Министерство цифрового развития, связи и массовых коммуникаций РФ Федеральное государственное бюджетное образовательное учреждение высшего образования

«Сибирский государственный университет телекоммуникаций и информатики» (СибГУТИ)

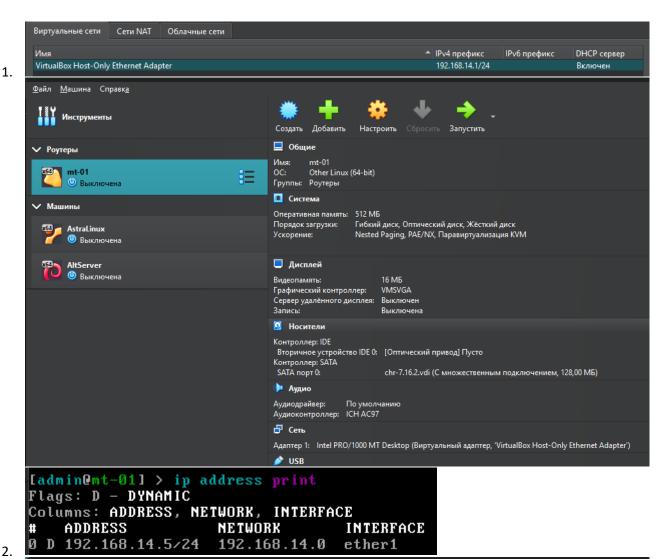
Отчет по практической работе №5

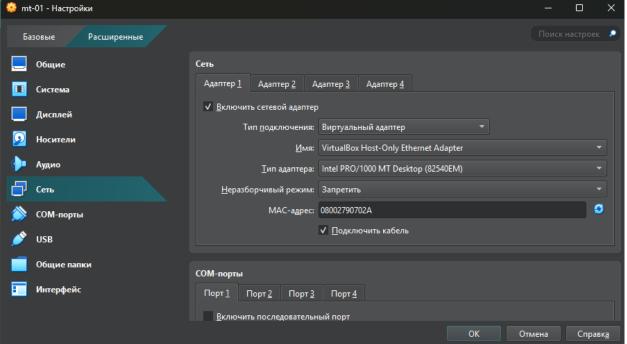
«Адресация узлов в сетях. Статическая и динамическая конфигурация узлов»

Выполнил:

студент группы ИП-314

Жинов Н. А.





```
Файл Машина Вид Ввод Устройства Справка
   : lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
              link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
               inet 127.0.0.1/8 scope host lo
                         valid_lft forever preferred_lft forever
valid_lft forever preferred_lft forever
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP group default qlen 100
              link/ether 08:00:27:c7:4b:5a brd ff:ff:ff:ff:ff:ff
              inet 192.168.14.3/24 brd 192.168.14.255 scope global eth0 valid_lft forever preferred_lft forever
              inet6 fe80::a00:27ff:fec7:4b5a/64 scope link
                         valid_lft forever preferred_lft forever
d1orn@astra:~$ _
      🐌 AltServer [Работает] - Oracle VirtualBox
                                                                                                                                                                                                                                                                                                                                                                Файл Машина Вид Ввод Устройства Справка
[d1orn@alt ~1$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00
               inet 127.0.0.1/8 scope host lo
               ualid_lft forever preferred_lft forever inet6 ::1/128 scope host
valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 100
               link/ether 08:00:27:0c:8b:9b brd ff:ff:ff:ff:ff
               inet 192.168.14.4/24 brd 192.168.14.255 scope global dynamic noprefixroute enp0s3
                          valid_lft 591sec preferred_lft 516sec
               inet6 fe80::a00:27ff:fe0c:8b9b/64 scope link
                         valid_lft forever preferred_lft forever
   d1orn@alt
 Примените фильтр отображения ... < Ctrl-/>
                                                       192.168.14.1
                                                                                                                                                                                                                                  82 Standard query 0x0000 PTR _googlecast._tcp.local, "QM" question
                                                                                                                224.0.0.251
                                                                                                                                                                                                                           102 Standard query 0x00000 PTR googlecast.tcp.local, "QM" question 32 Standard query 0x00000 PTR googlecast.tcp.local, "QM" question
                                                        fe80::b86:c2a8:d150:fcd8 ff02::fb
                                                                                                                                                                                                                                  02 Standard query 0x0000 PTR _googlecast._tcp.local, "QM" question
82 Standard query 0x0000 PTR _googlecast._tcp.local, "QM" question
                                                                                                                                                              MDNS
                                                        192.168.14.1
                                                                                                                                                              MDNS
                                                        fe80::b86:c2a8:d150:fcd8 ff02::fb
                               0.001556
                                                                                                                                                              MDNS
                                                        fe80::b86:c2a8:d150:fcd8 ff02::fb
                            5 1.002054
                                                                                                                                                              MDNS
                            6 1.002288
                                                                                                                                                              MDNS
                                                        192.168.14.1 224.0.0.251
fe80::b86:c2a8:d150:fcd8 ff02::fb
                            7 1.004072
                                                       192.168.14.1
                                                                                                                                                              MDNS
                            8 1.004201
                                                                                                                                                              MDNS
                                                       192.168.14.1 224.0.0.251
fe80::b86:c2a8:d150:fcd8 ff02::fb
                             3.004514
                                                                                                                                                              MDNS
                         10 3.004864
                                                                                                                                                              MDNS
                                                       192.168.14.1
                                                                                                                224.0.0.251
                         11 3.006879
                                                    192.168.14.1
fe88::b86:c2a8:d159:fcd8
ff62::1ff59:fcd8
fe88::a00:27ff:fec7:4b5a
fe80::b86:c2a8:d159:fcd8
fe80::b86:c2a8:d159:fcd8
fe80::b86:c2a8:d159:fcd8
fe80::b86:c2a8:d159:fcd8
fe80::b86:c2a8:d159:fcd8
fe80::b86:c2a8:d159:fcd8
fe80::a00:27ff:fec7:4b5a
fe80::a00:27ff:f
                                                                                                                                                              MDNS
                                                      fe80::b86:c2a8:d150:fcd8 ff02::fb
fe80::a00:27ff:fec7:4b5a ff02::1:ff50:fcd8
                         12 3.007171
                                                                                                                                                              MDNS
                         13 18.316710
                         14 18.316886
                                                                                                                                                              ICMPv6
                         15 18.317384
                         16 18.317486
                         17 19.317341
                         18 19.317520
                         19 20.318248
                         20 20.318450
                         21 21.329999
22 21.330132
                         23 22.351427
24 22.351620
                        2- 22-35029

25 22-966990

26 22-967934

27 23.390246

28 23.390277

30 24.392319

31 25.393934

32 25.3934169

33 26.395015

35 27.396779

36 27.396779

37 28.493419

38 28.493790

39 29.484731

40 39.484734

41 34.45884

43 31.415884

45 32.415995

46 32.416986

47 33.416888

48 33.416888

48 33.416888

48 33.416888

48 33.416888

48 33.416888

48 33.416888

48 33.416888

48 33.416888
d1orn@astra:~$ ip −6 neigh show
|fe80::b86:c2a8:d150:fcd8 dev eth0 lladdr 0a:00:27:00:00:08 STALE
```

👺 AstraLinux [Работает] - Oracle VirtualBox

3.

d1orn@astra:~\$

```
Destination
                                                                                                                                                                                                                                                                                                                                                      110 Multicast Listener Report Message v2
110 Multicast Listener Report Message v2
                                                           2 19.900227
                                                                                                                                                                                      ff02::16
                                                           3 20.829792
                                                                                                                                                                                      ff02::16
                                                                                                                                                                                                                                                        ICMPv6
                                                                                                                                                                                                                                                                                                                                                       86 Neighbor Solicitation for fe80::a00:27ff:fe90
130 Multicast Listener Report Message v2
342 DHCP Discover - Transaction ID 0x50125ce1
590 DHCP Offer - Transaction ID 0x50125ce1
342 DHCP Request - Transaction ID 0x50125ce1
590 DHCP ACK - Transaction ID 0x50125ce1
                                                           4 20.909360
                                                                                                                                                                                      ff02::1:ff90:702a
                                                                                                                                                                                                                                                       ICMPv6
                                                                                                    fe80::a00:27ff:fe90:702a
                                                                                                                                                                                     255.255.255.255
                                                           6 21.954991
                                                                                                  0.0.0.0
                                                                                                                                                                                                                                                       DHCP
                                                            7 21 962453
                                                                                                  192.168.14.2
                                                                                                                                                                                     255.255.255.255
                                                                                                                                                                                                                                                       DHCP
                                                                                                  192.168.14.2
                                                           9 21.965474
                                                                                                                                                                                     255.255.255.255
                                                                                                                                                                                                                                                       DHCP
                                                                                                                                                                                                                                                                                                                                                      590 DHCP ACK - Transaction ID 0x50125ce1
90 Multicast Listener Report Message v2
90 Multicast Listener Report Message v2
130 Multicast Listener Report Message v2
86 Neighbor Solicitation for 680::a00:27ff:fec.
86 Neighbor Advertisement fe80::a00:27ff:fec7:4k
                                                                                                  fe80::a00:27ff:fe90:702a
fe80::a00:27ff:fe90:702a
                                                                                                                                                                                                                                                        ICMPv6
ICMPv6
                                                       10 21.979653
                                                                                                                                                                                     ff02::16
                                                                                                                                                                                      ff02::16
                                                        11 22.039864
                                                       12 22.389710
                                                                                                   fe80::a00:27ff:fe90:702a
                                                                                                                                                                                     ff02::16
                                                                                                                                                                                                                                                         ICMPv6
                                                       13 34.033573
14 34.034503
                                                                                                   fe80::a00:27ff:fe90:702a
fe80::a00:27ff:fec7:4b5a
                                                                                                                                                                                      ff02::1:ffc7:4b5a
                                                                                                                                                                                      fe80::a00:27ff:fe9...
                                                                                                                                                                                                                                                       ICMPv6
                                                                                                                                                                                                                                                                                                                                                          70 Echo (ping) request id=0xa100, seq=0, hop lim
70 Echo (ping) reply id=0xa100, seq=0, hop limit
                                                       15 34.034908
                                                                                                   fe80::a00:27ff:fe90:702a
                                                                                                                                                                                     fe80::a00:27ff:fec...
                                                                                                                                                                                                                                                       TCMPv6
                                                                                                    fe80::a00:27ff:fec7:4b5a
                                                                                                                                                                                                                                                                                                                                                         70 Echo (ping) request id-0xa100, seq=256, hop limit 70 Echo (ping) request id-0xa100, seq=256, hop lim 70 Echo (ping) reply id-0xa100, seq=512, hop lim 70 Echo (ping) reply id-0xa100, seq=512, hop lim 70 Echo (ping) reply id-0xa100, seq=512, hop lim 70 Echo (ping) request id-0xa100, seq=768, hop lim 70 Echo (ping) reply id-0xa100, seq=768, hop lim 70 Echo (ping) request id-0xa1
                                                       17 35.037205
                                                                                                   fe80::a00:27ff:fe90:702a
                                                                                                                                                                                     fe80::a00:27ff:fec...
                                                                                                                                                                                                                                                       ICMPv6
                                                                                                   fe80::a00:27ff:fec7:4b5a
fe80::a00:27ff:fe90:702a
                                                                                                                                                                                     fe80::a00:27ff:fe9...
fe80::a00:27ff:fec...
                                                        18 35.038002
                                                                                                                                                                                                                                                       ICMPv6
                                                               36.044799
                                                       20 36.045778
                                                                                                   fe80::a00:27ff:fec7:4b5a
                                                                                                                                                                                     fe80::a00:27ff:fe9...
                                                                                                                                                                                                                                                       ICMPv6
                                                      21 37.047525
22 37.048250
                                                                                                                                                                                     fe80::a00:27ff:fec...
fe80::a00:27ff:fe9...
                                                                                                   fe80::a00:27ff:fe90:702a
                                                                                                                                                                                                                                                       TCMPv6
                                                                                                    fe80::a00:27ff:fec7:4b5a
                                                                                                                                                                                                                                                       ICMPv6
                                                                                                                                                                                                                                                                                                                                                         70 Echo (ping) request id=0xa100, seq=1024, hop 70 Echo (ping) request id=0xa100, seq=1024, hop 70 Echo (ping) reply id=0xa100, seq=1280, hop 170 Echo (ping) request id=0xa100, seq=1280, hop 186 Neighbor Solicitation for fe80::a00:27ff:fe94
                                                       23 38.050234
                                                                                                   fe80::a00:27ff:fe90:702a
                                                                                                                                                                                     fe80::a00:27ff:fec...
                                                                                                                                                                                                                                                       TCMPv6
                                                                                                   fe80::a00:27ff:fec7:4b5a
fe80::a00:27ff:fe90:702a
                                                                                                                                                                                      fe80::a00:27ff:fe9...
                                                                                                                                                                                      fe80::a00:27ff:fec...
                                                       25 39.053747
                                                                                                                                                                                                                                                       ICMPv6
                                                       26 39.054459
                                                                                                   fe80::a00:27ff:fec7:4b5a
                                                                                                                                                                                     fe80::a00:27ff:fe9...
                                                                                                                                                                                                                                                       ICMPv6
                                                        27 39.272179
                                                                                                                                                                                                                                                                                                                                                          86 Neighbor Solicitation for fe80::a00:27ff:fe9
78 Neighbor Advertisement fe80::a00:27ff:fe90:7
                                                       28 39.272586
                                                                                                   fe80::a00:27ff:fe90:702a
                                                                                                                                                                                     fe80::a00:27ff:fec...
                                                                                                                                                                                                                                                       ICMPv6
                                                                                                                                                                                     fe80::a00:27ff:fec...
fe80::a00:27ff:fe9...
                                                                                                                                                                                                                                                                                                                                                          70 Echo (ping) request id=0xa100, seq=1536, hop
70 Echo (ping) reply id=0xa100, seq=1536, hop l
                                                       29 40.048777
                                                                                                   fe80::a00:27ff:fe90:702a
                                                                                                                                                                                                                                                       ICMPv6
                                                       30 40.049485
                                                                                                    fe80::a00:27ff:fec7:4b5a
                                                                                                                                                                                                                                                       ICMPv6
                                                                                                                                                                                                                                                                                                                                                         70 Echo (ping) request id=0xa100, seq=1792, hop 70 Echo (ping) request id=0xa100, seq=1792, hop 70 Echo (ping) reply id=0xa100, seq=2048, hop 70 Echo (ping) reply id=0xa100, seq=2048, hop 70 Echo (ping) request id=0xa100, seq=2044, hop 70 Echo (ping) reply id=0xa100, seq=2304, hop 70 Echo (ping) reply id=0xa100, seq=2304, hop 70 Echo (ping) reply id=0xa100, seq=2304, hop 10 Echo (ping) r
                                                       31 41.054644
                                                                                                   fe80::a00:27ff:fe90:702a
                                                                                                                                                                                     fe80::a00:27ff:fec...
                                                                                                                                                                                                                                                       ICMPv6
                                                        32 41.055482
                                                                                                   fe80::a00:27ff:fec7:4b5a
fe80::a00:27ff:fe90:702a
                                                                                                                                                                                     fe80::a00:27ff:fe9...
fe80::a00:27ff:fec...
                                                        33 42.057561
                                                                                                                                                                                                                                                        ICMPv6
                                                       34 42.058565
                                                                                                   fe80::a00:27ff:fec7:4b5a
                                                                                                                                                                                     fe80::a00:27ff:fe9...
                                                                                                                                                                                                                                                       ICMPv6
                                                                                                   fe80::a00:27ff:fe90:702a
fe80::a00:27ff:fec7:4b5a
                                                        35 43.061569
                                                                                                                                                                                      fe80::a00:27ff:fec...
                                                                                                                                                                                     fe80::a00:27ff:fe9...
                                                        36 43.062353
                                                                                                                                                                                                                                                       ICMPv6
                                                       37 44.064183
                                                                                                   fe80::a00:27ff:fe90:702a
                                                                                                                                                                                     fe80::a00:27ff:fec...
                                                                                                                                                                                                                                                       TCMPv6
                                                                                                                                                                                                                                                                                                                                                          70 Echo
                                                                                                                                                                                                                                                                                                                                                                                  (ping) request id=0xa100, seq=2560, hop
(ping) reply id=0xa100, seq=2560, hop l
                                                                                                     fe80::a00:27ff:fec7:4b5a
                                                                                                                                                                                      fe80::a00:27ff:fe9...
                                                                                                                                                                                                                                                                                                                                                      70 Echo (ping) reply id=0xa100, seq=2816, hop 17
70 Echo (ping) request id=0xa100, seq=2816, hop 17
70 Echo (ping) reply id=0xa100, seq=3072, hop 17
70 Echo (ping) request id=0xa100, seq=3072, hop 17
70 Echo (ping) reply id=0xa100, seq=3072, hop 17
189 5678 → 5678 Len=147
189 5678 → 5678 Len=147
                                                       39 45.066957
                                                                                                   fe80::a00:27ff:fe90:702a
                                                                                                                                                                                     fe80::a00:27ff:fec...
                                                                                                                                                                                                                                                       ICMPv6
                                                                                                   fe80::a00:27ff:fec7:4b5a
fe80::a00:27ff:fe90:702a
                                                                                                                                                                                     fe80::a00:27ff:fe9...
fe80::a00:27ff:fec...
                                                        40 45.067874
                                                                                                                                                                                                                                                        ICMPv6
                                                        41 46.069595
                                                       42 46.070631
                                                                                                   fe80::a00:27ff:fec7:4b5a
                                                                                                                                                                                     fe80::a00:27ff:fe9...
                                                                                                                                                                                                                                                       ICMPv6
                                                       43 47.017804
                                                                                                   fe80::a00:27ff:fe90:702a
                                                                                                                                                                                     ff02::1
                                                                                                                                                                                     255.255.255.255
                                                        44 47.018523
                                                                                                  192.168.14.5
                                                       45 47.019698
                                                                                                  PCSSystemtec_90:70:2a
                                                                                                                                                                                    CDP/VTP/DTP/PAgP/U...
                                                                                                                                                                                                                                                      CDP
                                                                                                                                                                                                                                                                                                                                                       121 Device ID: mt-01 Port ID: ether1
5.
                                                                                       fe80::a00:27ff:fe90:702a fe80::b86:c2a8:d15...
                                                                                                                                                                                                                                                                                                        70 Echo (ping) request id=0x0300, seq=1792, hop limit=64 (reply in 2)
70 Echo (ping) reply id=0x300, seq=1792, hop limit=128 (request in 1)
70 Echo (ping) request id=0x300, seq=2048, hop limit=64 (reply in 4)
70 Echo (ping) reply id=0x300, seq=2048, hop limit=128 (request in 3)
70 Echo (ping) request id=0x300, seq=2304, hop limit=128 (request in 5)
70 Echo (ping) reply id=0x3300, seq=2304, hop limit=128 (request in 5)
70 Echo (ping) reply id=0x3300, seq=2360, hop limit=128 (request in 7)
70 Echo (ping) request id=0x3300, seq=2560, hop limit=128 (request in 7)
70 Echo (ping) request id=0x3300, seq=2816, hop limit=26 (request in 7)
70 Echo (ping) request id=0x3300, seq=2816, hop limit=26 (request in 7)
70 Echo (ping) request id=0x3300, seq=3810, hop limit=64 (reply in 10)
70 Echo (ping) request id=0x3300, seq=3872, hop limit=64 (reply in 12)
70 Echo (ping) request id=0x3300, seq=3328, hop limit=64 (reply in 14)
70 Echo (ping) request id=0x3300, seq=3328, hop limit=64 (reply in 14)
70 Echo (ping) request id=0x3300, seq=3328, hop limit=64 (reply in 14)
70 Echo (ping) request id=0x3300, seq=3328, hop limit=64 (reply in 14)
                                                     1 0.000000
                                                                                                                                                                                                                                                                                                           70 Echo (ping) request id=0xa300, seq=1792, hop limit=64 (reply in 2)
                                                                                       fe80::b86:c2a8:d150:fcd8 fe80::a00:27ff:fe9... ICMPv6
fe80::a00:27ff:fe90:702a fe80::b86:c2a8:d15... ICMPv6
fe80::b86:c2a8:d150:fcd8 fe80::a00:27ff:fe9... ICMPv6
                                                     3 1.001846
                                                      4 1.001984
                                                                                       5 2.008746
                                                         3.011972
                                                     8 3.012127
                                                         4.014261
                                                                                       fe80::a00:27ff:fe90:702a fe80::b85:c2a8:d15_
fe80::b86:c2a8:d159:fc46 fe80::a00:27ff:fe9_
fe80::b86:c2a8:d150:fcd6 fe80::a00:27ff:fe9_
fe80::b86:c2a8:d150:fcd8 fe80::a00:27ff:fe9_
fe80::b86:c2a8:d150:fcd8 fe80::a00:27ff:fe9_
fe80::b86:c2a8:d150:fcd8 fe80::a00:27ff:fe9_
                                                  10 4.014411
                                                                                                                                                                                                                      ICMPv6
                                                  11 5.018238
12 5.018362
13 6.019903
14 6.020030
                                                                                                                                                                                                                                                                                                     70 Echo (ping) reply id-0x300, seq-3328, hop limit=128 (request in 118 Echo (ping) request id-0x0002, seq-1, hop limit=64 (reply in 6) 118 Echo (ping) reply id-0x0002, seq-1, hop limit=128 (request in 5) 118 Echo (ping) reply id-0x0002, seq-2, hop limit=128 (request in 7) 118 Echo (ping) reply id-0x0002, seq-2, hop limit=128 (request in 7) 118 Echo (ping) reply id-0x0002, seq-3, hop limit=128 (request in 10) 118 Echo (ping) reply id-0x0002, seq-3, hop limit=128 (request in 10) 118 Echo (ping) reply id-0x0002, seq-4, hop limit=128 (request in 11) 118 Echo (ping) reply id-0x0002, seq-4, hop limit=128 (request in 11) 118 Echo (ping) request id-0x0002, seq-4, hop limit=128 (request in 11) 118 Echo (ping) request id-0x0002, seq-5, hop limit=64 (reply in 14) 118 Echo (ping) request id-0x0002, seq-5, hop limit=64 (reply in 14) 118 Echo (ping) request id-0x0002, seq-6, hop limit=64 (reply in 16) 118 Echo (ping) request id-0x0002, seq-6, hop limit=64 (reply in 18) 118 Echo (ping) request id-0x0002, seq-6, hop limit=28 (request in 15) 118 Echo (ping) request id-0x0002, seq-6, hop limit=128 (request in 15) 118 Echo (ping) request id-0x0002, seq-7, hop limit=128 (request in 17)
                                                                                      2.139215
                                                         3.155862
                                                     8 3.156018
                                                         4.179331
                                                  10 4.179452
                                                  11 5.180396
                                                  12 5.180536
                                                  13 6.181385
                                                  14 6.181509
                                                  15 7.187708
                                                                                       fe80::a00:27ff:fe0c:8b9b fe80::b86:c2a8:d15...
fe80::b86:c2a8:d150:fcd8 fe80::a00:27ff:fe0...
                                                  16 7.187855
                                                  17 8.211742
                                                                                       fe80::a00:27ff:fe0c:8b9b fe80::b86:c2a8:d15...
fe80::b86:c2a8:d150:fcd8 fe80::a00:27ff:fe0...
                    [d1orn@alt ~1$ ip -6 neighbor show
                   fe80::b86:c2a8:d150:fcd8 dev enp0s3 lladdr 0a:00:27:00:00:08 STALE
                       [d1orn@alt ^
                                                        17 57.422715
                                                                                                                                                                                     ff02::1:ff0c:8b9b
                                                                                                                                                                                                                                                                                                                                                          86 Neighbor Solicitation for fe80::a00:27ff:fe0d
                                                                                                   fe80::a00:27ff:fe90:702a
                                                                                                                                                                                                                                                                                                                                                          86 Neighbor Advertisement fe80::a00:27ff:fe0c:8b
70 Echo (ping) request id=0xa100, seq=0, hop lim
                                                       18 57,424340
                                                                                                   fe80::a00:27ff:fe0c:8b9b
                                                                                                                                                                                     fe80::a00:27ff:fe9...
                                                                                                                                                                                                                                                       ICMPv6
                                                        19 57.424800
                                                                                                    fe80::a00:27ff:fe90:702a
                                                                                                                                                                                      fe80::a00:27ff:fe0...
                                                                                                   fe80::a00:27ff:fe0c:8b9b
                                                                                                                                                                                      fe80::a00:27ff:fe9...
                                                                                                                                                                                                                                                                                                                                                          70 Echo (ping) reply id=0xa100, seq=0, hop limit
                                                       20 57.425583
                                                                                                                                                                                                                                                       ICMPv6
```

```
70 Echo (ping) request id=0xa100, seq=56, hop 1 70 Echo (ping) request id=0xa100, seq=256, hop 1 70 Echo (ping) reply id=0xa100, seq=512, hop 1 70 Echo (ping) request id=0xa100, seq=512, hop 1 70 Echo (ping) reply id=0xa100, seq=512, hop 1 70 Echo (ping) request id=0xa100, seq=768, hop 1
                                                                                                              ICMPv6
ICMPv6
21 58.427402
                         fe80::a00:27ff:fe90:702a
                                                                         fe80::a00:27ff:fe0...
                         fe80::a00:27ff:fe0c:8b9b
                                                                         fe80::a00:27ff:fe9...
22 58.428348
23 59.425420
                         fe80::a00:27ff:fe90:702a
                                                                         fe80::a00:27ff:fe0...
                                                                                                              ICMPv6
24 59.426474
25 60.428276
                         fe80::a00:27ff:fe0c:8b9b
fe80::a00:27ff:fe90:702a
                                                                         fe80::a00:27ff:fe9...
fe80::a00:27ff:fe0...
                                                                                                              ICMPv6
ICMPv6
                                                                                                                                                                        70 Echo (ping) reply id=0xa100, seq=768, hop lim
70 Echo (ping) request id=0xa100, seq=1024, hop
70 Echo (ping) reply id=0xa100, seq=1024, hop lim
26 60.429329
                         fe80::a00:27ff:fe0c:8b9b
                                                                         fe80::a00:27ff:fe9...
                                                                                                              ICMPv6
                         fe80::a00:27ff:fe90:702a
fe80::a00:27ff:fe0c:8b9b
                                                                         fe80::a00:27ff:fe0...
28 61.421772
                                                                         fe80::a00:27ff:fe9...
                                                                                                              ICMPv6
                                                                                                                                                                       70 Echo (ping) request id=0xa100, seq=1280, hop 170 Echo (ping) request id=0xa100, seq=1280, hop 186 Neighbor Solicitation for fe80::a00:27ff:fe90. 78 Neighbor Advertisement fe80::a00:27ff:fe90. 70 Echo (ping) request id=0xa100, seq=1536, hop
29 62.424262
                         fe80::a00:27ff:fe90:702a
                                                                         fe80::a00:27ff:fe0...
                                                                                                              ICMPv6
                         fe80::a00:27ff:fe0c:8b9b
                                                                         fe80::a00:27ff:fe9...
31 62.905680
                         fe80::a00:27ff:fe0c:8b9b
                                                                         fe80::a00:27ff:fe9...
                                                                                                              ICMPv6
32 62.906045
33 63.426979
                         fe80::a00:27ff:fe90:702a
fe80::a00:27ff:fe90:702a
                                                                        fe80::a00:27ff:fe0...
fe80::a00:27ff:fe0...
                                                                                                              ICMPv6
ICMPv6
                                                                                                                                                                        70 Echo (ping) reply id=0xa100, seq=1536, hop li
70 Echo (ping) replysid=0xa100, seq=1792, hop
70 Echo (ping) reply id=0xa100, seq=1792, hop li
34 63.427925
                         fe80::a00:27ff:fe0c:8b9b
                                                                         fe80::a00:27ff:fe9...
                                                                                                              ICMPv6
35 64.429603
36 64.430354
                         fe80::a00:27ff:fe90:702a
                                                                         fe80::a00:27ff:fe0...
                         fe80::a00:27ff:fe0c:8b9b
                                                                         fe80::a00:27ff:fe9...
                                                                                                              ICMPv6
                                                                                                                                                                        70 Echo (ping) request id=0xa100, seq=2048, hop
70 Echo (ping) reply id=0xa100, seq=2048, hop li
37 65.432998
                        fe80::a00:27ff:fe90:702a
                                                                        fe80::a00:27ff:fe0...
                                                                                                              TCMPv6
```

7. fd00:2005:8:22::/64

```
[admin@mt-01] > ipv6 address add address=fd00:2005:8:22::1/64 advertise=yes
interface: ether1
[admin@mt-01] > ipv6 address print
Flags: D - DYNAMIC; G - GLOBAL, L - LINK-LOCAL
Columns: ADDRESS, INTERFACE, ADVERTISE
                                                                                                                        INTERFACE
                 ADDRESS
                                                                                                                                                              ADVERTISE
Ø
      n
                 ::1/128
                                                                                                                        10
                                                                                                                                                              no
1
      DL fe80::a00:27ff:fe90:702a/64
                                                                                                                       ether1
                                                                                                                                                              no
         G fd00:2005:8:22::1/64
                                                                                                                        ether1
                                                                                                                                                              yes
[admin@mt-01] >
                                                                                                                                                          82 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 102 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 102 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 102 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 102 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 102 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 102 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 102 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 103 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 150 Multicast Listener Report Message v2
80 Neighbor Solicitation for fd00:2005.81:22:1
150 Multicast Listener Report Message v2
82 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 102 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 102 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 102 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 102 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 102 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 102 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 102 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 102 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 102 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 102 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 102 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 102 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 102 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 102 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 102 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 102 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 102 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 102 Standard query 0x0000 PTR googlecast. tcp.local, "QN" question 102 Standard query 0x0000 PTR googlecast. t
                                      192.168.14.1 224.0.0.251

fe80::b86::c28:d150:fcd8 ff02::fb

192.168.14.1 224.0.0.251

fe80::b86::c28::d150:fcd8 ff02::fb

192.168.14.1 224.0.0.251

fe80::b86::238::d150:fcd8 ff02::fb

192.168.14.1 224.0.0.251

fe80::b86::238::d150:fcd8 ff02::fb
                                     192.168.14.1 224.0.0.251 fe80::086:c2a8:d150:fcd8 ff02::fb fe80::a00:27ff:fe90:702a ff02::16 ff02::16:192.168.14.1 fe80::a00:27ff:fe90:702a ff02::16 192.168.14.1 fe80::a00:27ff:fe90:702a ff02::16
                 7 1.005325
8 1.005410
9 2.464222
10 2.663663
                                                                                                              ICMPv6
                 11 2.724301
                                                                                                              ICMPv6
                 12 3.006708
                                      192.168.14.1 224.0.0.1
fe80::b86:c2a8:d150:fcd8 ff02::fb
                                                                                                              MDNS
                                                                                                              MDNS
                                     192.168.14.1 224.0.0.251

fe80::b86:c2a8:d150:fcd8 ff02::fb

fe80::a00:27ff:fe90:702a ff02::1
                 14 3.008610
                                                                                                              MDNS
                                                                                                              MDNS
                 16 14.509119
                 17 14.509451 192.168.14.5
                                                                             255.255.255.255
                        Time
                                            Source
                                                                                            Destination
                                                                                                                                  Protocol
                                                                                                                                                                              Lenath Info
                    17 41.475265 PCSSystemtec 90:70:2a
                                                                                            CDP/VTP/DTP/PAgP/U... CDP
                                                                                                                                                                                          121 Device ID: mt-01 Port ID: ether1
                                              fe80::a00:27ff:fec7:4b5a
                                                                                                                                                                                            70 Router Solicitation from 08:00:27:c7:4
                    20 61.250297
                                             fe80::a00:27ff:fec7:4b5a
                                                                                             ff02::2
                                                                                                                                   ICMPv6
                                                                                                                                                                                            70 Router Solicitation from 08:00:27:c7:4
                    21 64.862059
                                                                                             ff02::16
                                                                                                                                    ICMPv6
                                                                                                                                                                                            90 Multicast Listener Report Message v2
90 Multicast Listener Report Message v2
                                                                                                                                   ICMPv6
                    22 65.061881
                                                                                             ff02::16
                                                                                                                                                                                          229 5678 → 5678 Len=167
209 5678 → 5678 Len=167
                    23 71.474543
                                             fe80::a00:27ff:fe90:702a
                                                                                             ff02::1
                                                                                                                                   MNDP
                        71.475162
                                                                                             255.255.255.255
                                             192.168.14.5
                    25 71.476019 PCSSystemtec_90:70:2a
                                                                                             CDP/VTP/DTP/PAgP/U...
                                                                                                                                   CDP
                                                                                                                                                                                          121 Device ID: mt-01 Port ID: ether1
                    27 80.883860
                                                                                                                                                                                            60 Who has 192.168.14.2? Tell 192.168.14.
                                             PCSSystemtec c7:4b:5a
                                                                                             Broadcast
                                                                                                                                                                                          60 192.168.14.2 is at 08:00:27:b7:45:f9
342 DHCP Release - Transaction ID 0xf825f
342 DHCP Discover - Transaction ID 0x385ca
                                             PCSSystemtec_b7:45:f9
192.168.14.3
                                                                                             PCSSystemtec_c7:4b...
192.168.14.2
                     28 80.884118
                                                                                                                                   ARP
                    29 80.884242
                                                                                                                                   DHCP
                                                                                             255.255.255.255
                    30 85.408098
                                             0.0.0.0
                                                                                                                                   DHCP
                     31 85.408439
                                                                                                                                                                                           590 DHCP Offer
                                                                                                                                                                                                                      - Transaction ID 0x385ca
t - Transaction ID 0x385ca
-- Message v2
                    32 85.409326
                                             0.0.0.0
                                                                                             255.255.255.255
                                                                                                                                   DHCP
                                                                                                                                                                                          342 DHCP Request
                                                                                                                                                                                           90 Multicast Listener Report Message v2
590 DHCP ACK - Transaction ID 0x385ca
                     33 85.410089
                                                                                             ff02::16
                    34 85.412565 192.168.14.2
                                                                                             255.255.255.255
                                                                                                                                   DHCP
                                                                                                                                                                                          590 DHCP ACK
                                                                                                                                                                                           90 Multicast Listener Report Message v2
86 Neighbor Solicitation for fe80::a00:27
                    35.85.457970
                                                                                             ff02::16
                                                                                                                                   TCMPv6
                                                                                              ff02::1:ffc7:4b5a
                    37 87.042790 fe80::a00:27ff:fec7:4b5a
                                                                                             ff02::16
                                                                                                                                   ICMPv6
                                                                                                                                                                                            90 Multicast Listener Report Message v2
                                             fe80::a00:27ff:fec7:4b5a
fe80::a00:27ff:fec7:4b5a
                     38 87.043064
                                                                                                                                    ICMPv6
                                                                                                                                                                                            70 Router Solicitation from 08:00:27:c7:4
                    39 87.491012
                                                                                             ff02::16
                                                                                                                                   ICMPv6
                                                                                                                                                                                            90 Multicast Listener Report Message v2
                                                                                                                                                                                            70 Router Solicitation from 08:00:27:c7:4
70 Router Solicitation from 08:00:27:c7:4
                    40 90 946547
                                             fe80::a00:27ff:fec7:4b5a
                                                                                             ff02::2
                                                                                                                                   TCMPv6
                                             fe80::a00:27ff:fec7:4b5a
                     41 98.369724
                                                                                                                                    ICMPv6
                                                                                                                                                                                          229 5678 → 5678 Len=167
209 5678 → 5678 Len=167
                    42 101.475622 fe80::a00:27ff:fe90:702a
                                                                                             ff02::1
                                                                                                                                   MNDP
                    43 101.476987 192.168.14.5
44 101.477350 PCSSystemtec_90:70:2a
                                                                                             255.255.255.255
                                                                                             CDP/VTP/DTP/PAgP/U...
                                                                                                                                   CDP
                                                                                                                                                                                          121 Device ID: mt-01 Port ID: ether1
                     46 113.474130 fe80::a00:27ff:fec7:4b5a
                                                                                                                                                                                            70 Router Solicitation from 08:00:27:c7:4
                                                                                                                                                                                          229 5678 → 5678 Len=167
209 5678 → 5678 Len=167
                    47 131.475264 fe80::a00:27ff:fe90:702a
                                                                                             ff02::1
                                                                                                                                   MNDP
                         131.475557 192.168.14.5
                    49 131.476333 PCSSystemtec_90:70:2a
                                                                                             CDP/VTP/DTP/PAgP/U...
                                                                                                                                  CDP
                                                                                                                                                                                          121 Device ID: mt-01 Port ID: ether1
                    51 142.521254 fe80::a00:27ff:fec7:4b5a
                                                                                             ff02::2
                                                                                                                                   ICMPv6
                                                                                                                                                                                            70 Router Solicitation from 08:00:27:c7:4
                    52 161.470143 fe80::a00:27ff:fe90:702a
53 161.470562 192.168.14.5
                                                                                                                                                                                          229 5678 → 5678 Len=167
209 5678 → 5678 Len=167
                                                                                            ff02::1
                                                                                                                                   MNDP
                                                                                             255.255.255.255
                    54 161.471068 PCSSystemtec_90:70:2a
                                                                                             CDP/VTP/DTP/PAgP/U...
                                                                                                                                  CDP
                                                                                                                                                                                          121 Device ID: mt-01 Port ID: ether1
                    56 167.067091 fe80::a00:27ff:fec7:4b5a
                                                                                             ff02::1:ff50:fcd8
                                                                                                                                   ICMPv6
                                                                                                                                                                                            86 Neighbor Solicitation for fe80::b86:c2
                    57 167.067321 fe80::b86:c2a8:d150:fcd8
58 167.067894 fe80::a00:27ff:fec7:4b5a
                                                                                             fe80::a00:27ff:fec...
fe80::b86:c2a8:d15...
                                                                                                                                  ICMPv6
                                                                                                                                                                                            86 Neighbor Advertisement fe80::b86:c2a8:
                                                                                                                                                                                          118 Echo (ping) request id=0x0318, seq=1, 118 Echo (ping) reply id=0x0318, seq=1, hc 118 Echo (ping) repust id=0x0318, seq=2,
                    59 167.068175 fe80::b86:c2a8:d150:fcd8
                                                                                             fe80::a00:27ff:fec...
                                                                                                                                   TCMPv6
                     60 168.100848 fe80::a00:27ff:fec7:4b5a
                                                                                             fe80::b86:c2a8:d15...
                                                                                                                                                                                          118 Echo (ping) reply id=0x0318, seq=2, ho
118 Echo (ping) request id=0x0318, seq=3,
118 Echo (ping) reply id=0x0318, seq=3, ho
                    61 168.101117 fe80::b86:c2a8:d150:fcd8
                                                                                             fe80::a00:27ff:fec...
                                                                                                                                   ICMPv6
                    62 169.103058 fe80::a00:27ff:fec7:4b5a
63 169.103316 fe80::b86:c2a8:d150:fcd8
                                                                                             fe80::b86:c2a8:d15...
                                                                                             fe80::a00:27ff:fec...
                                                                                                                                   ICMPv6
                    64 170.107196 fe80::a00:27ff:fec7:4b5a
65 170.107410 fe80::b86:c2a8:d150:fcd8
                                                                                             fe80::b86:c2a8:d15...
                                                                                                                                   TCMPv6
                                                                                                                                                                                          118 Echo (ping) request id=0x0318, seq=4,
118 Echo (ping) reply id=0x0318, seq=4, ho
                                                                                             fe80::a00:27ff:fec...
                                                                                                                                                                                         118 Echo (ping) reply id=0x0418, seq=4, ho
118 Echo (ping) repuest id=0x0318, seq=5, ho
86 Neighbor Solicitation for fe80::a00:27
78 Neighbor Solicitation for fe80::a00:27
f118 Echo (ping) request id=0x0318, seq=6, ho
118 Echo (ping) request id=0x0318, seq=6, ho
118 Echo (ping) request id=0x0318, seq=7, ho
118 Echo (ping) request id=0x0318, seq=7, ho
118 Echo (ping) request id=0x0318, seq=7, ho
                    66 171.189336 fe80::a00:27ff:fec7:4b5a
                                                                                             fe80::b86:c2a8:d15...
                                                                                                                                   ICMPv6
                    67 171.189581 fe80::b86:c2a8:d150:fcd8
68 171.859606 fe80::b86:c2a8:d150:fcd8
                                                                                             fe80::a00:27ff:fec...
                                                                                             fe80::a00:27ff:fec...
                                                                                                                                   ICMPv6
                    69 171.860255 fe80::a00:27ff:fec7:4b5a
70 172.314258 fe80::a00:27ff:fec7:4b5a
                                                                                             fe80::b86:c2a8:d15...
fe80::b86:c2a8:d15...
                                                                                                                                   ICMPv6
                                                                                                                                   ICMPv6
                                                                                             fe80::a00:27ff:fec...
fe80::b86:c2a8:d15...
                    71 172.314532 fe80::b86:c2a8:d150:fcd8
                                                                                                                                   ICMPv6
                          173.318488 fe80::a00:27ff:fec7:4b5a
                                                                                                                                                                                           118 Echo (ping) reply id=0x0318, seq=7,
                          173.318766 fe80::b86:c2a8:d150:fcd8
                                                                                             fe80::a00:27ff:fec.
```

ether1

no

2 DG fd00:2005:8:22::100/128

[admin@mt-01] >