DEPARTAMENTO
DE COMPUTACIÓN
Facultad de Ciencias Exactas y Naturales - UBA

Departamento de Computación,
Facultad de Ciencias Exactas y Naturales,
Universidad de Buenos Aires

Trabajo Práctico 2

Teoría de las Comunicaciones

Primer Cuatrimestre de 2014

Apellido y Nombre	LU	E-mail
Delgado, Alejandro N.	601/11	nahueldelgado@gmail.com
Lovisolo, Leandro	645/11	leandro@leandro.me
Petaccio, Lautaro José	443/11	lausuper@gmail.com

Índice

1. Introducción

En este trabajo estudiamos un método para detectar enlaces submarinos en la traza de paquetes entre dos hosts conectados a internet.

2. Desarrollo

Pendiente.

3. Resultados

3.1. University of Oxford

TTL	IP Addresses	Absolute RTT	Relative RTT	Relative ZRTT	Location
1	192.168.1.1	3.397 ms	3.397 ms	-0.058	*
2	190.194.57.1	148.730 ms	145.332 ms	1.455	Avellaneda, Argentina
3	4.69.201.65	352.483 ms	203.753 ms	2.018	United States
5	200.89.166.129	37.081 ms	-315.402 ms	-2.981	Argentina
6	200.89.165.130	37.479 ms	0.399 ms	0.059	Argentina
9	200.89.164.217	36.697 ms	-0.783 ms	0.048	Argentina
10	200.89.165.222	36.770 ms	0.073 ms	0.056	Argentina
11	208.178.244.213	35.864 ms	-0.906 ms	0.047	United States
12	67.16.139.26	184.619 ms	148.755 ms	1.488	United States
	67.16.148.102				United States
13	4.68.111.121	163.433 ms	-21.186 ms	-0.148	United States
14	4.69.138.123	264.907 ms	101.474 ms	1.033	United States
15	4.69.140.142	272.747 ms	7.840 ms	0.131	United States
16	4.69.132.33	272.139 ms	-0.609 ms	0.050	United States
17	4.69.148.106	266.492 ms	-5.647 ms	0.001	United States
18	4.69.143.214	264.474 ms	-2.017 ms	0.036	United States
19	4.69.201.65	266.367 ms	1.892 ms	0.074	United States
20	193.63.109.110	270.196 ms	3.829 ms	0.093	Wantage, United Kingdom
	4.69.137.65				United States
21	4.69.143.97	263.330 ms	-6.866 ms	-0.010	United States
22	4.69.133.101	291.472 ms	28.142 ms	0.327	United States
23	195.50.119.98	252.112 ms	-39.360 ms	-0.323	United Kingdom
24	146.97.33.41	249.891 ms	-2.221 ms	0.034	London, United Kingdom
25	146.97.33.21	251.935 ms	2.044 ms	0.075	London, United Kingdom
26	146.97.37.206	254.539 ms	2.603 ms	0.081	London, United Kingdom
27	193.63.108.129	252.196 ms	-2.342 ms	0.033	United Kingdom
28	193.63.108.134	253.841 ms	1.645 ms	0.071	United Kingdom
29	193.63.109.110	252.546 ms	-1.295 ms	0.043	Wantage, United Kingdom
	4.69.137.65				United States
30	192.76.21.11	254.064 ms	1.518 ms	0.070	Oxford, United Kingdom

Ruta principal

RTTs para cada gateway

ZRTTs para cada gateway
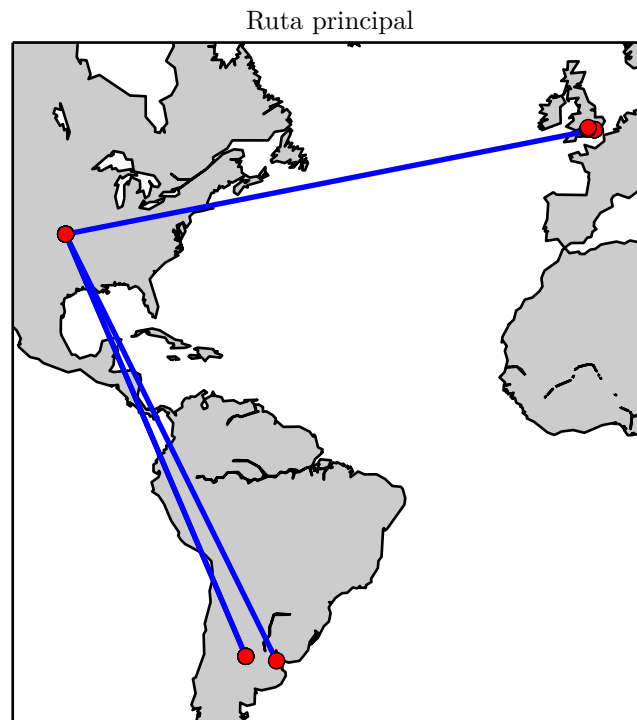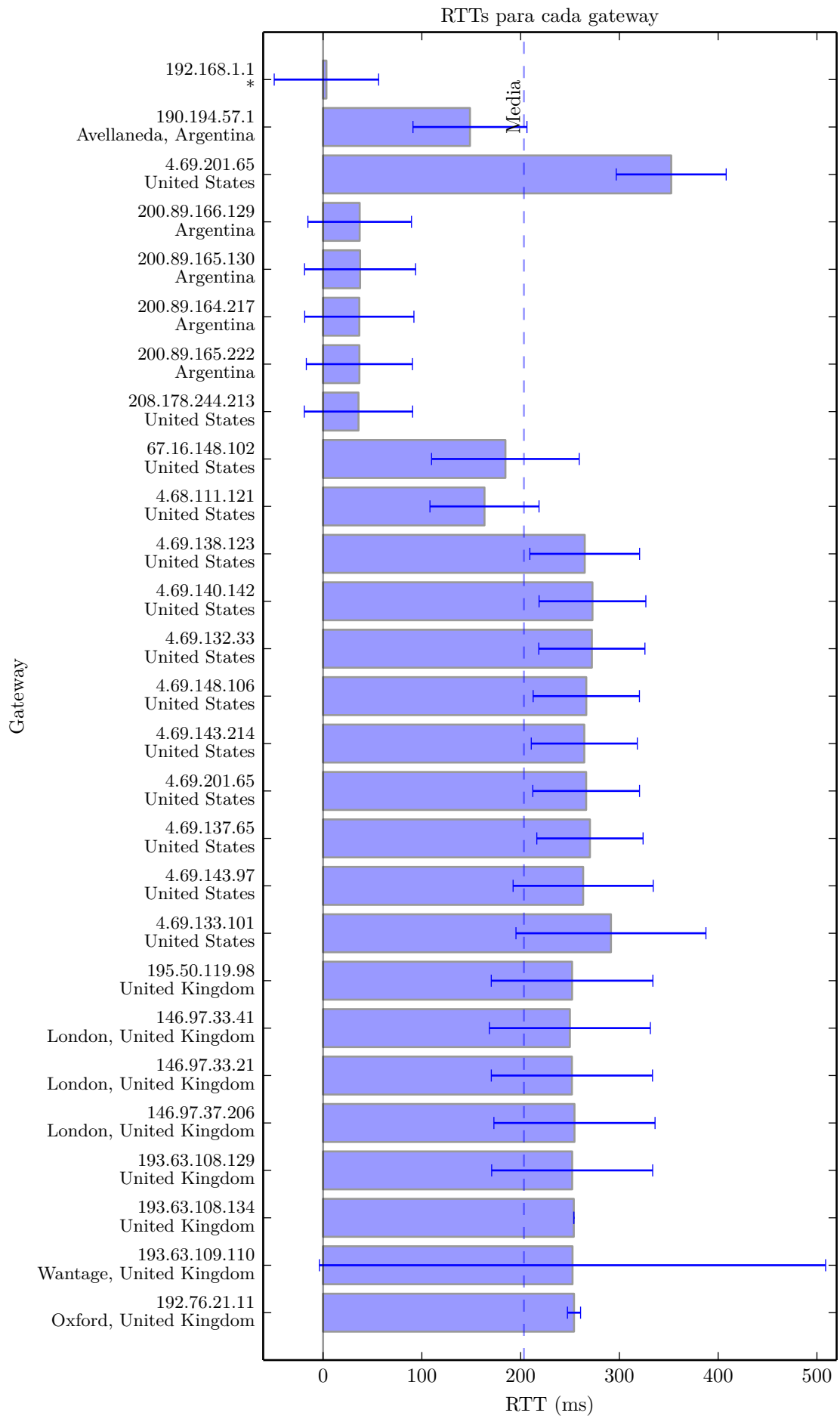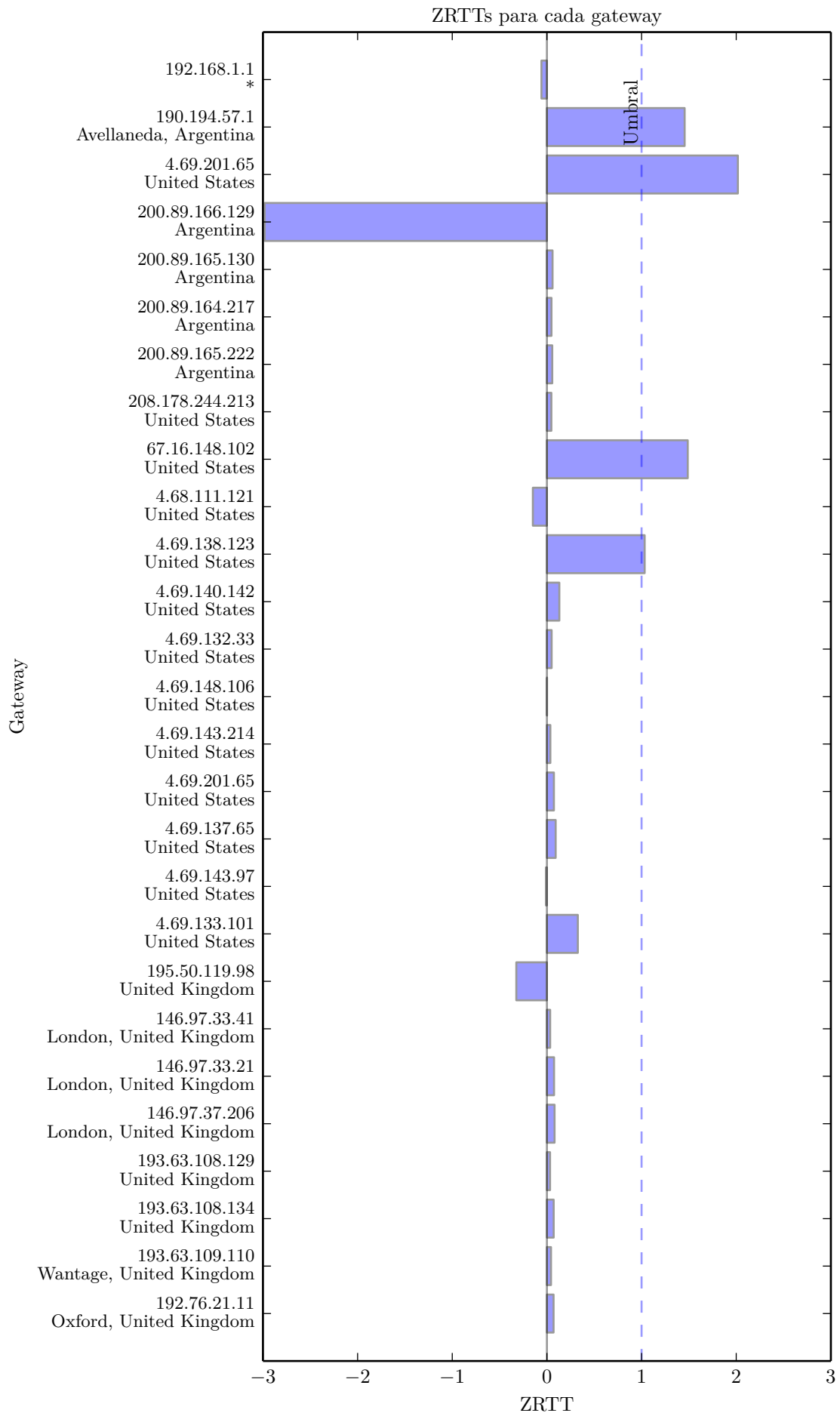
3.2.   The University of Sydney

TTL	IP Addresses	Absolute RTT	Relative RTT	Relative ZRTT	Location
1	192.168.1.1	4.028 ms	4.028 ms	-0.190	*
2	190.194.57.1	136.795 ms	132.768 ms	1.963	Avellaneda, Argentina
	129.250.2.230				Englewood, United States
5	200.89.165.157	28.460 ms	-108.335 ms	-1.627	Argentina
6	200.89.165.130	27.980 ms	-0.481 ms	-0.021	Argentina
9	159.63.53.213	28.150 ms	0.171 ms	-0.011	United States
	200.89.164.217				Argentina
10	200.89.165.222	28.559 ms	0.409 ms	-0.008	Argentina
11	159.63.53.213	28.194 ms	-0.365 ms	-0.019	United States
	200.89.164.217				Argentina
12	67.16.139.18	188.493 ms	160.299 ms	2.373	United States
13	129.250.9.117	152.026 ms	-36.467 ms	-0.557	Englewood, United States
14	129.250.3.172	155.601 ms	3.575 ms	0.039	Englewood, United States
15	129.250.3.174	186.601 ms	31.000 ms	0.448	Englewood, United States
16	129.250.2.168	198.006 ms	11.405 ms	0.156	Englewood, United States
17	129.250.2.230	194.436 ms	-3.570 ms	-0.067	Englewood, United States
18	204.1.253.166	193.793 ms	-0.643 ms	-0.023	Englewood, United States
19	113.197.15.68	318.822 ms	125.028 ms	1.848	Australia
	202.158.194.172				Australia
20	113.197.15.68	318.663 ms	-0.159 ms	-0.016	Australia
	202.158.194.172				Australia
21	113.197.15.66	341.475 ms	22.812 ms	0.326	Australia
22	202.158.194.197	352.632 ms	11.158 ms	0.152	Australia
	113.197.15.65				Australia
23	202.158.194.197	352.413 ms	-0.219 ms	-0.017	Australia
	113.197.15.65				Australia
24	202.158.205.165	353.399 ms	0.985 ms	0.001	Australia
25	113.197.9.186	352.893 ms	-0.506 ms	-0.021	Lidcombe, Australia

Ruta principal

RTTs para cada gateway

ZRTTs para cada gateway
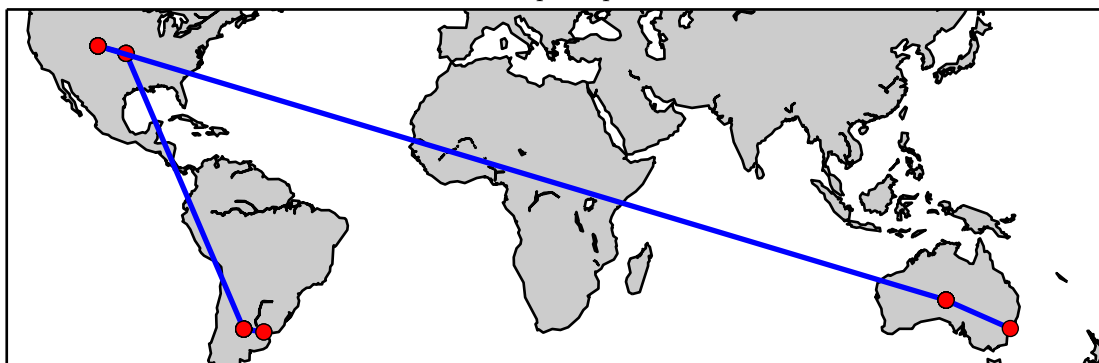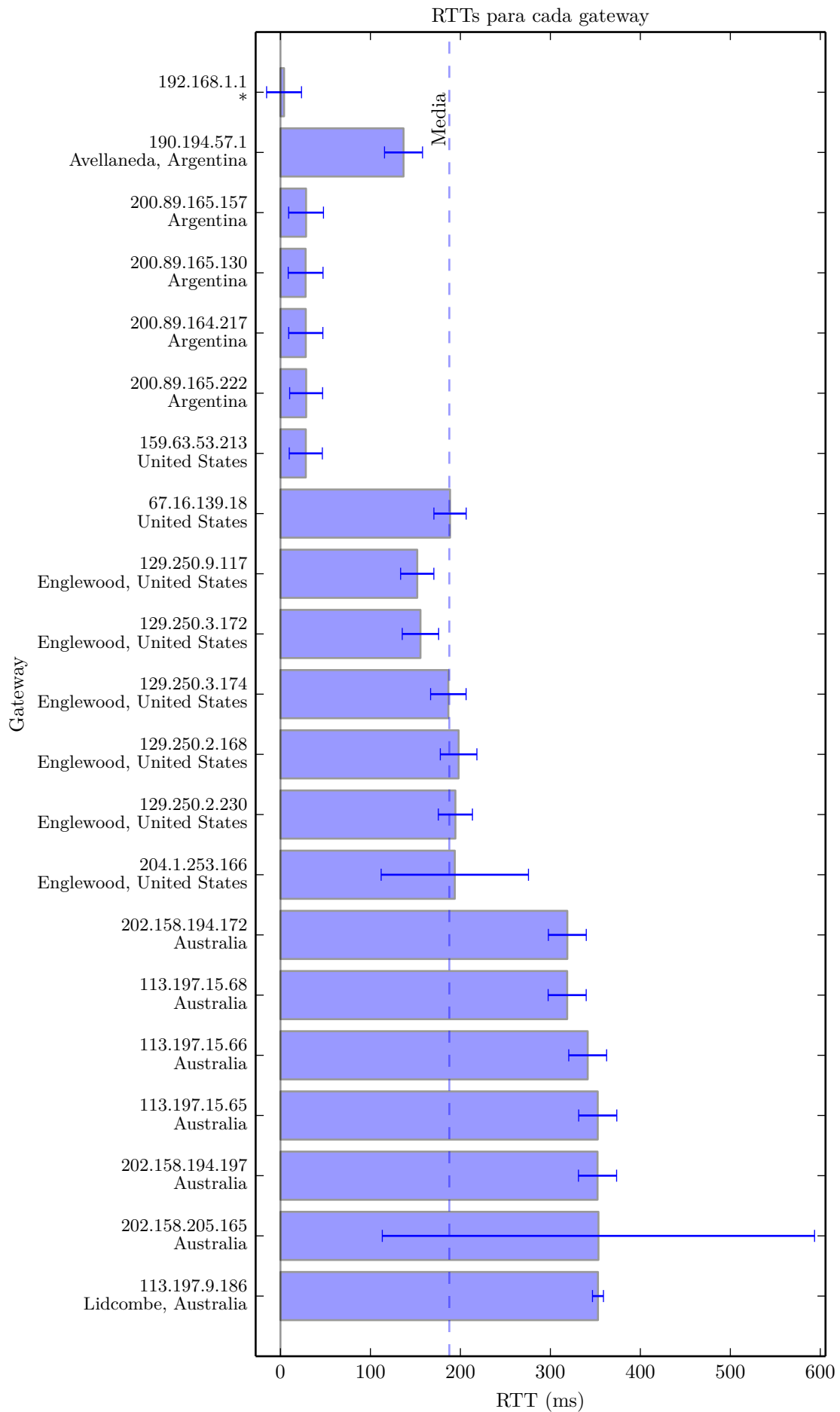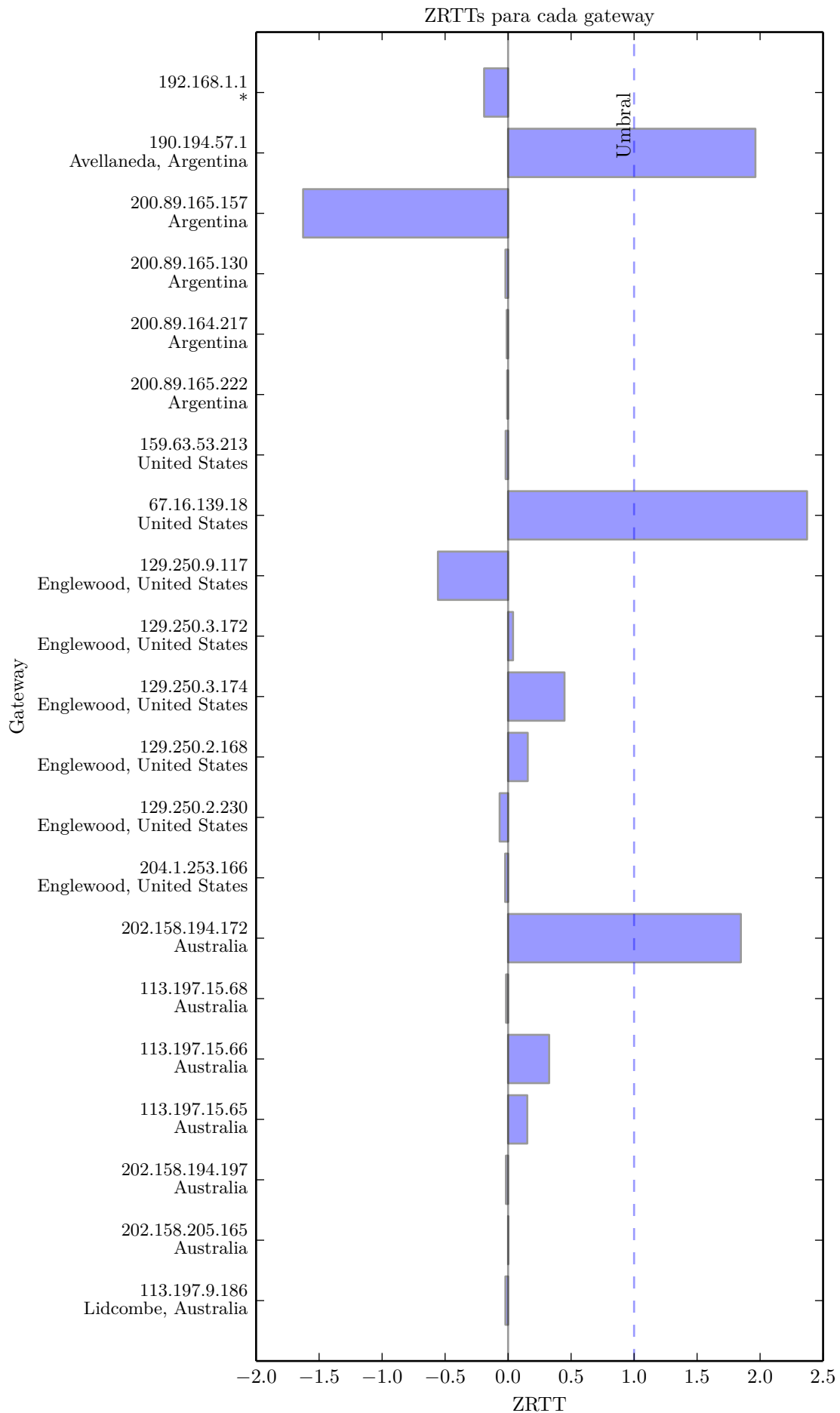
3.3. Malasya University of Science and Technology

TTL	IP Addresses	Absolute RTT	Relative RTT	Relative ZRTT	Location
1	192.168.1.1	2.759 ms	2.759 ms	-0.094	*
2	190.194.57.1	168.634 ms	165.875 ms	1.519	Avellaneda, Argentina
5	200.89.164.77	26.326 ms	-142.308 ms	-1.296	Argentina
6	200.89.165.197	26.331 ms	0.005 ms	0.004	Argentina
	208.178.195.205				Alexandria, United States
8	61.11.210.175	356.019 ms	329.688 ms	3.015	Malaysia
9	200.89.165.233	26.014 ms	-330.005 ms	-3.010	Argentina
10	200.89.165.222	26.049 ms	0.036 ms	0.004	Argentina
11	200.89.165.197	25.579 ms	-0.470 ms	-0.000	Argentina
	208.178.195.205				Alexandria, United States
12	67.16.129.202	172.589 ms	147.010 ms	1.346	United States
13	67.17.192.6	167.939 ms	-4.651 ms	-0.039	United States
14	203.208.171.145	172.060 ms	4.121 ms	0.041	Singapore
15	203.208.151.117	258.795 ms	86.735 ms	0.796	Singapore
	203.208.183.146				Singapore
	203.208.151.113				Singapore
	203.208.149.26				Singapore
	203.208.171.9				Singapore
	203.208.151.229				Singapore
	203.208.149.38				Singapore
	203.208.149.225				Singapore
	203.208.151.85				Singapore
	203.208.154.45				Singapore
	203.208.178.185				Singapore
	203.208.151.221				Singapore
	203.208.171.233				Singapore
	203.208.149.237				Singapore
	203.208.171.189				Singapore
16	203.208.171.137	345.280 ms	86.485 ms	0.794	Singapore
	203.208.152.22				Singapore
	203.208.149.61				Singapore
	203.208.151.194				Singapore
	203.208.182.77				Singapore
	203.208.149.73				Singapore
	203.208.172.101				Singapore
	203.208.182.37				Singapore
	203.208.153.121				Singapore
	203.208.171.85				Singapore
	203.208.171.198				Singapore
	203.208.182.125				Singapore
	203.208.182.41				Singapore
	203.208.152.58				Singapore
17	203.208.174.82	350.498 ms	5.218 ms	0.051	Singapore
	203.208.171.201				Singapore
	203.208.153.253				Singapore
	203.208.183.154				Singapore
	203.208.183.13				Singapore
18	203.208.171.198	352.568 ms	2.070 ms	0.023	Singapore
	124.158.224.45				Malaysia
19	61.11.210.1	345.925 ms	-6.643 ms	-0.057	Malaysia
	203.208.174.82				Singapore
20	61.11.210.175	349.564 ms	3.639 ms	0.037	Malaysia
	124.158.224.45				Malaysia
21	124.158.228.58	348.006 ms	-1.558 ms	-0.010	Malaysia
	61.11.210.1				Malaysia

```
22    61.11.210.175     351.526 ms       3.520 ms       0.036  Malaysia
      110.4.44.250                                              Penang, Malaysia
23    124.158.228.58    351.928 ms       0.402 ms       0.008  Malaysia
      110.4.45.250                                              Penang, Malaysia
24    110.4.45.250      353.841 ms       1.913 ms       0.021  Penang, Malaysia
      110.4.44.250                                              Penang, Malaysia
25    110.4.45.250      350.132 ms      -3.709 ms      -0.030  Penang, Malaysia
```

Ruta principal

RTTs para cada gateway

ZRTTs para cada gateway
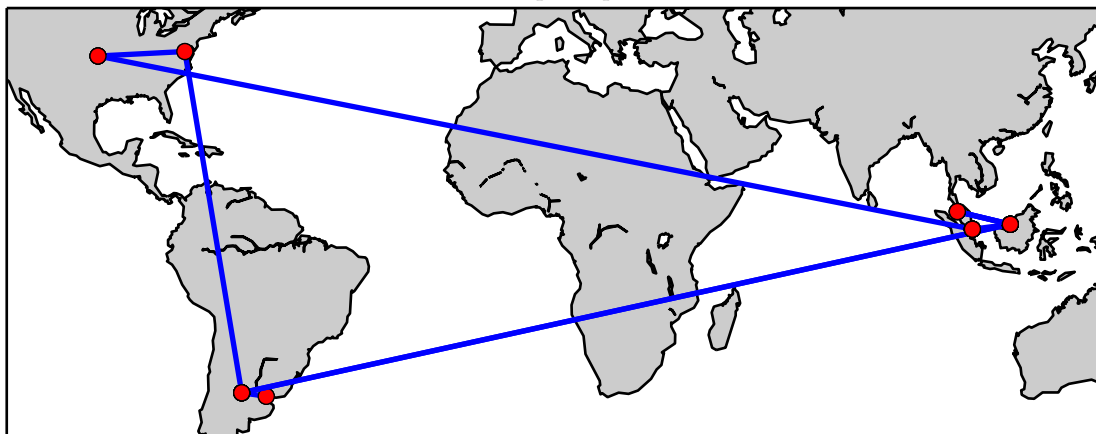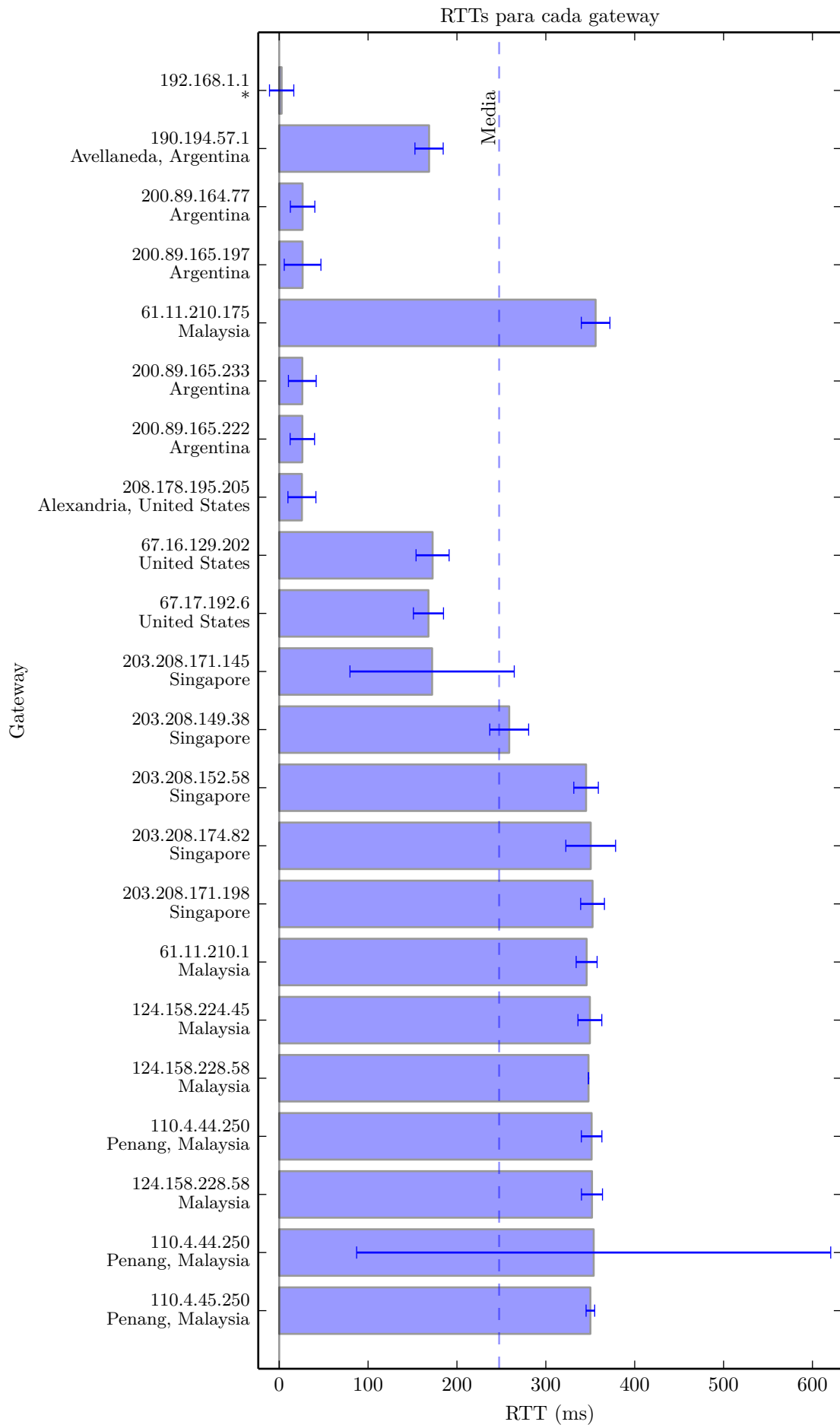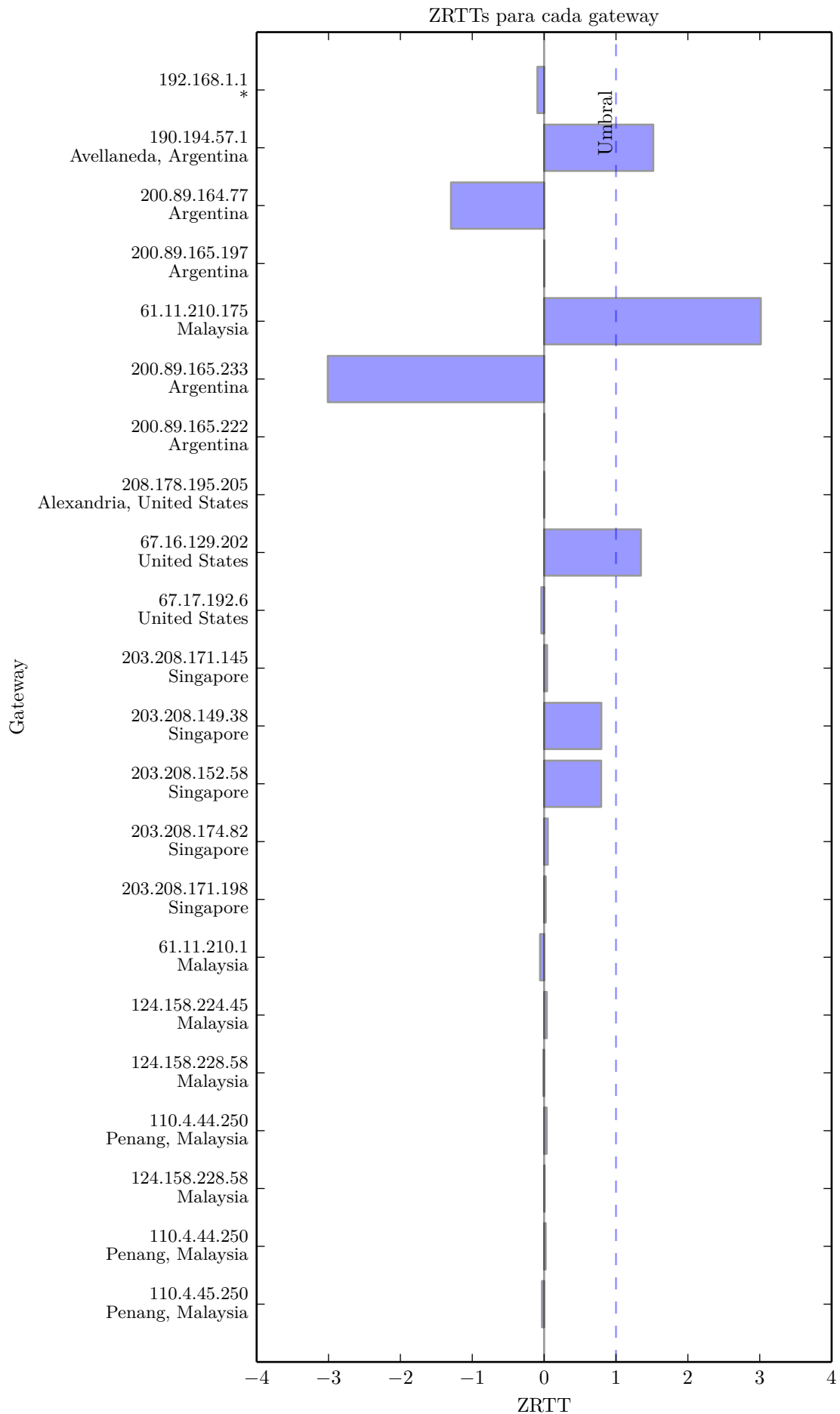
4. Discusión

Pendiente.

5. Conclusión

Pendiente.

Referencias

[1] *Scapy Project.* http://www.secdev.org/projects/scapy, Mayo de 2014