

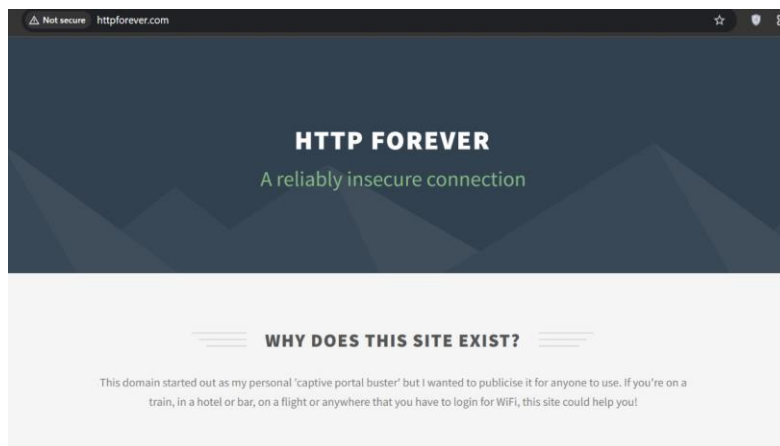


Computer Networks Assignment

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Class/Section	Bs (Ai Blue)
Instructor	Dr. Adnan
Subject	Computer Networks
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Assignment No 01

1. What is the name of website?



615	14.000007	192.168.149.92	146.190.62.39	HTTP	530 GET / HTTP/1.1
765	15.293573	146.190.62.39	192.168.149.92	HTTP	1454 HTTP/1.1 200 OK [
766	15.293573	146.190.62.39	192.168.149.92	HTTP	1410 Continuation
779	15.322940	192.168.149.92	146.190.62.39	HTTP	382 GET /js/init.min.
885	16.934187	146.190.62.39	192.168.149.92	HTTP	1410 [TCP Spurious Ret
983	18.332317	146.190.62.39	192.168.149.92	HTTP	1454 HTTP/1.1 200 OK
984	18.332317	146.190.62.39	192.168.149.92	HTTP	500 Continuation
1256	22.349949	192.168.149.92	146.190.62.39	HTTP	400 GET /css/style.mi
1257	22.350070	192.168.149.92	146.190.62.39	HTTP	405 GET /css/style-wi
1269	23.387255	146.190.62.39	192.168.149.92	HTTP	1454 HTTP/1.1 200 OK
1270	23.387255	146.190.62.39	192.168.149.92	HTTP	1454 Continuation
1271	23.387255	146.190.62.39	192.168.149.92	HTTP	1454 Continuation
1272	23.387255	146.190.62.39	192.168.149.92	HTTP	1454 Continuation
1273	23.387255	146.190.62.39	192.168.149.92	HTTP	1454 Continuation
1274	23.387255	146.190.62.39	192.168.149.92	HTTP	1454 Continuation
1275	23.387255	146.190.62.39	192.168.149.92	HTTP	1454 Continuation

Internet Protocol Version 4, Src: 192.168.149.92, Dst: 146.190.62.39				0030	00
Transmission Control Protocol				0040	20
Hypertext Transfer Protocol				0050	60
GET / HTTP/1.1\r\n				0060	60
Host: httpforever.com\r\n				0070	60
Connection: keep-alive\r\n				0080	60
Upgrade-Insecure-Requests: 1\r\n				0090	30
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML,				00a0	60
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/we				00b0	60
Referer: https://www.google.com/\r\n				00c0	30
Accept-Encoding: gzip, deflate\r\n				00d0	60
Accept-Language: en-GB,en-US;q=0.9,en;q=0.8\r\n				00e0	40
\r\n				00f0	40
[Response in frame: 765]				0100	20
[Full request URI: http://httpforever.com/]				0110	40
				0120	60
				0130	70
				0140	60

This packet will be responded in the packet with this number (http.response_in)

2. Find the packet that contains the first GET request for the website you have accessed.

615	14.000007	192.168.149.92	146.190.62.39	HTTP	530 GET / HTTP/1.1
765	15.293573	146.190.62.39	192.168.149.92	HTTP	1454 HTTP/1.1 200 OK [
766	15.293573	146.190.62.39	192.168.149.92	HTTP	1410 Continuation
779	15.322940	192.168.149.92	146.190.62.39	HTTP	382 GET /js/init.min.
885	16.934187	146.190.62.39	192.168.149.92	HTTP	1410 [TCP Spurious Ret
983	18.332317	146.190.62.39	192.168.149.92	HTTP	1454 HTTP/1.1 200 OK
984	18.332317	146.190.62.39	192.168.149.92	HTTP	500 Continuation
1256	22.349949	192.168.149.92	146.190.62.39	HTTP	400 GET /css/style.mi
1257	22.350070	192.168.149.92	146.190.62.39	HTTP	405 GET /css/style-wi
1269	23.387255	146.190.62.39	192.168.149.92	HTTP	1454 HTTP/1.1 200 OK
1270	23.387255	146.190.62.39	192.168.149.92	HTTP	1454 Continuation
1271	23.387255	146.190.62.39	192.168.149.92	HTTP	1454 Continuation
1272	23.387255	146.190.62.39	192.168.149.92	HTTP	1454 Continuation
1273	23.387255	146.190.62.39	192.168.149.92	HTTP	1454 Continuation
1274	23.387255	146.190.62.39	192.168.149.92	HTTP	1454 Continuation
1275	23.387255	146.190.62.39	192.168.149.92	HTTP	1454 Continuation

Internet Protocol Version 4, Src: 192.168.149.92, Dst: 146.190.62.39				0030	00
Transmission Control Protocol				0040	20
Hypertext Transfer Protocol				0050	60
GET / HTTP/1.1\r\n				0060	60
Host: httpforever.com\r\n				0070	60
Connection: keep-alive\r\n				0080	60
Upgrade-Insecure-Requests: 1\r\n				0090	30
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML,				00a0	60
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/we				00b0	60
Referer: https://www.google.com/\r\n				00c0	30
Accept-Encoding: gzip, deflate\r\n				00d0	60
Accept-Language: en-GB,en-US;q=0.9,en;q=0.8\r\n				00e0	40
\r\n				00f0	40
[Response in frame: 765]				0100	20
[Full request URI: http://httpforever.com/]				0110	40
				0120	60
				0130	70
				0140	60

This packet will be responded in the packet with this number (http.response_in)

3. Describe all headers and their values in this GET request message.

The image shows a Wireshark packet capture of an HTTP GET request. The packet list on the left shows a GET request to `/msdownload/update/v3/static/trusted/en/disallowedcertstl.cab?c596b647d13af117` from source `10.1.36.186` to destination `23.54.80.18`. The packet details pane on the right shows the structure of the request:

- Frame 620: 256 bytes on wire (2048 bits), 256 bytes captured (2048 bits) on interface
- Ethernet II, Src: Intel_01:5a:4f (94:e2:3c:01:5a:4f), Dst: HuaweiTechno_f6:d6:47 (a0:1c:8d:f6:d6:47)
- Internet Protocol Version 4, Src: 10.1.36.186, Dst: 23.54.80.18
- Transmission Control Protocol
- Hypertext Transfer Protocol

The packet bytes pane shows the raw data of the request, including the GET method and the full URL.

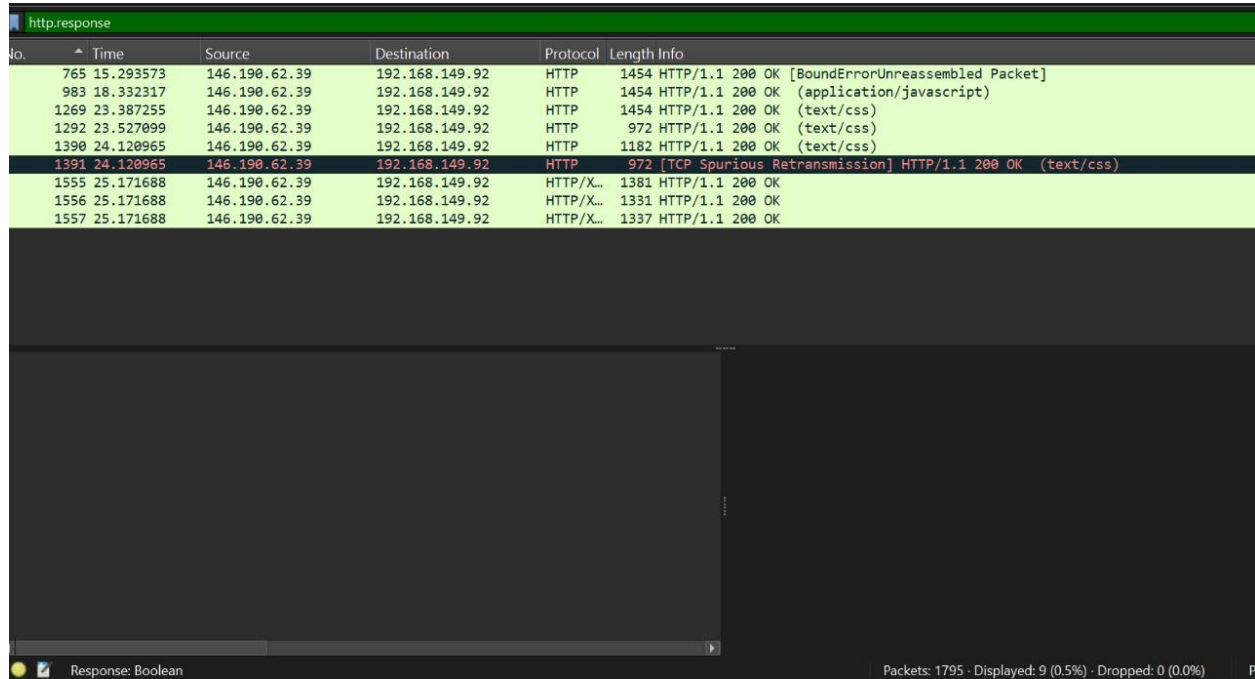
4. Identify the status code in the first server response.

The image shows a Wireshark packet capture of an HTTP 200 OK response. The packet list on the left shows a 200 OK response from source `146.190.62.39` to destination `192.168.149.92`. The packet details pane on the right shows the structure of the response:

- Frame 1391: 24.128965 bytes on wire (199112 bits), 24.128965 bytes captured (199112 bits) on interface
- Ethernet II, Src: Intel_01:5a:4f (94:e2:3c:01:5a:4f), Dst: HuaweiTechno_f6:d6:47 (a0:1c:8d:f6:d6:47)
- Internet Protocol Version 4, Src: 146.190.62.39, Dst: 192.168.149.92
- Transmission Control Protocol
- Hypertext Transfer Protocol

The packet bytes pane shows the raw data of the response, including the 200 OK status code and the full URL.

5. How many HTTP response messages are exchanged in total?



No.	Time	Source	Destination	Protocol	Length	Info
765	15.293573	146.190.62.39	192.168.149.92	HTTP	1454	HTTP/1.1 200 OK [BoundErrorUnreassembled Packet]
983	18.332317	146.190.62.39	192.168.149.92	HTTP	1454	HTTP/1.1 200 OK (application/javascript)
1269	23.387255	146.190.62.39	192.168.149.92	HTTP	1454	HTTP/1.1 200 OK (text/css)
1292	23.527099	146.190.62.39	192.168.149.92	HTTP	972	HTTP/1.1 200 OK (text/css)
1390	24.120965	146.190.62.39	192.168.149.92	HTTP	1182	HTTP/1.1 200 OK (text/css)
1391	24.120965	146.190.62.39	192.168.149.92	HTTP	972	[TCP Spurious Retransmission] HTTP/1.1 200 OK (text/css)
1555	25.171688	146.190.62.39	192.168.149.92	HTTP/X...	1381	HTTP/1.1 200 OK
1556	25.171688	146.190.62.39	192.168.149.92	HTTP/X...	1331	HTTP/1.1 200 OK
1557	25.171688	146.190.62.39	192.168.149.92	HTTP/X...	1337	HTTP/1.1 200 OK

Response: Boolean

Packets: 1795 - Displayed: 9 (0.5%) - Dropped: 0 (0.0%)

6. Determine whether the connection is persistent or not. Justify with evidence from packet captures.

The connection is persistent.

Justification: "The connection is persistent because both the client's GET request and the server's response contain the Connection: keep-alive header. This header explicitly instructs both parties to keep the TCP connection open after the initial response, allowing for multiple HTTP requests to be sent over the same connection without the overhead of establishing new TCP handshakes for each request."