

# Emulação de Redes - Relatório

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## I. CORE

O Common Open Research Engine (CORE) é uma ferramenta para emular redes, contendo uma interface gráfica para desenhar a topologia de máquinas virtuais. Foi desenvolvido pelo grupo de pesquisa da Network Technology com suporte do Naval Research Laboratory.

A versão utilizada foi baixada pelo site do produto e rodada através de uma máquina virtual em ambiente Unix.

Feita a instalação da máquina virtual e a configuração desta para executar o Wireshark (um analisador de protocolos de rede), foi usada a topologia disponibilizada através da plataforma moodle em um arquivo ".imn", assim como visto na figura 1. A partir disso, foi aplicada a configuração dos roteadores de forma estática seguindo os comandos e passos descritos para a atividade.

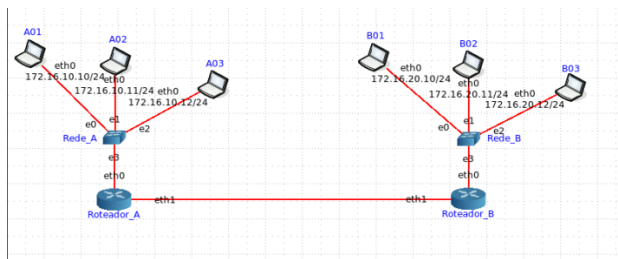


Figura 1: Topologia aberta através da ferramenta CORE, constituída por dois roteadores, dois switches e 6 computadores

Com o cenário da topologia já montado, ambos os roteadores foram configurados através da aba "Services..." para estar marcado na seção Quagga as opções: zebra, RIP e vtysh, vide figura 2.



Figura 2: Configuração do serviço Quagga a ser utilizado pelos roteadores e switches

Foi iniciada a execução, apertando o botão de "start" para, então, abrir o terminal de cada roteador e configurá-los com os comandos: vtysh, conf t, ip address e no shutdown, conforme visto nas figuras 3 e 4.

```
root@vcore:/tmp/pycore.57172/Roteador_A.conf# vtysh
Hello, this is Quagga (version 0.99.21mr2.2).
Copyright 1996-2005 Kunihiro Ishiguro, et al.

vcore# conf t
vcore(config)# interface eth0
vcore(config-if)# ip address 172.16.10.1/24
vcore(config-if)# no shutdown
vcore(config-if)# interface eth1
vcore(config-if)# ip address 172.16.30.1/24
vcore(config-if)# no shutdown
vcore(config-if)#
```

Figura 3: Configuração do primeiro roteador pelo terminal deste

```
root@vcore:/tmp/pycore.57172/Roteador_B.conf# vtysh
Hello, this is Quagga (version 0.99.21mr2.2).
Copyright 1996-2005 Kunihiro Ishiguro, et al.

vcore# conf t
vcore(config)# interface eth0
vcore(config-if)# ip address 172.16.20.1/24
vcore(config-if)# no shutdown
vcore(config-if)# interface eth1
vcore(config-if)# ip address 172.16.30.2/24
vcore(config-if)# no shutdown
vcore(config-if)#
```

Figura 4: Configuração do segundo roteador pelo terminal deste

Para que todos os computadores se comunicassem, foi configurado o roteamento estático em ambos os roteadores através dos comando vtysh, conf t e ip route, assim como indicado nas figuras 5 e 6.

```
root@vcore:/tmp/pycore.57172/Roteador_A.conf# vtysh
Hello, this is Quagga (version 0.99.21mr2.2).
Copyright 1996-2005 Kunihiro Ishiguro, et al.

vcore# conf t
vcore(config)# ip route 172.16.30.0 172.16.10.0 eth1
vcore(config)#
```

Figura 5: Configuração do roteamento estático do primeiro roteador pelo terminal deste

```

root@vcore:/tmp/pycore.49879/Roteador_B.conf# vtysh
Hello, this is Quagga (version 0.99.21nr2.2).
Copyright 1996-2005 Kunihiro Ishiguro, et al.

vcore# conf t
vcore(config)# ip route 172.16.30.0 172.16.20.0 eth1
vcore(config)#

```

Figura 6: Configuração do roteamento estático do segundo roteador pelo terminal deste

Conforme os roteadores já estavam configurados, testes foram executados com os comandos ping e traceroute entre nós na mesma subrede e em subredes distintas, respectivamente as figuras 7 e 8.

```

root@A02:/tmp/pycore.57172/A02.conf# ping 172.16.10.12
PING 172.16.10.12 (172.16.10.12) 56(84) bytes of data,
64 bytes from 172.16.10.12: icmp_req=1 ttl=64 time=0.190 ms
64 bytes from 172.16.10.12: icmp_req=2 ttl=64 time=0.089 ms
64 bytes from 172.16.10.12: icmp_req=3 ttl=64 time=0.081 ms
64 bytes from 172.16.10.12: icmp_req=4 ttl=64 time=0.085 ms
64 bytes from 172.16.10.12: icmp_req=5 ttl=64 time=0.085 ms
64 bytes from 172.16.10.12: icmp_req=6 ttl=64 time=0.084 ms
64 bytes from 172.16.10.12: icmp_req=7 ttl=64 time=0.085 ms
^C
--- 172.16.10.12 ping statistics ---
7 packets transmitted, 7 received, 0% packet loss, time 5939ms
rtt min/avg/max/ndev = 0.081/0.093/0.190/0.039 ms
root@A02:/tmp/pycore.57172/A02.conf# traceroute 172.16.10.12
traceroute to 172.16.10.12 (172.16.10.12), 30 hops max, 60 byte packets
 1 172.16.10.12 (172.16.10.12) 0.082 ms 0.038 ms 0.030 ms
root@A02:/tmp/pycore.57172/A02.conf#

```

Figura 7: Teste da rede usando os comandos ping e traceroute entre os nós 6 e 7, na mesma subrede

```

root@B02:/tmp/pycore.57172/B02.conf# ping 172.16.10.11
PING 172.16.10.11 (172.16.10.11) 56(84) bytes of data,
64 bytes from 172.16.10.11: icmp_req=1 ttl=62 time=0.899 ms
64 bytes from 172.16.10.11: icmp_req=2 ttl=62 time=0.149 ms
64 bytes from 172.16.10.11: icmp_req=3 ttl=62 time=0.150 ms
64 bytes from 172.16.10.11: icmp_req=4 ttl=62 time=0.151 ms
64 bytes from 172.16.10.11: icmp_req=5 ttl=62 time=0.209 ms
64 bytes from 172.16.10.11: icmp_req=6 ttl=62 time=0.163 ms
64 bytes from 172.16.10.11: icmp_req=7 ttl=62 time=0.146 ms
^C
--- 172.16.10.11 ping statistics ---
7 packets transmitted, 7 received, 0% packet loss, time 6001ms
rtt min/avg/max/ndev = 0.146/0.266/0.899/0.259 ms
root@B02:/tmp/pycore.57172/B02.conf# traceroute 172.16.10.11
traceroute to 172.16.10.11 (172.16.10.11), 30 hops max, 60 byte packets
 1 172.16.20.1 (172.16.20.1) 0.091 ms 0.038 ms 0.032 ms
 2 172.16.30.1 (172.16.30.1) 0.081 ms 0.061 ms 0.055 ms
 3 * * *
 4 * * *
 5 * * *
 6 * * *
 7 * * *
 8 * 172.16.10.11 (172.16.10.11) 0.144 ms 0.083 ms

```

Figura 8: Teste da rede usando os comandos ping e traceroute entre os nós 9 e 6, em subredes distintas

## II. WIRESHARK

Para capturar o tráfego utilizando o Wireshark foi necessário abri-lo pelo terminal com permissão de administrador e encontrar a rede correspondente aos nós que estavam sendo executados o comando ping, como observado nas figuras 9 e 10.

```

root@A01:/tmp/pycore.49879/A01.conf# ping 172.16.20.12
PING 172.16.20.12 (172.16.20.12) 56(84) bytes of data,
64 bytes from 172.16.20.12: icmp_req=1 ttl=62 time=0.344 ms
64 bytes from 172.16.20.12: icmp_req=2 ttl=62 time=0.228 ms
64 bytes from 172.16.20.12: icmp_req=3 ttl=62 time=0.348 ms
64 bytes from 172.16.20.12: icmp_req=4 ttl=62 time=0.414 ms
64 bytes from 172.16.20.12: icmp_req=5 ttl=62 time=0.301 ms
64 bytes from 172.16.20.12: icmp_req=6 ttl=62 time=0.872 ms
64 bytes from 172.16.20.12: icmp_req=7 ttl=62 time=0.166 ms
64 bytes from 172.16.20.12: icmp_req=8 ttl=62 time=0.217 ms
64 bytes from 172.16.20.12: icmp_req=9 ttl=62 time=0.197 ms
^C
--- 172.16.20.12 ping statistics ---
9 packets transmitted, 9 received, 0% packet loss, time 8003ms
rtt min/avg/max/ndev = 0.166/0.343/0.872/0.202 ms
root@A01:/tmp/pycore.49879/A01.conf#

```

Figura 9: Comando ping executado entre o nó 5 e o nó 10

No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000	172.16.10.1	224.0.0.9	RIPv2	106	Response
2	0.000000	172.16.10.12	172.16.10.1	ICMP	64	Echo (ping) request seq=1/512, ttl=64 (request)
3	0.000000	172.16.10.12	172.16.10.1	ICMP	64	Echo (ping) reply seq=1/512, ttl=64 (reply)
4	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=2/512, ttl=64 (request)
5	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=3/512, ttl=64 (request)
6	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=4/512, ttl=64 (request)
7	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=5/512, ttl=64 (request)
8	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=6/512, ttl=64 (request)
9	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=7/512, ttl=64 (request)
10	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=8/512, ttl=64 (request)
11	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=9/512, ttl=64 (request)
12	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=10/512, ttl=64 (request)
13	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=11/512, ttl=64 (request)
14	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=12/512, ttl=64 (request)
15	0.000000	00:00:00:aa:00:00:00:00	00:00:00:aa:00:00:00:00	ARP	42	Who has 172.16.10.12? Tell 172.16.10.1
16	0.000000	00:00:00:aa:00:00:00:00	00:00:00:aa:00:00:00:00	ARP	42	Who has 172.16.10.12? Tell 172.16.10.1
17	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=13/512, ttl=64 (request)
18	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=14/512, ttl=64 (request)
19	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=15/512, ttl=64 (request)
20	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=16/512, ttl=64 (request)
21	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=17/512, ttl=64 (request)
22	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=18/512, ttl=64 (request)
23	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=19/512, ttl=64 (request)
24	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=20/512, ttl=64 (request)
25	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=21/512, ttl=64 (request)
26	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=22/512, ttl=64 (request)
27	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=23/512, ttl=64 (request)
28	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=24/512, ttl=64 (request)
29	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=25/512, ttl=64 (request)
30	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=26/512, ttl=64 (request)
31	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=27/512, ttl=64 (request)
32	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=28/512, ttl=64 (request)
33	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=29/512, ttl=64 (request)
34	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=30/512, ttl=64 (request)
35	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=31/512, ttl=64 (request)
36	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=32/512, ttl=64 (request)
37	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=33/512, ttl=64 (request)
38	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=34/512, ttl=64 (request)
39	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=35/512, ttl=64 (request)
40	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=36/512, ttl=64 (request)
41	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=37/512, ttl=64 (request)
42	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=38/512, ttl=64 (request)
43	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=39/512, ttl=64 (request)
44	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=40/512, ttl=64 (request)
45	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=41/512, ttl=64 (request)
46	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=42/512, ttl=64 (request)
47	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=43/512, ttl=64 (request)
48	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=44/512, ttl=64 (request)
49	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=45/512, ttl=64 (request)
50	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=46/512, ttl=64 (request)
51	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=47/512, ttl=64 (request)
52	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=48/512, ttl=64 (request)
53	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=49/512, ttl=64 (request)
54	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=50/512, ttl=64 (request)
55	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=51/512, ttl=64 (request)
56	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=52/512, ttl=64 (request)
57	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=53/512, ttl=64 (request)
58	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=54/512, ttl=64 (request)
59	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=55/512, ttl=64 (request)
60	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=56/512, ttl=64 (request)
61	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=57/512, ttl=64 (request)
62	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=58/512, ttl=64 (request)
63	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=59/512, ttl=64 (request)
64	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=60/512, ttl=64 (request)
65	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=61/512, ttl=64 (request)
66	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=62/512, ttl=64 (request)
67	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=63/512, ttl=64 (request)
68	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=64/512, ttl=64 (request)
69	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=65/512, ttl=64 (request)
70	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=66/512, ttl=64 (request)
71	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=67/512, ttl=64 (request)
72	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=68/512, ttl=64 (request)
73	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=69/512, ttl=64 (request)
74	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=70/512, ttl=64 (request)
75	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=71/512, ttl=64 (request)
76	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=72/512, ttl=64 (request)
77	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=73/512, ttl=64 (request)
78	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=74/512, ttl=64 (request)
79	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=75/512, ttl=64 (request)
80	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=76/512, ttl=64 (request)
81	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=77/512, ttl=64 (request)
82	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=78/512, ttl=64 (request)
83	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=79/512, ttl=64 (request)
84	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=80/512, ttl=64 (request)
85	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=81/512, ttl=64 (request)
86	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=82/512, ttl=64 (request)
87	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=83/512, ttl=64 (request)
88	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=84/512, ttl=64 (request)
89	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=85/512, ttl=64 (request)
90	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=86/512, ttl=64 (request)
91	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=87/512, ttl=64 (request)
92	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=88/512, ttl=64 (request)
93	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=89/512, ttl=64 (request)
94	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=90/512, ttl=64 (request)
95	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=91/512, ttl=64 (request)
96	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=92/512, ttl=64 (request)
97	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=93/512, ttl=64 (request)
98	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=94/512, ttl=64 (request)
99	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=95/512, ttl=64 (request)
100	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=96/512, ttl=64 (request)
101	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=97/512, ttl=64 (request)
102	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=98/512, ttl=64 (request)
103	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=99/512, ttl=64 (request)
104	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=100/512, ttl=64 (request)
105	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=101/512, ttl=64 (request)
106	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=102/512, ttl=64 (request)
107	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=103/512, ttl=64 (request)
108	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=104/512, ttl=64 (request)
109	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=105/512, ttl=64 (request)
110	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=106/512, ttl=64 (request)
111	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=107/512, ttl=64 (request)
112	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=108/512, ttl=64 (request)
113	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=109/512, ttl=64 (request)
114	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=110/512, ttl=64 (request)
115	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=111/512, ttl=64 (request)
116	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=112/512, ttl=64 (request)
117	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=113/512, ttl=64 (request)
118	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=114/512, ttl=64 (request)
119	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=115/512, ttl=64 (request)
120	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=116/512, ttl=64 (request)
121	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=117/512, ttl=64 (request)
122	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=118/512, ttl=64 (request)
123	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=119/512, ttl=64 (request)
124	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=120/512, ttl=64 (request)
125	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=121/512, ttl=64 (request)
126	0.000000	172.16.10.12	172.16.10.12	ICMP	64	Echo (ping) request seq=122/512, ttl=64 (request)
127	0.000000	172.16.10.12	172.16.10.			