? Якими були цільові IP-адреси запитів?
 - a. 6 запитів.
 - b. 128.119.245.12
 - c. 23.0.37.195
 - d. 128.119.240.90
 - e. 128.119.240.90
 - f. 128.119.245.12
 - g. 128.119.245.12
17. Чи можете ви встановити, чи були ресурси отримані паралельно чи послідовно? Яким чином?
 - a. Послідовно, за часом надходження відповідей та адресами.

Висновок: В ході виконання даної лабораторної роботи було покращено навички використання програми Wireshark для захоплення пакетів. Було проаналізовано протоколи HTTP та було проведено аналіз деталей роботи даних протоколів.