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# Trabajo Práctico 2

Teoría de las Comunicaciones

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## 1. Introducción

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

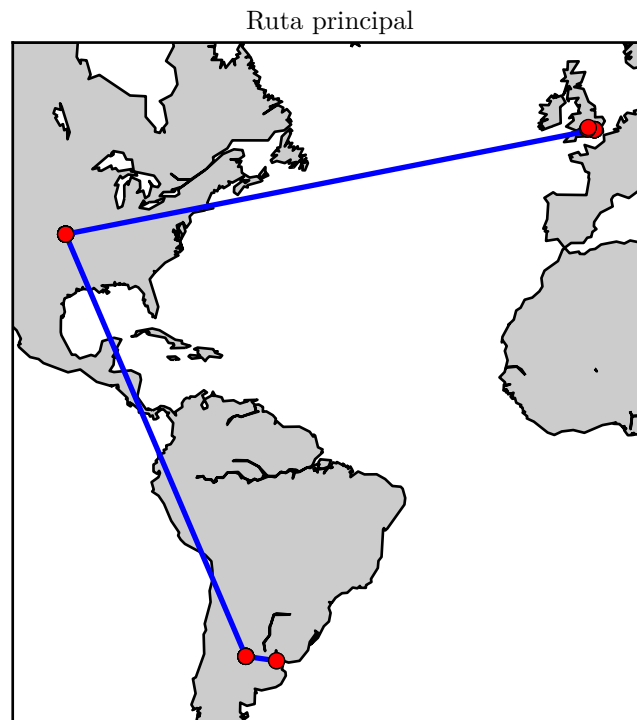
## 2. Desarrollo

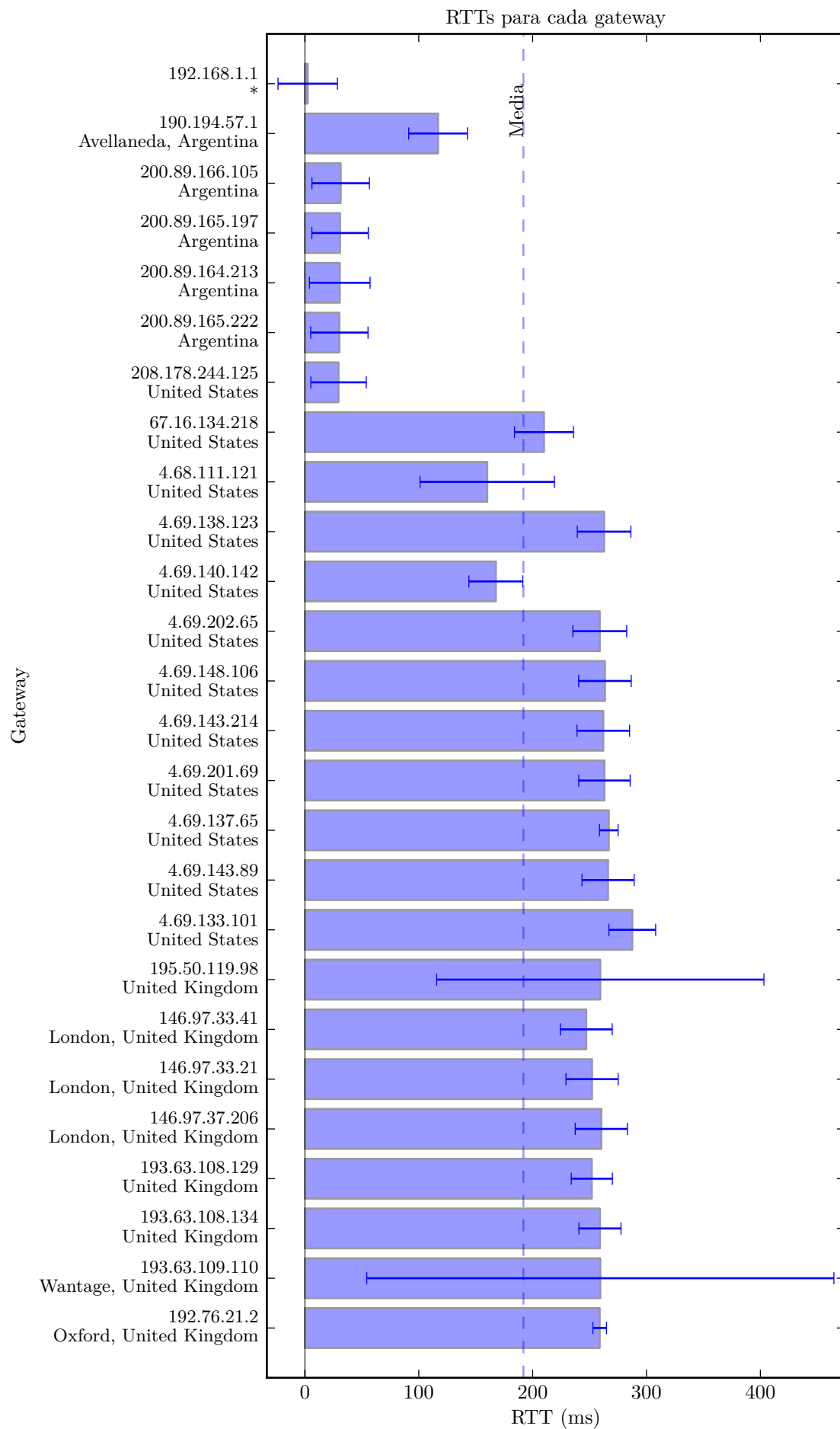
Pendiente.

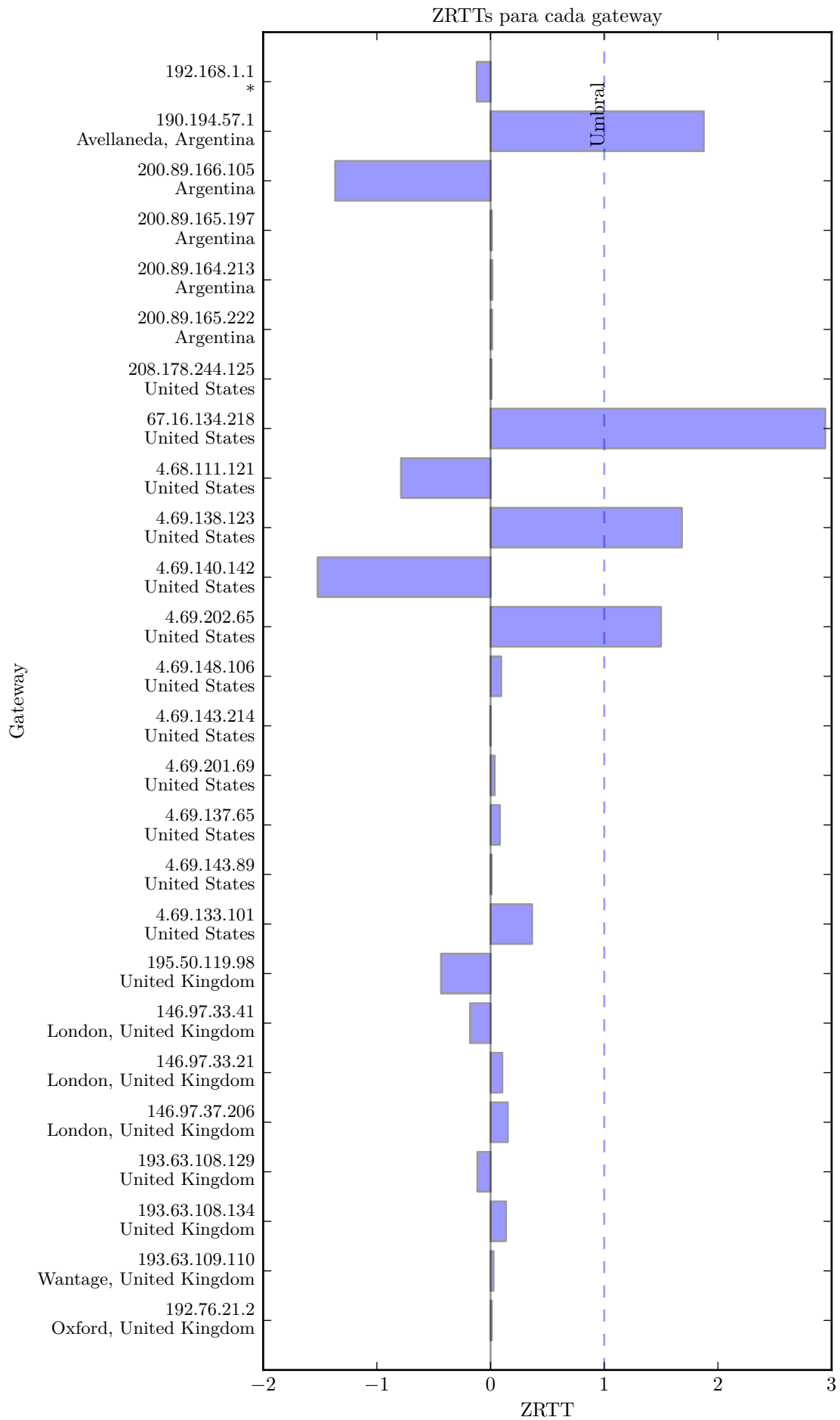
## 3. Resultados

### 3.1. University of Oxford

TTL	IP Addresses	Absolute RTT	Relative RTT	Relative ZRTT	Location
1	192.168.1.1	2.467 ms	2.467 ms	-0.121	*
2	190.194.57.1	116.937 ms	114.470 ms	1.875	Avellaneda, Argentina
5	200.89.166.105	31.413 ms	-85.525 ms	-1.366	Argentina
6	200.89.165.197	30.870 ms	-0.543 ms	0.011	Argentina
9	200.89.164.213	30.612 ms	-0.258 ms	0.016	Argentina
10	200.89.165.222	30.258 ms	-0.354 ms	0.014	Argentina
11	208.178.244.125	29.547 ms	-0.711 ms	0.008	United States
12	67.16.134.218	209.956 ms	180.409 ms	2.944	United States
	67.16.147.134				United States
13	4.68.111.121	160.149 ms	-49.807 ms	-0.787	United States
14	4.69.138.123	262.754 ms	102.604 ms	1.683	United States
15	4.69.140.142	167.694 ms	-95.060 ms	-1.521	United States
16	4.69.202.65	258.969 ms	91.275 ms	1.499	United States
17	4.69.148.106	263.497 ms	4.528 ms	0.093	United States
18	4.69.143.214	262.053 ms	-1.443 ms	-0.004	United States
19	4.69.201.69	263.068 ms	1.015 ms	0.036	United States
20	4.69.137.65	266.883 ms	3.815 ms	0.082	United States
21	4.69.143.89	266.230 ms	-0.653 ms	0.009	United States
22	4.69.133.101	287.524 ms	21.294 ms	0.365	United States
23	195.50.119.98	259.422 ms	-28.102 ms	-0.436	United Kingdom
24	146.97.33.41	247.070 ms	-12.352 ms	-0.180	London, United Kingdom
25	146.97.33.21	252.201 ms	5.131 ms	0.103	London, United Kingdom
26	146.97.37.206	260.330 ms	8.130 ms	0.152	London, United Kingdom
27	193.63.108.129	251.974 ms	-8.356 ms	-0.116	United Kingdom
28	193.63.108.134	259.115 ms	7.141 ms	0.136	United Kingdom
29	193.63.109.110	259.443 ms	0.328 ms	0.025	Wantage, United Kingdom
30	192.76.21.2	258.893 ms	-0.550 ms	0.011	Oxford, United Kingdom



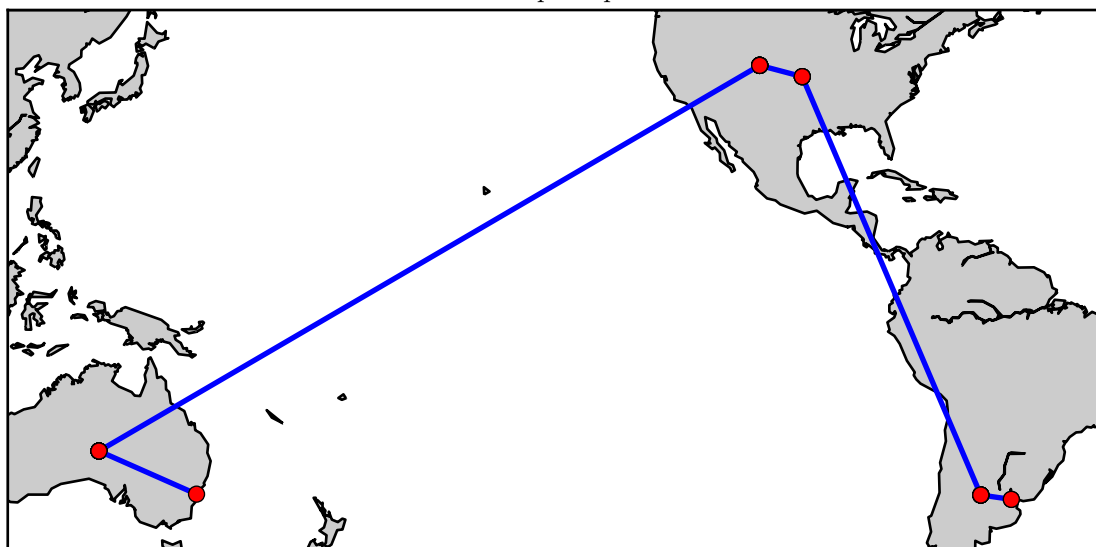


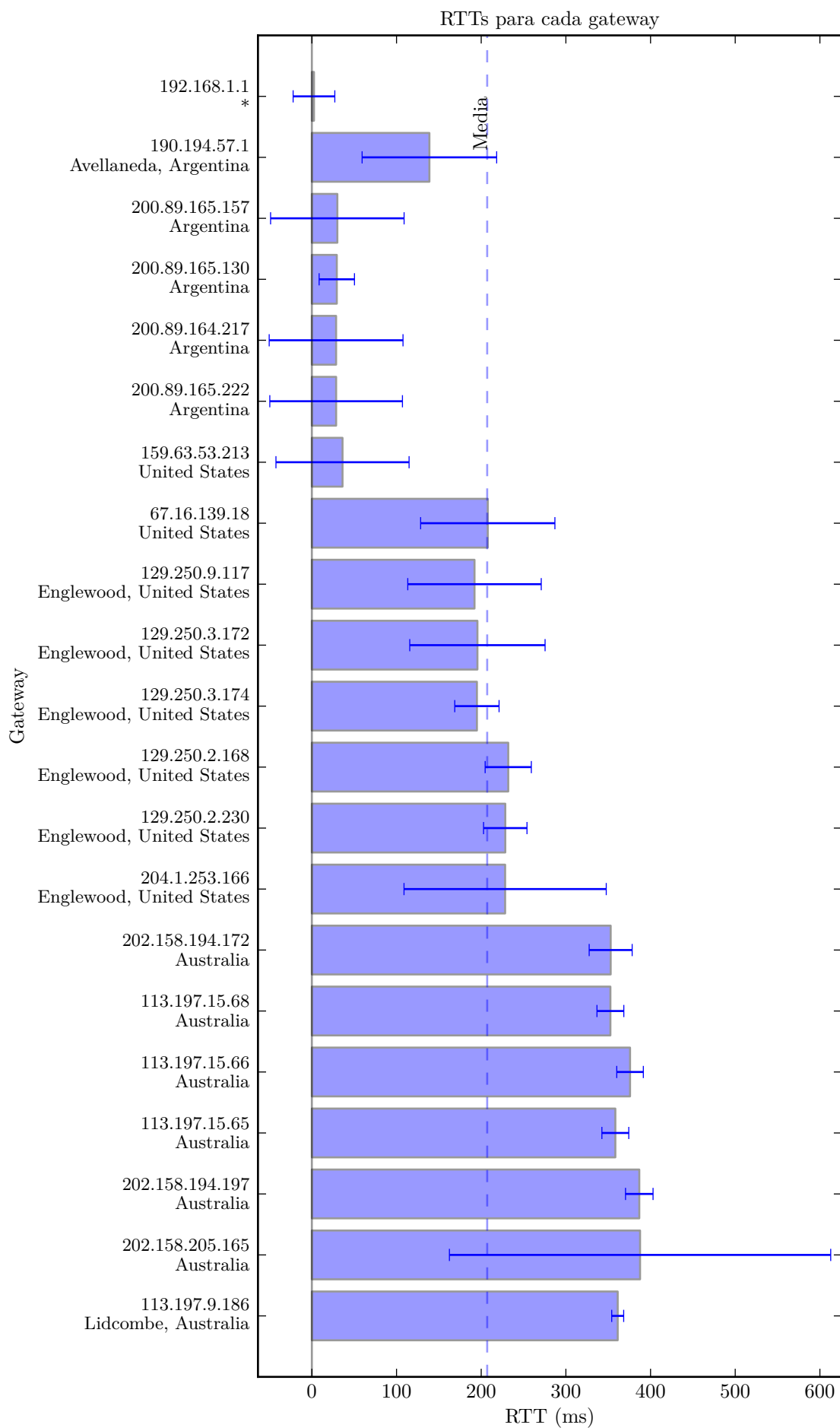


### 3.2. The University of Sydney

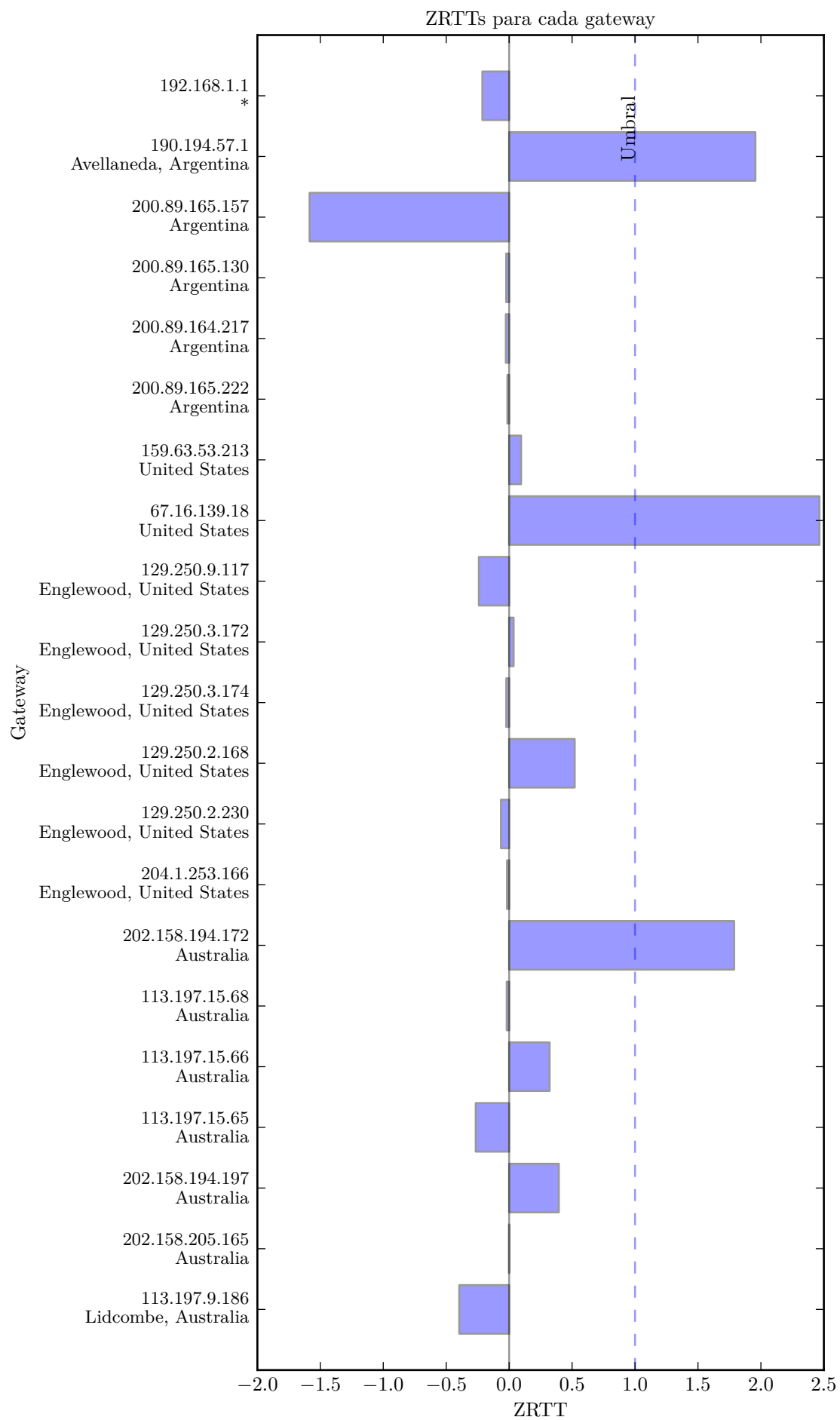
TTL	IP Addresses	Absolute RTT	Relative RTT	Relative ZRTT	Location
1	192.168.1.1	2.495 ms	2.495 ms	-0.213	*
2	190.194.57.1	138.808 ms	136.313 ms	1.956	Avellaneda, Argentina
5	200.89.165.157	30.104 ms	-108.703 ms	-1.586	Argentina
6	200.89.165.130	29.463 ms	-0.641 ms	-0.024	Argentina
9	200.89.164.217	28.635 ms	-0.828 ms	-0.026	Argentina
10	200.89.165.222	28.665 ms	0.031 ms	-0.014	Argentina
11	159.63.53.213	36.210 ms	7.544 ms	0.095	United States
12	67.16.139.18	207.744 ms	171.534 ms	2.465	United States
13	129.250.9.117	192.087 ms	-15.657 ms	-0.241	Englewood, United States
14	129.250.3.172	195.526 ms	3.439 ms	0.035	Englewood, United States
15	129.250.3.174	194.925 ms	-0.601 ms	-0.023	Englewood, United States
16	129.250.2.168	231.937 ms	37.012 ms	0.521	Englewood, United States
17	129.250.2.230	228.437 ms	-3.500 ms	-0.065	Englewood, United States
18	204.1.253.166	228.255 ms	-0.181 ms	-0.017	Englewood, United States
19	202.158.194.172	352.907 ms	124.651 ms	1.788	Australia
20	113.197.15.68	352.569 ms	-0.337 ms	-0.019	Australia
21	113.197.15.66	375.784 ms	23.215 ms	0.321	Australia
22	113.197.15.65	358.409 ms	-17.375 ms	-0.265	Australia
23	202.158.194.197	386.693 ms	28.284 ms	0.395	Australia
24	202.158.205.165	387.616 ms	0.923 ms	-0.001	Australia
25	113.197.9.186	361.201 ms	-26.415 ms	-0.396	Lidcombe, Australia

Ruta principal





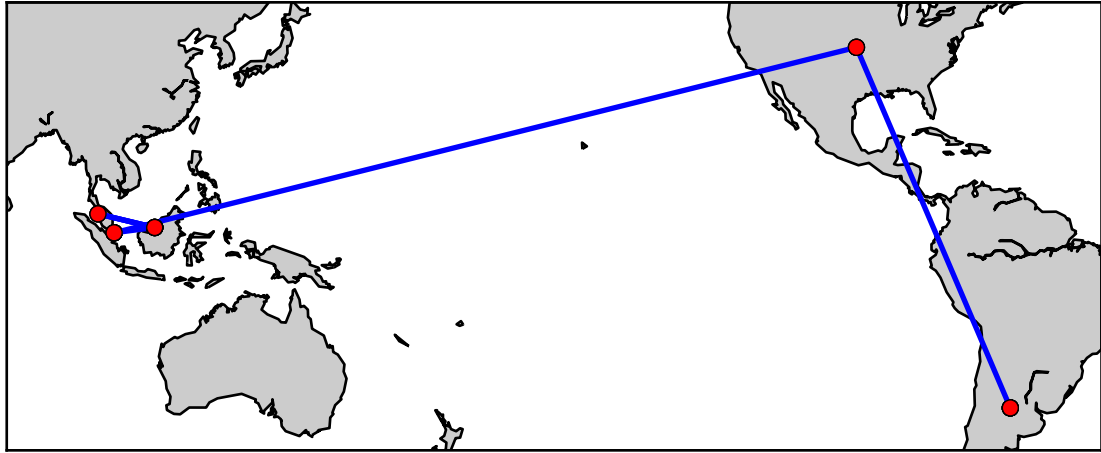


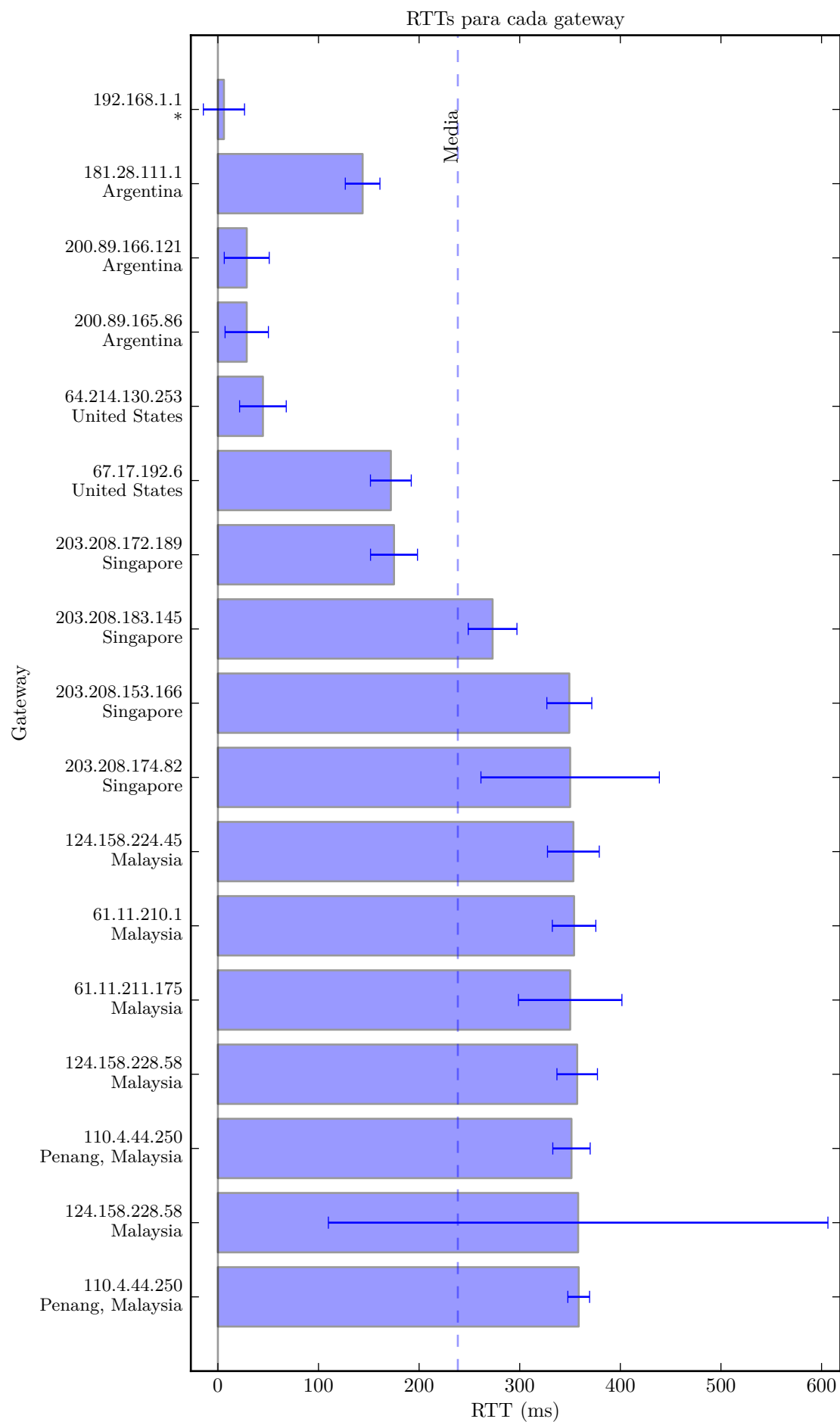


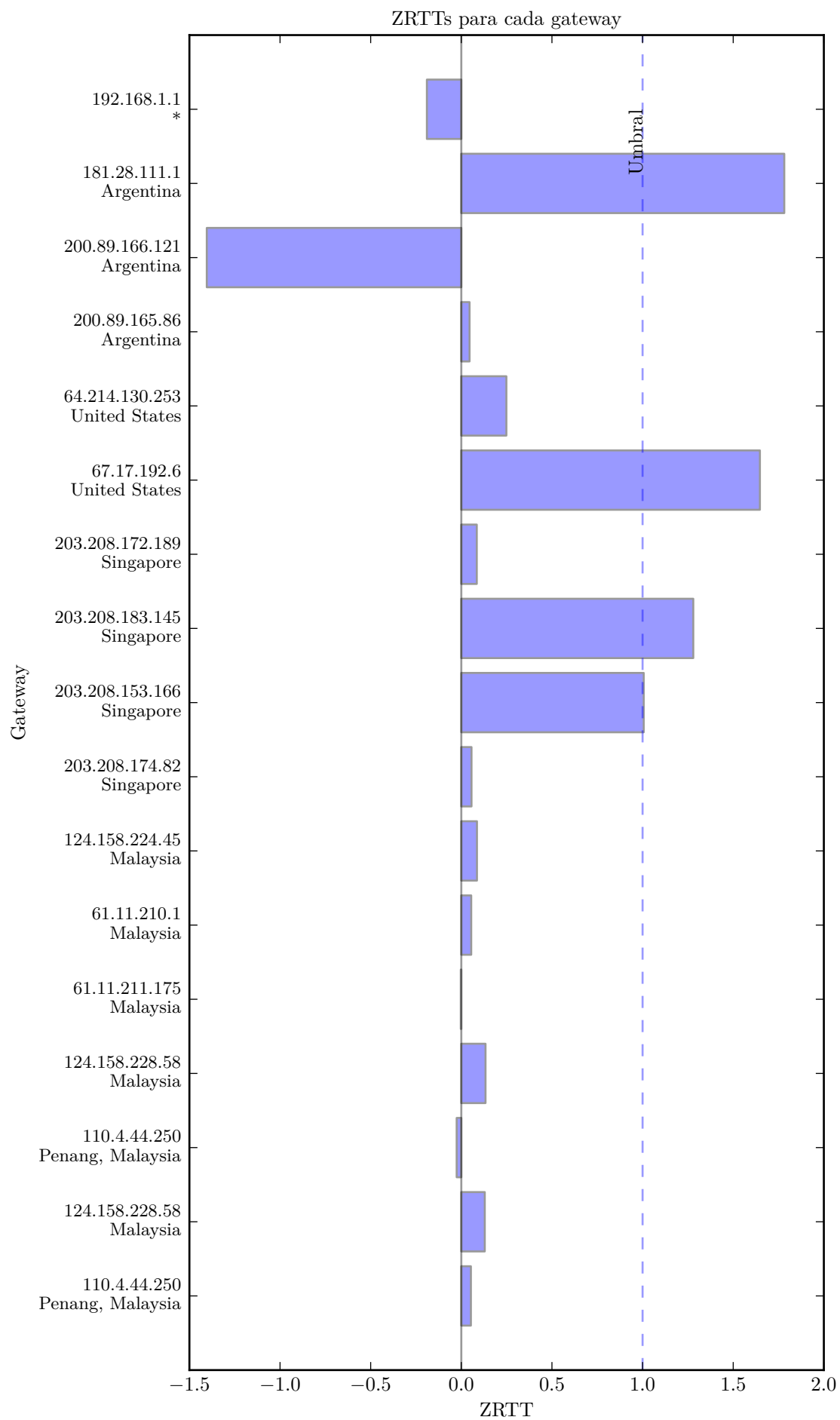
### 3.3. Malasya University of Science and Technology

TTL	IP Addresses	Absolute RTT	Relative RTT	Relative ZRTT	Location
1	192.168.1.1	6.019 ms	6.019 ms	-0.190	*
2	181.28.111.1	143.855 ms	137.836 ms	1.782	Argentina
6	200.89.166.121	28.707 ms	-115.148 ms	-1.404	Argentina
7	200.89.165.86	28.671 ms	-0.036 ms	0.045	Argentina
8	64.214.130.253	44.767 ms	16.096 ms	0.249	United States
	208.178.245.21				United States
9	67.17.192.6	171.927 ms	127.161 ms	1.647	United States
10	203.208.172.189	175.059 ms	3.132 ms	0.085	Singapore
11	203.208.183.145	273.035 ms	97.976 ms	1.280	Singapore
	203.208.171.137				Singapore
	203.208.149.61				Singapore
	203.208.182.125				Singapore
	203.208.182.77				Singapore
	203.208.149.73				Singapore
	203.208.172.101				Singapore
	203.208.149.25				Singapore
	203.208.153.121				Singapore
	203.208.149.37				Singapore
	203.208.171.85				Singapore
	203.208.171.234				Singapore
	203.208.182.41				Singapore
12	203.208.151.117	349.307 ms	76.272 ms	1.006	Singapore
	203.208.152.222				Singapore
	203.208.151.113				Singapore
	203.208.153.166				Singapore
	203.208.151.98				Singapore
	203.208.171.9				Singapore
	203.208.151.229				Singapore
	203.208.149.225				Singapore
	203.208.152.226				Singapore
	203.208.151.85				Singapore
	203.208.154.45				Singapore
	203.208.151.221				Singapore
	203.208.182.45				Singapore
	203.208.171.189				Singapore
13	203.208.183.14	350.128 ms	0.821 ms	0.056	Singapore
	203.208.183.153				Singapore
	203.208.153.254				Singapore
	203.208.174.82				Singapore
14	203.208.153.166	353.338 ms	3.210 ms	0.086	Singapore
	203.208.151.98				Singapore
	124.158.224.45				Malaysia
	203.208.152.222				Singapore
	203.208.152.226				Singapore
	203.208.182.45				Singapore
15	61.11.210.1	354.032 ms	0.694 ms	0.055	Malaysia
	203.208.174.82				Singapore
16	61.11.211.175	350.168 ms	-3.864 ms	-0.003	Malaysia
	124.158.224.45				Malaysia
17	124.158.228.58	357.127 ms	6.960 ms	0.134	Malaysia
	61.11.210.1				Malaysia
18	110.4.44.250	351.449 ms	-5.679 ms	-0.026	Penang, Malaysia
	61.11.211.175				Malaysia
19	124.158.228.58	358.083 ms	6.634 ms	0.129	Malaysia
20	110.4.44.250	358.633 ms	0.550 ms	0.053	Penang, Malaysia

Ruta principal







## 4. Discusión

Pendiente.

## 5. Conclusión

Pendiente.

## Referencias

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