**Network Trouble Shooting Lab**

Pull up a command prompt. Click start->all programs->accessories->command prompt and ping the following sites what IP addresses do you get and what is the average round trip time.

Enter: ping <address>

|  |  |  |
| --- | --- | --- |
|  | IP Address | Average round trip in milli-seconds |
| [www.lego.com](http://www.lego.com) |  |  |
| [www.majong.com](http://www.majong.com) |  |  |
| [www.google.com](http://www.google.com) |  |  |
| [www.facebook.com](http://www.facebook.com) |  |  |
| [www.walmart.com](http://www.walmart.com) |  |  |

Why would PING function be useful in troubleshooting a network problem? What are the limitations of PING?

Now use trace route to find the hops and time it takes to get to the following websites. It should be noted that the command in Linux is TRACEROUTE but in Windows it is TRACERT. An example of the command you enter at the command prompt for this exercise would be: TRACERT www.weber.edu

Enter: tracert <address>

|  |  |  |
| --- | --- | --- |
|  | # of hops | Time |
| [www.lego.com](http://www.lego.com) |  |  |
| [www.majong.com](http://www.majong.com) |  |  |
| [www.google.com](http://www.google.com) |  |  |
| [www.facebook.com](http://www.facebook.com) |  |  |
| [www.walmart.com](http://www.walmart.com) |  |  |

Why would trace route be helpful to you in troubleshooting a network problem? How would this information differ from what you would get if you did PING?

We will not switch from a command line trace route to a graphical trace route. This site is hosted on a server outside of your location. It does a trace route from the server to you and a second trace route from the server to the desired destination. It gives you a nice interface to see where it is going. Now go to: <http://www.yougetsignal.com/tools/visual-tracert/>

And do a proxy trace route of the following addresses.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | # of Hops | Time | Miles traveled | Final Geographic location |
| [www.lego.com](http://www.lego.com) |  |  |  |  |
| [www.majong.com](http://www.majong.com) |  |  |  |  |
| [www.google.com](http://www.google.com) |  |  |  |  |
| [www.facebook.com](http://www.facebook.com) |  |  |  |  |
| [www.walmart.com](http://www.walmart.com) |  |  |  |  |

Why are the numbers of hops different when comparing trace route and proxy trace? What are your thoughts of the visual pattern of where the signals went around the country and world?