Networks & Internet
(Brian Stone)
(CA169)

Assignment 1

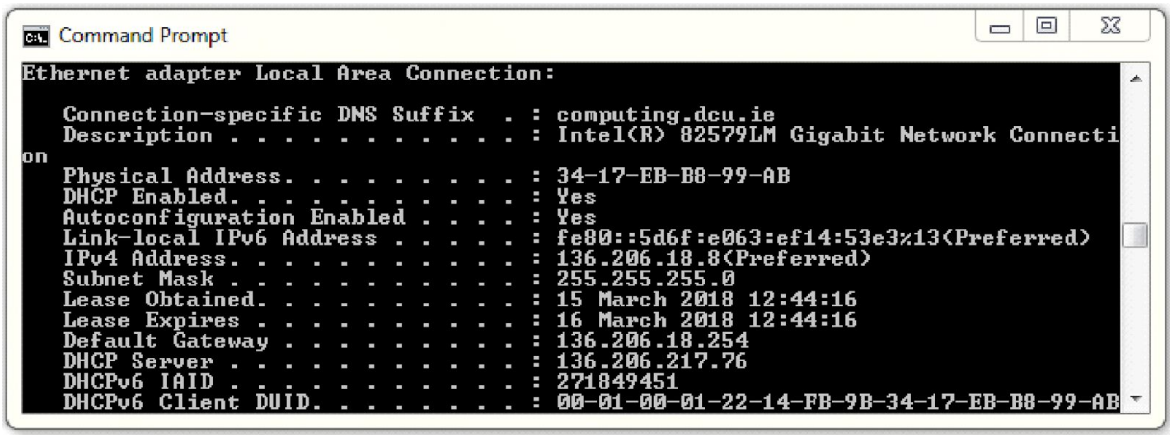
Bryan McHugh
(17428222)

Declaration:

In submitting this project I declare that the project material, which I now submit, is my own work. Any assistance received by way of borrowing from the work of others has been cited and acknowledged within the work.I make this declaration in the knowledge that a breach of the rules pertaining to project submission may carry serious consequences

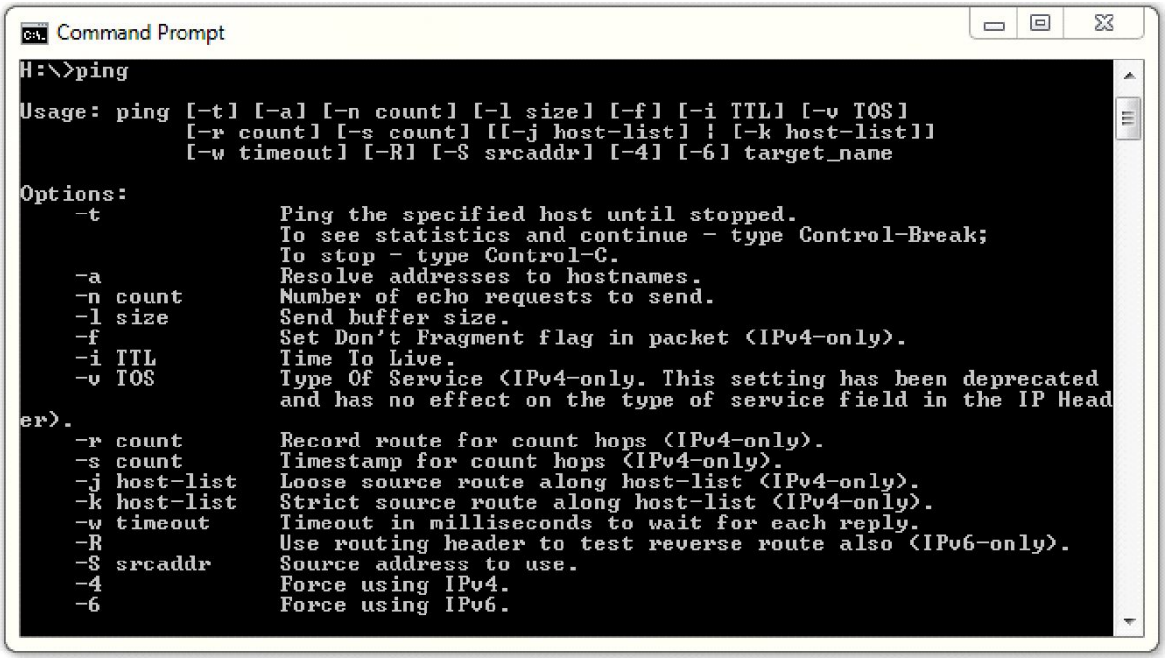
IPCONFIG Exercise:

When ipconfig is typed into the command prompt a list of IP addresses are displayed.



Ethernet adapters hardware address: 34-17-EB-B8-99-AB

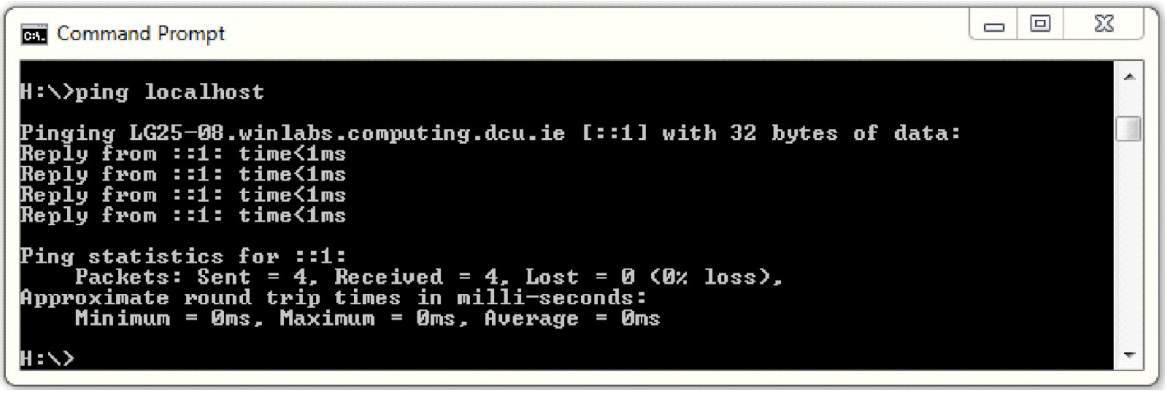
PING Exercise 1:



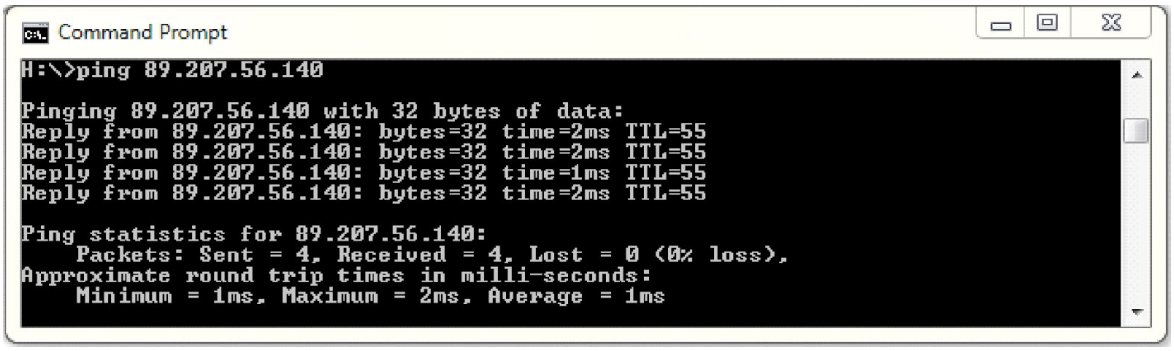
When ping is typed into the command prompt

a list of options for ping gets returned.

PING Exercise 2:



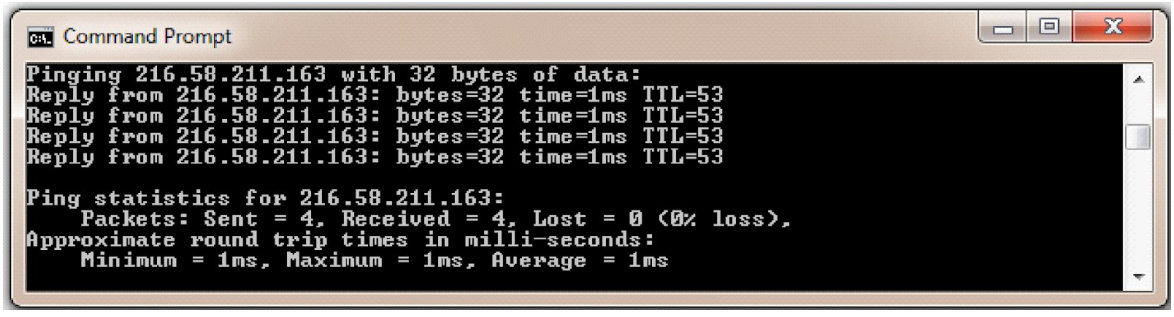
Typing ping localhost returns statistics for the localhost such as how many packets were sent, received and lost and the time taken to do this, with the max, min and average time being displayed. The localhost is a hostname that means this computer. This computer's local host is LG25-08.winlabs.computing.dcu.ie



Ping 89.207.56.140

Packets: Sent = 4, received = 4, lost = 0

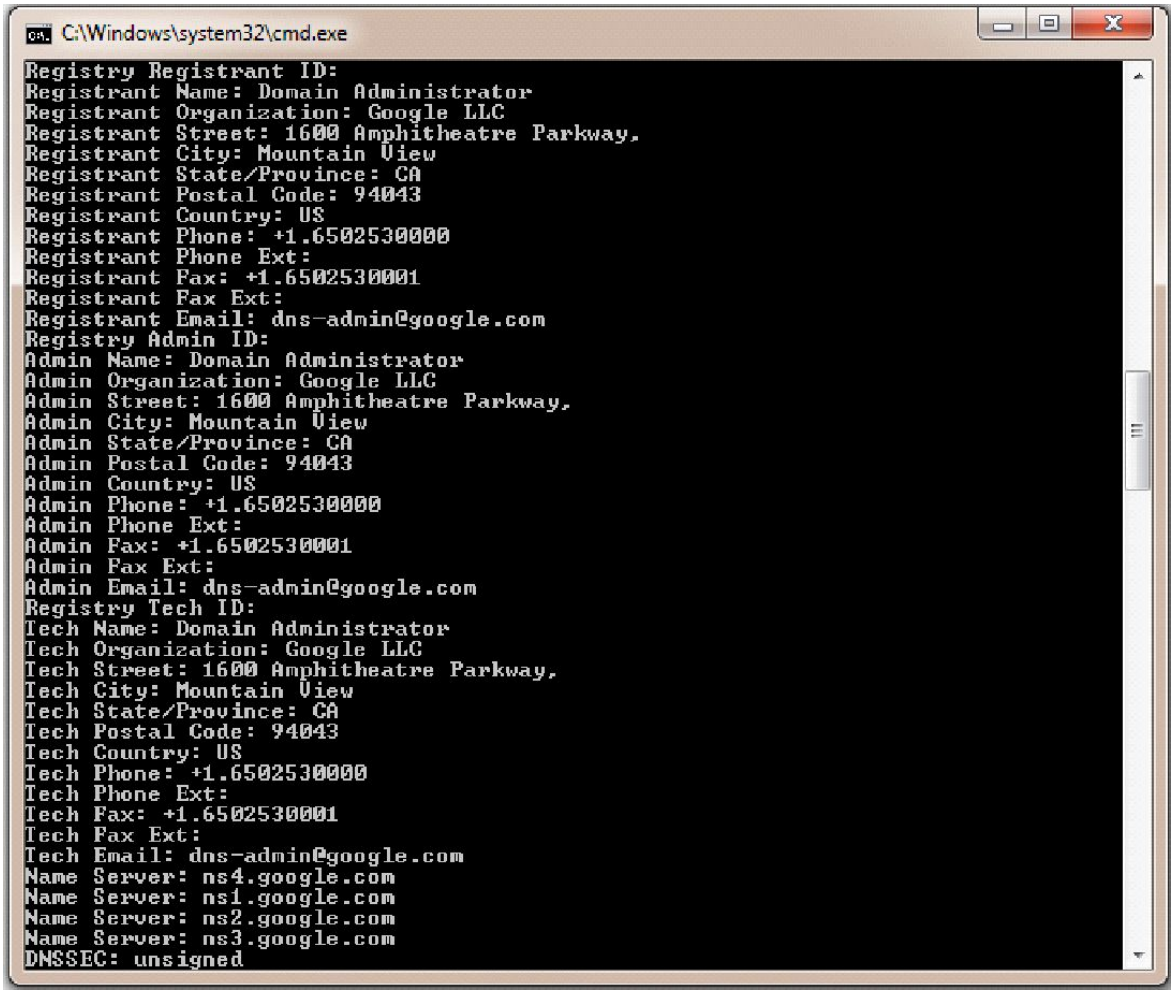
Time taken: Min = 1 ms, Max = 2 ms, average = 1 ms



Ping 216.58.211.163

Packets: Sent = 4, received = 4, lost = 0

Time taken: Min = 1 ms, Max = 1 ms, average = 1 ms



216.58.211.163 = dub08s01-in-f163.1e100.net, this is the hostname of Google's HQ in California.

The owner of this URL is Google and their phone number is +1.6502530000.

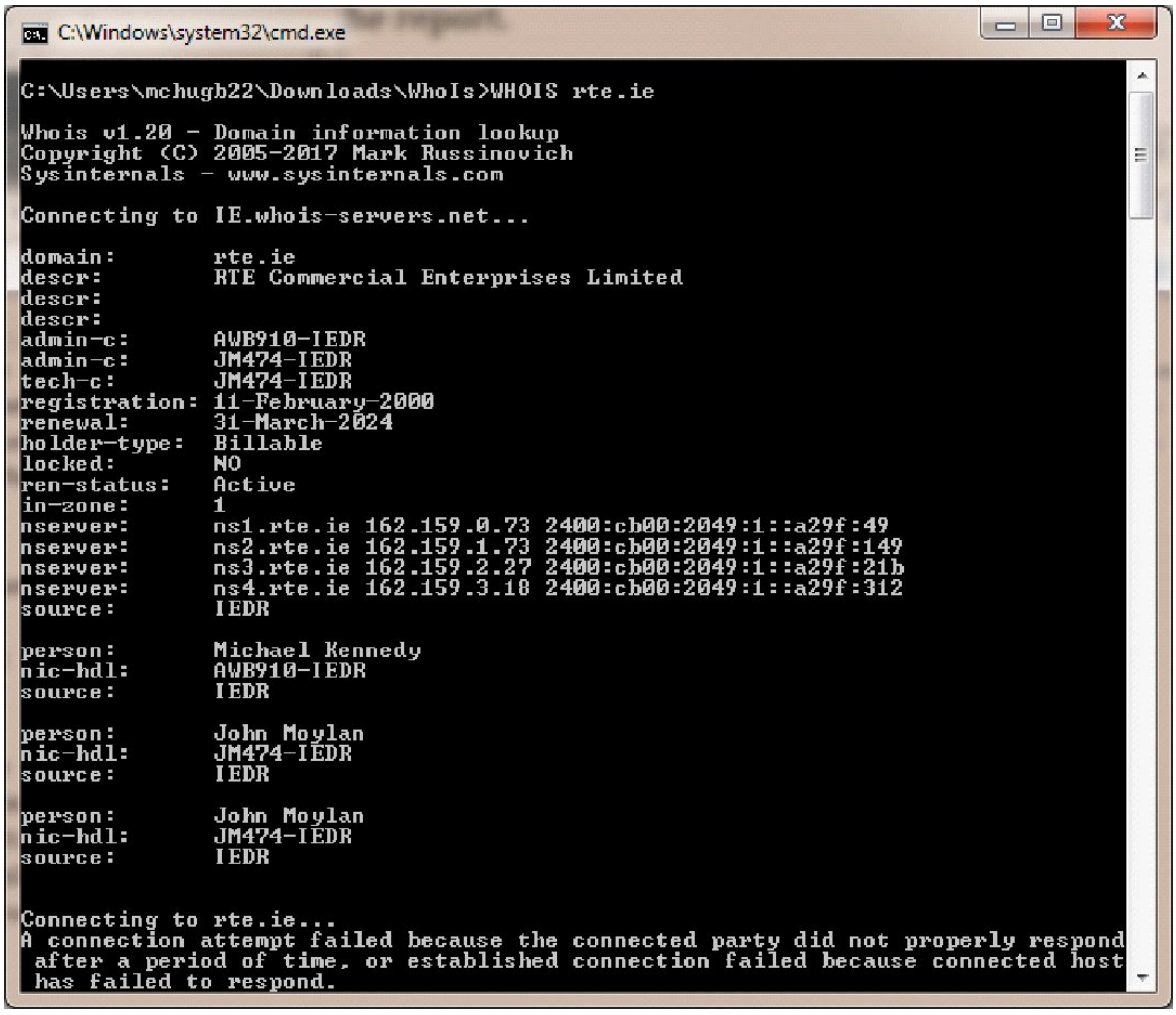
Postal address is 1600 Amphitheatre Parkway, Mountain View, California.

Additional info:

Email – dns-admin@google.com

Fax - +1.6502530001

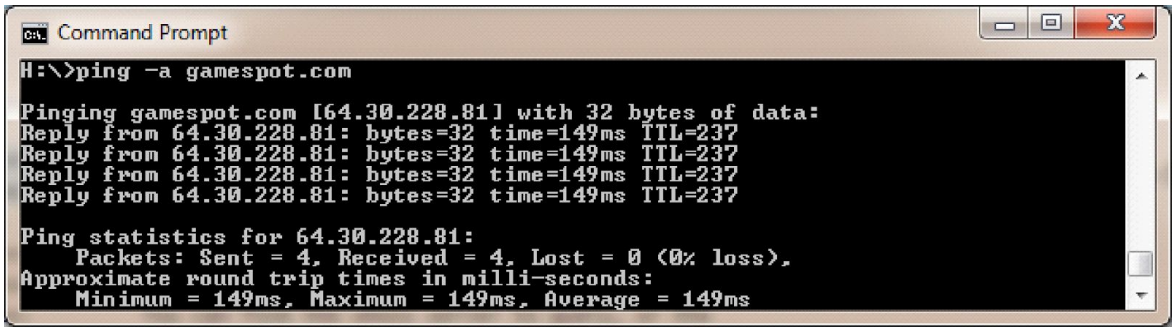
I managed to gather this information using Whois which I found on Microsoft sysinternals



89.207.56.140 = www.rte.ie

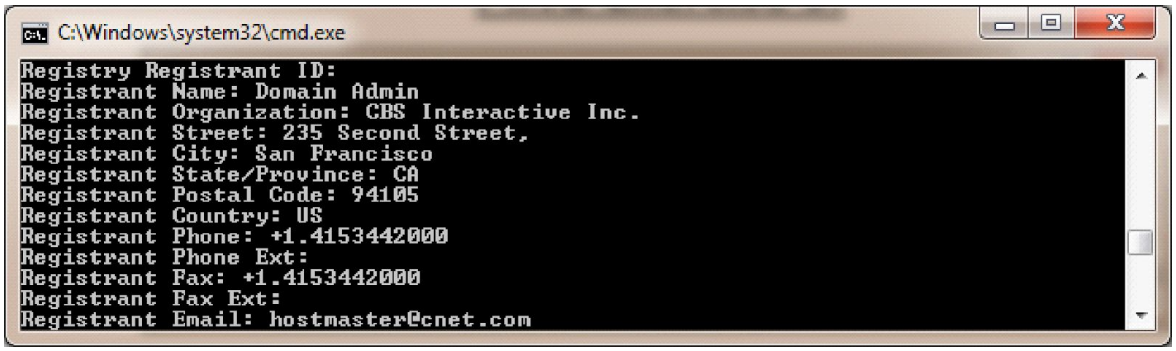
RTE unfortunately did not work as well with Whois and didn't yield an address, owner or phone number or any additional info due to data protection.

PING Exercise 3:



Pinging Gamespot the American gaming news website managed to work well and with a consistent time for all replies.

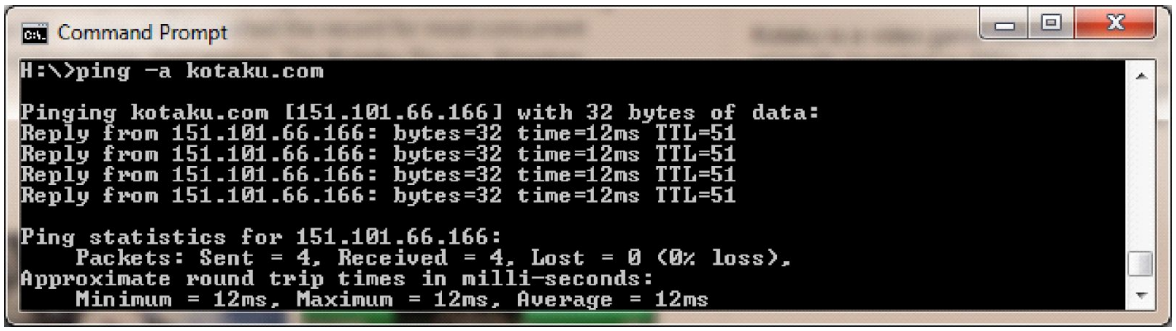
Time taken: Min = 149 ms, Max = 149 ms, Average = 149 ms.



Using Whois again I found the owner of Gamespot is CBS.

Postal address: 235 Second Street, San Francisco, California.

Phone number: +1.4153442000



From pinging Kotaku, another big gaming news website, the difference in its reply time to gamespot's is quite large with kotaku being 137 ms faster on average.

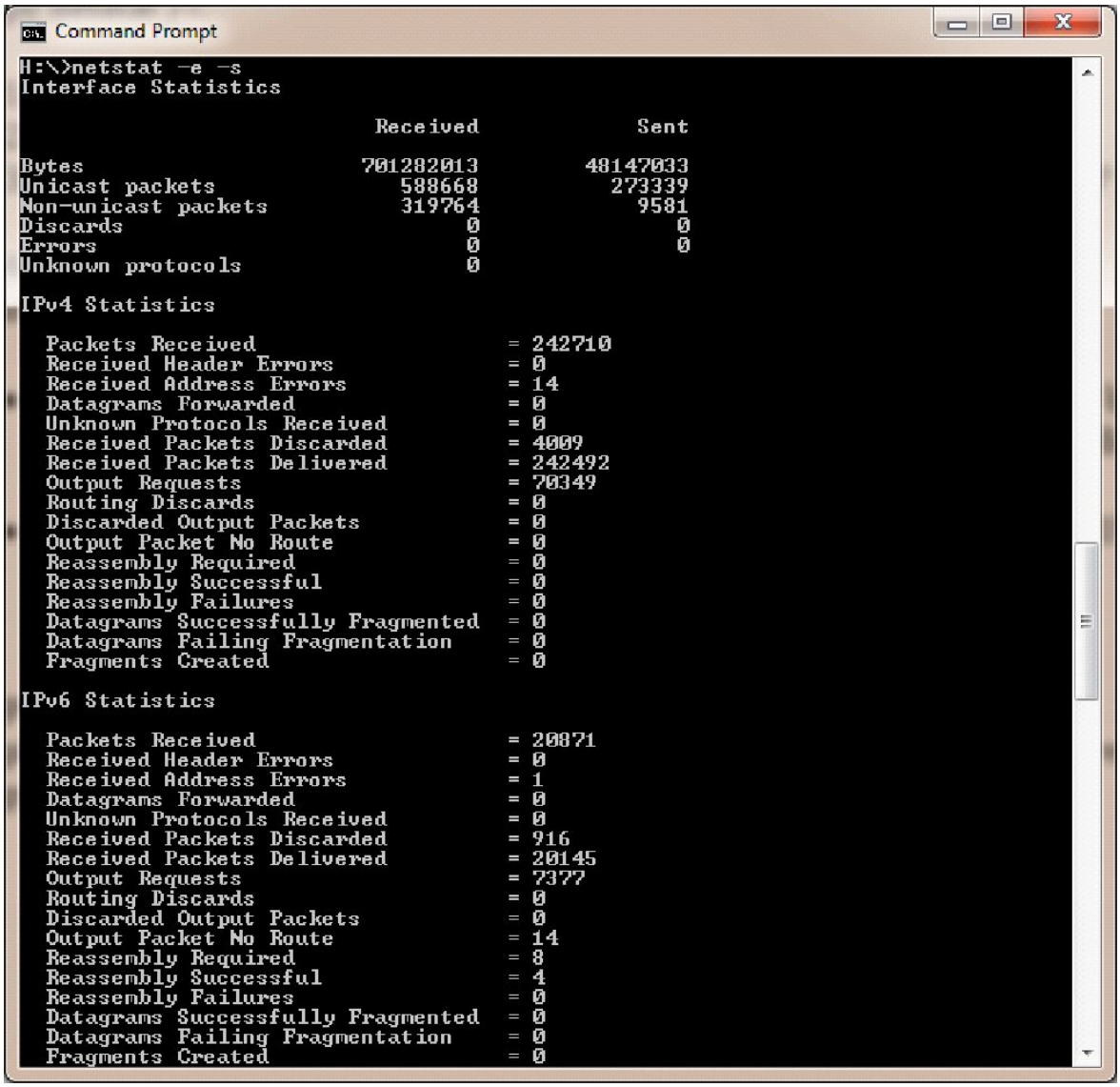
Time taken: Min = 12 ms, Max = 12 ms, Average = 12 ms.

Kotaku's owner is Univision Interactive Media, Inc.

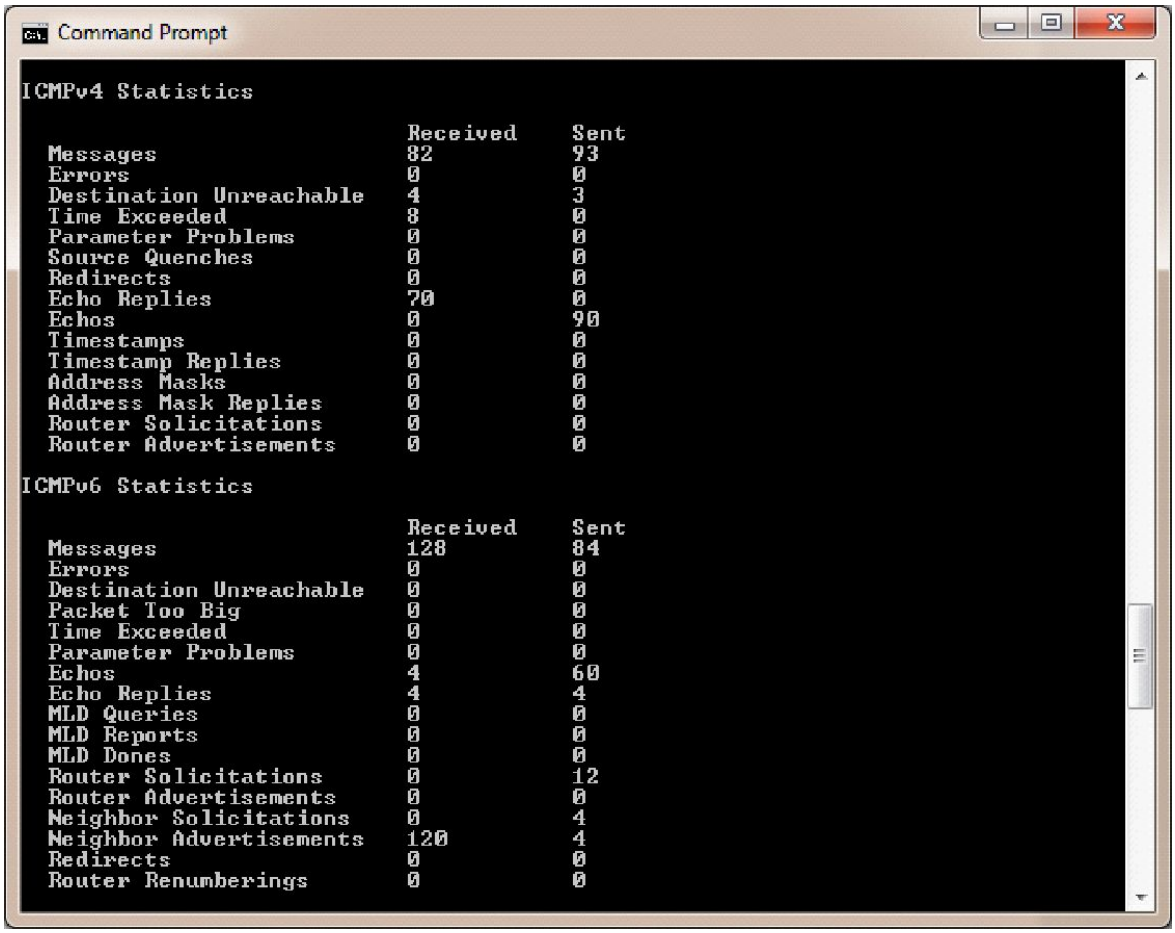
Postal address: 12th Floor, Third Avenue, New York.

Phone number: +1.6464875900

NETSTAT Exercise:



My workstation received 242710 IPv4 packets and 20871 IPv6 packets. This is from the various websites that I visited and pinged while on the workstation.

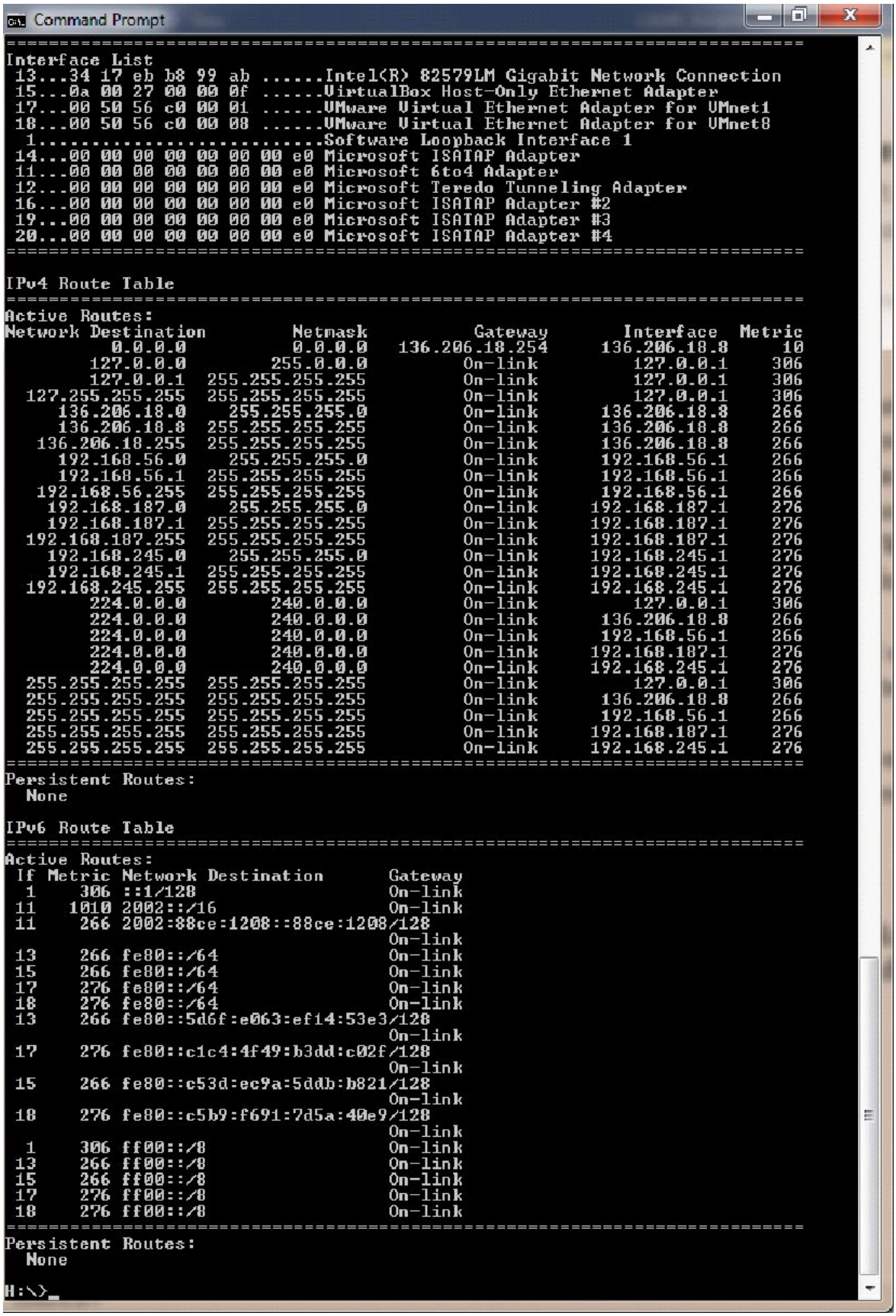


My computer received 3 types of ICMPv4 messages. They are 4 destination unreachable messages, 8 time exceeded messages and 70 echo replies messages. Furthermore I received 3 types of ICMPv6 messages, 4 Echos, 4 Echo replies and 120 Neighbor Advertisements.

Before opening www.dcu.ie.

After opening www.dcu.ie.

The connections opened as a result of visiting the DCU website can be seen from 136.206.18.8:49277 to 136.206.18.8:49308. Most of them are in the established state except 136.206.18.8:49297 which is in the close_wait state.



Typing netstat -r into the command prompt results in a route table for IPv4 and IPv6. This provides active routes along with their destination, showing where IP packets travel to.