

COMPARING THE REAL PERFORMANCE ISSUES OF AN ADSL INTERNET CONNECTION

Objective:

To determine the distance (in terms of the number of intermediary, vulnerable ISP computer networks) that exist between a client ADSL access point (YOU), and a known reliable website that is directly on the Telstra Australia BACKBONE ADSL network (US) at Alchester's website at 203.17.1.102).

The backbone running through Victoria, at xxxxx.lonXX.Melbourne.Telstra.net (ie: 203.50.80.34).

If you have a service RIGHT ON the BACKBONE, and you attempt to reach other parties also ON the BACKBONE, then a far less number of vulnerable hops (connection points) exist between you and your target website/email recipient. Thus greater uptime, greater speed and greater reliability.... *More of the time!*

EXAMPLE 1: (typical on the market)

Using a low cost, typical Retail plan but from behind a firewall, on non-static IP: *(safe but no reliability)*

Result: 9 hops beyond protective firewall – but note the distance involving interstate locations.....

```
MS-DOS Prompt
8 x 12
C:\WINDOWS>tracert 203.17.1.102
Tracing route to tekwebsite [203.17.1.102]
over a maximum of 30 hops:
  0  0 ms  0 ms  0 ms  absfire3 [192.168.202.1]
  1  *      *      *      Request timed out.
  2  *      *      *      Request timed out.
  3  26 ms  26 ms  26 ms  toowoomba-atm.vic-remote.bigpond.net.au [61.9.128.193]
  4  25 ms  26 ms  25 ms  GigabitEthernet3-1.exc2.Melbourne.telstra.net [139.130.94.89]
  5  27 ms  26 ms  26 ms  GigabitEthernet3-1.exc2.Melbourne.telstra.net [139.130.94.89]
  6  28 ms  26 ms  25 ms  GigabitEthernet6-1.lon-core3.Melbourne.telstra.net [203.50.77.9]
  7  27 ms  25 ms  26 ms  FastEthernet0-0.lon24.Melbourne.telstra.net [203.50.80.34]
  8  41 ms  34 ms  33 ms  teksup22.lnk.telstra.net [139.130.25.102]
  9  46 ms  41 ms  56 ms  tekwebsite [203.17.1.102]
Trace complete.
C:\WINDOWS>
```

EXAMPLE 2: (poor performance)

Client on a static IP ADSL service using a simple router/modem connection but with no firewall.

(highly visible to the internet which is exceedingly risky, and with huge delays reaching ANY target location)

Result: 13 hops behind the router, no protection of any firewall.

But look at the number of hops required just to reach the backbone: 10 hops!. If the target website/email recipient was also on such a structure, they too would be likely another 10 hops on the OTHER side of the backbone, plus a router connection, plus infrastructure

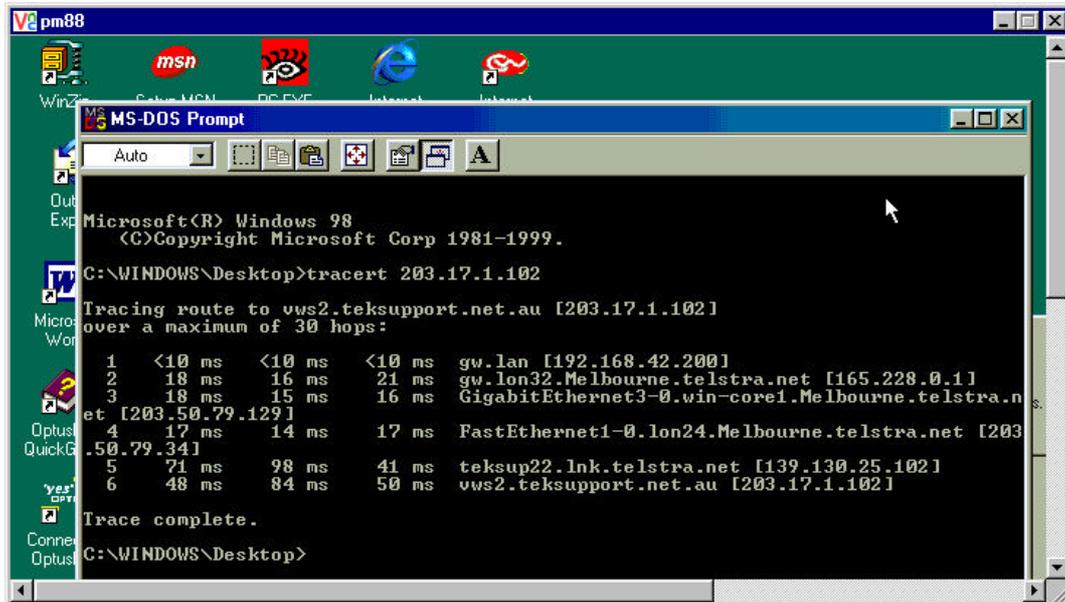
..... *probably in the order of some 23 total hops away plus routers for a typical request!*

```
MS-DOS Prompt
Auto
1  1 ms  1 ms  1 ms  192.168.1.1
2  49 ms  40 ms  45 ms  free-tpg-085.tpgi.com.au [203.219.58.85]
3  24 ms  22 ms  23 ms  172.31.55.37
4  31 ms  36 ms  38 ms  free-tpg-074.tpgi.com.au [202.7.176.74]
5  38 ms  50 ms  59 ms  nme-7206.tpgi.com.au [203.29.131.1]
6  41 ms  39 ms  37 ms  syd-nme-gw.tpgi.com.au [202.7.161.21]
7  40 ms  40 ms  41 ms  syd-12012.tpgi.com.au [203.12.160.32]
8  103 ms  76 ms  51 ms  203.192.130.221
9  44 ms  42 ms  37 ms  Serial6-1-0.ken12.Sydney.telstra.net [139.130.159.9]
10  51 ms  49 ms  54 ms  GigabitEthernet3-0.ken-core4.Sydney.telstra.net [203.50.12.153]
11  54 ms  51 ms  54 ms  Pos5-0.win-core1.Melbourne.telstra.net [203.50.6.166]
12  51 ms  63 ms  47 ms  FastEthernet1-0.lon24.Melbourne.telstra.net [203.50.79.34]
13  100 ms  234 ms  103 ms  teksup22.lnk.telstra.net [139.130.25.102]
14  88 ms  108 ms  81 ms  wws2.teksupport.net.au [203.17.1.102]
Trace complete.
C:\WINDOWS\Desktop>^A^C
C:\WINDOWS\Desktop>
```

EXAMPLE 3: (BACKBONE recommendation)

Using an Alchester firewall directly connected to the Telstra BACKBONE. (ie: one of our clients)

Result: 1 hop from firewall to Backbone, 3 hops inside the backbone infrastructure (at only 16-21ms!) and then the target, only 1 hop behind fibre-optic link to the Backbone. **Total of ONLY 5 hops** from the firewall!



```
Microsoft(R) Windows 98
(C)Copyright Microsoft Corp 1981-1999.

C:\WINDOWS\Desktop>tracert 203.17.1.102

Tracing route to vws2.teksupport.net.au [203.17.1.102]
over a maximum of 30 hops:

  0  <10 ms  <10 ms  <10 ms  gw.lan [192.168.42.200]
  1  18 ms   16 ms   21 ms  gw.lon32.Melbourne.telstra.net [165.228.0.1]
  2  18 ms   15 ms   16 ms  GigabitEthernet3-0.win-core1.Melbourne.telstra.net [203.50.79.129]
  3  17 ms   14 ms   17 ms  FastEthernet1-0.lon24.Melbourne.telstra.net [203.50.79.34]
  4  71 ms   98 ms   41 ms  teksup22.lnk.telstra.net [139.130.25.102]
  5  48 ms   84 ms   50 ms  vws2.teksupport.net.au [203.17.1.102]

Trace complete.

C:\WINDOWS\Desktop>
```

try the test yourself:

Click **START** and choose **RUN**.

Type: **COMMAND** in the box provided. Then click **OKAY**
When the Dos **COMMAND PROMPT** window appears just type in:
.....> tracert 203.17.1.102 (Enter)

When completed, just type: >EXIT (Enter)
to close down that window.

Check the number of **HOPS** in the first column
(it only goes up to 30..... Maximum displayed).
A good result is 5 or 6, and average result is 10
and a poor result is over 13.

The speed and reliability of ADSL connections you choose are just the beginning.... ask us about the rest. We know how business can get the **BEST** out of its computer facilities

