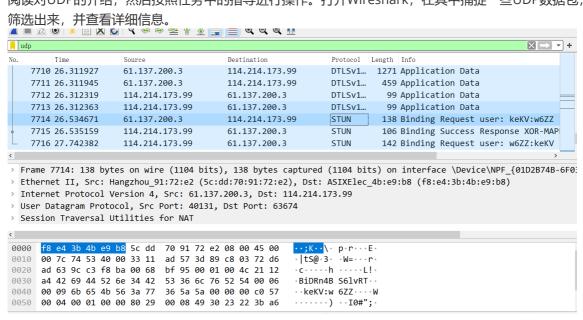
实验四

Wireshark Lab: UDP

阅读对UDP的介绍,然后按照任务中的指导进行操作。打开Wireshark,在其中捕捉一些UDP数据包,



回答问题:

```
User Datagram Protocol, Src Port: 40131, Dst Port: 63674
  Source Port: 40131
  Destination Port: 63674
  Length: 104
   Checksum: 0xbf95 [unverified]
  [Checksum Status: Unverified]
   [Stream index: 22]
> [Timestamps]
   UDP payload (96 bytes)
Session Traversal Utilities for NAT
```

一共4个字段,为Source Port(源端口号),Destination Port(目的端口号),Length(长度), Checksum(校验和)

- 2. 同1, 是8byte
- 3. Length的长度是UDP报文的字节数
- 4. 可以根据Length计算得出,Length字段2byte,所以UDP负载为 $2^{16}-8=65528$ 个字节
- 5. 类似的,端口号从0开始,所以最大端口号应为 $2^{16}-1=65535$

```
6.
                                   > Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)
                                     Total Length: 124
                                     Identification: 0x7453 (29779)
                                   > Flags: 0x40, Don't fragment
                                     Fragment Offset: 0
                                     Time to Live: 51
                                     Protocol: UDP (17)
                                     Header Checksum: 0xad57 [validation disabled]
                                     [Header checksum status: Unverified]
                                     Source Address: 61.137.200.3
                                     Destination Address: 114.214.173.99
                                  User Datagram Protocol, Src Port: 40131, Dst Port: 63674
```

由图知协议号十进制为17, 十六进制就是0x11

7. 两者的源端口号和目的端口号是互换的

//11 20.311943	01.13/.200.3	114.214.1/3.99
7712 26.312319	114.214.173.99	61.137.200.3
7713 26.312363	114.214.173.99	61.137.200.3
7714 26.534671	61.137.200.3	114.214.173.99
7715 26.535159	114.214.173.99	61.137.200.3
7716 27.742382	114.214.173.99	61.137.200.3

- > Internet Protocol Version 4, Src: 114.214.173.99, Dst: 61.137.200.3
- v User Datagram Protocol, Src Port: 63674, Dst Port: 40131

Source Port: 63674 Destination Port: 40131

Length: 65

Checksum: 0x2619 [unverified] [Checksum Status: Unverified]

[Stream index: 22] > [Timestamps]

UDP payload (57 bytes)

	7710	26.311927	61.137.200.3	114.214.173.99	DT
	7711	26.311945	61.137.200.3	114.214.173.99	DT
	7712	26.312319	114.214.173.99	61.137.200.3	DT
	7713	26.312363	114.214.173.99	61.137.200.3	DT
	7714	26.534671	61.137.200.3	114.214.173.99	ST
+	7715	26.535159	114.214.173.99	61.137.200.3	ST
L	7716	27.742382	114.214.173.99	61.137.200.3	ST

 \rightarrow Frame 7714: 138 bytes on wire (1104 bits), 138 bytes captured (1104 bits)

- > Ethernet II, Src: Hangzhou_91:72:e2 (Sc:dd:70:91:72:e2), Dst: ASIXElec_4b:
 > Internet Protocol Version 4, Src: 61.137.200.3, Dst: 114.214.173.99

 User Datagram Protocol, Src Port: 40131, Dst Port: 63674

 Source Port: 40131

Destination Port: 63674

Length: 104

Checksum: 0xbf95 [unverified] [Checksum Status: Unverified]

[Stream index: 22]

> [Timestamps]