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CST 311
Lab 4
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No.     Time               Source                Destination           Protocol Length Info
   7980 18:09:59.997579000 10.0.0.10             10.0.0.1              DNS      79     Standard query
0x71ec  A joshwagnermusic.com

Frame 7980: 79 bytes on wire (632 bits), 79 bytes captured (632 bits) on interface 0
Ethernet II, Src: LiteonTe_a1:7d:de (ac:b5:7d:a1:7d:de), Dst: Netgear_c7:80:e8 (00:22:3f:c7:80:e8)
Internet Protocol Version 4, Src: 10.0.0.10 (10.0.0.10), Dst: 10.0.0.1 (10.0.0.1)
User Datagram Protocol, Src Port: 62599 (62599), Dst Port: 53 (53)
    Source Port: 62599 (62599)
    Destination Port: 53 (53)
    Length: 45
    Checksum: 0x06a9 [validation disabled]
    [Stream index: 77]
Domain Name System (query)

No.     Time               Source                Destination           Protocol Length Info
   8333 18:10:00.170317000 10.0.0.1              10.0.0.10             DNS      95     Standard query
response 0x71ec  A 66.96.147.120

Frame 8333: 95 bytes on wire (760 bits), 95 bytes captured (760 bits) on interface 0
Ethernet II, Src: Netgear_c7:80:e8 (00:22:3f:c7:80:e8), Dst: LiteonTe_a1:7d:de (ac:b5:7d:a1:7d:de)
Internet Protocol Version 4, Src: 10.0.0.1 (10.0.0.1), Dst: 10.0.0.10 (10.0.0.10)
User Datagram Protocol, Src Port: 53 (53), Dst Port: 62599 (62599)
    Source Port: 53 (53)
    Destination Port: 62599 (62599)
    Length: 61
    Checksum: 0x8a63 [validation disabled]
    [Stream index: 77]
Domain Name System (response)
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1. 4; source port, destination port, length, checksum
2. 2 bytes each
3. # of bytes in the UDP segment including the header
4. (2^{16}- 1) - 8 byte header=65527 bytes, as that's the biggest length that can be represented in a 2 byte length
5. 2^{16}-1=65535 bytes, similarly this is the biggest port # number that can be represented in a 2 byte reference
6. 17; 11 in hex
7. The source and destination ports are reversed in the request and response.