Assignment 1



there were no packets at first as no data was being sent

departmental network

No.	Time	Source	Destination	Protocol	Length Info
	355 3.519534378	10.200.16.143	239.255.255.250	UDP	698 54479 → 3702 Len=656
	356 3.520662770	10.200.16.229	255.255.255.255	GVCP	60 > DISCOVERY_CMD
	357 3.532023069	10.200.17.201	255.255.255.255	GVCP	60 > DISCOVERY_CMD
	358 3.537590921	10.200.16.29	255.255.255.255	GVCP	60 > DISCOVERY_CMD
	359 3.537591145	10.200.16.29	255.255.255.255	GVCP	60 > DISCOVERY_CMD
	360 3.537591225	10.200.16.29	255.255.255.255	GVCP	60 > DISCOVERY_CMD
	361 3.538782985	10.200.16.27	255.255.255.255	GVCP	60 > DISCOVERY_CMD
	362 3.551766973	10.200.17.118	239.255.255.250	SSDP	179 M-SEARCH * HTTP/1.1
	363 3.557391015	10.200.16.135	224.0.0.251	MDNS	79 Standard query 0x0000 PTR _ni-slsctcp.local, "QM" quest
	364 3.575555284	10.200.16.120	255.255.255.255	GVCP	60 > DISCOVERY_CMD
	365 3.599122025	10.200.17.191	224.0.0.251	MDNS	79 Standard query 0x0000 PTR _ni-slsctcp.local, "QM" quest
	366 3.622183655	10.200.16.138	255.255.255.255	GVCP	60 > DISCOVERY_CMD
	367 3.643570780	10.200.17.4	224.0.0.251	MDNS	79 Standard query 0x0000 PTR _ni-slsctcp.local, "QM" quest
	368 3.644871356	10.200.17.184	255.255.255.255	GVCP	60 > DISCOVERY_CMD
	369 3.647867596	10.200.17.175	255.255.255.255	GVCP	60 > DISCOVERY_CMD
	070 0 004050400	40 000 47 404	055 055 055 055	OVOD	CO > DICCOVEDY OND

- Frame 1: 60 bytes on wire (480 bits), 60 bytes captured (480 bits) on interface enp0s31f6, id 0

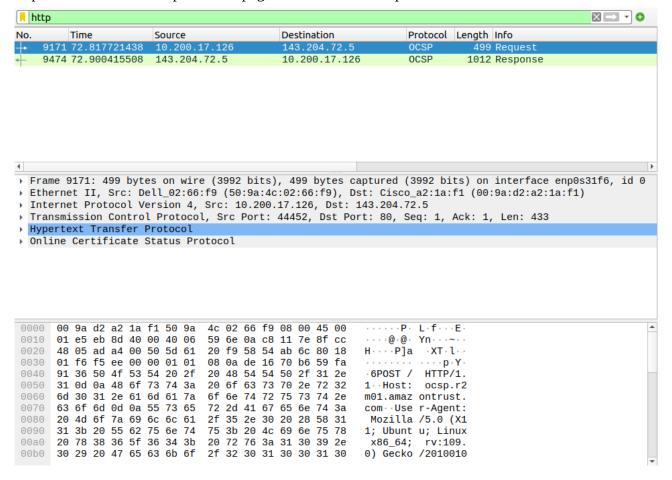
 Ethernet II, Src: Dell_02:e3:74 (50:9a:4c:02:e3:74), Dst: Broadcast (ff:ff:ff:ff:ff:ff)

 Internet Protocol Version 4, Src: 10.200.16.131, Dst: 255.255.255.255

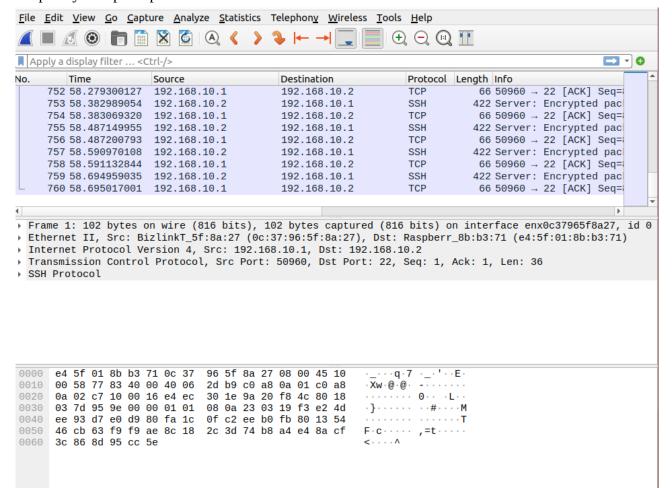
 User Datagram Protocol, Src Port: 49965, Dst Port: 3956

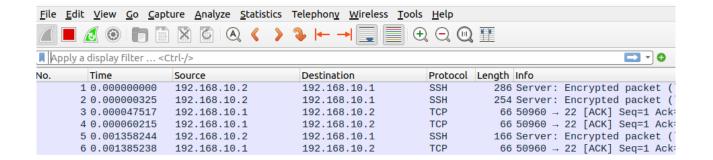
 GigE Vision Control Protocol

http network – I had to open a new page on the internet for packets to be sent.

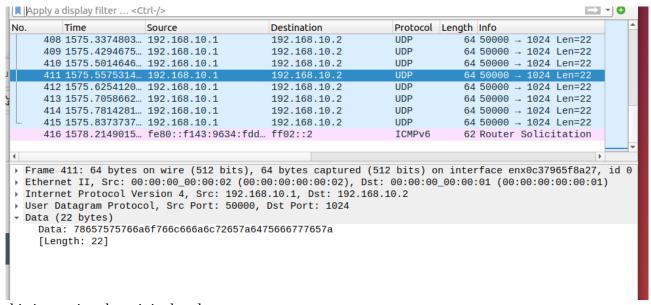


Raspberry Pi tcpdump





sending Traffic



this is running the original code you could use a UDP filter the length o data is 22 bytes but the packet itself is 64 bytes protocol used is UDP

edited code

```
1 #!/usr/bin/python
3 from scapy.all import Ether, IP, sendp, get_if_hwaddr, get_if_list, TCP, Raw, UDP
 4 import sys
5 import random, string
8 def randomword(length):
      return ''.join(random.choice(string.ascii lowercase) for i in range(length))
9
10
11 def send_random_traffic(num_packets, interface, src_ip, dst_ip):
12
      dst_mac = "00:00:00:00:00:01
      src_mac= "CA:FE:CA:FE:CA:FE"
13
      total_pkts = 0
14
15
      port = 1024
16
      for i in range(num_packets):
               data = randomword(458)
17
               p = Ether(dst=dst_mac,src=src_mac)/IP(dst=dst_ip,src=src_ip)
18
               p = p/TCP(sport= 5555, dport=port)/Raw(load=data)
19
20
               sendp(p, iface = interface, inter = 0.01)
               # If you want to see the contents of the packet, uncomment the line below
21
22
               # print(p.show())
23
               total_pkts += 1
      print("Sent %s packets in total" % total_pkts)
24
25
26 if _
       name_
             _ == '__main__':
27
      if len(sys.argv) < 5:</pre>
          print("Usage: python send.py number_of_packets interface_name src_ip_address
28
  dst_ip_address")
29
          sys.exit(1)
30
      else:
31
          num_packets = sys.argv[1]
          interface = sys.argv[2]
32
33
          src ip = sys.arqv[3]
34
          dst ip = sys.argv[4]
35
          send_random_traffic(int(num_packets), interface, src_ip, dst_ip)
```

result

```
□ - 0
Apply a display filter ... <Ctrl-/>
No.
            Time
                                Source
                                                              Destination
                                                                                           Protocol Length Info
        393 1426.7648103...
                                192.168.10.1
                                                              192.168.10.2
                                                                                                           512 [TCP
                                                                                                          512 [TCP Retransmission]
       394 1426.8325686... 192.168.10.1
395 1426.9087036... 192.168.10.1
                                                                                                                                              [TCF
       396 1426.9727826... 192.168.10.1
397 1427.0604651... 192.168.10.1
                                                                                                                                              [TCP
       398 1427.1322829... 192.168.10.1
399 1427.2130954... 192.168.10.1
                                                                                                                                              [ТСР
        401 1427.3442848...
Frame 1: 64 bytes on wire (512 bits), 64 bytes captured (512 bits) on interface enx0c37965f8a27, id 0
   Ethernet II, Src: 00:00:00_00:00:02 (00:00:00:00:00:02), Dst: 00:00:00_00:01 (00:00:00:00:00:01)
  Internet Protocol Version 4, Src: 192.168.10.1, Dst: 192.168.10.2
   User Datagram Protocol, Src Port: 50000, Dst Port: 1024
   Data (22 bytes)
                                            00 00 00 02 08 00 45 00
 0000
                      00 00 01 00 00
                                                                                                 . . . . E
         00 32 00 01 00 00 40 11
                                            e5 66 c0 a8 0a 01 c0 a8
                                                                                 ·2····@· ·f···
                                                                                    . . P . .
         0a 02 c3 50 04 00 00 1e
                                            d6 6b 70 6b 79 69 69 64
                                                                                            · · kpkyiid
         75 7a 65 66 76 61 77 62
                                            6d 72 6d 72 71 75 64 69
                                                                                 uzefvawb mrmrqudi
```