## Readme

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To compile the files run - make

IPv4

To run this file run - ./v4

Wireshark of command "sudo ./v4":

```
8002 1.473186114 225.203.172.196 127.0.0.1 TCP 56 1234 443 RST] Seq=1 Win=5840 Len=0 8004 1.473220463 215.122.156.139 127.0.0.1 TCP 56 1234 - 443 RST] Seq=1 Win=5840 Len=0 8004 1.473256092 207.202.156.14 127.0.0.1 TCP 56 1234 - 443 RST] Seq=1 Win=5840 Len=0 8005 1.473256092 207.202.156.14 127.0.0.1 TCP 56 1234 - 443 RST] Seq=1 Win=5840 Len=0 8007 1.473256092 54.135.59.60 127.0.0.1 TCP 56 1234 - 443 RST] Seq=1 Win=5840 Len=0 8007 1.473326256 15.210.196.9 127.0.0.1 TCP 56 1234 - 443 RST] Seq=1 Win=5840 Len=0 8009 1.473350433 41.4.1.0 127.0.0.1 TCP 56 1234 - 443 RST] Seq=1 Win=5840 Len=0 8009 1.473375639 208.173.206.167 127.0.0.1 TCP 56 1234 - 443 RST] Seq=1 Win=5840 Len=0 8011 1.473429034 91.07.50.181 127.0.0.1 TCP 56 1234 - 443 RST] Seq=1 Win=5840 Len=0 8011 1.473429034 92.07.32.81.98 127.0.0.1 TCP 56 1234 - 443 RST] Seq=1 Win=5840 Len=0 8011 1.473479034 92.47.83.28.198 127.0.0.1 TCP 56 1234 - 443 RST] Seq=1 Win=5840 Len=0 8011 1.473479034 92.47.83.28.198 127.0.0.1 TCP 56 1234 - 443 RST] Seq=1 Win=5840 Len=0 8013 1.473479104 29.184.212.83 127.0.0.1 TCP 56 1234 - 443 RST] Seq=1 Win=5840 Len=0 8014 1.47550355 64.15.143.194 127.0.0.1 TCP 56 1234 - 443 RST] Seq=1 Win=5840 Len=0 8014 1.47550355 64.15.143.194 127.0.0.1 TCP 56 1234 - 443 RST] Seq=1 Win=5840 Len=0 8014 1.47550355 64.15.143.194 127.0.0.1 TCP 56 1234 - 443 RST] Seq=1 Win=5840 Len=0 8015 1.473529560 255.237.141.240 127.0.0.1 TCP 56 1234 - 443 RST] Seq=1 Win=5840 Len=0 8015 1.47356960 425.255.133.36 127.0.0.1 TCP 56 1234 - 443 RST] Seq=1 Win=5840 Len=0 8015 1.47356960 45.255.133.36 127.0.0.1 TCP 56 1234 - 443 RST] Seq=1 Win=5840 Len=0 8014 1.47550355 41.51 Min=5840 Len=0 8014 1.47356960 45.255.133.36 127.0.0.1 TCP 56 1234 - 443 RST] Seq=1 Win=5840 Len=0 8015 1.47356960 45.255.133.36 127.0.0.1 TCP 56 1234 - 443 RST] Seq=1 Win=5840 Len=0 8021 1.47356960 45.255.133.36 127.0.0.1 TCP 56 1234 - 443 RST] Seq=1 Win=5840 Len=0 8021 1.47356950 45.255.133.36 127.0.0.1 TCP 56 1234 - 443 RST] Seq=1 Win=5840 Len=0 8021 1.47366960 45.255.133.36 127.0.0.1 TCP 56 1234 - 443
```

Wireshark of command "sudo ./v4 -t 1.2.3.4 -p 4235 -r":

```
- 4235 Len=0

- 4235 Len=0

- 4235 Len=0
1655 0.806134998
                                 21.61.6.119
                                                                                                                              44 1234
                                                                     1.2.3.4
1.2.3.4
1.2.3.4
1656 0.806639214
1657 0.807117193
                                70.182.132.141
254.125.50.128
                                                                                                                              44 1234
44 1234
                                                                                                          UDP
1658 0.807501643
                                                                                                                              44 1234
                                238.34.189.232
                                                                                                          UDP
                                                                                                                                           → 4235 Len=0
1659 0.809229414
1660 0.810345051
                                215.164.197.103
168.122.172.201
                                                                     1.2.3.4
                                                                                                                             44 1234
44 1234
                                                                                                                                            → 4235 Len=0
                                                                                                          UDP
                                                                                                                                            - 4235 Len=0
                                                                     1.2.3.4
1.2.3.4
1.2.3.4
1661 0.811448979
1662 0.812693371
                                201.203.92.233
11.40.139.32
                                                                                                          UDP
                                                                                                                              44 1234
                                                                                                                                           → 4235 Len=0
                                                                                                                             44 1234
44 1234
                                                                                                                                               4235 Len=0
1663 0.814006852
                                101.145.151.171
                                                                                                          UDP
                                                                                                                                           - 4235 Len=0
                                                                     1.2.3.4
1.2.3.4
1.2.3.4
1.2.3.4
1.2.3.4
1664 0.815118944
1665 0.815556047
                                71.27.57.70
153.107.198.135
                                                                                                                              44 1234
44 1234
                                                                                                                                            → 4235 Len=0
                                                                                                                                            → 4235 Len=0
                                141.131.111.100
40.52.204.208
175.120.154.120
                                                                                                                             44 1234
44 1234
44 1234
1666 0.815946595
1667 0.816329073
                                                                                                                                           → 4235 Len=0
→ 4235 Len=0
                                                                                                          UDP
1668 0.817795746
                                                                                                                                            → 4235 Len=0
                                                                                                          UDP
                                175.120.154.126
67.246.97.78
30.236.110.132
125.6.47.196
33.104.10.186
211.208.65.96
                                                                     1.2.3.4
1.2.3.4
1.2.3.4
1.2.3.4
1.2.3.4
                                                                                                                             44 1234
44 1234
44 1234
1669 0.818889859
1670 0.819987839
                                                                                                          UDP
UDP
                                                                                                                                            → 4235 Len=0
                                                                                                                                               4235 Len=0
1671 0.822496859
1672 0.824175262
1673 0.825763025
                                                                                                          UDP
                                                                                                                                            - 4235 Len=0
                                                                                                          UDP
                                                                                                                             44 1234
44 1234
                                                                                                                                            → 4235 Len=0
                                                                                                          UDP
                                                                                                                                            - 4235 Len=0
                                                                                                                             44 1234 - 4235 Len=0
44 1234 - 4235 Len=0
44 1234 - 4235 Len=0
44 1234 - 4235 Len=0
                                84.177.197.124
229.145.76.148
                                                                     1.2.3.4
1674 0.826859972
                                                                                                          UDP
1675 0.827960502
                                9.230.12.76
                                                                     1.2.3.4
1676 0.828344482
                                                                                                          UDP
                                9.230.12.76
220.109.155.251
89.9.127.214
15.174.155.49
23.165,235.234
                                                                     1.2.3.4
1.2.3.4
1.2.3.4
1677 0.829098850
1678 0.829523556
                                                                                                          UDP
                                                                                                                             44 1234
44 1234
                                                                                                                                           → 4235 Len=0
→ 4235 Len=0
                                                                                                          UDP
                                                                                                                             44 1234 - 4235 Len=0
44 1234 - 4235 Len=0
1679 0.830733047
                                                                                                          UDP
                                                                                                                              44 1234 → 4235 Len=0
1681 0.832843868
                                118, 45, 75, 202
                                                                     1.2.3.4
                                                                                                          UDP
1682 0.833326284
                                222.16.70.195
                                                                                                                              44 1234 - 4235 Len=0
```

## IPv6

To run this file run - ./v6

## Wireshark of command "sudo ./v6":

```
4612 0.828235071
                     8553:2118:9352:4979... ::1
                                                                  UDP
                                                                                64 1234
                                                                                         443 Len=0
4613 0.828241325
                    5a40:3662:3916:ed6a...
                                                                   UDP
                                                                               64 1234
                                                                                          443 Len=0
4614 0.828247420
                    5be6:7088:d6d7:e1aa...
                                            ::1
                                                                   UDP
                                                                               64 1234
                                                                                          443 Len=0
                    4fa4:9ebe:7024:e9dc...
528f:4115:6dca:63ad...
                                                                   UDP
4615 0.828253536
                                            . . 1
                                                                               64 1234
                                                                                          443 Len=0
                                                                   UDP
                                                                                          443 Len=0
4616 0.828259673
                                                                               64 1234
                                            ::1
4617 0.828265242
                    528f:4115:6dca:63ad...
                                                                   UDP
                                                                               64
                                                                                  1234
                                                                                          443 Len=0
4618 0.828271438
                    ec85:686d:9eaa:3fc6...
                                                                   UDP
                                                                                64 1234
                                                                                          443 Len=0
4619 0.828277487
                     7cc9:7e22:1570:1bc7...
                                                                   UDP
                                                                               64
                                                                                  1234
                                                                                          443 Len=0
4620 0.828283103
                    7cc9:7e22:1570:1bc7...
                                                                   LIDP
                                                                               64 1234
                                                                                          443 Len=0
                                            ::1
                    bed1:21f7:8f65:1fea...
4621 0.828289248
                                            1:1
                                                                   UDP
                                                                               64 1234
                                                                                          443 Len=0
4622 0.828363933
                    bed1:21f7:8f65:1fea...::1
                                                                   UDP
                                                                               64
                                                                                  1234
                                                                                          443 Len=0
                    f65f:265b:f230:b5f9...
4623 0.828373606
                                                                   UDP
                                                                               64 1234
                                                                                          443 Len=0
4624 0.828380513
                    e02b:bdf8:70b2:60f7...
                                                                   UDP
                                                                               64
                                                                                  1234
                                                                                          443 Len=0
4625 0.828386655
                    ee5e:fa73:1a7c:8c53...
                                                                   UDP
                                                                                64 1234
                                                                                          443 Len=0
                                                                                          443 Len=0
4626 0.828392703
                     f2fa:610e:6a31:4c9a...
                                                                   UDP
                                                                               64
                                                                                  1234
                                            ::1
4627 0.828398781
                    c177:1534:75a5:2b05...
                                            : : 1
                                                                   HDP
                                                                               64 1234
                                                                                          443 Len=0
                                                                   UDP
4628 0.828404873
                     fbbf:f98c:88a1:3781...
                                            ::1
                                                                               64
                                                                                  1234
                                                                                          443 Len=0
                                                                   UDP
4629 0.828410933
                    6e23:4c90:d0a6:d994...
                                                                                  1234
                                                                                          443 Len=0
                                            ::1
                                                                               64
                                                                                          443 Len=0
4630 0.828416984
                    c882:b89d:838b:11cf...
                                                                   UDP
                                                                               64 1234
4631 0.828422989
                    bbc3:c720:c037:c341...
                                                                                64
                                                                                  1234
                                                                                          443 Len=0
4632 0.828429020
                    629e:338b:382a:3892... ::1
                                                                   UDP
                                                                               64 1234
                                                                                          443 Len=0
4633 0.828435203
                    b6ce:cd8b:9ef2:fac4...
                                            ::1
                                                                   UDP
                                                                               64
                                                                                  1234
                                                                                          443 Len=0
                                                                   LIDP
4634 0.828441285
                    85fc:b541:bf51:59b7...
                                            ::1
                                                                               64 1234
                                                                                          443 Len=0
4635 0.828447349
                                                                   UDP
                    27ec:2f21:1ad4:2cd5
                                                                                        → 443 Len=0
                                            . . 1
                                                                               64 1234
4636 0.828453433
                     7949:65a8:a363:2085...
                                                                   UDP
                                                                                          443 Len=0
                                                                               64
                                                                                  1234
                                            ::1
                                                                                          443 Len=0
4637 0.828459399
                    6dd4:d4d5:d17a:22d4...
                                                                   UDP
                                                                               64 1234
4638 0.828465285
                    6871:2fa7:21e8:4442.
                                                                   UDP
                                                                                64
                                                                                  1234
                                                                                          443 Len=0
4639 0.828472098
                    9ff3:f6a9:e534:2827... ::1
                                                                   UDP
                                                                               64 1234
                                                                                        → 443 Len=0
```

## Wireshark of command "sudo ./v6 -t 3513:ba5d::e76c -p 5621":

```
3774 2.291064770
                    a88d:ff1b:ffe7:c73e:ea64:a9... 3513:ba5d::e76c
                                                                                     64 1234
                                                                                              + 5621 Len=0
                                                                        UDP
                   b209:1f51:176c:dd60:f6b2:8a..
3775 2.291268478
                                                   3513:ba5d::e760
                                                                         LIDP
                                                                                     64 1234
                                                                                                5621 Len=0
                   c52e:b659:8f76:bf7a:3225:b5...
                                                                                     64 1234
3776 2.291381818
                                                   3513:ba5d::e76c
                                                                         UDP
                                                                                                5621 Len=0
    2.291489063
                    5460:b7d9:b0bf:ba86:cee9:96...
                                                   3513:ba5d::e76c
                                                                                     64 1234
                                                                                                     Len=0
3778 2.291601290
                    15c4:1ae6:beb6:be2a:b458:7c...
                                                   3513:ba5d::e76c
                                                                         UDP
                                                                                     64 1234
                                                                                                5621
                                                                                                     Len=0
3779 2.291801103
                    9c20:6dc0:c3c3:12d3:f7c6:1a...
                                                   3513:ba5d::e76c
                                                                         UDP
                                                                                     64 1234 →
                                                                                                5621 Len=0
                                                                         UDP
                                                                                     64 1234 →
3780 2.291912251
                    d0c6:498b:fc70:f2ec:ff73:8b...
                                                                                                5621
                                                   3513:ba5d::e76c
                                                                                                     Len=0
3781 2.292111635
                    4398:fed2:8e5b:9281:157b:99...
                                                   3513:ba5d::e76c
                                                                         UDP
                                                                                     64 1234
                                                                                                5621
                                                                                                     Len=0
                    243f:48b0:ab69:5898:c57f:81...
                                                                                     64 1234
3782
     2.292224664
                                                   3513:ba5d::e76c
                                                                         UDP
                                                                                                     Len=0
3783 2,292411936
                    ef7e:82be:f473:6746:9d2b:ae...
                                                   3513:ba5d::e76c
                                                                         UDP
                                                                                     64 1234 →
                                                                                                5621 Len=0
3784 2 292525607
                    7813:20ae:f0dd:7787:ac6c:be...
                                                   3513:ba5d::e76c
                                                                         UDP
                                                                                     64 1234
                                                                                                5621
                                                                                                     Len=0
                    bdc3:d9b6:d286:533e:7310:8c...
                                                                         UDP
3785 2.292634655
                                                   3513:ba5d::e76c
                                                                                     64 1234
                                                                                                5621
                                                                                                     Len=0
                                                                                     64 1234
3786 2.292743095
                    552f:a9e7:6fe7:1aaf:aba5:2e...
                                                   3513:ba5d::e76c
                                                                         UDP
                                                                                                5621
                                                                                                     Len=0
                    b1a1:70c3:826b:cecc:9f4b:a6...
                                                                                     64 1234
     2.292851043
                                                   3513:ba5d::e76d
                                                                         UDP
                                                   3513:ba5d::e76c
3788 2.293051181
                    4756:2d9d:8ee6:f3c2:ec8d:da...
                                                                         UDP
                                                                                     64 1234 →
                                                                                                5621
                                                                                                     Len=0
                                                                         UDP
                                                                                     64 1234 -
3789 2 293162294
                   b3f8:e64d:fd8f:a708:f2cc:fc...
                                                   3513:ba5d::e76c
                                                                                                5621
                                                                                                     Len=0
3790 2.293352485
                   a5f6:ae3f:e2ab:519c:5d22:5e...
                                                                         UDP
                                                                                     64 1234 -
                                                   3513:ba5d::e76c
                                                                                                5621
                                                                                                     Len=0
                   cfbe:ef2c:5d90:6f0a:15d5:9a...
                                                                                     64 1234
3791 2.293478811
                                                   3513:ba5d::e76c
                                                                         UDP
                                                                                                5621
                                                                                                     Len=0
3792
    2.293589397
                    47ed:9550:50ef:b47a:ef91:b4...
                                                                         UDP
                                                                                     64 1234
                                                   3513:ba5d::e76c
                                                                                                5621
3793 2.293698267
                    9b04:5c5c:ca93:cdd1:586a:58...
                                                   3513:ba5d::e76c
                                                                         UDP
                                                                                     64 1234 →
                                                                                                5621
                                                                                                     Len=0
                                                                         UDP
3794 2.293931239
                    372c:387a:cffd:944e:9775:bc...
                                                   3513:ba5d::e76c
                                                                                     64 1234 -
                                                                                                5621 Len=0
                    2bec:80a2:d63e:41c1:9af2:5c...
                                                                         UDP
                                                                                     64 1234 →
3795 2.294124351
                                                   3513:ba5d::e76c
                                                                                                5621
                                                                                                     Len=0
                                                                                     64 1234
3796 2.294234691
                    71f9:6fdd:175a:618b:2494:76...
                                                   3513:ba5d::e76c
                                                                         UDP
                                                                                                5621
                                                                                                     Len=0
3797
    2.294344135
                    d282:4fab:cd68:aaed:d896:a3...
                                                   3513:ba5d::e76c
                                                                         UDP
                                                                                     64 1234
                                                                                                5621
3798 2.294463382
                    dbb1:f94b:a411:f326:360b:c7...
                                                   3513:ba5d::e76c
                                                                         UDP
                                                                                     64 1234 -
                                                                                                5621 Len=0
3799 2.294740475
                                                                         UDP
                                                                                     64 1234 → 5621
                    c7c6:b09b:a3b8:62b9:8d44:42
                                                   3513:ba5d::e76c
                                                                                                     Len=0
3800 2.294938323
                    3284:dcf2:e0c8:5718:d319:65...
                                                   3513:ba5d::e76c
                                                                         UDP
                                                                                     64 1234 → 5621 Len=0
```