

1. IP : 192.168.0.176, port : 65408

778 3.287093 192.168.0.176 52.123.160.135 TCP 54 62355 → 443 [ACK] Seq=60 Ack=49 Win=1022 Len=0

816 3.581098 192.168.0.176 128.119.245.12 TCP 66 65409 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 WS=256 SACK_PERM

825 3.659735 192.168.0.176 128.119.245.12 TCP 66 65409 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 WS=256 SACK_PERM

837 3.781384 128.119.245.12 192.168.0.176 TCP 66 80 → 65408 [SYN, ACK] Seq=0 Ack=1 Win=29200 Len=0 MSS=1460 SACK_PERM WS=128

838 3.781474 192.168.0.176 128.119.245.12 TCP 54 65408 → 80 [ACK] Seq=1 Ack=1 Win=262656 Len=0

839 3.781658 192.168.0.176 128.119.245.12 HTTP 527 GET /wireshark-labs/INTRO-wireshark-file1.html HTTP/1.1

847 3.856054 128.119.245.12 192.168.0.176 TCP 66 80 → 65409 [SYN, ACK] Seq=0 Ack=1 Win=29200 Len=0 MSS=1460 SACK_PERM WS=128

848 3.856125 192.168.0.176 128.119.245.12 TCP 54 65409 → 80 [ACK] Seq=1 Ack=1 Win=262656 Len=0

868 3.953308 162.159.134.234 192.168.0.176 TLSv1.2 108 Application Data

870 3.969259 162.159.134.234 192.168.0.176 TLSv1.2 99 Application Data

871 3.969305 192.168.0.176 162.159.134.234 TCP 54 65145 → 443 [ACK] Seq=1 Ack=373 Win=1024 Len=0

872 3.987470 128.119.245.12 192.168.0.176 TCP 54 80 → 65408 [ACK] Seq=1 Ack=474 Win=30336 Len=0

873 3.987470 128.119.245.12 192.168.0.176 HTTP 492 HTTP/1.1 200 OK (text/html)

878 4.033377 192.168.0.176 128.119.245.12 TCP 54 65408 → 80 [ACK] Seq=474 Ack=439 Win=262144 Len=0

995 4.445983 192.168.0.176 74.125.247.128 STUN 198 Refresh Request user: C3qNKKsG6gb5lppk8pMYu7KABNMWIIcJbTAHSMbKpDA realm: turn.l.google.com with nonce

996 4.454014 74.125.247.128 192.168.0.176 TCP 54 3478 → 63481 [ACK] Seq=1 Ack=145 Win=483 Len=0

> Frame 816: 66 bytes on wire (528 bits), 66 bytes captured (528 bits) on interface \Device\NPF_{EBSA1A4B-473C-4183-B8} Ethernet II, Src: IntelCor_a8:d5:9a (dc:21:5c:a8:d5:9a), Dst: Mercusys_31:88:a0 (00:eb:d8:31:88:a0)

> Internet Protocol Version 4, Src: 192.168.0.176, Dst: 128.119.245.12

> Transmission Control Protocol, Src Port: 65408, Dst Port: 80, Seq: 0, Len: 0

Source Port: 65408

Destination Port: 80

[Stream index: 5]

[Conversation completeness: Incomplete, DATA (15)]

[TCP Segment Len: 0]

Sequence Number: 0 (relative sequence number)

Sequence Number (raw): 995276959

[Next Sequence Number: (relative sequence number)]

Acknowledgment Number: 0

Acknowledgment number (raw): 0

1000 = Header Length: 32 bytes (8)

Flags: 0x002 (SYN)

Window: 64240

[Calculated window size: 64240]

Checksum: 0x3703 [unverified]

[Checksum Status: Unverified]

Urgent Pointer: 0

> Options: (12 bytes), Maximum segment size, No-Operation (NOP), Window scale, No-Operation (NOP), No-Operation (NOP)

> [Timestamps]

0000 00 eb d8 31 88 a0 dc 21 5c a8 d5 9a 08 00 45 00 ...1...1 \.....E

0010 00 34 5a fd 40 00 80 06 00 00 c0 a8 00 b0 80 77 -42 g -w

0020 f5 0c ff 80 00 50 3b 52 b8 9f 00 00 00 00 00 02 ...PjR|

0030 fa f0 37 03 00 00 02 04 05 b4 01 03 03 08 01 01 ..7.....

0040 04 02 ..

Source Port (tcp sport), 2 byte(s)

Packets: 1706 · Displayed: 46 (2.6%) · Dropped: 0 (0)

2. Seq : 0, value : 1

No. Time Source Destination Protocol Length Info

778 3.287093 192.168.0.176 52.123.160.135 TCP 54 62355 → 443 [ACK] Seq=60 Ack=49 Win=1022 Len=0

816 3.581098 192.168.0.176 128.119.245.12 TCP 66 65409 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 WS=256 SACK_PERM

825 3.659735 192.168.0.176 128.119.245.12 TCP 66 65409 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 WS=256 SACK_PERM

837 3.781384 128.119.245.12 192.168.0.176 TCP 66 80 → 65408 [SYN, ACK] Seq=0 Ack=1 Win=29200 Len=0 MSS=1460 SACK_PERM WS=128

838 3.781474 192.168.0.176 128.119.245.12 TCP 54 65408 → 80 [ACK] Seq=1 Ack=1 Win=262656 Len=0

839 3.781658 192.168.0.176 128.119.245.12 HTTP 527 GET /wireshark-labs/INTRO-wireshark-file1.html HTTP/1.1

847 3.856054 128.119.245.12 192.168.0.176 TCP 66 80 → 65409 [SYN, ACK] Seq=0 Ack=1 Win=29200 Len=0 MSS=1460 SACK_PERM WS=128

848 3.856125 192.168.0.176 128.119.245.12 TCP 54 65409 → 80 [ACK] Seq=1 Ack=1 Win=262656 Len=0

868 3.953308 162.159.134.234 192.168.0.176 TLSv1.2 108 Application Data

870 3.969259 162.159.134.234 192.168.0.176 TLSv1.2 99 Application Data

871 3.969305 192.168.0.176 162.159.134.234 TCP 54 65145 → 443 [ACK] Seq=1 Ack=373 Win=1024 Len=0

872 3.987470 128.119.245.12 192.168.0.176 TCP 54 80 → 65408 [ACK] Seq=1 Ack=474 Win=30336 Len=0

873 3.987470 128.119.245.12 192.168.0.176 HTTP 492 HTTP/1.1 200 OK (text/html)

878 4.033377 192.168.0.176 128.119.245.12 TCP 54 65408 → 80 [ACK] Seq=474 Ack=439 Win=262144 Len=0

995 4.445983 192.168.0.176 74.125.247.128 STUN 198 Refresh Request user: C3qNKKsG6gb5lppk8pMYu7KABNMWIIcJbTAHSMbKpDA realm: turn.l.google.com with nonce

996 4.454014 74.125.247.128 192.168.0.176 TCP 54 3478 → 63481 [ACK] Seq=1 Ack=145 Win=483 Len=0

> Frame 816: 66 bytes on wire (528 bits), 66 bytes captured (528 bits) on interface \Device\NPF_{EBSA1A4B-473C-4183-B8} Ethernet II, Src: IntelCor_a8:d5:9a (dc:21:5c:a8:d5:9a), Dst: Mercusys_31:88:a0 (00:eb:d8:31:88:a0)

> Internet Protocol Version 4, Src: 192.168.0.176, Dst: 128.119.245.12

> Transmission Control Protocol, Src Port: 65408, Dst Port: 80, Seq: 0, Len: 0

Source Port: 65408

Destination Port: 80

[Stream index: 5]

[Conversation completeness: Incomplete, DATA (15)]

[TCP Segment Len: 0]

Sequence Number: 0 (relative sequence number)

Sequence Number (raw): 995276959

[Next Sequence Number: (relative sequence number)]

Acknowledgment Number: 0

Acknowledgment number (raw): 0

1000 = Header Length: 32 bytes (8)

Flags: 0x002 (SYN)

000. = Reserved: Not set

...0 = Accurate ECN: Not set

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

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

....0... = Urgent: Not set

....0... = Acknowledgment: Not set

....0... = Push: Not set

....0... = Reset: Not set

>1. = Syn: Set

....0 = Fin: Not set

[TCP Flags:S.]

Window: 64240

0000 00 eb d8 31 88 a0 dc 21 5c a8 d5 9a 08 00 45 00 ...1...1 \.....E

0010 00 34 5a fd 40 00 80 06 00 00 c0 a8 00 b0 80 77 -42 g -w

0020 f5 0c ff 80 00 50 3b 52 b8 9f 00 00 00 00 00 02 ...PjR|

0030 fa f0 37 03 00 00 02 04 05 b4 01 03 03 08 01 01 ..7.....

0040 04 02 ..

3. Value : 1, The value of the ACKnowledgement field in the SYNACK segment is determined by the server gaia.cs.umass.edu. The server adds 1 to the initial sequence number of SYN segment from the client computer. For this case, the initial sequence number of SYN segment from the client computer is 0, thus the value of the ACKnowledgement field in the SYNACK segment is 1.

No.	Time	Source	Destination	Protocol	Length	Info
778	3.287093	192.168.0.176	52.123.160.135	TCP	54	62355 → 443 [ACK] Seq=60 Ack=49 Win=1022 Len=0
816	3.581098	192.168.0.176	128.119.245.12	TCP	66	65408 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 WS=256 SACK_PERM
825	3.659735	192.168.0.176	128.119.245.12	TCP	66	65409 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 WS=256 SACK_PERM
837	3.781384	128.119.245.12	192.168.0.176	TCP	66	80 → 65408 [SYN, ACK] Seq=0 Ack=1 Win=29200 Len=0 MSS=1460 SACK_PERM WS=128
838	3.781474	192.168.0.176	128.119.245.12	TCP	54	65408 → 80 [ACK] Seq=1 Ack=1 Win=262656 Len=0
839	3.781658	192.168.0.176	128.119.245.12	HTTP	527	GET /wireshark-labs/INTRO-wireshark-file1.html HTTP/1.1
847	3.856054	128.119.245.12	192.168.0.176	TCP	66	80 → 65409 [SYN, ACK] Seq=0 Ack=1 Win=29200 Len=0 MSS=1460 SACK_PERM WS=128
848	3.856125	192.168.0.176	128.119.245.12	TCP	54	65409 → 80 [ACK] Seq=1 Ack=1 Win=262656 Len=0
868	3.953308	162.159.134.234	192.168.0.176	TLSv1.2	108	Application Data
870	3.969259	162.159.134.234	192.168.0.176	TLSv1.2	99	Application Data
871	3.969305	192.168.0.176	162.159.134.234	TCP	54	65145 → 443 [ACK] Seq=1 Ack=373 Win=1024 Len=0
872	3.987470	128.119.245.12	192.168.0.176	TCP	54	80 → 65408 [ACK] Seq=1 Ack=474 Win=30336 Len=0
873	3.987470	128.119.245.12	192.168.0.176	HTTP	492	HTTP/1.1 200 OK (text/html)
878	4.033377	192.168.0.176	128.119.245.12	TCP	54	65408 → 80 [ACK] Seq=474 Ack=439 Win=262144 Len=0
995	4.445983	192.168.0.176	74.125.247.128	STUN	198	Refresh Request user: CjQWksG651pk8pMtu7KABWNIICjBTAHSMbKpDA realm: turn.1.google.com with nonce
996	4.454814	74.125.247.128	192.168.0.176	TCP	54	3478 → 63481 [ACK] Seq=1 Ack=145 Win=483 Len=0

> Frame 838: 54 bytes on wire (432 bits), 54 bytes captured (432 bits) on interface \Device\NPF... (E85A1A4B-473C-4183-1...)	0000	00 eb d8 31 88 a0 dc 21 5c a8 d5 9a 00 00 45 00	...1...1 \.....E
> Ethernet II, Src: IntelCon_a8:d5:9a (dc:21:5c:a8:d5:9a), Dst: Mercusys_31:88:a0 (00:eb:d8:31:88:a0)	0010	00 28 5a ff 40 00 80 06 00 00 c0 a8 00 b0 77	...Z@.....W
> Internet Protocol Version 4, Src: 192.168.0.176, Dst: 128.119.245.12	0020	f5 0c ff 80 00 50 3b 52 b8 a0 9b 01 18 f8 50P;R.....P
> Transmission Control Protocol, Src Port: 65408, Dst Port: 80, Seq: 1, Ack: 1, Len: 0	0030	04 02 36 f7 00 00	...6....


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Source Port: 65408
Destination Port: 80
[Stream index: 5]
[Conversation completeness: Incomplete, DATA (15)]
[TCP Segment Len: 0]
Sequence Number: 1 (relative sequence number)
Sequence Number (raw): 995276960
[Next Sequence Number: 1 (relative sequence number)]
Acknowledgment Number: 1 (relative ack number)
Acknowledgment number (raw): 2600540408
0101 .... = Header Length: 20 bytes (5)
Flags: 0x010 (ACK)
0000 .... = Reserved: Not set
...0 .... = Accurate ECH: Not set
...0 .... = Congestion Window Reduced: Not set
...0 .... = ECH-Echo: Not set
...0 .... = Urgent: Not set
...1 .... = Acknowledgment: Set
...0 .... = Push: Not set
...0 .... = Reset: Not set
...0 .... = Syn: Not set
...0 .... = Fin: Not set
[TCP Flags: .....A....]
Window: 1026

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4. 29200 bytes

No.	Time	Source	Destination	Protocol	Length	Info
778	3.287093	192.168.0.176	52.123.160.135	TCP	54	62355 → 443 [ACK] Seq=60 Ack=49 Win=1022 Len=0
816	3.581098	192.168.0.176	128.119.245.12	TCP	66	65408 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 WS=256 SACK_PERM
825	3.659735	192.168.0.176	128.119.245.12	TCP	66	65409 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 WS=256 SACK_PERM
837	3.781384	128.119.245.12	192.168.0.176	TCP	66	80 → 65408 [SYN, ACK] Seq=0 Ack=1 Win=29200 Len=0 MSS=1460 SACK_PERM WS=128
838	3.781474	192.168.0.176	128.119.245.12	TCP	54	65408 → 80 [ACK] Seq=1 Ack=1 Win=262656 Len=0
839	3.781658	192.168.0.176	128.119.245.12	HTTP	527	GET /wireshark-labs/INTRO-wireshark-file1.html HTTP/1.1
847	3.856054	128.119.245.12	192.168.0.176	TCP	66	80 → 65409 [SYN, ACK] Seq=0 Ack=1 Win=29200 Len=0 MSS=1460 SACK_PERM WS=128
848	3.856125	192.168.0.176	128.119.245.12	TCP	54	65409 → 80 [ACK] Seq=1 Ack=1 Win=262656 Len=0
868	3.953308	162.159.134.234	192.168.0.176	TLSv1.2	108	Application Data
870	3.969259	162.159.134.234	192.168.0.176	TLSv1.2	99	Application Data
871	3.969305	192.168.0.176	162.159.134.234	TCP	54	65145 → 443 [ACK] Seq=1 Ack=373 Win=1024 Len=0
872	3.987470	128.119.245.12	192.168.0.176	TCP	54	80 → 65408 [ACK] Seq=1 Ack=474 Win=30336 Len=0
873	3.987470	128.119.245.12	192.168.0.176	HTTP	492	HTTP/1.1 200 OK (text/html)
878	4.033377	192.168.0.176	128.119.245.12	TCP	54	65408 → 80 [ACK] Seq=474 Ack=439 Win=262144 Len=0
995	4.445983	192.168.0.176	74.125.247.128	STUN	198	Refresh Request user: CjQWksG651pk8pMtu7KABWNIICjBTAHSMbKpDA realm: turn.1.google.com with nonce
996	4.454814	74.125.247.128	192.168.0.176	TCP	54	3478 → 63481 [ACK] Seq=1 Ack=145 Win=483 Len=0

Destination Port: 65408	0000	dc 21 5c a8 d5 9a 00 eb d8 31 88 a0 00 00 45 00	...1...1 \.....E
[Stream index: 5]	0010	00 34 00 00 40 00 24 06 1f e8 80 77 f5 8c c0 a8	...@\$......W
[Conversation completeness: Incomplete, DATA (15)]	0020	00 58 00 50 ff 80 9b 01 18 f7 3b 52 b8 a0 9b 01	...P;R.....P
[TCP Segment Len: 0]	0030	72 01 5e 58 00 00 02 04 05 b4 01 01 04 02 01 03	...X.....P
Sequence Number: 0 (relative sequence number)	0040	03 07	...
Sequence Number (raw): 2600540407			
[Next Sequence Number: 1 (relative sequence number)]			
Acknowledgment Number: 1 (relative ack number)			
Acknowledgment number (raw): 995276960			
1800 = Header Length: 32 bytes (8)			
Flags: 0x012 (SYN, ACK)			
0000 = Reserved: Not set			
...0 = Accurate ECH: Not set			
...0 = Congestion Window Reduced: Not set			
...0 = ECH-Echo: Not set			
...0 = Urgent: Not set			
...1 = Acknowledgment: Set			
...0 = Push: Not set			
...0 = Reset: Not set			
...1 = Syn: Set			
...0 = Fin: Not set			
[TCP Flags:A-S-]			
Window: 29200			
[Calculated window size: 29200]			
Checksum: 0x4e5b [unverified]			
[Checksum Status: Unverified]			
Urgent Pointer: 0			
Options: (12 bytes), Maximum segment size, No-Operation (NOP), No-Operation (NOP), SACK permitted, No-Operation			