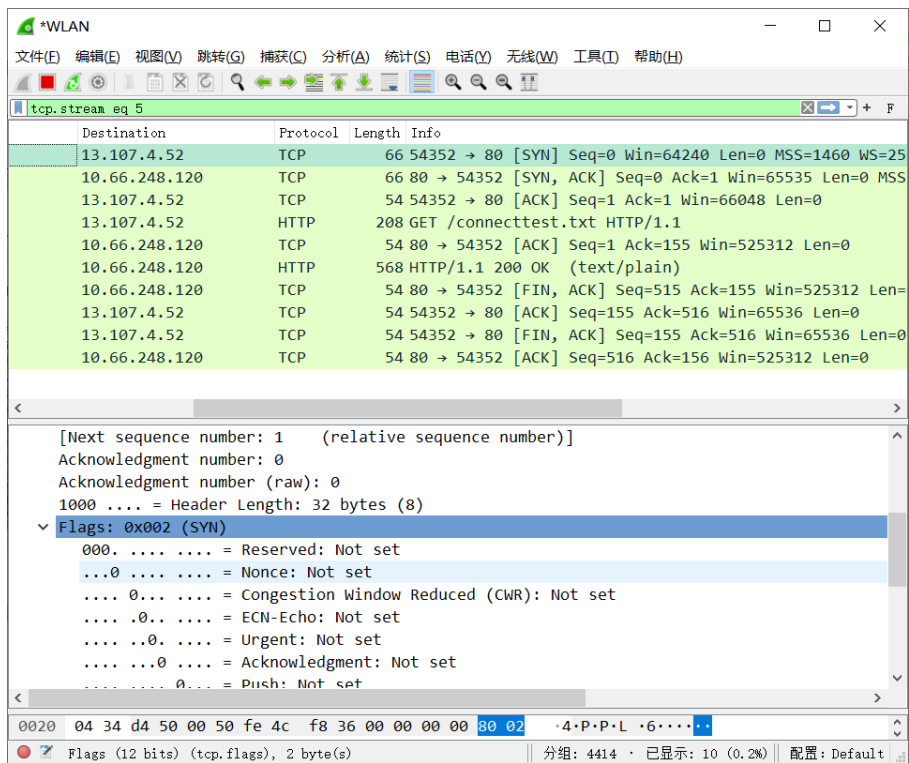


2) 三次握手的第一个数据包，标志位 SYN 置位，初始序列值设置为 0.



*WLAN

文件(F) 编辑(E) 视图(V) 跳转(G) 捕获(C) 分析(A) 统计(S) 电话(Y) 无线(W) 工具(I) 帮助(H)

tcp.stream eq 5

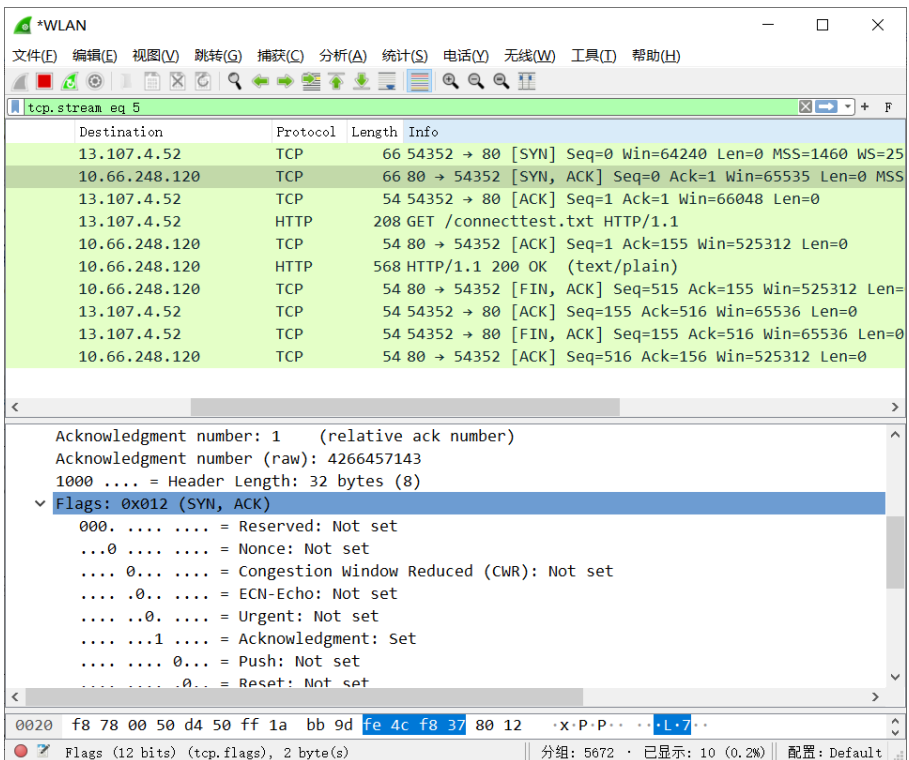
Destination	Protocol	Length	Info
13.107.4.52	TCP	66	54352 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 WS=25
10.66.248.120	TCP	66	80 → 54352 [SYN, ACK] Seq=0 Ack=1 Win=65535 Len=0 MSS=
13.107.4.52	TCP	54	54352 → 80 [ACK] Seq=1 Ack=1 Win=66048 Len=0
13.107.4.52	HTTP	208	GET /connecttest.txt HTTP/1.1
10.66.248.120	TCP	54	80 → 54352 [ACK] Seq=1 Ack=155 Win=525312 Len=0
10.66.248.120	HTTP	568	HTTP/1.1 200 OK (text/plain)
10.66.248.120	TCP	54	80 → 54352 [FIN, ACK] Seq=515 Ack=155 Win=525312 Len=
13.107.4.52	TCP	54	54352 → 80 [ACK] Seq=155 Ack=516 Win=65536 Len=0
13.107.4.52	TCP	54	54352 → 80 [FIN, ACK] Seq=155 Ack=516 Win=65536 Len=0
10.66.248.120	TCP	54	80 → 54352 [ACK] Seq=516 Ack=156 Win=525312 Len=0

[Next sequence number: 1 (relative sequence number)]
Acknowledgment number: 0
Acknowledgment number (raw): 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
... .0.. = ECN-Echo: Not set
... ..0. = Urgent: Not set
... ...0 = Acknowledgment: Not set
...0... = Push: Not set

0020 04 34 d4 50 00 50 fe 4c f8 36 00 00 00 00 80 02 .4.P.P.L .6....

Flags (12 bits) (tcp.flags), 2 byte(s) 分组: 4414 · 已显示: 10 (0.2%) 配置: Default

3) 三次握手的第二个数据包，SYN和 ACK 置位，Acknowledgment number 为 seq+1=1



*WLAN

文件(F) 编辑(E) 视图(V) 跳转(G) 捕获(C) 分析(A) 统计(S) 电话(Y) 无线(W) 工具(I) 帮助(H)

tcp.stream eq 5

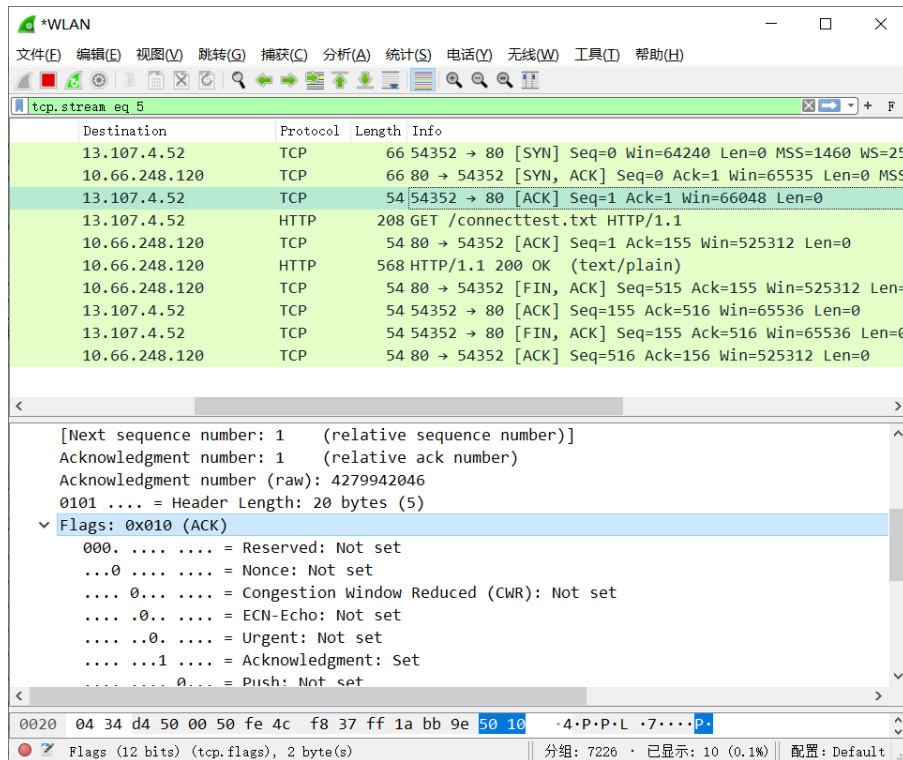
Destination	Protocol	Length	Info
13.107.4.52	TCP	66	54352 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 WS=25
10.66.248.120	TCP	66	80 → 54352 [SYN, ACK] Seq=0 Ack=1 Win=65535 Len=0 MSS=
13.107.4.52	TCP	54	54352 → 80 [ACK] Seq=1 Ack=1 Win=66048 Len=0
13.107.4.52	HTTP	208	GET /connecttest.txt HTTP/1.1
10.66.248.120	TCP	54	80 → 54352 [ACK] Seq=1 Ack=155 Win=525312 Len=0
10.66.248.120	HTTP	568	HTTP/1.1 200 OK (text/plain)
10.66.248.120	TCP	54	80 → 54352 [FIN, ACK] Seq=515 Ack=155 Win=525312 Len=
13.107.4.52	TCP	54	54352 → 80 [ACK] Seq=155 Ack=516 Win=65536 Len=0
13.107.4.52	TCP	54	54352 → 80 [FIN, ACK] Seq=155 Ack=516 Win=65536 Len=0
10.66.248.120	TCP	54	80 → 54352 [ACK] Seq=516 Ack=156 Win=525312 Len=0

Acknowledgment number: 1 (relative ack number)
Acknowledgment number (raw): 4266457143
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
... ..0. = Urgent: Not set
... ...1 = Acknowledgment: Set
...0... = Push: Not set
...0... = Reset: Not set

0020 f8 78 00 50 d4 50 ff 1a bb 9d fe 4c f8 37 80 12 .X.P.P.. .L.7..

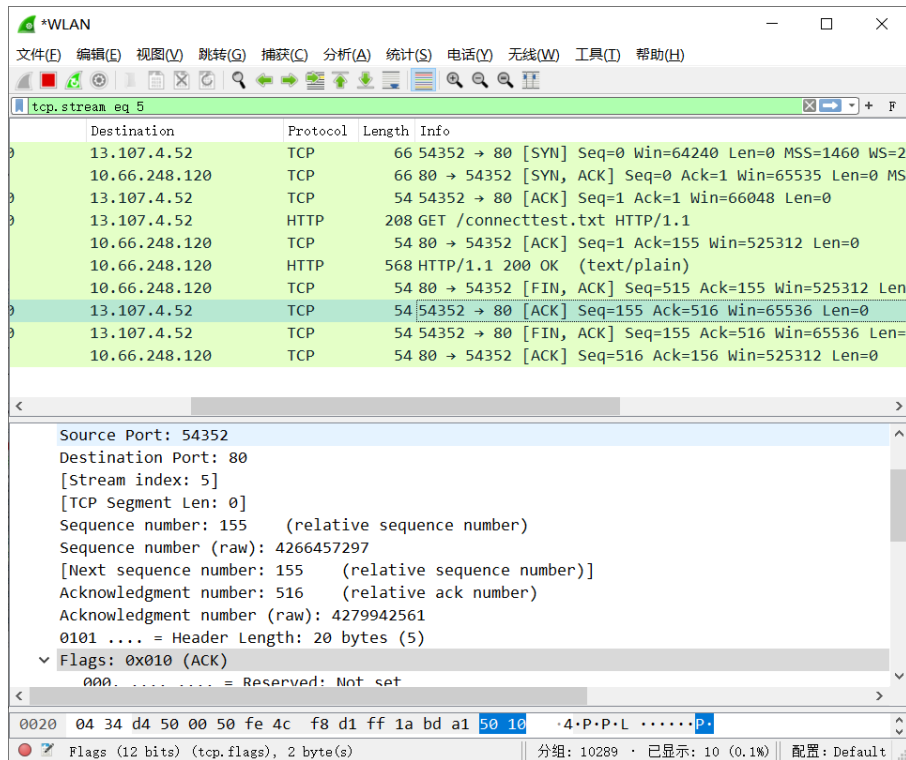
Flags (12 bits) (tcp.flags), 2 byte(s) 分组: 5672 · 已显示: 10 (0.2%) 配置: Default

4) TCP 三次握手的第三个数据包，标志位 ACK 置位，seq+1.



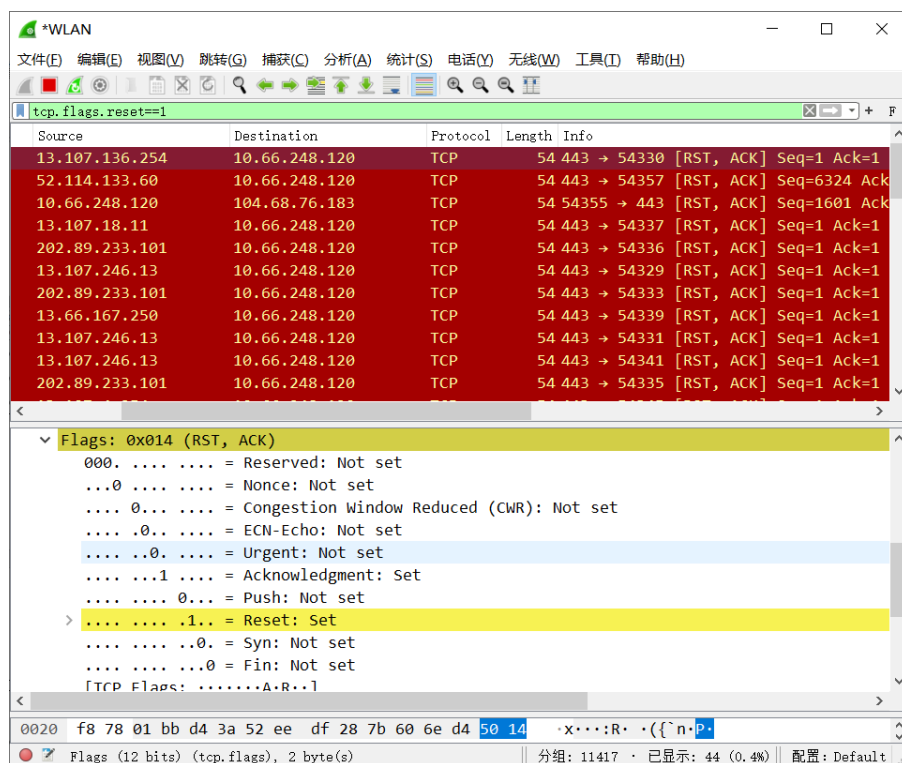
二、TCP 的终止

- 1) 过滤标志位 Fin 置位的包。服务器向客户机发送一个 Fin 包，标志位 ACK 和 FIN 置位，客户机也很快发送一个确认包，标志为 ACK 置位，ack 为 Fin 包的 seq+1.



三、TCP 连接的重置。

用 wireshark 捕获 tcp 的重置包。此时标志位的 rst 和 ack 置位。



实验总结（遇到的问题及解决办法、体会）：
大概明白了 TCP 协议三次握手和标志位的运用

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实验记录人：（签名）张楷

实验执笔人：（签名）张楷

报告协助人：（签名）张楷

小组成员签名：（签名）张楷

验收人：

成绩评定：