

CA169 Assignment 1 Lab Report

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MODULE CODE:	CA169
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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.

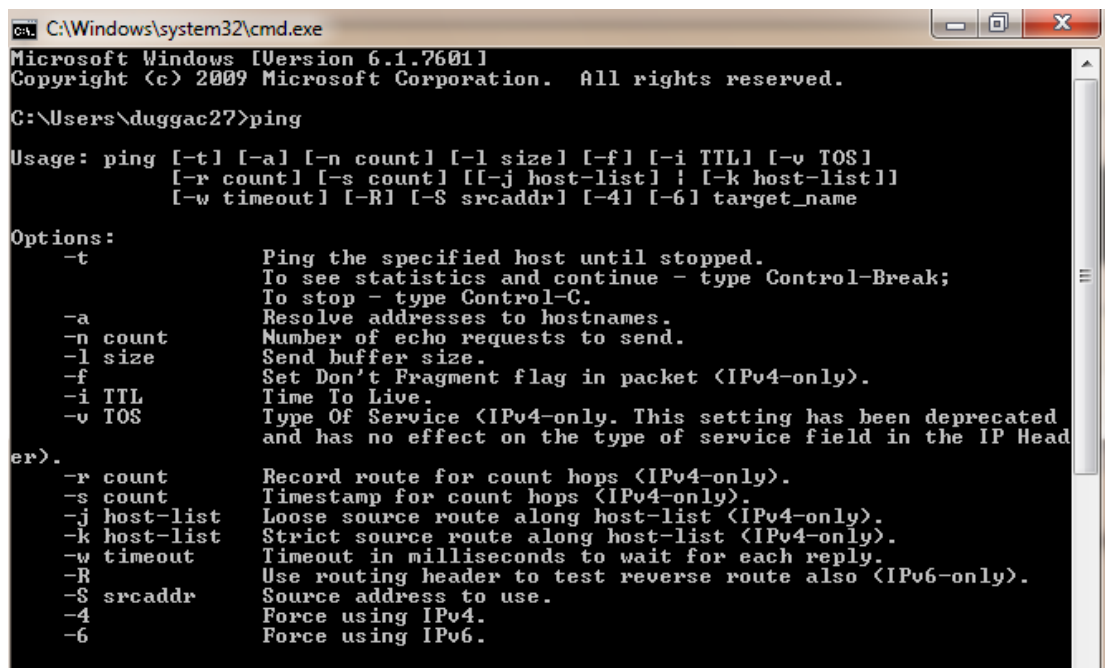
Answer Sheets

Ipconfig exercise

IP address of the machine	136.206.18.157
MAC address	0A-00-27-00-00-0F

Ping exercise 1

What is displayed?



```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\duggac27>ping

Usage: ping [-t] [-a] [-n count] [-l size] [-f] [-i TTL] [-v TOS]
           [-r count] [-s count] [[-j host-list] ! [-k host-list]]
           [-w timeout] [-R] [-S srcaddr] [-4] [-6] target_name

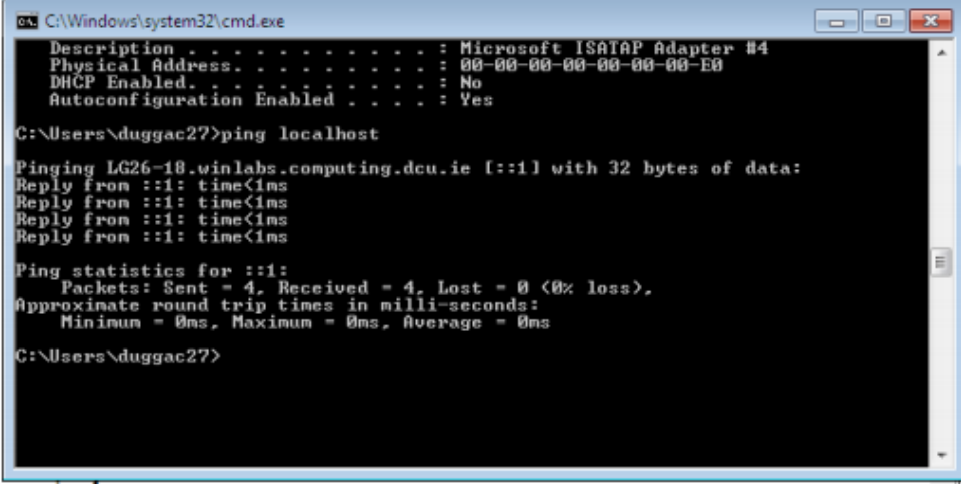
Options:
    -t           Ping the specified host until stopped.
                  To see statistics and continue - type Control-Break;
                  To stop - type Control-C.
    -a           Resolve addresses to hostnames.
    -n count     Number of echo requests to send.
    -l size      Send buffer size.
    -f           Set Don't Fragment flag in packet (IPv4-only).
    -i TTL       Time To Live.
    -v TOS       Type Of Service (IPv4-only. This setting has been deprecated
er>              and has no effect on the type of service field in the IP Head
    -r count     Record route for count hops (IPv4-only).
    -s count     Timestamp for count hops (IPv4-only).
    -j host-list Loose source route along host-list (IPv4-only).
    -k host-list Strict source route along host-list (IPv4-only).
    -w timeout   Timeout in milliseconds to wait for each reply.
    -R           Use routing header to test reverse route also (IPv6-only).
    -S srcaddr   Source address to use.
    -4           Force using IPv4.
    -6           Force using IPv6.
```

Displayed are the usage and options for the ping command.

Ping exercise 2

Ping localhost

Paste window here.



```
C:\Windows\system32\cmd.exe
Description . . . . . : Microsoft ISATAP Adapter #4
Physical Address. . . . . : 00-00-00-00-00-00-00-E0
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes

C:\Users\duggac27>ping localhost

Pinging LG26-18.winlabs.computing.dcu.ie [::1] with 32 bytes of data:
Reply from ::1: time<1ms
Reply from ::1: time<1ms
Reply from ::1: time<1ms
Reply from ::1: time<1ms

Ping statistics for ::1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\duggac27>
```

1. What information is returned?
2. What is the localhost?

Answer 1

The IPv6 is shown and is being pinged at 32 bytes. It shows that we are given a reply from the local host and tells us the amount of time it took for us to receive that reply. Along with this it shows the data for the entire process to occur including the min, max, and average round-trip times, the number of requests sent, the number of replies received and the number of losses.

Answer 2

The local host is the name given to the machine that the user is currently on.

Additional marks

89.207.56.140 is www.rte.ie

Owned by: Radio Telefis Eireann

Location: IE (Ireland), 07, Dublin, Dublin

216.58.211.163 is www.google.ie

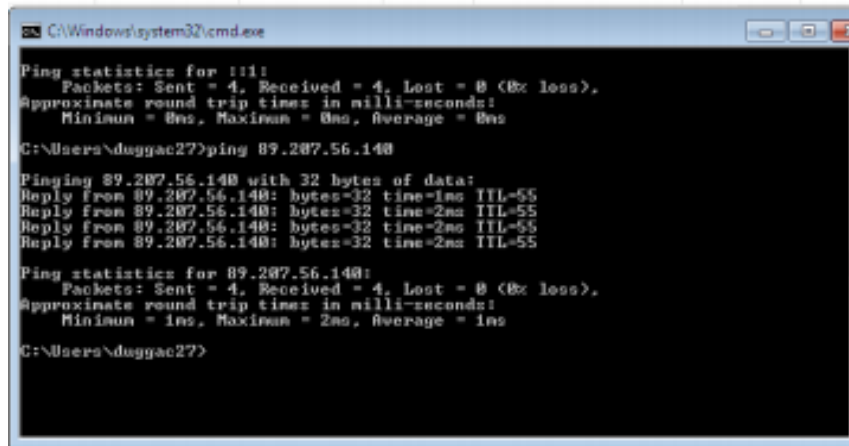
Owned by: Google LLC 4

Location: 1600 Amphitheatre Parkway, US (United States), CA, California, 94043 Mountain View

To find the websites I simply put the IP into a browser as a link then was given the website. In the case of RTE it was easy but in the case of Google I had to check on cmd to see which Google it was. (google.com or google.ie)

To find additional information I used this website ipinfo.info/html/ip_checker.php.

Ping the IP address 89.207.56.140 or the address 173.194.34.120
Paste window here



```
CA\Windows\system32\cmd.exe
Ping statistics for !11:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\Users\duggac27>ping 89.207.56.140

Pinging 89.207.56.140 with 32 bytes of data:
Reply from 89.207.56.140: bytes=32 time=1ms TTL=55
Reply from 89.207.56.140: bytes=32 time=2ms TTL=55
Reply from 89.207.56.140: bytes=32 time=2ms TTL=55
Reply from 89.207.56.140: bytes=32 time=2ms TTL=55

Ping statistics for 89.207.56.140:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 2ms, Average = 1ms
C:\Users\duggac27>
```

Explain output here, item by item.

The first line says that we are sending a 32 byte request to the IP we are trying to ping. The next 4 lines tell us that we have received a reply from the IP and it has taken 2 milliseconds to make the full round trip and a time to live of 55 meaning that if a packet has been on the network for longer than that discard it. The next 2 lines tell us the number of packets sent, received, and percentage lost. The next two lines give us approximate data for the minimum, maximum, and average round-trip times.

Exercise 3

Paste window 1

```
C:\Windows\system32\cmd.exe
G:\Users\duggac27>ping 173.194.34.120

Pinging 173.194.34.120 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 173.194.34.120:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\Users\duggac27>ping shcp.edu

Pinging shcp.edu [64.207.189.36] with 32 bytes of data:
Reply from 64.207.189.36: bytes=32 time=90ms TTL=49
Reply from 64.207.189.36: bytes=32 time=90ms TTL=49
Reply from 64.207.189.36: bytes=32 time=90ms TTL=49
Reply from 64.207.189.36: bytes=32 time=90ms TTL=49

Ping statistics for 64.207.189.36:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 90ms, Maximum = 90ms, Average = 90ms

C:\Users\duggac27>
```

Paste window 2

```
C:\Windows\system32\cmd.exe

Pinging shcp.edu [64.207.189.36] with 32 bytes of data:
Reply from 64.207.189.36: bytes=32 time=90ms TTL=49
Reply from 64.207.189.36: bytes=32 time=90ms TTL=49
Reply from 64.207.189.36: bytes=32 time=90ms TTL=49
Reply from 64.207.189.36: bytes=32 time=90ms TTL=49

Ping statistics for 64.207.189.36:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 90ms, Maximum = 90ms, Average = 90ms

C:\Users\duggac27>ping www.carersaustralia.com.au

Pinging carersaustralia.com.au [203.83.219.108] with 32 bytes of data:
Reply from 203.83.219.108: bytes=32 time=278ms TTL=45
Reply from 203.83.219.108: bytes=32 time=278ms TTL=45
Reply from 203.83.219.108: bytes=32 time=278ms TTL=45
Reply from 203.83.219.108: bytes=32 time=278ms TTL=45

Ping statistics for 203.83.219.108:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 278ms, Maximum = 278ms, Average = 278ms

C:\Users\duggac27>
```

	Website 1	Website 2
Name of the website pinged	Shcp.edu	www.carersaustrali.com.au
What is the IP address returned?	64.207.189.36	203.83.219.108
What is the TTL figure?	49	45
Average round trip time	90	278

Your comments on **administrative information** that you found by searching on the Internet about the websites from experiment 3. Things like, who owns it, phone

Website 1:

Organization: MEDIATEMPLE-100

Address: US (United States), CA, California, 90232 Culver City

Email: dnsadmin@mediatemple.net

Phone: +1-877-578-4000

Website 2:

Organization: GoHosting

Address: PO Box 3497 Belconnen ACT 2617, AU

Email: info@gohosting.com.au

Phone: +61-42377381

numbers, email addresses, registered addresses etc, anything at all that tells us about the website and its administration.

Exercise 4: Netstat exercise

Number of packets received by workstation:

Number of packets received: 73384

```
C:\Windows\system32\cmd.exe
C:\Users\duggac27>netstat -es
Interface Statistics

              Received          Sent
Bytes          355719042        14319203
Unicast packets      271587          89580
Non-unicast packets  27328           1638
Discards           0
Errors             0
Unknown protocols   0

IPv4 Statistics

Packets Received      = 73384
Received Header Errors = 0
Received Address Errors = 0
Datagrams Forwarded    = 0
Unknown Protocols Received = 0
Received Packets Discarded = 395
Received Packets Delivered = 73622
Output Requests        = 22326
Routing Discards       = 0
Discarded Output Packets = 4
Output Packet No Route = 0
Reassembly Required    = 0
Reassembly Successful  = 0
Reassembly Failures    = 0
Datagrams Successfully Fragmented = 0
Datagrams Failing Fragmentation = 0
Fragments Created      = 0

IPv6 Statistics

Packets Received      = 5529
Received Header Errors = 0
Received Address Errors = 0
Datagrams Forwarded    = 0
Unknown Protocols Received = 0
Received Packets Discarded = 175
Received Packets Delivered = 5472
Output Requests        = 3239
Routing Discards       = 0
Discarded Output Packets = 0
Output Packet No Route = 10
Reassembly Required    = 0
Reassembly Successful  = 0
Reassembly Failures    = 0
Datagrams Successfully Fragmented = 0
Datagrams Failing Fragmentation = 0
Fragments Created      = 0

ICMPv4 Statistics

              Received          Sent
Messages      18              23
Errors         0              0
Destination Unreachable 0              1
Time Exceeded  0              0
Parameter Problems 0              0
Source Quenches 0              0
Redirects       0              0
Echo Replies    18              0
Echos           0              22
Timestamps      0              0
Timestamp Replies 0              0
Address Masks   0              0
Address Mask Replies 0              0
Router Solicitations 0              0
Router Advertisements 0              0

ICMPv6 Statistics

              Received          Sent
Messages      20              06
Errors         0              0
Destination Unreachable 0              0
Packet Too Big  0              0
Time Exceeded  0              0
Parameter Problems 0              0
Echos           4              62
```

ICMP packets explained:

ICMP packets are packets of pieces of information data like error messages. The ICMP packets are sent to other devices to check if we can reach them through the ping function. Using the ping function this computer has sent 23 ICMP packets and received 18 echo packets back from addresses it was able to reach.

Discuss the connections opened by visiting the DCU website here.
Also, grab the window, showing connections opened as a result of visiting the DCU website.

```
C:\Windows\system32\cmd.exe
Proto Local Address Foreign Address State
TCP 0.0.0.0:8135 LG26-1010 LISTENING
TCP 0.0.0.0:443 LG26-1010 LISTENING
TCP 0.0.0.0:445 LG26-1010 LISTENING
TCP 0.0.0.0:9080 LG26-1010 LISTENING
TCP 0.0.0.0:9113 LG26-1010 LISTENING
TCP 0.0.0.0:9309 LG26-1010 LISTENING
TCP 0.0.0.0:9357 LG26-1010 LISTENING
TCP 0.0.0.0:8501 LG26-1010 LISTENING
TCP 0.0.0.0:49152 LG26-1010 LISTENING
TCP 0.0.0.0:49151 LG26-1010 LISTENING
TCP 0.0.0.0:49154 LG26-1010 LISTENING
TCP 0.0.0.0:49265 LG26-1010 LISTENING
TCP 0.0.0.0:49272 LG26-1010 LISTENING
TCP 0.0.0.0:49316 LG26-1010 LISTENING
TCP 127.0.0.1:8087 LG26-1010 LISTENING
TCP 136.206.18.157:139 LG26-1010 LISTENING
TCP 136.206.18.157:52909 du0b0801-in-f14:https ESTABLISHED
TCP 136.206.18.157:53082 du0b0801-in-f14:https ESTABLISHED
TCP 136.206.18.157:53078 du0b0801-in-f14:https ESTABLISHED
TCP 136.206.18.157:53083 dh-in-109:https ESTABLISHED
TCP 136.206.18.157:53089 dh-in-109:https ESTABLISHED
TCP 136.206.18.157:53090 dh-in-109:https ESTABLISHED
TCP 136.206.18.157:53084 du0b0801-in-f14:https ESTABLISHED
TCP 136.206.18.157:53286 du0b0801-in-f14:https ESTABLISHED
TCP 192.168.56.1:139 LG26-1010 LISTENING
TCP 192.168.56.1:1338 LG26-1010 LISTENING
TCP 192.168.131.1:139 LG26-1010 LISTENING
TCP :::1443 LG26-1010 LISTENING
TCP :::1445 LG26-1010 LISTENING
TCP :::1389 LG26-1010 LISTENING
TCP :::15357 LG26-1010 LISTENING
TCP :::1389 LG26-1010 LISTENING
TCP :::149152 LG26-1010 LISTENING
TCP :::149153 LG26-1010 LISTENING
TCP :::149154 LG26-1010 LISTENING
TCP :::149265 LG26-1010 LISTENING
TCP :::149272 LG26-1010 LISTENING
TCP :::149273 LG26-1010 LISTENING
TCP :::118307 LG26-1010 LISTENING
t-ds ESTABLISHED [2002:88cc:129d:08cc:129d152971 [2002:88cc:d93d:08cc:d93d]:microsoft
t-ds ESTABLISHED [2002:88cc:129d:08cc:129d152971 [2002:88cc:d93d:08cc:d93d]:49150 E
UDP 0.0.0.0:8123 **
UDP 0.0.0.0:3702 **
UDP 0.0.0.0:3702 **
UDP 0.0.0.0:4508 **
UDP 0.0.0.0:5353 **
UDP 0.0.0.0:5353 **
UDP 0.0.0.0:5353 **
UDP 0.0.0.0:5353 **
UDP 0.0.0.0:5353 **
UDP 0.0.0.0:5353 **
UDP 0.0.0.0:5353 **
UDP 0.0.0.0:5353 **
UDP 0.0.0.0:5353 **
UDP 0.0.0.0:56972 **
UDP 127.0.0.1:1980 **
UDP 127.0.0.1:53370 **
UDP 127.0.0.1:53380 **
UDP 127.0.0.1:56899 **
UDP 127.0.0.1:6013 **
UDP 136.206.18.157:137 **
UDP 136.206.18.157:138 **
UDP 136.206.18.157:52909 **
UDP 136.206.18.157:54809 **
UDP 192.168.56.1:137 **
UDP 192.168.56.1:138 **
UDP 192.168.56.1:1640 **
UDP 192.168.64.1:137 **
UDP 192.168.64.1:138 **
UDP 192.168.64.1:16812 **
UDP 192.168.64.1:1137 **
UDP 192.168.131.1:138 **
C:\Windows\system32\cmd.exe
Proto Local Address Foreign Address State
TCP 0.0.0.0:8135 LG26-1010 LISTENING
TCP 0.0.0.0:443 LG26-1010 LISTENING
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TCP 0.0.0.0:9309 LG26-1010 LISTENING
TCP 0.0.0.0:9357 LG26-1010 LISTENING
TCP 0.0.0.0:8501 LG26-1010 LISTENING
TCP 0.0.0.0:49152 LG26-1010 LISTENING
TCP 0.0.0.0:49151 LG26-1010 LISTENING
TCP 0.0.0.0:49154 LG26-1010 LISTENING
TCP 0.0.0.0:49265 LG26-1010 LISTENING
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TCP 136.206.18.157:53090 dh-in-109:https ESTABLISHED
TCP 136.206.18.157:53084 du0b0801-in-f14:https ESTABLISHED
TCP 136.206.18.157:53286 du0b0801-in-f14:https ESTABLISHED
TCP 192.168.56.1:139 LG26-1010 LISTENING
TCP 192.168.56.1:1338 LG26-1010 LISTENING
TCP 192.168.131.1:139 LG26-1010 LISTENING
TCP :::1443 LG26-1010 LISTENING
TCP :::1445 LG26-1010 LISTENING
TCP :::1389 LG26-1010 LISTENING
TCP :::15357 LG26-1010 LISTENING
TCP :::1389 LG26-1010 LISTENING
TCP :::149152 LG26-1010 LISTENING
TCP :::149153 LG26-1010 LISTENING
TCP :::149154 LG26-1010 LISTENING
TCP :::149265 LG26-1010 LISTENING
TCP :::149272 LG26-1010 LISTENING
TCP :::149273 LG26-1010 LISTENING
TCP :::118307 LG26-1010 LISTENING
t-ds ESTABLISHED [2002:88cc:129d:08cc:129d152971 [2002:88cc:d93d:08cc:d93d]:microsoft
t-ds ESTABLISHED [2002:88cc:129d:08cc:129d152971 [2002:88cc:d93d:08cc:d93d]:49150 E
UDP 0.0.0.0:8123 **
UDP 0.0.0.0:3702 **
UDP 0.0.0.0:3702 **
UDP 0.0.0.0:4508 **
UDP 0.0.0.0:5353 **
UDP 0.0.0.0:5353 **
UDP 0.0.0.0:5353 **
UDP 0.0.0.0:5353 **
UDP 0.0.0.0:5353 **
UDP 0.0.0.0:5353 **
UDP 0.0.0.0:5353 **
UDP 0.0.0.0:5353 **
UDP 0.0.0.0:56972 **
UDP 127.0.0.1:1980 **
UDP 127.0.0.1:53370 **
UDP 127.0.0.1:53380 **
UDP 127.0.0.1:56899 **
UDP 127.0.0.1:6013 **
UDP 136.206.18.157:137 **
UDP 136.206.18.157:138 **
UDP 136.206.18.157:52909 **
UDP 136.206.18.157:54809 **
UDP 192.168.56.1:137 **
UDP 192.168.56.1:138 **
UDP 192.168.56.1:1640 **
UDP 192.168.64.1:137 **
UDP 192.168.64.1:138 **
UDP 192.168.64.1:16812 **
UDP 192.168.64.1:1137 **
UDP 192.168.131.1:138 **
```

Netstat -r explained

The `netstat -r` call shows the routing table which is a set of addresses for various other networks that can be reached through that machine. It will display the fastest route to get to another network from the one you are currently on.