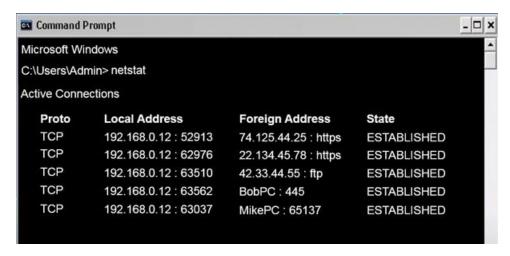
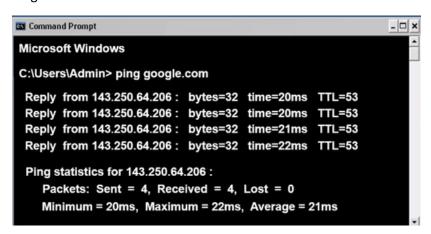
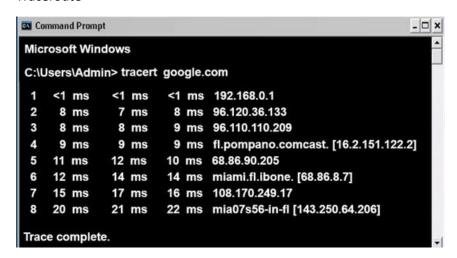
## Netstat



## Ping



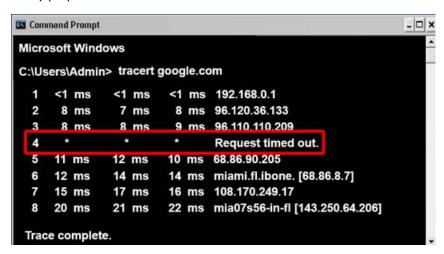
## Traceroute



Where hop count = 8

```
- 0 x
Command Prompt
Microsoft Windows
C:\Users\Admin> tracert google.com
              <1 ms
     <1 ms
                       <1 ms 192.168.0.1
     8 ms
               7 ms
                              96.120.36.133
                        8 ms
                              96.110.110.209
     8 ms
               8 ms
                        9 ms
     9 ms
              9 ms 9 ms
                              fl.pompano.comcast. [16.2.151.122.2]
 5 200 ms
             201 ms 202 ms 68.86.90.205
             210 ms 204 ms
                              miami.fl.ibone. [68.86.8.7]
    210 ms
             215 ms 220 ms 108.170.249.17
             221 ms 222 ms mia07s56-in-fl [143.250.64.206]
   220 ms
Trace complete.
```

In this case, trip time taken by data packets at 5<sup>th</sup> hop is near 200ms and thus 5<sup>th</sup> router from the source router can be the bottleneck and may resulting into the lag. Thus, using traceroute we can easily pinpoint the exact location where a down link or an issue is occurring.



Another case where it wont show us the trip time by data packets this could be due to the fact that the 4<sup>th</sup> router didn't send the packets back but routed them to the next router. This could be a possible down link.