Week Five

Note: The tasks are based on “Lab 6: Internet Addressing” from the Addison-Wesley web resources from the text: Brooksheer, J. Glenn 2005, Computer science: An overview, 8th edn, Addison Wesley.

Task 1:

Find out the IP address of the computer you are using using the following web site:

http://www.whatismyipaddress.com/

If this site is unavailable, perform a google search to find another web site that provides this facility. Record:

1. The IP address of the machine you are using
2. The web site you visited to get this information

Task 2:

There are command-line tools under Windows XP that allow you to find out the same information. One of these is “ipconfig”. Follow the following steps and verify the IP address:

1. Goto the START menu from the taskbar
2. Choose “Run”
3. Type “cmd”
4. Type “ipconfig”
5. Record the IP address
6. Type “exit”

You should see output similar to:

U:\>ipconfig
Windows IP Configuration
Ethernet adapter Docking Station Port:
    Connection-specific DNS Suffix . : staff.ad.cqu.edu.au
    IP Address . . . . . . . . . . . . : 138.77.xx.yyy
    Subnet Mask . . . . . . . . . . . : 255.255.254.0
    Default Gateway . . . . . . . . . : 138.77.xx.1

Note: The Linux command equivalent is “ifconfig”

Discussion point 1:

It is possible, in fact likely, that if you are running these commands from a student lab at CQU, you will get two different IP addresses. Why do you think that is? Which one is your “real” IP address?
**Task 3:**

Using the web site:

http://www.traceroute.org/

Perform a “trace route” (or the path that data packets travel through to go between servers). The web site provides a list of countries you can obtain this route from – it is if you are tracking a data packet from that country to the destination address (which you are prompted to enter). Because the IP address you found in task 2 may be protected behind a firewall, it may be best to use a well known, accessible server, for example:

www.cqu.edu.au

First, pick an Australian traceroute server and trace the route back to the University’s web server. Next, be a little bit more adventurous – try tracing the route back from a place such as Kyrgyzstan! Note that the trace back to the CQU web server may not work all the way – if not, pick another well known server. If you have time, try tracing to these:

www.google.com
www.whitehouse.gov
www.microsoft.com

**Task 4:**

Again, there is a command line tool under Windows XP to display the same information. It is called “tracert”. To run the tool, repeat steps 1 to 3 of Task 2 (obtaining a command line) and then type:

tracert <server>

For example:

U:\>tracert www.whitehouse.gov

Tracing route to a1289.g.akamai.net [61.9.209.136] over a maximum of 30 hops:

1  <1 ms  <1 ms  <1 ms  cqunet-core-36.cqu.edu.au [138.77.36.1]
2  <1 ms  <1 ms  <1 ms  fitz-outside-real.cqu.EDU.AU [203.27.221.253]
3   8 ms   8 ms   8 ms  qrrno-cqu.questnet.net.au [203.22.86.9]
4   9 ms   9 ms   9 ms _vlan439.14vrc76f06.optus.net.au [61.88.151.89]
5  10 ms  9 ms  10 ms  Glen8-0-0.bnl1.optus.net.au [202.139.190.130]
6  11 ms  10 ms  10 ms  Pos1-0-0.cha2.Brisbane.telstra.net [139.130.3.15
7]
8  10 ms  10 ms  9 ms  GigabitEthernet5-0.cha-core4.Brisbane.telstra.ne
   t [203.50.44.9]
9   9 ms   9 ms   9 ms  GigabitEthernet1-1.cha30.Brisbane.telstra.net [2
   03.50.44.150]
10  9 ms  10 ms  10 ms  a-61-9-209-136.deploy.akamaitechnologies.com [61
    .9.209.136]

Trace complete.

Note: The Linux command equivalent is “traceroute”
Discussion point 2:

Computer networks and in particular “The Internet”, have altered the way we interact both at work and socially. What are some examples of this? Are these changes positive or negative? What risks do networks pose and how can these be addressed?

Discussion point 3:

Concerns with issues such as Internet pornography, paedophilia and Spam (or junk email) have led to the call for tighter regulation on the Internet. Is this appropriate and if so, by what means could this be achieved?