

**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**

**Практична робота №2
з курсу «Комп'ютерні мережі»**

**Виконала: студентка 3 курсу
групи КА-71
Оксюта І.М.
Прийняв: Кухарєв С.О.**

Київ – 2020 р.

lab2_request

No.	Time	Source	Destination	Protocol	Length	Info
307	12.768609	192.168.0.103	128.119.245.12	HTTP	432	GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1

Frame 307: 432 bytes on wire (3456 bits), 432 bytes captured (3456 bits) on interface 0

Ethernet II, Src: IntelCor_08:d0:13 (ac:2b:6e:08:d0:13), Dst: Tp-LinkT_5f:b5:0a (f4:f2:6d:5f:b5:0a)

Internet Protocol Version 4, Src: 192.168.0.103, Dst: 128.119.245.12

Transmission Control Protocol, Src Port: 62301, Dst Port: 80, Seq: 1, Ack: 1, Len: 378

Hypertext Transfer Protocol

GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1\r\n

[Expert Info (Chat/Sequence): GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1\r\n]

[GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1\r\n]

[Severity level: Chat]

[Group: Sequence]

Request Method: GET

Request URI: /wireshark-labs/HTTP-wireshark-file1.html

Request Version: HTTP/1.1

Host: gaia.cs.umass.edu\r\n

User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:65.0) Gecko/20100101 Firefox/65.0\r\n

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;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

Upgrade-Insecure-Requests: 1\r\n

\r\n

[Full request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html]

[HTTP request 1/2]

[Response in frame: 309]

[Next request in frame: 316]

lab2_answer

No.	Time	Source	Destination	Protocol	Length	Info
736	32.327488	128.119.245.12	192.168.0.103	HTTP	540	HTTP/1.1 200 OK (text/html)

Frame 736: 540 bytes on wire (4320 bits), 540 bytes captured (4320 bits) on interface 0

Ethernet II, Src: Tp-LinkT_5f:b5:0a (f4:f2:6d:5f:b5:0a), Dst: IntelCor_08:d0:13 (ac:2b:6e:08:d0:13)

Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.0.103

Transmission Control Protocol, Src Port: 80, Dst Port: 62592, Seq: 1, Ack: 379, Len: 486

Hypertext Transfer Protocol

HTTP/1.1 200 OK\r\n

Date: Fri, 01 May 2020 09:31:03 GMT \r\n

Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/5.4.16 mod_perl/2.0.10 Perl/v5.16.3\r\n

Last-Modified: Fri, 01 May 2020 09:31:03 GMT \r\n

ETag: "80-5833f4aa6df5b"\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 1/1]
[Time since request: 0.139833000 seconds]
[Request in frame: 732]
File Data: 128 bytes
Line-based text data: text/html (4 lines)
<html>\n
Congratulations. You've downloaded the file \n
http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file1.html!\n
</html>\n

Повторный запит lab2_re-request

No.	Time	Source	Destination	Protocol	Length	Info
458	8.238547	192.168.0.103	128.119.245.12	HTTP	543	GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1

Frame 458: 543 bytes on wire (4344 bits), 543 bytes captured (4344 bits) on interface 0
Ethernet II, Src: IntelCor_08:d0:13 (ac:2b:6e:08:d0:13), Dst: Tp-LinkT_5f:b5:0a (f4:f2:6d:5f:b5:0a)
Internet Protocol Version 4, Src: 192.168.0.103, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 62681, Dst Port: 80, Seq: 1, Ack: 1, Len: 489
Hypertext Transfer Protocol
GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1\r\n
[Expert Info (Chat/Sequence): GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1\r\n]
[GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1\r\n]
[Severity level: Chat]
[Group: Sequence]
Request Method: GET
Request URI: /wireshark-labs/HTTP-wireshark-file1.html
Request Version: HTTP/1.1
Host: gaia.cs.umass.edu\r\n
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:65.0) Gecko/20100101 Firefox/65.0\r\n
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;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
Upgrade-Insecure-Requests: 1\r\n
If-Modified-Since: Fri, 01 May 2020 09:31:03 GMT \r\n
If-None-Match: "80-5833f4aa6df5b"\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 1/2]
[Response in frame: 470]
[Next request in frame: 475]

lab2_re-answer

No.	Time	Source	Destination	Protocol	Length	Info
470	8.378362	128.119.245.12	192.168.0.103	HTTP	293	HTTP/1.1 304 Not Modified

Frame 470: 293 bytes on wire (2344 bits), 293 bytes captured (2344 bits) on interface 0
Ethernet II, Src: Tp-LinkT_5f:b5:0a (f4:f2:6d:5f:b5:0a), Dst: IntelCor_08:d0:13 (ac:2b:6e:08:d0:13)

Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.0.103
Transmission Control Protocol, Src Port: 80, Dst Port: 62681, Seq: 1, Ack: 490, Len: 239
Hypertext Transfer Protocol
HTTP/1.1 304 Not Modified\r\n
[Expert Info (Chat/Sequence): HTTP/1.1 304 Not Modified\r\n]
[HTTP/1.1 304 Not Modified\r\n]
[Severity level: Chat]
[Group: Sequence]
Response Version: HTTP/1.1
Status Code: 304
[Status Code Description: Not Modified]
Response Phrase: Not Modified
Date: Fri, 01 May 2020 09:31:03 GMT \r\n
Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/5.4.16 mod_perl/2.0.10 Perl/v5.16.3\r\n
Connection: Keep-Alive\r\n
Keep-Alive: timeout=5, max=100\r\n
ETag: "80-5833f4aa6df5b"\r\n
\r\n
[HTTP response 1/2]
[Time since request: 0.139815000 seconds]
[Request in frame: 458]
[Next request in frame: 475]
[Next response in frame: 496]

Контрольні запитання:

1. Яку версію протоколу HTTP використовує ваш браузер (1.0 чи 1.1)?

1.1 (GET /wireshark-labs/HTTP-wireshark-file1.html HTTP/1.1)

Яку версію протоколу використовує сервер?

1.1 (HTTP/1.1 200 OK (text/html))

2. Які мови (якщо вказано) браузер може прийняти від сервера?

Американська англійська (Accept-Language: en-US,en;q=0.5\r\n)

3. Які IP-адреси вашого комп'ютера та цільового веб-сервера?

192.168.0.103/128.119.245.12

4. Який статусний код сервер повернув у відповіді вашому браузеру?

200

5. Коли на сервері в останній раз був модифікований файл, який запитується браузером?

Last-Modified: Fri, 01 May 2020 09:31:03 GMT \r\n

6. Скільки байт контенту повертається сервером?

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.

-

8. Перевірте вміст першого запиту HTTP GET від вашого браузера до сервера. Чи є в ньому заголовок IF-MODIFIED-SINCE?

Ні

9. Перевірте вміст першої відповіді сервера. Чи повернув сервер вміст файлу безпосередньо у відповіді?

Так

10. Перевірте вміст другого запиту HTTP GET. Чи є в ньому заголовок IF-MODIFIEDSINCE? Якщо так, яке значення йому відповідає?

If-Modified-Since: Fri, 01 May 2020 09:31:03 GMT \r\n

11. Який код та опис статусу другої відповіді сервера? Чи повернув сервер вміст файлу безпосередньо у відповіді?

304 Not Modified, ні.

lab2_image_request

No.	Time	Source	Destination	Protocol	Length	Info
556	17.777756	192.168.0.104	193.109.246.67	HTTP	410	GET /foto/edin_inform.jpg HTTP/1.1

Frame 556: 410 bytes on wire (3280 bits), 410 bytes captured (3280 bits) on interface 0 Ethernet II, Src: IntelCor_08:d0:13 (ac:2b:6e:08:d0:13), Dst: Tp-LinkT_5f:b5:0a (f4:f2:6d:5f:b5:0a)

Internet Protocol Version 4, Src: 192.168.0.104, Dst: 193.109.246.67

Transmission Control Protocol, Src Port: 58541, Dst Port: 80, Seq: 1, Ack: 1, Len: 356

Hypertext Transfer Protocol

GET /foto/edin_inform.jpg HTTP/1.1\r\n

[Expert Info (Chat/Sequence): GET /foto/edin_inform.jpg HTTP/1.1\r\n]

[GET /foto/edin_inform.jpg HTTP/1.1\r\n]

[Severity level: Chat]

[Group: Sequence]

Request Method: GET

Request URI: /foto/edin_inform.jpg

Request Version: HTTP/1.1

Host: tinkova.ucoz.ru\r\n

User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:65.0) Gecko/20100101

Firefox/65.0\r\n

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;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

Upgrade-Insecure-Requests: 1\r\n

\r\n

[Full request URI: http://tinkova.ucoz.ru/foto/edin_inform.jpg]

[HTTP request 1/2]

[Response in frame: 990]

[Next request in frame: 992]

lab2_image_answer

No.	Time	Source	Destination	Protocol	Length	Info
990	18.833278	193.109.246.67	192.168.0.104	HTTP	1296	HTTP/1.1 200 OK (JPEG JFIF image)

Frame 990: 1296 bytes on wire (10368 bits), 1296 bytes captured (10368 bits) on interface 0

Ethernet II, Src: Tp-LinkT_5f:b5:0a (f4:f2:6d:5f:b5:0a), Dst: IntelCor_08:d0:13 (ac:2b:6e:08:d0:13)

Internet Protocol Version 4, Src: 193.109.246.67, Dst: 192.168.0.104

Transmission Control Protocol, Src Port: 80, Dst Port: 58541, Seq: 409140, Ack: 357, Len: 1242

[282 Reassembled TCP Segments (410381 bytes): #566(339), #567(1460), #569(1460), #578(1460), #579(1460), #581(1460), #582(1460), #583(1460), #586(1460), #589(1460), #590(1460), #593(1460), #594(1460), #596(1460), #597(1460), #598(1460), #59]

Hypertext Transfer Protocol

HTTP/1.1 200 OK\r\n

[Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]

[HTTP/1.1 200 OK\r\n]

[Severity level: Chat]

[Group: Sequence]

Response Version: HTTP/1.1

Status Code: 200

[Status Code Description: OK]

Response Phrase: OK

Server: nginx/1.8.0\r\n

Date: Fri, 01 May 2020 09:31:03 GMT \r\n

Content-Type: image/jpeg\r\n

Content-Length: 410042\r\n

Last-Modified: Fri, 01 May 2020 09:31:03 GMT \r\n

Connection: keep-alive\r\n

Keep-Alive: timeout=15\r\n

ETag: "50c88649-641ba"\r\n

Expires: Fri, 01 May 2020 09:31:03 GMT \r\n

Cache-Control: max-age=1728000\r\n

Accept-Ranges: bytes\r\n

\r\n

[HTTP response 1/2]

[Time since request: 1.055522000 seconds]

[Request in frame: 556]

[Next request in frame: 992]

[Next response in frame: 994]

File Data: 410042 bytes
JPEG File Interchange Format

12. Скільки повідомлень HTTP GET було відправлено вашим браузером?
Одне

13. Скільки пакетів TCP було необхідно для доставки одної відповіді HTTP-сервера?
282

14. Який код та опис статусу був у відповіді сервера?
200 OK

15. Чи зустрічаються у даних пакетів-продовжень протоколу TCP стрічки з кодом та описом статусу відповіді, або ж якісь заголовки протоколу HTTP?

Так, таким чином починається перший пакет протоколу TCP.

lab2_final

No.	Time	Source	Destination	Protocol	Length	Info
68	4.297022	192.168.0.104	128.119.245.12	HTTP	432	GET /wireshark-labs/HTTP-wireshark-file4.html HTTP/1.1

Frame 68: 432 bytes on wire (3456 bits), 432 bytes captured (3456 bits) on interface 0
Ethernet II, Src: IntelCor_08:d0:13 (ac:2b:6e:08:d0:13), Dst: Tp-LinkT_5f:b5:0a (f4:f2:6d:5f:b5:0a)

Internet Protocol Version 4, Src: 192.168.0.104, Dst: 128.119.245.12

Transmission Control Protocol, Src Port: 58952, Dst Port: 80, Seq: 1, Ack: 1, Len: 378

Hypertext Transfer Protocol

GET /wireshark-labs/HTTP-wireshark-file4.html HTTP/1.1\r\n

[Expert Info (Chat/Sequence): GET /wireshark-labs/HTTP-wireshark-file4.html HTTP/1.1\r\n]

[GET /wireshark-labs/HTTP-wireshark-file4.html HTTP/1.1\r\n]

[Severity level: Chat]

[Group: Sequence]

Request Method: GET

Request URI: /wireshark-labs/HTTP-wireshark-file4.html

Request Version: HTTP/1.1

Host: gaia.cs.umass.edu\r\n

User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:65.0) Gecko/20100101 Firefox/65.0\r\n

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;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
Upgrade-Insecure-Requests: 1\r\n
\r\n
[Full request URI: http://gaia.cs.umass.edu/wireshark-labs/HTTP-wireshark-file4.html]
[HTTP request 1/1]
[Response in frame: 72]

No.	Time	Source	Destination	Protocol	Length	Info
72	4.425545	128.119.245.12	192.168.0.104	HTTP	1127	HTTP/1.1 200 OK (text/html)

Frame 72: 1127 bytes on wire (9016 bits), 1127 bytes captured (9016 bits) on interface 0
Ethernet II, Src: Tp-LinkT_5f:b5:0a (f4:f2:6d:5f:b5:0a), Dst: IntelCor_08:d0:13 (ac:2b:6e:08:d0:13)

Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.0.104

Transmission Control Protocol, Src Port: 80, Dst Port: 58952, Seq: 1, Ack: 379, Len: 1073

Hypertext Transfer Protocol

HTTP/1.1 200 OK\r\n

[Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]

[HTTP/1.1 200 OK\r\n]

[Severity level: Chat]

[Group: Sequence]

Response Version: HTTP/1.1

Status Code: 200

[Status Code Description: OK]

Response Phrase: OK

Date: Fri, 01 May 2020 09:31:03 GMT\r\n

Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/5.4.16 mod_perl/2.0.10
Perl/v5.16.3\r\n

Last-Modified: Fri, 01 May 2020 09:31:03 GMT\r\n

ETag: "2ca-58353687e19a1"\r\n

Accept-Ranges: bytes\r\n

Content-Length: 714\r\n

[Content length: 714]

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 1/1]

[Time since request: 0.128523000 seconds]

[Request in frame: 68]

File Data: 714 bytes

Line-based text data: text/html (17 lines)

No.	Time	Source	Destination	Protocol	Length	Info
74	4.475107	192.168.0.104	128.119.245.12	HTTP	389	GET /pearson.png

HTTP/1.1

Frame 74: 389 bytes on wire (3112 bits), 389 bytes captured (3112 bits) on interface 0
Ethernet II, Src: IntelCor_08:d0:13 (ac:2b:6e:08:d0:13), Dst: Tp-LinkT_5f:b5:0a (f4:f2:6d:5f:b5:0a)
Internet Protocol Version 4, Src: 192.168.0.104, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 58953, Dst Port: 80, Seq: 1, Ack: 1, Len: 335
Hypertext Transfer Protocol
GET /pearson.png HTTP/1.1\r\n
[Expert Info (Chat/Sequence): GET /pearson.png HTTP/1.1\r\n]
[GET /pearson.png HTTP/1.1\r\n]
[Severity level: Chat]
[Group: Sequence]
Request Method: GET
Request URI: /pearson.png
Request Version: HTTP/1.1
Host: gaia.cs.umass.edu\r\n
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:65.0) Gecko/20100101
Firefox/65.0\r\n
Accept: image/webp,*/*\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://gaia.cs.umass.edu/pearson.png]
[HTTP request 1/2]
[Response in frame: 80]
[Next request in frame: 85]

No.	Time	Source	Destination	Protocol	Length	Info
80	4.606232	128.119.245.12	192.168.0.104	HTTP	746	HTTP/1.1 200 OK (PNG)

Frame 80: 746 bytes on wire (5968 bits), 746 bytes captured (5968 bits) on interface 0
Ethernet II, Src: Tp-LinkT_5f:b5:0a (f4:f2:6d:5f:b5:0a), Dst: IntelCor_08:d0:13 (ac:2b:6e:08:d0:13)
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.0.104
Transmission Control Protocol, Src Port: 80, Dst Port: 58953, Seq: 2921, Ack: 336, Len: 692
[3 Reassembled TCP Segments (3612 bytes): #77(1460), #78(1460), #80(692)]
Hypertext Transfer Protocol
HTTP/1.1 200 OK\r\n
[Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]
[HTTP/1.1 200 OK\r\n]
[Severity level: Chat]
[Group: Sequence]

Response Version: HTTP/1.1
Status Code: 200
[Status Code Description: OK]
Response Phrase: OK
Date: Fri, 01 May 2020 09:31:03 GMT\r\n
Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/5.4.16 mod_perl/2.0.10
Perl/v5.16.3\r\n
Last-Modified: Sat, 06 Aug 2016 10:08:14 GMT\r\n
ETag: "cc3-539645c7f1ee7"\r\n
Accept-Ranges: bytes\r\n
Content-Length: 3267\r\n
[Content length: 3267]
Keep-Alive: timeout=5, max=100\r\n
Connection: Keep-Alive\r\n
Content-Type: image/png\r\n
\r\n
[HTTP response 1/2]
[Time since request: 0.131125000 seconds]
[Request in frame: 74]
[Next request in frame: 85]
[Next response in frame: 102]
File Data: 3267 bytes
Portable Network Graphics

No.	Time	Source	Destination	Protocol	Length	Info
83	4.638675	192.168.0.104	128.119.245.12	HTTP	403	GET /~kurose/cover_5th_ed.jpg HTTP/1.1

Frame 83: 403 bytes on wire (3224 bits), 403 bytes captured (3224 bits) on interface 0
Ethernet II, Src: IntelCor_08:d0:13 (ac:2b:6e:08:d0:13), Dst: Tp-LinkT_5f:b5:0a (f4:f2:6d:5f:b5:0a)
Internet Protocol Version 4, Src: 192.168.0.104, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 58954, Dst Port: 80, Seq: 1, Ack: 1, Len: 349
Hypertext Transfer Protocol
GET /~kurose/cover_5th_ed.jpg HTTP/1.1\r\n
[Expert Info (Chat/Sequence): GET /~kurose/cover_5th_ed.jpg HTTP/1.1\r\n]
[GET /~kurose/cover_5th_ed.jpg HTTP/1.1\r\n]
[Severity level: Chat]
[Group: Sequence]
Request Method: GET
Request URI: /~kurose/cover_5th_ed.jpg
Request Version: HTTP/1.1
Host: manic.cs.umass.edu\r\n
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:65.0) Gecko/20100101
Firefox/65.0\r\n
Accept: image/webp,*/*\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: 192]

No.	Time	Source	Destination	Protocol	Length	Info
85	4.717650	192.168.0.104	128.119.245.12	HTTP	373	GET /favicon.ico HTTP/1.1

Frame 85: 373 bytes on wire (2984 bits), 373 bytes captured (2984 bits) on interface 0
Ethernet II, Src: IntelCor_08:d0:13 (ac:2b:6e:08:d0:13), Dst: Tp-LinkT_5f:b5:0a (f4:f2:6d:5f:b5:0a)
Internet Protocol Version 4, Src: 192.168.0.104, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 58953, Dst Port: 80, Seq: 336, Ack: 3613, Len: 319
Hypertext Transfer Protocol
GET /favicon.ico HTTP/1.1\r\n
[Expert Info (Chat/Sequence): GET /favicon.ico HTTP/1.1\r\n]
[GET /favicon.ico HTTP/1.1\r\n]
[Severity level: Chat]
[Group: Sequence]
Request Method: GET
Request URI: /favicon.ico
Request Version: HTTP/1.1
Host: gaia.cs.umass.edu\r\n
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:65.0) Gecko/20100101
Firefox/65.0\r\n
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,*/*;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 2/2]
[Prev request in frame: 74]
[Response in frame: 102]

No.	Time	Source	Destination	Protocol	Length	Info
102	4.845707	128.119.245.12	192.168.0.104	HTTP	538	HTTP/1.1 404 Not Found (text/html)

Frame 102: 538 bytes on wire (4304 bits), 538 bytes captured (4304 bits) on interface 0
Ethernet II, Src: Tp-LinkT_5f:b5:0a (f4:f2:6d:5f:b5:0a), Dst: IntelCor_08:d0:13

(ac:2b:6e:08:d0:13)

Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.0.104

Transmission Control Protocol, Src Port: 80, Dst Port: 58953, Seq: 3613, Ack: 655, Len: 484

Hypertext Transfer Protocol

HTTP/1.1 404 Not Found\r\n

[Expert Info (Chat/Sequence): HTTP/1.1 404 Not Found\r\n]

[HTTP/1.1 404 Not Found\r\n]

[Severity level: Chat]

[Group: Sequence]

Response Version: HTTP/1.1

Status Code: 404

[Status Code Description: Not Found]

Response Phrase: Not Found

Date: Fri, 01 May 2020 09:31:03 GMT\r\n

Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/5.4.16 mod_perl/2.0.10

Perl/v5.16.3\r\n

Content-Length: 209\r\n

[Content length: 209]

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 2/2]

[Time since request: 0.128057000 seconds]

[Prev request in frame: 74]

[Prev response in frame: 80]

[Request in frame: 85]

File Data: 209 bytes

Line-based text data: text/html (7 lines)

No.	Time	Source	Destination	Protocol	Length	Info
192	5.108179	128.119.245.12	192.168.0.104	HTTP	632	HTTP/1.1 200 OK (JPEG JFIF image)

Frame 192: 632 bytes on wire (5056 bits), 632 bytes captured (5056 bits) on interface 0

Ethernet II, Src: Tp-LinkT_5f:b5:0a (f4:f2:6d:5f:b5:0a), Dst: IntelCor_08:d0:13 (ac:2b:6e:08:d0:13)

Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.0.104

Transmission Control Protocol, Src Port: 80, Dst Port: 58954, Seq: 100741, Ack: 350, Len: 578

[70 Reassembled TCP Segments (101318 bytes): #87(1460), #88(1460), #90(1460), #91(1460), #93(1460), #94(1460), #96(1460), #97(1460), #99(1460), #100(1460), #104(1460), #105(1460), #107(1460), #108(1460), #110(1460), #111(1460), #113(1460),]

Hypertext Transfer Protocol

HTTP/1.1 200 OK\r\n

[Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]

[HTTP/1.1 200 OK\r\n]

[Severity level: Chat]
[Group: Sequence]
Response Version: HTTP/1.1
Status Code: 200
[Status Code Description: OK]
Response Phrase: OK
Date: Fri, 01 May 2020 09:31:03 GMT \r\n
Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/5.4.16 mod_perl/2.0.10
Perl/v5.16.3\r\n
Last-Modified: Tue, 15 Sep 2009 18:23:27 GMT\r\n
ETag: "18a68-473a1e0e6e5c0"\r\n
Accept-Ranges: bytes\r\n
Content-Length: 100968\r\n
[Content length: 100968]
Keep-Alive: timeout=5, max=100\r\n
Connection: Keep-Alive\r\n
Content-Type: image/jpeg\r\n
\r\n
[HTTP response 1/1]
[Time since request: 0.469504000 seconds]
[Request in frame: 83]
File Data: 100968 bytes
JPEG File Interchange Format

**16. Скільки запитів HTTP GET було відправлено вашим браузером?
Якими були цільові IP-адреси запитів?**

4 запити

128.119.245.12

128.119.245.12

128.119.245.12

128.119.245.12

17. Чи можете ви встановити, чи були ресурси отримані паралельно чи послідовно? Яким чином?

Послідовно, за часом надходження відповідей та адресами.