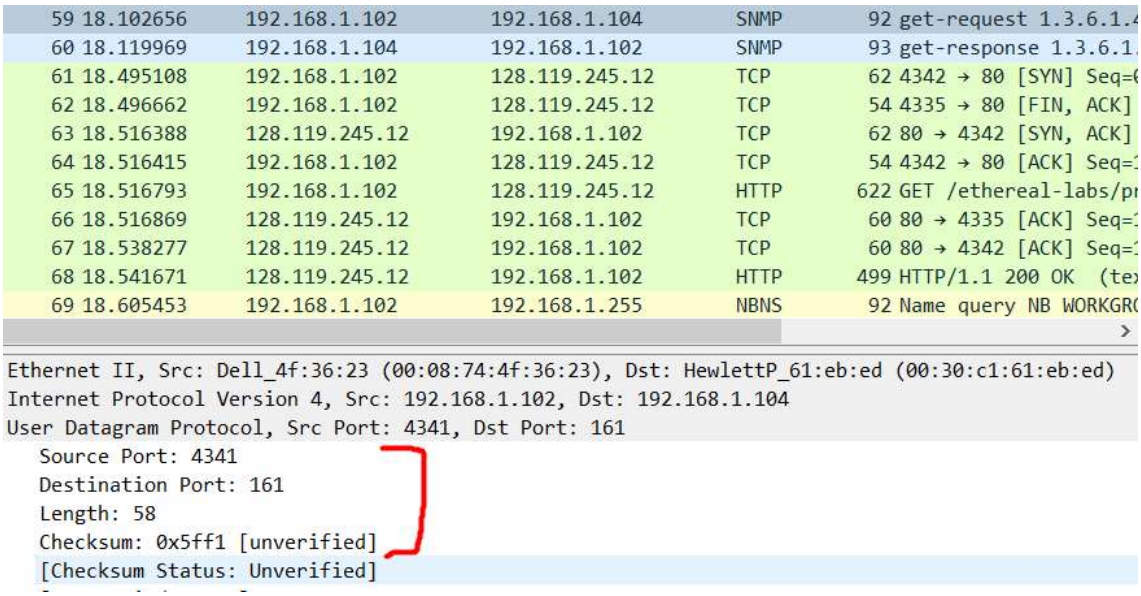
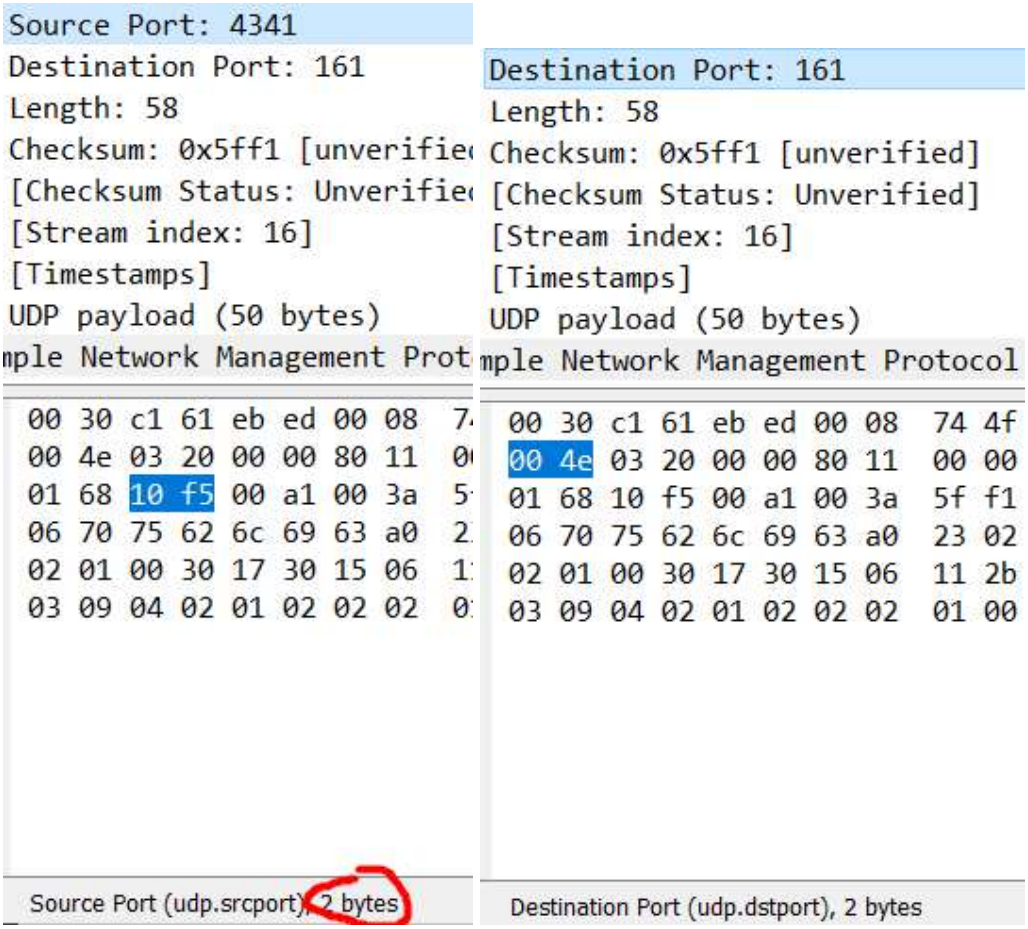
1. 4 fields



The fields have same name as shown in red

2. Each of the lengths is 2 bytes



```
Length: 58
Checksum: 0x5ff1 [unverified]
[Checksum Status: Unverified]
[Stream index: 16]
[Timestamps]
UDP payload (50 bytes)
mple Network Management Protoco
```

```
00 30 c1 61 eb ed 00 08  74 4
00 4e 03 20 00 00 80 11  00 0
01 68 10 f5 00 a1 00 3a  5f f
06 70 75 62 6c 69 63 a0  23 0
02 01 00 30 17 30 15 06  11 2
03 09 04 02 01 02 02 02  01 0
```

Length (udp.length), 2 bytes

```
Checksum: 0x5ff1 [unverified]
[Checksum Status: Unverified]
[Stream index: 16]
[Timestamps]
UDP payload (50 bytes)
mple Network Management Protocol
```

```
00 30 c1 61 eb ed 00 08  74 4f 36 23 08 00 45 00    ·0·a···· t
00 4e 03 20 00 00 80 11  00 00 c0 a8 01 66 c0 a8    ·N· ···· ·
01 68 10 f5 00 a1 00 3a  5f f1 30 30 02 01 00 04    ·h·····: 
06 70 75 62 6c 69 63 a0  23 02 02 19 01 02 01 00    ·public· #
02 01 00 30 17 30 15 06  11 2b 06 01 04 01 0b 02    ···0·0·· ·
03 09 04 02 01 02 02 02  01 00 05 00                ·····
```

Details at: https://www.wireshark.org/docs...hAdvChecksums.html (udp.checksum), 2 bytes P

3. 8 bytes UDP packet header+50 bytes application layer payload=length of packet (58 bytes)

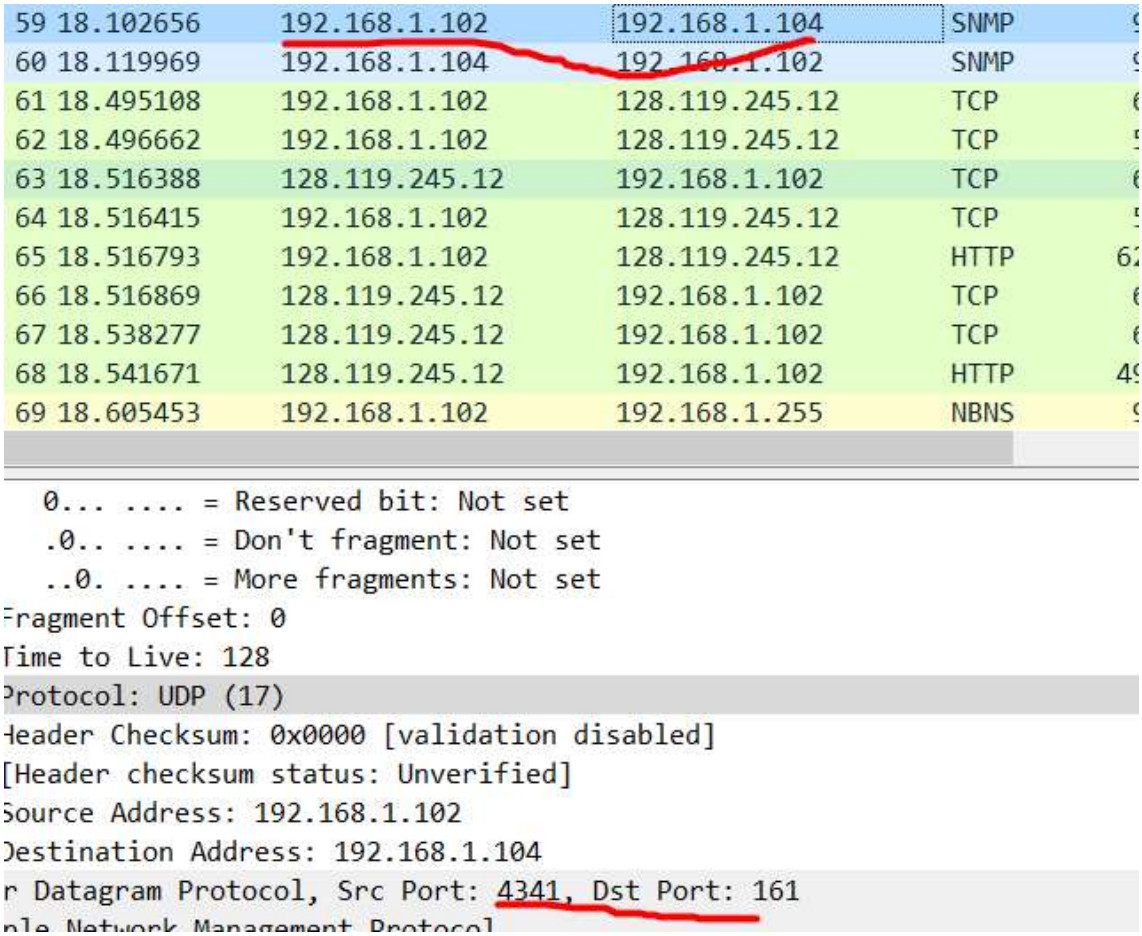
```
Ethernet II, Src: Dell_4f:36:23 (00:08:74:4f:36:23), Dst: HewlettP_61:eb:ed (
Internet Protocol Version 4, Src: 192.168.1.102, Dst: 192.168.1.104
User Datagram Protocol, Src Port: 4341, Dst Port: 161
   Source Port: 4341
   Destination Port: 161
   Length: 58
   Checksum: 0x5ff1 [unverified]
   [Checksum Status: Unverified]
   [Stream index: 16]
 > [Timestamps]
   UDP payload (50 bytes)
Simple Network Management Protocol
```

4. The maximum number of bytes that can be included in a UDP payload is 2^16 – 1 less the header bytes. This gives 65535 – 8 = 65527 bytes
5. The largest possible source port number is 2^16 – 1 = 65535.
6. Protocol no. in decimal and hex are 17 and 11 respectively.

```
Flags: 0x00
   0... .... = Reserved bit: Not set
   .0.. .... = Don't fragment: Not set
   ..0. .... = More fragments: Not set
Fragment Offset: 0
Time to Live: 128
Protocol: UDP (17)
Header Checksum: 0x0000 [validation disabled]
[Header checksum status: Unverified]
```

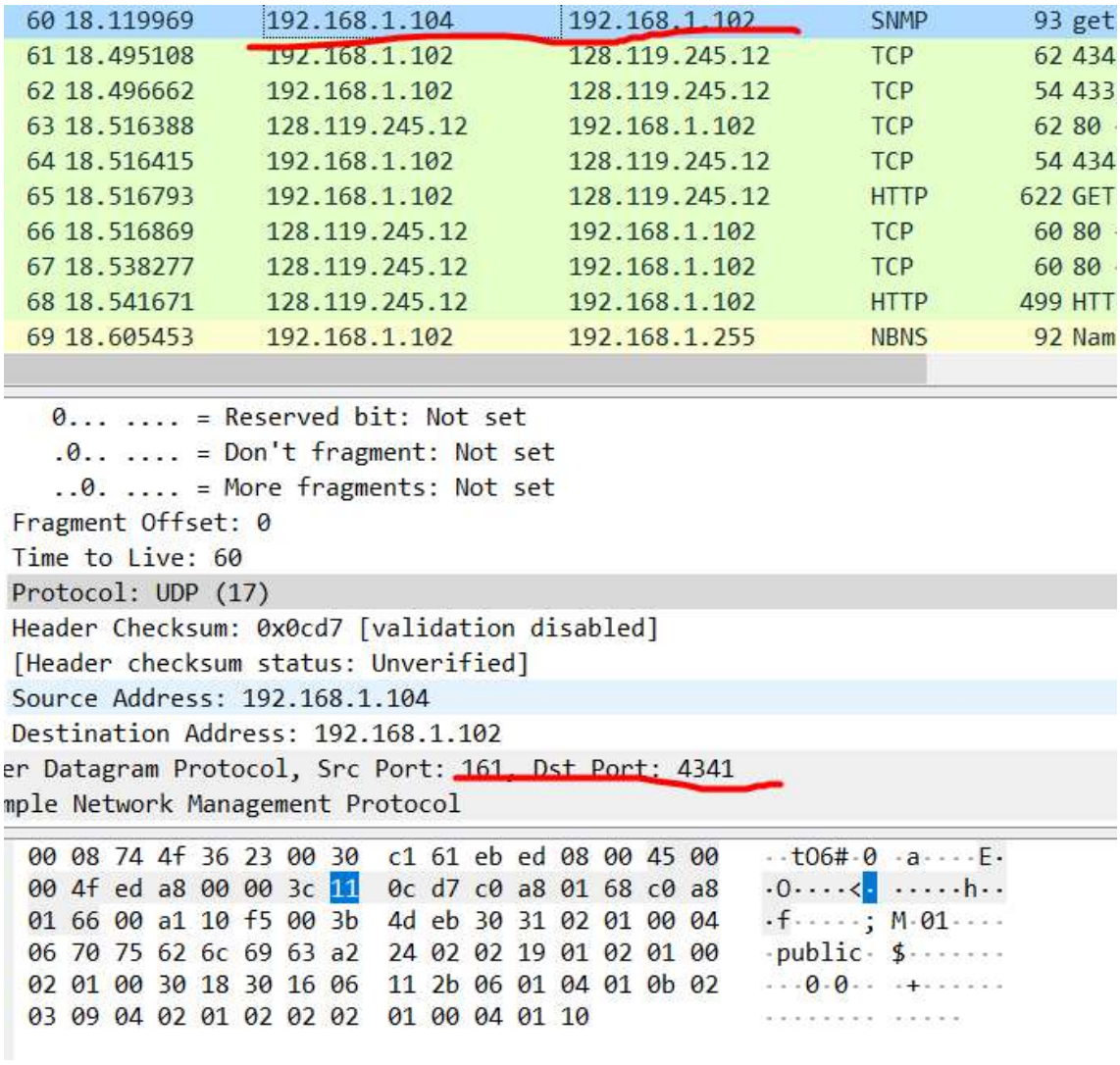
```
00 30 c1 61 eb ed 00 08  74 4f 36 23 08 00 45 00
00 4e 03 20 00 00 80 11  00 00 c0 a8 01 66 c0 a8
01 68 10 f5 00 a1 00 3a  5f f1 30 30 02 01 00 04
06 70 75 62 6c 69 63 a0  23 02 02 19 01 02 01 00
02 01 00 30 17 30 15 06  11 2b 06 01 04 01 0b 02
03 09 04 02 01 02 02 02  01 00 05 00
```

7. The source port number from the source IP sends the request packet to the destination IP's destination port number. During the sending of a response, the source IP that sent the request packet becomes the destination and it's source port becomes the destination port. The response sender's IP and port number turns to the source.



59 18.102656	192.168.1.102	192.168.1.104	SNMP	9
60 18.119969	192.168.1.104	192.168.1.102	SNMP	9
61 18.495108	192.168.1.102	128.119.245.12	TCP	6
62 18.496662	192.168.1.102	128.119.245.12	TCP	5
63 18.516388	128.119.245.12	192.168.1.102	TCP	6
64 18.516415	192.168.1.102	128.119.245.12	TCP	5
65 18.516793	192.168.1.102	128.119.245.12	HTTP	62
66 18.516869	128.119.245.12	192.168.1.102	TCP	6
67 18.538277	128.119.245.12	192.168.1.102	TCP	6
68 18.541671	128.119.245.12	192.168.1.102	HTTP	49
69 18.605453	192.168.1.102	192.168.1.255	NBNS	9

```
   0... .... = Reserved bit: Not set
   .0.. .... = Don't fragment: Not set
   ..0. .... = More fragments: Not set
Fragment Offset: 0
Time to Live: 128
Protocol: UDP (17)
Header Checksum: 0x0000 [validation disabled]
[Header checksum status: Unverified]
Source Address: 192.168.1.102
Destination Address: 192.168.1.104
r Datagram Protocol, Src Port: 4341, Dst Port: 161
ple Network Management Protocol
```



```
60 18.119969    192.168.1.104    192.168.1.102    SNMP     93 get
61 18.495108    192.168.1.102    128.119.245.12   TCP      62 434
62 18.496662    192.168.1.102    128.119.245.12   TCP      54 433
63 18.516388    128.119.245.12   192.168.1.102    TCP      62 80
64 18.516415    192.168.1.102    128.119.245.12   TCP      54 434
65 18.516793    192.168.1.102    128.119.245.12   HTTP    622 GET
66 18.516869    128.119.245.12   192.168.1.102    TCP      60 80
67 18.538277    128.119.245.12   192.168.1.102    TCP      60 80
68 18.541671    128.119.245.12   192.168.1.102    HTTP    499 HTT
69 18.605453    192.168.1.102    192.168.1.255    NBNS     92 Nam

   0... .... = Reserved bit: Not set
   .0.. .... = Don't fragment: Not set
   ..0. .... = More fragments: Not set
Fragment Offset: 0
Time to Live: 60
Protocol: UDP (17)
Header Checksum: 0x0cd7 [validation disabled]
[Header checksum status: Unverified]
Source Address: 192.168.1.104
Destination Address: 192.168.1.102
er Datagram Protocol, Src Port: 161, Dst Port: 4341
mple Network Management Protocol

00 08 74 4f 36 23 00 30  c1 61 eb ed 08 00 45 00   ··tO6#·0 ·a····E·
00 4f ed a8 00 00 3c 11  0c d7 c0 a8 01 68 c0 a8   ·O····<· ·····h··
01 66 00 a1 10 f5 00 3b  4d eb 30 31 02 01 00 04   ·f·····; M·01····
06 70 75 62 6c 69 63 a2  24 02 02 19 01 02 01 00   ·public· $·······
02 01 00 30 18 30 16 06  11 2b 06 01 04 01 0b 02   ···0·0·· ·+······
03 09 04 02 01 02 02 02  01 00 04 01 10            ········ ·····
```