

No. Time Source Destination Protocol Length Info
1.1 937 22.392135 192.168.1.78 128.119.245.12 HTTP 577 GET /wireshark-labs/INTRO-wireshark-file1.html HTTP/
Frame 937: 577 bytes on wire (4616 bits), 577 bytes captured (4616 bits) on interface
\\Device\\NPF_{DEB8B340-4738-4145-9CE0-725F4B8136F6}, id 0
Section number: 1
Interface id: 0 (\\Device\\NPF_{DEB8B340-4738-4145-9CE0-725F4B8136F6})
Interface name: \\Device\\NPF_{DEB8B340-4738-4145-9CE0-725F4B8136F6}
Interface description: Ethernet
Encapsulation type: Ethernet (1)
Arrival Time: Sep 30, 2025 16:34:42.560126000 Mountain Daylight Time
UTC Arrival Time: Sep 30, 2025 22:34:42.560126000 UTC
Epoch Arrival Time: 1759271682.560126000
[Time shift for this packet: 0.000000000 seconds]
[Time delta from previous captured frame: 0.000258000 seconds]
[Time delta from previous displayed frame: 0.000000000 seconds]
[Time since reference or first frame: 22.392135000 seconds]
Frame Number: 937
Frame Length: 577 bytes (4616 bits)
Capture Length: 577 bytes (4616 bits)
[Frame is marked: False]
[Frame is ignored: False]
[Protocols in frame: eth:ethertype:ip:tcp:http]
[Coloring Rule Name: HTTP]
[Coloring Rule String: http || tcp.port == 80 || http2]
Ethernet II, Src: Gold&WaterIn_07:91:f5 (70:70:fc:07:91:f5), Dst: Arcadyan_7f:61:30 (a8:a2:37:7f:61:30)
Destination: Arcadyan_7f:61:30 (a8:a2:37:7f:61:30)
.... 0. = LG bit: Globally unique address (factory default)
.... 0. = IG bit: Individual address (unicast)
Source: Gold&WaterIn_07:91:f5 (70:70:fc:07:91:f5)
.... 0. = LG bit: Globally unique address (factory default)
.... 0. = IG bit: Individual address (unicast)
Type: IPv4 (0x0800)
[Stream index: 2]
Internet Protocol Version 4, Src: 192.168.1.78, Dst: 128.119.245.12
0100 = Version: 4
.... 0101 = Header Length: 20 bytes (5)
Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)
0000 00.. = Differentiated Services Codepoint: Default (0)
.... ..00 = Explicit Congestion Notification: Not ECN-Capable Transport (0)
Total Length: 563
Identification: 0x4839 (18489)
010. = Flags: 0x2, Don't fragment
0... = Reserved bit: Not set
.1. = Don't fragment: Set
..0. = More fragments: Not set
...0 0000 0000 0000 = Fragment Offset: 0
Time to Live: 128
Protocol: TCP (6)
Header Checksum: 0x0000 [validation disabled]
[Header checksum status: Unverified]
Source Address: 192.168.1.78
Destination Address: 128.119.245.12
[Stream index: 32]
Transmission Control Protocol, Src Port: 57423, Dst Port: 80, Seq: 1, Ack: 1, Len: 523
Source Port: 57423
Destination Port: 80
[Stream index: 35]
[Stream Packet Number: 4]
[Conversation completeness: Complete, WITH_DATA (63)]
..1. = RST: Present
...1 = FIN: Present
.... 1... = Data: Present
.... .1.. = ACK: Present
.... ..1. = SYN-ACK: Present
.... ...1 = SYN: Present
[Completeness Flags: RFDASS]
[TCP Segment Len: 523]
Sequence Number: 1 (relative sequence number)
Sequence Number (raw): 2351174818
[Next Sequence Number: 524 (relative sequence number)]
Acknowledgment Number: 1 (relative ack number)
Acknowledgment number (raw): 1663662137
0101 = Header Length: 20 bytes (5)
Flags: 0x018 (PSH, ACK)
000. = Reserved: Not set
...0 = Accurate ECN: Not set
.... 0... = Congestion Window Reduced: Not set
.... .0.. = ECN-Echo: Not set
.... ..0. = Urgent: Not set

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.... 1... = Acknowledgment: Set
.... 1... = Push: Set
.... 0... = Reset: Not set
.... 0... = Syn: Not set
.... 0... = Fin: Not set
[TCP Flags: .....AP...]
Window: 255
[Calculated window size: 65280]
[Window size scaling factor: 256]
Checksum: 0x39a0 [unverified]
[Checksum Status: Unverified]
Urgent Pointer: 0
[Timestamps]
[Time since first frame in this TCP stream: 0.071207000 seconds]
[Time since previous frame in this TCP stream: 0.000258000 seconds]
[SEQ/ACK analysis]
[iRTT: 0.070949000 seconds]
[Bytes in flight: 523]
[Bytes sent since last PSH flag: 523]
TCP payload (523 bytes)
Hypertext Transfer Protocol
GET /wireshark-labs/INTRO-wireshark-file1.html HTTP/1.1\r\n
Request Method: GET
Request URI: /wireshark-labs/INTRO-wireshark-file1.html
Request Version: HTTP/1.1
Host: gaia.cs.umass.edu\r\n
Connection: keep-alive\r\n
Upgrade-Insecure-Requests: 1\r\n
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/138.0.0.0 Safari/537.36 OPR/
122.0.0.0\r\n
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-
exchange;v=b3;q=0.7\r\n
Accept-Encoding: gzip, deflate\r\n
Accept-Language: en-US,en;q=0.9,ja;q=0.8,fr;q=0.7,pl;q=0.6,ko;q=0.5\r\n
\r\n
[Response in frame: 945]
[Full request URI: http://gaia.cs.umass.edu/wireshark-labs/INTRO-wireshark-file1.html]
No.      Time      Source      Destination      Protocol Length Info
 945 22.463893 128.119.245.12 192.168.1.78 HTTP 492 HTTP/1.1 200 OK (text/html)
Frame 945: 492 bytes on wire (3936 bits), 492 bytes captured (3936 bits) on interface
\Device\NPF_{DEB8B340-4738-4145-9CE0-725F4B8136F6}, id 0
Section number: 1
Interface id: 0 (\Device\NPF_{DEB8B340-4738-4145-9CE0-725F4B8136F6})
Interface name: \Device\NPF_{DEB8B340-4738-4145-9CE0-725F4B8136F6}
Interface description: Ethernet
Encapsulation type: Ethernet (1)
Arrival Time: Sep 30, 2025 16:34:42.631884000 Mountain Daylight Time
UTC Arrival Time: Sep 30, 2025 22:34:42.631884000 UTC
Epoch Arrival Time: 1759271682.631884000
[Time shift for this packet: 0.000000000 seconds]
[Time delta from previous captured frame: 0.000221000 seconds]
[Time delta from previous displayed frame: 0.071758000 seconds]
[Time since reference or first frame: 22.463893000 seconds]
Frame Number: 945
Frame Length: 492 bytes (3936 bits)
Capture Length: 492 bytes (3936 bits)
[Frame is marked: False]
[Frame is ignored: False]
[Protocols in frame: eth:ethertype:ip:tcp:http:data-text-lines]
[Coloring Rule Name: HTTP]
[Coloring Rule String: http || tcp.port == 80 || http2]
Ethernet II, Src: Arcadyan_7f:61:30 (a8:a2:37:7f:61:30), Dst: Gold&WaterIn_07:91:f5 (70:70:fc:07:91:f5)
Destination: Gold&WaterIn_07:91:f5 (70:70:fc:07:91:f5)
.... 0... = LG bit: Globally unique address (factory default)
.... 0... = IG bit: Individual address (unicast)
Source: Arcadyan_7f:61:30 (a8:a2:37:7f:61:30)
.... 0... = LG bit: Globally unique address (factory default)
.... 0... = IG bit: Individual address (unicast)
Type: IPv4 (0x0800)
[Stream index: 2]
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.1.78
0100 .... = Version: 4
.... 0101 = Header Length: 20 bytes (5)
Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)
0000 00.. = Differentiated Services Codepoint: Default (0)
.... 0000 = Explicit Congestion Notification: Not ECN-Capable Transport (0)
Total Length: 478
Identification: 0x3f46 (16198)
010. .... = Flags: 0x2, Don't fragment
0... .... = Reserved bit: Not set
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.1.. .... = Don't fragment: Set
..0. .... = More fragments: Not set
...0 0000 0000 0000 = Fragment Offset: 0
Time to Live: 46
Protocol: TCP (6)
Header Checksum: 0xd459 [validation disabled]
[Header checksum status: Unverified]
Source Address: 128.119.245.12
Destination Address: 192.168.1.78
[Stream index: 32]
Transmission Control Protocol, Src Port: 80, Dst Port: 57423, Seq: 1, Ack: 524, Len: 438
Source Port: 80
Destination Port: 57423
[Stream index: 35]
[Stream Packet Number: 6]
[Conversation completeness: Complete, WITH_DATA (63)]
..1. .... = RST: Present
...1 .... = FIN: Present
.... 1... = Data: Present
.... .1.. = ACK: Present
.... ..1. = SYN-ACK: Present
.... ...1 = SYN: Present
[Completeness Flags: RFDASS]
[TCP Segment Len: 438]
Sequence Number: 1 (relative sequence number)
Sequence Number (raw): 1663662137
[Next Sequence Number: 439 (relative sequence number)]
Acknowledgment Number: 524 (relative ack number)
Acknowledgment number (raw): 2351175341
0101 .... = Header Length: 20 bytes (5)
Flags: 0x018 (PSH, ACK)
000. .... = Reserved: Not set
...0 .... = Accurate ECN: Not set
.... 0... = Congestion Window Reduced: Not set
.... .0.. = ECN-Echo: Not set
.... ..0. = Urgent: Not set
.... ...1 = Acknowledgment: Set
.... .... 1... = Push: Set
.... .... .0.. = Reset: Not set
.... .... ..0. = Syn: Not set
.... .... ...0 = Fin: Not set
[TCP Flags: .....AP...]
Window: 237
[Calculated window size: 30336]
[Window size scaling factor: 128]
Checksum: 0x54c3 [unverified]
[Checksum Status: Unverified]
Urgent Pointer: 0
[Timestamps]
[Time since first frame in this TCP stream: 0.142965000 seconds]
[Time since previous frame in this TCP stream: 0.000221000 seconds]
[SEQ/ACK analysis]
[iRTT: 0.070949000 seconds]
[Bytes in flight: 438]
[Bytes sent since last PSH flag: 438]
TCP payload (438 bytes)
Hypertext Transfer Protocol
HTTP/1.1 200 OK\r\n
Response Version: HTTP/1.1
Status Code: 200
[Status Code Description: OK]
Response Phrase: OK
Date: Tue, 30 Sep 2025 22:34:41 GMT\r\n
Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/7.4.33 mod_perl/2.0.11 Perl/v5.16.3\r\n
Last-Modified: Tue, 30 Sep 2025 05:59:01 GMT\r\n
ETag: "51-63ffe72e099e4"\r\n
Accept-Ranges: bytes\r\n
Content-Length: 81\r\n
[Content length: 81]
Keep-Alive: timeout=5, max=100\r\n
Connection: Keep-Alive\r\n
Content-Type: text/html; charset=UTF-8\r\n
\r\n
[Request in frame: 937]
[Time since request: 0.071758000 seconds]
[Request URI: /wireshark-labs/INTRO-wireshark-file1.html]
[Full request URI: http://gaia.cs.umass.edu/wireshark-labs/INTRO-wireshark-file1.html]
File Data: 81 bytes
Line-based text data: text/html (3 lines)
<html>\n
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Congratulations! You've downloaded the first Wireshark lab file!\n</html>\n

No.	Time	Source	Destination	Protocol	Length	Info
965	22.915686	192.168.1.78	128.119.245.12	HTTP	523	GET /favicon.ico HTTP/1.1

Frame 965: 523 bytes on wire (4184 bits), 523 bytes captured (4184 bits) on interface \\Device\\NPF_{DEB8B340-4738-4145-9CE0-725F4B8136F6}, id 0

Section number: 1

Interface id: 0 (\\Device\\NPF_{DEB8B340-4738-4145-9CE0-725F4B8136F6})

Interface name: \\Device\\NPF_{DEB8B340-4738-4145-9CE0-725F4B8136F6}

Interface description: Ethernet

Encapsulation type: Ethernet (1)

Arrival Time: Sep 30, 2025 16:34:43.083677000 Mountain Daylight Time

UTC Arrival Time: Sep 30, 2025 22:34:43.083677000 UTC

Epoch Arrival Time: 1759271683.083677000

[Time shift for this packet: 0.000000000 seconds]

[Time delta from previous captured frame: 0.103992000 seconds]

[Time delta from previous displayed frame: 0.451793000 seconds]

[Time since reference or first frame: 22.915686000 seconds]

Frame Number: 965

Frame Length: 523 bytes (4184 bits)

Capture Length: 523 bytes (4184 bits)

[Frame is marked: False]

[Frame is ignored: False]

[Protocols in frame: eth:ethertype:ip:tcp:http]

[Coloring Rule Name: HTTP]

[Coloring Rule String: http || tcp.port == 80 || http2]

Ethernet II, Src: Gold&WaterIn_07:91:f5 (70:70:fc:07:91:f5), Dst: Arcadyan_7f:61:30 (a8:a2:37:7f:61:30)

Destination: Arcadyan_7f:61:30 (a8:a2:37:7f:61:30)

.... ..0. = LG bit: Globally unique address (factory default)

.... ...0 = IG bit: Individual address (unicast)

Source: Gold&WaterIn_07:91:f5 (70:70:fc:07:91:f5)

.... ..0. = LG bit: Globally unique address (factory default)

.... ...0 = IG bit: Individual address (unicast)

Type: IPv4 (0x0800)

[Stream index: 2]

Internet Protocol Version 4, Src: 192.168.1.78, Dst: 128.119.245.12

0100 = Version: 4

.... 0101 = Header Length: 20 bytes (5)

Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)

0000 00.. = Differentiated Services Codepoint: Default (0)

.... ..00 = Explicit Congestion Notification: Not ECN-Capable Transport (0)

Total Length: 509

Identification: 0x483b (18491)

010. = Flags: 0x2, Don't fragment

0... = Reserved bit: Not set

.1.. = Don't fragment: Set

..0. = More fragments: Not set

...0 0000 0000 0000 = Fragment Offset: 0

Time to Live: 128

Protocol: TCP (6)

Header Checksum: 0x0000 [validation disabled]

[Header checksum status: Unverified]

Source Address: 192.168.1.78

Destination Address: 128.119.245.12

[Stream index: 32]

Transmission Control Protocol, Src Port: 57423, Dst Port: 80, Seq: 524, Ack: 439, Len: 469

Source Port: 57423

Destination Port: 80

[Stream index: 35]

[Stream Packet Number: 8]

[Conversation completeness: Complete, WITH_DATA (63)]

..1. = RST: Present

...1 = FIN: Present

.... 1... = Data: Present

.... .1.. = ACK: Present

.... ..1. = SYN-ACK: Present

.... ...1 = SYN: Present

[Completeness Flags: RFDASS]

[TCP Segment Len: 469]

Sequence Number: 524 (relative sequence number)

Sequence Number (raw): 2351175341

[Next Sequence Number: 993 (relative sequence number)]

Acknowledgment Number: 439 (relative ack number)

Acknowledgment number (raw): 1663662575

0101 = Header Length: 20 bytes (5)

Flags: 0x018 (PSH, ACK)

000. = Reserved: Not set

...0 = Accurate ECN: Not set

.... 0... = Congestion Window Reduced: Not set

.... .0.. = ECN-Echo: Not set

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.... ..0. .... = Urgent: Not set
.... ....1 .... = Acknowledgment: Set
.... .... 1... = Push: Set
.... .... .0.. = Reset: Not set
.... .... ..0. = Syn: Not set
.... .... ...0 = Fin: Not set
[TCP Flags: .....AP...]
Window: 254
[Calculated window size: 65024]
[Window size scaling factor: 256]
Checksum: 0x396a [unverified]
[Checksum Status: Unverified]
Urgent Pointer: 0
[Timestamps]
[Time since first frame in this TCP stream: 0.594758000 seconds]
[Time since previous frame in this TCP stream: 0.401484000 seconds]
[SEQ/ACK analysis]
[iRTT: 0.070949000 seconds]
[Bytes in flight: 469]
[Bytes sent since last PSH flag: 469]
TCP payload (469 bytes)
Hypertext Transfer Protocol
GET /favicon.ico HTTP/1.1\r\n
Request Method: GET
Request URI: /favicon.ico
Request Version: HTTP/1.1
Host: gaia.cs.umass.edu\r\n
Connection: keep-alive\r\n
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/138.0.0.0 Safari/537.36 OPR/
122.0.0.0\r\n
Accept: image/avif,image/webp,image/apng,image/svg+xml,image/*,*/*;q=0.8\r\n
Referer: http://gaia.cs.umass.edu/wireshark-labs/INTRO-wireshark-file1.html\r\n
Accept-Encoding: gzip, deflate\r\n
Accept-Language: en-US,en;q=0.9,ja;q=0.8,fr;q=0.7,pl;q=0.6,ko;q=0.5\r\n
\r\n
[Response in frame: 966]
[Full request URI: http://gaia.cs.umass.edu/favicon.ico]
No.      Time      Source      Destination      Protocol Length Info
 966 22.987610 128.119.245.12 192.168.1.78 HTTP 538 HTTP/1.1 404 Not Found (text/html)
Frame 966: 538 bytes on wire (4304 bits), 538 bytes captured (4304 bits) on interface
\Device\NPF_{DEB8B340-4738-4145-9CE0-725F4B8136F6}, id 0
Section number: 1
Interface id: 0 (\Device\NPF_{DEB8B340-4738-4145-9CE0-725F4B8136F6})
Interface name: \Device\NPF_{DEB8B340-4738-4145-9CE0-725F4B8136F6}
Interface description: Ethernet
Encapsulation type: Ethernet (1)
Arrival Time: Sep 30, 2025 16:34:43.155601000 Mountain Daylight Time
UTC Arrival Time: Sep 30, 2025 22:34:43.155601000 UTC
Epoch Arrival Time: 1759271683.155601000
[Time shift for this packet: 0.000000000 seconds]
[Time delta from previous captured frame: 0.071924000 seconds]
[Time delta from previous displayed frame: 0.071924000 seconds]
[Time since reference or first frame: 22.987610000 seconds]
Frame Number: 966
Frame Length: 538 bytes (4304 bits)
Capture Length: 538 bytes (4304 bits)
[Frame is marked: False]
[Frame is ignored: False]
[Protocols in frame: eth:ethertype:ip:tcp:http:data-text-lines]
[Coloring Rule Name: HTTP]
[Coloring Rule String: http || tcp.port == 80 || http2]
Ethernet II, Src: Arcadyan_7f:61:30 (a8:a2:37:7f:61:30), Dst: Gold&WaterIn_07:91:f5 (70:70:fc:07:91:f5)
Destination: Gold&WaterIn_07:91:f5 (70:70:fc:07:91:f5)
.... ..0. .... = LG bit: Globally unique address (factory default)
.... ...0 .... = IG bit: Individual address (unicast)
Source: Arcadyan_7f:61:30 (a8:a2:37:7f:61:30)
.... ..0. .... = LG bit: Globally unique address (factory default)
.... ...0 .... = IG bit: Individual address (unicast)
Type: IPv4 (0x0800)
[Stream index: 2]
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.1.78
0100 .... = Version: 4
.... 0101 = Header Length: 20 bytes (5)
Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)
0000 00.. = Differentiated Services Codepoint: Default (0)
.... ..00 = Explicit Congestion Notification: Not ECN-Capable Transport (0)
Total Length: 524
Identification: 0x3f47 (16199)
010. .... = Flags: 0x2, Don't fragment
0... .... = Reserved bit: Not set
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.1.. .... = Don't fragment: Set
..0. .... = More fragments: Not set
...0 0000 0000 0000 = Fragment Offset: 0
Time to Live: 46
Protocol: TCP (6)
Header Checksum: 0xd42a [validation disabled]
[Header checksum status: Unverified]
Source Address: 128.119.245.12
Destination Address: 192.168.1.78
[Stream index: 32]
Transmission Control Protocol, Src Port: 80, Dst Port: 57423, Seq: 439, Ack: 993, Len: 484
Source Port: 80
Destination Port: 57423
[Stream index: 35]
[Stream Packet Number: 9]
[Conversation completeness: Complete, WITH_DATA (63)]
..1. .... = RST: Present
...1 .... = FIN: Present
.... 1... = Data: Present
.... .1.. = ACK: Present
.... ..1. = SYN-ACK: Present
.... ...1 = SYN: Present
[Completeness Flags: RFDASS]
[TCP Segment Len: 484]
Sequence Number: 439      (relative sequence number)
Sequence Number (raw): 1663662575
[Next Sequence Number: 923      (relative sequence number)]
Acknowledgment Number: 993      (relative ack number)
Acknowledgment number (raw): 2351175810
0101 .... = Header Length: 20 bytes (5)
Flags: 0x018 (PSH, ACK)
000. .... .... = Reserved: Not set
...0 .... .... = Accurate ECN: Not set
.... 0... .... = Congestion Window Reduced: Not set
.... .0.. .... = ECN-Echo: Not set
.... ..0. .... = Urgent: Not set
.... ...1 .... = Acknowledgment: Set
.... .... 1... = Push: Set
.... .... .0.. = Reset: Not set
.... .... ..0. = Syn: Not set
.... .... ...0 = Fin: Not set
[TCP Flags: .....AP...]
Window: 245
[Calculated window size: 31360]
[Window size scaling factor: 128]
Checksum: 0xa668 [unverified]
[Checksum Status: Unverified]
Urgent Pointer: 0
[Timestamps]
[Time since first frame in this TCP stream: 0.666682000 seconds]
[Time since previous frame in this TCP stream: 0.071924000 seconds]
[SEQ/ACK analysis]
[This is an ACK to the segment in frame: 965]
[The RTT to ACK the segment was: 0.071924000 seconds]
[iRTT: 0.070949000 seconds]
[Bytes in flight: 484]
[Bytes sent since last PSH flag: 484]
TCP payload (484 bytes)
Hypertext Transfer Protocol
HTTP/1.1 404 Not Found\r\n
Response Version: HTTP/1.1
Status Code: 404
[Status Code Description: Not Found]
Response Phrase: Not Found
Date: Tue, 30 Sep 2025 22:34:41 GMT\r\n
Server: Apache/2.4.6 (CentOS) OpenSSL/1.0.2k-fips PHP/7.4.33 mod_perl/2.0.11 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
[Request in frame: 965]
[Time since request: 0.071924000 seconds]
[Request URI: /favicon.ico]
[Full request URI: http://gaia.cs.umass.edu/favicon.ico]
File Data: 209 bytes
Line-based text data: text/html (7 lines)
<!DOCTYPE HTML PUBLIC "-//IETF//DTD HTML 2.0//EN">\n
<html><head>\n
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<title>404 Not Found</title>\n</head><body>\n<h1>Not Found</h1>\n<p>The requested URL /favicon.ico was not found on this server.</p>\n</body></html>\n
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