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Project 2 Report

Instructions to run the code,

1. Navigate to the project2grading directory
2. Uset the command `sudo python3 distMeasurement.py`

The list of target domains used

I was allocated the below list from HW2, however few of them were not responding to my pings from both my tool and the standard ping tool on Unix.

taobao.com
xhamster.com
washingtonpost.com
blogger.com
wp.pl
mfisp.com
pngtree.com
study.com
mynet.com
eghtesadnews.com

So, I used a couple of other popular domains to the list to generate a decent graph as instructed in the question, I'm listing them my below,

google.com

yahoo.com

att.com

spotify.com

facebook.com

googleadservices.com

gmail.com

apple.com

The Output of the tool,

```
root@ip-10-4-3-49:~/project2grading# python3 distMeasurement.py

--------- Pinging google.com ---------
RTT =   0.0014314651489257812
Hops =  16
Both the IP Addresses and the Ports matched
Received response length (inclusive of headers) =  56
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--------- Pinging yahoo.com ---------
RTT =   0.06647086143493652
Hops =  17
Both the IP Addresses and the Ports matched
Received response length (inclusive of headers) =  56
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--------- Pinging att.com ---------
RTT =   0.03092646598815918
Hops =  27
Both the IP Addresses and the Ports matched
Received response length (inclusive of headers) =  56
--------------------------


--------- Pinging spotify.com ---------
RTT =   0.0013427734375
Hops =  11
Both the IP Addresses and the Ports matched
Received response length (inclusive of headers) =  56
--------------------------


--------- Pinging facebook.com ---------
RTT =   0.001092672348022461
Hops =  12
Both the IP Addresses and the Ports matched
Received response length (inclusive of headers) =  576
--------------------------


--------- Pinging googleadservices.com ---------
RTT =   0.0012345314025878906
Hops =  14
Both the IP Addresses and the Ports matched
Received response length (inclusive of headers) =  56
--------------------------
```

```
--------- Pinging gmail.com ---------
RTT =   0.0014462471008300781
Hops =  16
Both the IP Addresses and the Ports matched
Received response length (inclusive of headers) =  56
---------------------------


--------- Pinging apple.com ---------
RTT =   0.0018215179443359375
Hops =  10
Both the IP Addresses and the Ports matched
Received response length (inclusive of headers) =  576
---------------------------


--------- Pinging taobao.com ---------
Maximum wait time exceeded. Pinging the next domain in targets.txt
---------------------------


--------- Pinging xhamster.com ---------
RTT =   0.0011518001556396484
Hops =  9
Both the IP Addresses and the Ports matched
Received response length (inclusive of headers) =  576
---------------------------


--------- Pinging washingtonpost.com ---------
RTT =   0.0017769336700439453
Hops =  15
Both the IP Addresses and the Ports matched
Received response length (inclusive of headers) =  576
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--------- Pinging blogger.com ---------
RTT =   0.0012099742889404297
Hops =  14
Both the IP Addresses and the Ports matched
Received response length (inclusive of headers) =  56
---------------------------


--------- Pinging wp.pl ---------
Maximum wait time exceeded. Pinging the next domain in targets.txt
---------------------------
```

```
--------- Pinging mfisp.com ---------
RTT =   0.2697031497955322
Hops =  21
Both the IP Addresses and the Ports matched
Received response length (inclusive of headers) =  576
--------------------------


--------- Pinging pngtree.com ---------
Maximum wait time exceeded. Pinging the next domain in targets.txt
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--------- Pinging study.com ---------
RTT =   0.0004930496215820312
Hops =  1
Both the IP Addresses and the Ports matched
Received response length (inclusive of headers) =  576
--------------------------


--------- Pinging mynet.com ---------
RTT =   0.13863801956176758
Hops =  18
Both the IP Addresses and the Ports matched
Received response length (inclusive of headers) =  56
--------------------------


--------- Pinging eghtesadnews.com ---------
Maximum wait time exceeded. Pinging the next domain in targets.txt
--------------------------
```
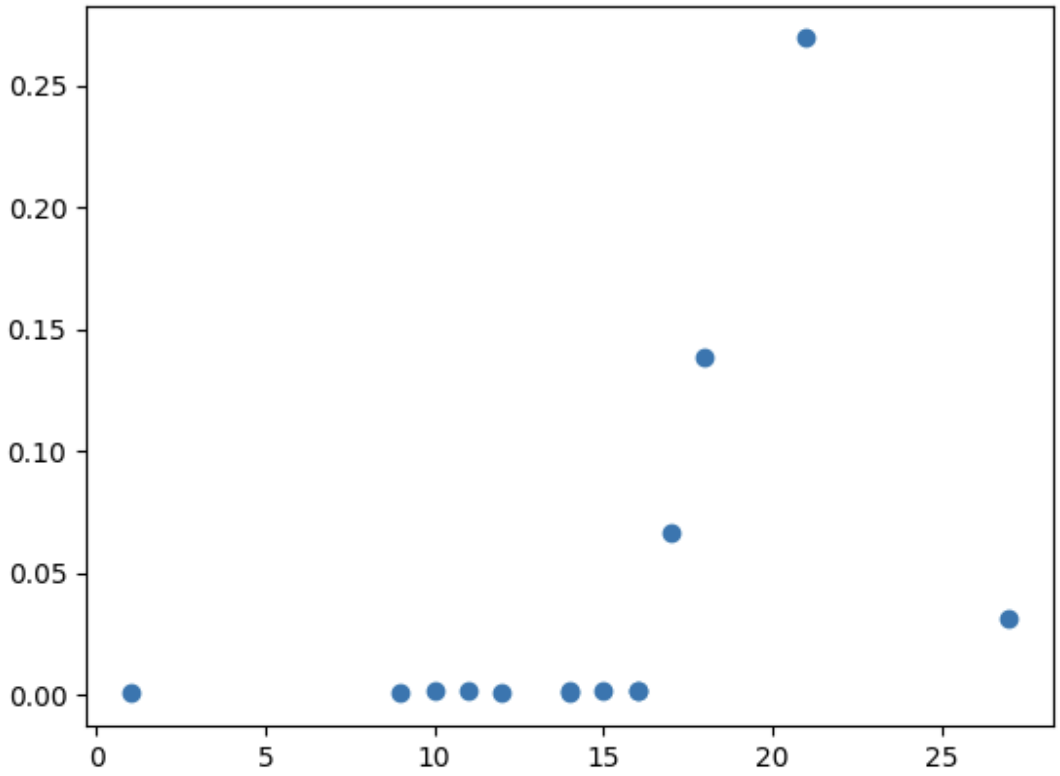

Scatterplot,

The RTT is along the Y-axis and the Number of hops is along the X-axis



Conclusion,

1. Among the domains that responded, most of them took 10 to 15 router hops to get to the server
2. Among the domains I targeted and the ones that responded, both the IPs and Port numbers matched for the response matching criteria