# Question Reponses

1. **How would you tell if the TTL is too small?**You can tell if the TTL is too small if the response is an ICMP TIME\_EXCEEDED packet and the sender was not the destination.
2. **How would you tell if the TTL is too large?**  
   You can’t tell as easily if the TTL is too large, just that it was large enough to make it to the server. You can verify that the TTL is indeed too large by sending a packet with a TTL one smaller and seeing if that packet gets a TIME\_EXCEEDED.
3. **How will you match ICMP responses to the probes?**  
   I matched the probes to my application by binding responses to the port they were sent from.
4. **Why would you not get an answer?**  
   The server could not exist, it could block all unknown connections to it (via a firewall) or block connections based on the port used. The router that the packet expires on may also not send ICMP packets, or not ICMP TIME\_EXCEEDED in particular.

# Data

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Address** | **TTL** | **RTT** |  | **#** | **Address** | **TTL** | **RTT** |
| 1 | youtube.com | 11 | 30 |  | 56 | google.it | 11 | 40 |
| 3 | photobucket.com | 15 | 330 |  | 57 | google.com.hk | 13 | 5120 |
| 4 | codecanyon.net | 16 | 80 |  | 58 | google.es | 11 | 40 |
| 5 | surveymonkey.com | 34 | 5000 |  | 60 | craigslist.org | 11 | 200 |
| 7 | templatemonster.com | 16 | 5030 |  | 61 | blogger.com | 14 | 180 |
| 8 | clicksor.com | 13 | 40 |  | 64 | go.com | 24 | 200 |
| 10 | pagesjaunes.fr | 12 | 5730 |  | 66 | ifeng.com | 16 | 5620 |
| 12 | google.com | 11 | 40 |  | 67 | xhamster.com | 9 | 400 |
| 13 | facebook.com | 12 | 330 |  | 69 | google.com.mx | 11 | 4300 |
| 14 | youtube.com | 11 | 40 |  | 70 | stackoverflow.com | 15 | 210 |
| 15 | yahoo.com | 16 | 380 |  | 72 | alibaba.com | 20 | 5010 |
| 16 | baidu.com | 16 | 5730 |  | 73 | google.ca | 11 | 40 |
| 18 | qq.com | 16 | 9520 |  | 74 | fc2.com | 16 | 5390 |
| 21 | taobao.com | 16 | 5820 |  | 75 | imgur.com | 11 | 5520 |
| 22 | twitter.com | 13 | 5060 |  | 79 | vube.com | 16 | 420 |
| 23 | linkedin.com | 15 | 5120 |  | 81 | thepiratebay.sx | 16 | 5830 |
| 24 | blogspot.com | 14 | 260 |  | 84 | t.co | 13 | 410 |
| 25 | google.co.in | 11 | 30 |  | 85 | espn.go.com | 24 | 5120 |
| 26 | sina.com.cn | 21 | 5530 |  | 86 | gmw.cn | 16 | 820 |
| 29 | wordpress.com | 14 | 5190 |  | 87 | flickr.com | 16 | 90 |
| 31 | yahoo.co.jp | 16 | 5820 |  | 88 | odnoklassniki.ru | 16 | 320 |
| 35 | google.de | 11 | 20 |  | 89 | reddit.com | 11 | 300 |
| 36 | weibo.com | 15 | 5320 |  | 90 | xinhuanet.com | 16 | 5800 |
| 37 | tumblr.com | 13 | 20 |  | 91 | google.com.tr | 11 | 40 |
| 38 | pinterest.com | 16 | 5080 |  | 92 | aliexpress.com | 16 | 410 |
| 39 | google.co.uk | 11 | 20 |  | 93 | adcash.com | 15 | 240 |
| 40 | google.fr | 11 | 20 |  | 96 | blogspot.in | 14 | 120 |
| 41 | tmall.com | 16 | 5420 |  | 97 | google.com.au | 11 | 170 |
| 43 | 360.cn | 16 | 5820 |  | 99 | about.com | 16 | 410 |
| 44 | sohu.com | 15 | 5810 |  | 100 | godaddy.com | 64 | 240 |
| 46 | google.co.jp | 11 | 20 |  | 101 | people.com.cn | 11 | 8390 |
| 47 | soso.com | 16 | 5490 |  | 103 | google.pl | 11 | 50 |
| 48 | mail.ru | 16 | 190 |  | 106 | alipay.com | 16 | 5410 |
| 51 | google.com.br | 11 | 40 |  | 109 | dailymotion.com | 15 | 410 |
| 52 | google.ru | 11 | 70 |  | 110 | netflix.com | 15 | 400 |
| 54 | apple.com | 16 | 270 |