

No.	Time	Source	Destination	Protocol	Length	Info
362	2019-11-02 22:48:34.795776	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=140854 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
363	2019-11-02 22:48:34.796262	128.119.245.12	192.168.1.249	TCP	64	80 → 52332 [ACK] Seq=1 Ack=66394 Win=162048 Len=0
364	2019-11-02 22:48:34.796280	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=142314 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
365	2019-11-02 22:48:34.796281	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=143774 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
366	2019-11-02 22:48:34.796734	128.119.245.12	192.168.1.249	TCP	64	80 → 52332 [ACK] Seq=1 Ack=79534 Win=175616 Len=0
367	2019-11-02 22:48:34.796762	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=145234 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
368	2019-11-02 22:48:34.796762	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [PSH, ACK] Seq=146694 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
369	2019-11-02 22:48:34.796763	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=148154 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
370	2019-11-02 22:48:34.796764	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=149614 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
371	2019-11-02 22:48:34.796764	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=151074 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
372	2019-11-02 22:48:34.796764	192.168.1.249	128.119.245.12	HTTP	535	POST /wireshark-labs/lab3-1-reply.htm HTTP/1.1 (text/plain)
373	2019-11-02 22:48:34.796989	128.119.245.12	192.168.1.249	TCP	64	80 → 52332 [ACK] Seq=1 Ack=82454 Win=173696 Len=0
374	2019-11-02 22:48:34.797238	128.119.245.12	192.168.1.249	TCP	64	80 → 52332 [ACK] Seq=1 Ack=83914 Win=172672 Len=0
375	2019-11-02 22:48:34.797558	128.119.245.12	192.168.1.249	TCP	64	80 → 52332 [ACK] Seq=1 Ack=86834 Win=182528 Len=0
376	2019-11-02 22:48:34.797809	128.119.245.12	192.168.1.249	TCP	64	80 → 52332 [ACK] Seq=1 Ack=88294 Win=181632 Len=0
377	2019-11-02 22:48:34.798245	128.119.245.12	192.168.1.249	TCP	64	80 → 52332 [ACK] Seq=1 Ack=89754 Win=183296 Len=0

> Frame 372: 535 bytes on wire (4280 bits), 535 bytes captured (4280 bits) on interface 0
 > Ethernet II, Src: Micro-St_92:30:cb (4c:cc:6a:92:30:cb), Dst: AsustekC_d3:3e:b4 (1c:87:2c:d3:3e:b4)
 > Internet Protocol Version 4, Src: 192.168.1.249, Dst: 128.119.245.12
 > Transmission Control Protocol, Src Port: 52332, Dst Port: 80, Seq: 152534, Ack: 1, Len: 481

Source Port: 52332
 Destination Port: 80
 [Stream index: 11]
 [TCP Segment Len: 481]
 Sequence number: 152534 (relative sequence number)
 [Next sequence number: 153015 (relative sequence number)]
 Acknowledgment number: 1 (relative ack number)
 0101 = Header Length: 20 bytes (5)
 > Flags: 0x018 (PSH, ACK)
 000. = Reserved: Not set
 ...0 = Nonce: Not set
0... = Congestion Window Reduced (CWR): Not set

1) Client IP and tcp port, 192.168.1.102, 52012

2) gaiacs.umass.edu IP, 128.119.12, 80

3) client IP and tcp port used to send the file 192.168.1.102, 52012

No.	Time	Source	Destination	Protocol	Length	Info
131	2019-11-02 22:48:27.198069	192.168.1.249	128.119.245.12	TCP	66	52332 → 80 [SYN] Seq=0 Win=64240 Len=

MSS=1460 WS=256 SACK_PERM=1
 Frame 131: 66 bytes on wire (528 bits), 66 bytes captured (528 bits) on interface 0
 Ethernet II, Src: Micro-St_92:30:cb (4c:cc:6a:92:30:cb), Dst: AsustekC_d3:3e:b4 (1c:87:2c:d3:3e:b4)
 Internet Protocol Version 4, Src: 192.168.1.249, Dst: 128.119.245.12
 Transmission Control Protocol, Src Port: 52332, Dst Port: 80, Seq: 0, Len: 0

Source Port: 52332
 Destination Port: 80
 [Stream index: 11]
 [TCP Segment Len: 0]
 Sequence number: 0 (relative sequence number)
 [Next sequence number: 0 (relative sequence number)]
 Acknowledgment number: 0
 1000 = Header Length: 32 bytes (8)
 Flags: 0x002 (SYN)
 000. = Reserved: Not set
 ...0 = Nonce: Not set
0... = Congestion Window Reduced (CWR): Not set
E... = ECN-Echo: Not set
U... = Urgent: Not set
A... = Acknowledgment: Not set
P... = Push: Not set
R... = Reset: Not set
S... = Syn: Set
F... = Fin: Not set
 [TCP Flags:S.]

Window size value: 64240
 [Calculated window size: 64240]
 Checksum: 0x0371 [unverified]
 [Checksum Status: Unverified]
 Urgent pointer: 0
 Options: (12 bytes), Maximum segment size, No-Operation (NOP), Window scale, No-Operation (NOP), No-Operation (NOP), SACK permitte
 [Timestamps]

4) Sequence Number is 0 and SYN Value is set to 1

```
No.      Time          Source           Destination      Protocol Length Info
133 2019-11-02 22:48:27.221128 128.119.245.12 192.168.1.249    TCP           66      80 → 52332 [SYN, ACK] Seq=0 Ack=1
Win=29200 Len=0 MSS=1460 SACK_PERM=1 WS=128
Frame 133: 66 bytes on wire (528 bits), 66 bytes captured (528 bits) on interface 0
Ethernet II, Src: AsustekC_d3:3e:b4 (1c:87:2c:d3:3e:b4), Dst: Micro-St_92:30:cb (4c:cc:6a:92:30:cb)
Internet Protocol Version 4, Src: 128.119.245.12, Dst: 192.168.1.249
Transmission Control Protocol, Src Port: 80, Dst Port: 52332, Seq: 0, Ack: 1, Len: 0
  Source Port: 80
  Destination Port: 52332
  [Stream index: 11]
  [TCP Segment Len: 0]
  Sequence number: 0 (relative sequence number)
  [Next sequence number: 0 (relative sequence number)]
  Acknowledgment number: 1 (relative ack number)
  1000 .... = Header Length: 32 bytes (8)
  Flags: 0x012 (SYN, ACK)
    000. .... = Reserved: Not set
    ...0 .... = Nonce: Not set
    ....0... = Congestion Window Reduced (CWR): Not set
    ....0.. = ECN-Echo: Not set
    ....00. = Urgent: Not set
    ....01. = Acknowledgment: Set
    ....0... = Push: Not set
    ....0.. = Reset: Not set
    ....01. = Syn: Set
    ....000 = Fin: Not set
  [TCP Flags: .....A..S.]
  Window size value: 29200
  [Calculated window size: 29200]
  Checksum: 0xad66 [unverified]
  [Checksum Status: Unverified]
  Urgent pointer: 0
  Options: (12 bytes), Maximum segment size, No-Operation (NOP), No-Operation (NOP), SACK permitted, No-Operation (NOP), Window scale
  [SEQ/ACK analysis]
  [Timestamps]
```

5) Sequence Number is 0, ACK field is set valued of 1. Since the acknowledgement is made server increment the client sequence number by 1. The ACK was set to 1 and a SYN was set to 1 which means a SYNACK was meant.

```

No.      Time                Source            Destination      Protocol Length Info
 372 2019-11-02 22:48:34.796764 192.168.1.249    128.119.245.12  HTTP        535    POST /wireshark-labs/lab3-1-reply.ht
HTTP/1.1 (text/plain)
Frame 372: 535 bytes on wire (4280 bits), 535 bytes captured (4280 bits) on interface 0
Ethernet II, Src: Micro-St_92:30:cb (4c:cc:6a:92:30:cb), Dst: AsustekC_d3:3e:b4 (1c:87:2c:d3:3e:b4)
Internet Protocol Version 4, Src: 192.168.1.249, Dst: 128.119.245.12
Transmission Control Protocol, Src Port: 52332, Dst Port: 80, Seq: 152534, Ack: 1, Len: 481
  Source Port: 52332
  Destination Port: 80
  [Stream index: 11]
  [TCP Segment Len: 481]
  Sequence number: 152534 (relative sequence number)
  [Next sequence number: 153015 (relative sequence number)]
  Acknowledgment number: 1 (relative ack number)
  0101 .... = Header Length: 20 bytes (5)
  Flags: 0x018 (PSH, ACK)
    000. .... = Reserved: Not set
    ...0 .... = Nonce: Not set
    ....0... = Congestion Window Reduced (CWR): 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 size value: 1026
  [Calculated window size: 262656]
  [Window size scaling factor: 256]
  Checksum: 0x0e8a [unverified]
  [Checksum Status: Unverified]
  Urgent pointer: 0
  [SEQ/ACK analysis]
  [Timestamps]
  TCP payload (481 bytes)
  TCP segment data (481 bytes)
[106 Reassembled TCP Segments (153014 bytes): #250(693), #251(1460), #252(1460), #253(1460), #254(1460), #255(1460), #256(1460),
#257(1460), #258(1460), #259(1460), #261(1460), #263(1460), #265(1460), #266(1460), #267(1460), #26]
Hypertext Transfer Protocol
MIME Multipart Media Encapsulation, Type: multipart/form-data, Boundary: "----WebKitFormBoundaryL9zWufwsRfHbv4FQ"

```

6) Sequence number is 152534

250	2019-11-02 22:48:34.722255	192.168.1.249	128.119.245.12	TCP	747	52332 → 80 [PSH, ACK] Seq=1 Ack=1 Win=262656 Len=693 [TCP segment of a reassembled PDU]
251	2019-11-02 22:48:34.722381	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=694 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
252	2019-11-02 22:48:34.722381	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=2154 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
253	2019-11-02 22:48:34.722382	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=3614 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
254	2019-11-02 22:48:34.722383	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=5074 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
255	2019-11-02 22:48:34.722383	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=6534 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
256	2019-11-02 22:48:34.722383	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=7994 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
257	2019-11-02 22:48:34.722383	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=9454 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
258	2019-11-02 22:48:34.722384	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=10914 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
259	2019-11-02 22:48:34.722384	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=12374 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
260	2019-11-02 22:48:34.747404	128.119.245.12	192.168.1.249	TCP	64	80 → 52332 [ACK] Seq=1 Ack=694 Win=30592 Len=0
261	2019-11-02 22:48:34.747432	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=13834 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
262	2019-11-02 22:48:34.748250	128.119.245.12	192.168.1.249	TCP	64	80 → 52332 [ACK] Seq=1 Ack=13834 Win=56960 Len=0
263	2019-11-02 22:48:34.748273	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=15294 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
264	2019-11-02 22:48:34.748274	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [PSH, ACK] Seq=16754 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
265	2019-11-02 22:48:34.748274	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=18214 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
266	2019-11-02 22:48:34.748275	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=19674 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
267	2019-11-02 22:48:34.748275	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=21134 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]

```

> Internet Protocol Version 4, Src: 192.168.1.249, Dst: 128.119.245.12
✓ Transmission Control Protocol, Src Port: 52332, Dst Port: 80, Seq: 1, Ack: 1, Len: 693
  Source Port: 52332
  Destination Port: 80
  [Stream index: 11]
  [TCP Segment Len: 693]
  Sequence number: 1 (relative sequence number)
  [Next sequence number: 694 (relative sequence number)]
  Acknowledgment number: 1 (relative ack number)

```

```

Internet Protocol Version 4, Src: 192.168.1.249, Dst: 128.119.245.12
  Transmission Control Protocol, Src Port: 52332, Dst Port: 80, Seq: 694, Ack: 1, Len: 1460
    Source Port: 52332
    Destination Port: 80
    [Stream index: 11]
    [TCP Segment Len: 1460]
    Sequence number: 694 (relative sequence number)
    [Next sequence number: 2154 (relative sequence number)]
    Acknowledgment number: 1 (relative ack number)

```

```
> Internet Protocol Version 4, Src: 192.168.1.249, Dst: 128.119.245.12
  Transmission Control Protocol, Src Port: 52332, Dst Port: 80, Seq: 2154, Ack: 1, Len: 1460
    Source Port: 52332
    Destination Port: 80
    [Stream index: 11]
    [TCP Segment Len: 1460]
    Sequence number: 2154 (relative sequence number)
    [Next sequence number: 3614 (relative sequence number)]
    Acknowledgment number: 1 (relative ack number)
    0020 f5 0c cc 6c 00 50 ef 8b 84 aa 48 cd 96 0e 50 10 ...l.P...H..P.
    0030 94 02 70 18 00 00 66 6c 61 73 68 65 64 20 61 63 ...p...flashed ac
    0040 72 6f 73 73 20 68 65 72 20 6d 69 65 64 20 74 68 ...ross her mind th
```

253	2019-11-02	22:48:34.722382	192.168.1.249	128.119.245.12	TCP	1514	52332	+ 80	[ACK]	Seq=3614 Ack=1 Win=262656 Len=1460	[TCP segment of a reassembled PDU]
254	2019-11-02	22:48:34.722383	192.168.1.249	128.119.245.12	TCP	1514	52332	+ 80	[ACK]	Seq=5074 Ack=1 Win=262656 Len=1460	[TCP segment of a reassembled PDU]
255	2019-11-02	22:48:34.722383	192.168.1.249	128.119.245.12	TCP	1514	52332	+ 80	[ACK]	Seq=6534 Ack=1 Win=262656 Len=1460	[TCP segment of a reassembled PDU]
256	2019-11-02	22:48:34.722383	192.168.1.249	128.119.245.12	TCP	1514	52332	+ 80	[ACK]	Seq=7994 Ack=1 Win=262656 Len=1460	[TCP segment of a reassembled PDU]
257	2019-11-02	22:48:34.722383	192.168.1.249	128.119.245.12	TCP	1514	52332	+ 80	[ACK]	Seq=9454 Ack=1 Win=262656 Len=1460	[TCP segment of a reassembled PDU]
258	2019-11-02	22:48:34.722384	192.168.1.249	128.119.245.12	TCP	1514	52332	+ 80	[ACK]	Seq=10914 Ack=1 Win=262656 Len=1460	[TCP segment of a reassembled PDU]
259	2019-11-02	22:48:34.722384	192.168.1.249	128.119.245.12	TCP	1514	52332	+ 80	[ACK]	Seq=12374 Ack=1 Win=262656 Len=1460	[TCP segment of a reassembled PDU]
260	2019-11-02	22:48:34.747404	128.119.245.12	192.168.1.249	TCP	64	80	+ 52332	[ACK]	Seq=1 Ack=694 Win=30592 Len=0	
261	2019-11-02	22:48:34.747432	192.168.1.249	128.119.245.12	TCP	1514	52332	+ 80	[ACK]	Seq=13834 Ack=1 Win=262656 Len=1460	[TCP segment of a reassembled PDU]
262	2019-11-02	22:48:34.748250	128.119.245.12	192.168.1.249	TCP	64	80	+ 52332	[ACK]	Seq=1 Ack=13834 Win=56960 Len=0	
263	2019-11-02	22:48:34.748273	192.168.1.249	128.119.245.12	TCP	1514	52332	+ 80	[ACK]	Seq=15294 Ack=1 Win=262656 Len=1460	[TCP segment of a reassembled PDU]
264	2019-11-02	22:48:34.748274	192.168.1.249	128.119.245.12	TCP	1514	52332	+ 80	[PSH, ACK]	Seq=16754 Ack=1 Win=262656 Len=1460	[TCP segment of a reassembled PDU]
265	2019-11-02	22:48:34.748274	192.168.1.249	128.119.245.12	TCP	1514	52332	+ 80	[ACK]	Seq=18214 Ack=1 Win=262656 Len=1460	[TCP segment of a reassembled PDU]
266	2019-11-02	22:48:34.748275	192.168.1.249	128.119.245.12	TCP	1514	52332	+ 80	[ACK]	Seq=19674 Ack=1 Win=262656 Len=1460	[TCP segment of a reassembled PDU]
267	2019-11-02	22:48:34.748275	192.168.1.249	128.119.245.12	TCP	1514	52332	+ 80	[ACK]	Seq=21134 Ack=1 Win=262656 Len=1460	[TCP segment of a reassembled PDU]

*Ethernet

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ip.addr == 128.119.245.12

No.	Time	Source	Destination	Protocol	Length	Info
131	2019-11-02 22:48:27.198069	192.168.1.249	128.119.245.12	TCP	66	52332 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 WS=256 SACK_PERM=1
132	2019-11-02 22:48:27.198241	192.168.1.249	128.119.245.12	TCP	66	52333 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 WS=256 SACK_PERM=1
133	2019-11-02 22:48:27.221128	128.119.245.12	192.168.1.249	TCP	66	80 → 52332 [SYN, ACK] Seq=0 Ack=1 Win=29200 Len=0 MSS=1460 SACK_PERM=1 WS=128
134	2019-11-02 22:48:27.221196	192.168.1.249	128.119.245.12	TCP	54	52332 → 80 [ACK] Seq=1 Ack=1 Win=262656 Len=0
135	2019-11-02 22:48:27.228525	128.119.245.12	192.168.1.249	TCP	66	80 → 52333 [SYN, ACK] Seq=0 Ack=1 Win=29200 Len=0 MSS=1460 SACK_PERM=1 WS=128
136	2019-11-02 22:48:27.228569	192.168.1.249	128.119.245.12	TCP	54	52333 → 80 [ACK] Seq=1 Ack=1 Win=262656 Len=0
250	2019-11-02 22:48:34.722255	192.168.1.249	128.119.245.12	TCP	747	52332 → 80 [PSH, ACK] Seq=1 Ack=1 Win=262656 Len=693 [TCP segment of a reassembled PDU]
251	2019-11-02 22:48:34.722381	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=694 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
252	2019-11-02 22:48:34.722381	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=2154 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
253	2019-11-02 22:48:34.722382	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=3614 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
254	2019-11-02 22:48:34.722383	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=5074 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
255	2019-11-02 22:48:34.722383	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=6534 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
256	2019-11-02 22:48:34.722383	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=7994 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
257	2019-11-02 22:48:34.722383	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=9454 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
258	2019-11-02 22:48:34.722384	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=10914 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
259	2019-11-02 22:48:34.722384	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=12374 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
260	2019-11-02 22:48:34.747404	128.119.245.12	192.168.1.249	TCP	64	80 → 52332 [ACK] Seq=1 Ack=694 Win=30592 Len=0
261	2019-11-02 22:48:34.747432	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=13834 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
262	2019-11-02 22:48:34.748250	128.119.245.12	192.168.1.249	TCP	64	80 → 52332 [ACK] Seq=1 Ack=13834 Win=56960 Len=0
263	2019-11-02 22:48:34.748273	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=15294 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
264	2019-11-02 22:48:34.748274	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [PSH, ACK] Seq=16754 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
265	2019-11-02 22:48:34.748274	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=18214 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
266	2019-11-02 22:48:34.748275	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=19674 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
267	2019-11-02 22:48:34.748275	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=21134 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]

Internet Protocol Version 4, Src: 192.168.1.249, Dst: 128.119.245.12

Transmission Control Protocol, Src Port: 52332, Dst Port: 80, Seq: 6534, Ack: 1, Len: 1460

Source Port: 52332

Destination Port: 80

[Stream index: 11]

[TCP Segment Len: 1460]

Sequence number: 6534 (relative sequence number)

[Next sequence number: 7994 (relative sequence number)]

Acknowledgment number: 1 (relative ack number)

0020 f5 0c cc 6c 00 50 ef 8b 95 c6 48 cd 96 0e 50 10 .1.P...H...P

ip.addr == 128.119.245.12

No.	Time	Source	Destination	Protocol	Length	Info
131	2019-11-02 22:48:27.198069	192.168.1.249	128.119.245.12	TCP	66	52332 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 WS=256 SACK_PERM=1
132	2019-11-02 22:48:27.198241	192.168.1.249	128.119.245.12	TCP	66	52333 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 WS=256 SACK_PERM=1
133	2019-11-02 22:48:27.221128	128.119.245.12	192.168.1.249	TCP	66	80 → 52332 [SYN, ACK] Seq=0 Ack=1 Win=29200 Len=0 MSS=1460 SACK_PERM=1 WS=128
134	2019-11-02 22:48:27.221196	192.168.1.249	128.119.245.12	TCP	54	52332 → 80 [ACK] Seq=1 Ack=1 Win=262656 Len=0
135	2019-11-02 22:48:27.228525	128.119.245.12	192.168.1.249	TCP	66	80 → 52333 [SYN, ACK] Seq=0 Ack=1 Win=29200 Len=0 MSS=1460 SACK_PERM=1 WS=128
136	2019-11-02 22:48:27.228569	192.168.1.249	128.119.245.12	TCP	54	52333 → 80 [ACK] Seq=1 Ack=1 Win=262656 Len=0
250	2019-11-02 22:48:34.722255	192.168.1.249	128.119.245.12	TCP	747	52332 → 80 [PSH, ACK] Seq=1 Ack=1 Win=262656 Len=693 [TCP segment of a reassembled PDU]
251	2019-11-02 22:48:34.722381	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=694 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
252	2019-11-02 22:48:34.722381	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=2154 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
253	2019-11-02 22:48:34.722382	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=3614 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
254	2019-11-02 22:48:34.722383	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=5074 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
255	2019-11-02 22:48:34.722383	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=6534 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
256	2019-11-02 22:48:34.722383	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=7994 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
257	2019-11-02 22:48:34.722383	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=9454 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
258	2019-11-02 22:48:34.722384	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=10914 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
259	2019-11-02 22:48:34.722384	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=12374 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
260	2019-11-02 22:48:34.747404	128.119.245.12	192.168.1.249	TCP	64	80 → 52332 [ACK] Seq=1 Ack=694 Win=30592 Len=0
261	2019-11-02 22:48:34.747432	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=13834 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
262	2019-11-02 22:48:34.748250	128.119.245.12	192.168.1.249	TCP	64	80 → 52332 [ACK] Seq=1 Ack=13834 Win=56960 Len=0
263	2019-11-02 22:48:34.748273	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=15294 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
264	2019-11-02 22:48:34.748274	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [PSH, ACK] Seq=16754 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
265	2019-11-02 22:48:34.748274	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=18214 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
266	2019-11-02 22:48:34.748275	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=19674 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]
267	2019-11-02 22:48:34.748275	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80 [ACK] Seq=21134 Ack=1 Win=262656 Len=1460 [TCP segment of a reassembled PDU]

Internet Protocol Version 4, Src: 192.168.1.249, Dst: 128.119.245.12

Transmission Control Protocol, Src Port: 52332, Dst Port: 80, Seq: 7994, Ack: 1, Len: 1460

Source Port: 52332

Destination Port: 80

[Stream index: 11]

[TCP Segment Len: 1460]

Sequence number: 7994 (relative sequence number)

[Next sequence number: 9454 (relative sequence number)]

Acknowledgment number: 1 (relative ack number)

0020 f5 0c cc 6c 00 50 ef 8b 9b 7a 48 cd 96 0e 50 10 .1.P...zH...P

Sequence Number of acks send, 1 , 694 ,2154, 3614,5074,6534,7994

8) 7994

9) the minimum ammount of buffer space is 262656

10)

251	2019-11-02 22:48:34.722381	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80	[ACK] Seq=694 Ack=1 Win=262656 Len=1460	[TCP segment of a reassembled PDU]
252	2019-11-02 22:48:34.722381	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80	[ACK] Seq=2154 Ack=1 Win=262656 Len=1460	[TCP segment of a reassembled PDU]
253	2019-11-02 22:48:34.722382	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80	[ACK] Seq=3614 Ack=1 Win=262656 Len=1460	[TCP segment of a reassembled PDU]
254	2019-11-02 22:48:34.722383	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80	[ACK] Seq=5074 Ack=1 Win=262656 Len=1460	[TCP segment of a reassembled PDU]
255	2019-11-02 22:48:34.722383	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80	[ACK] Seq=6534 Ack=1 Win=262656 Len=1460	[TCP segment of a reassembled PDU]
256	2019-11-02 22:48:34.722383	192.168.1.249	128.119.245.12	TCP	1514	52332 → 80	[ACK] Seq=7994 Ack=1 Win=262656 Len=1460	[TCP segment of a reassembled PDU]

No retransmit beacue there is no duplicate Sequence number, there are incrementing respectivly

10)

11)

12)