1. After typing ipconfig/all on the command prompt:
   1. Host Name: DESKTOP-MSKVD63
   2. Is your adapter DHCP enabled: Yes
   3. IP address: 192.168.0.3
   4. Default Gateway: 192.168.0.1
   5. DNS servers: 209.18.47.62

209.18.47.61

1. Nslookup of cnn.com IP addresses:

2a04:4e42:800::773

2a04:4e42:a00::773

2a04:4e42:400::773

2a04:4e42::773

2a04:4e42:200::773

2a04:4e42:600::773

2a04:4e42:e00::773

2a04:4e42:c00::773

151.101.131.5

151.101.3.5

151.101.195.5

151.101.67.5

1. Tracert to www.whitehouse.gov record the entire transaction showing the number of hops:

Tracing route to wh46.go-vip.net [192.0.66.168]

over a maximum of 30 hops:

1 2 ms 1 ms 1 ms 192.168.0.1

2 16 ms 11 ms 11 ms 072-031-128-181.res.spectrum.com [72.31.128.181]

3 15 ms 121 ms 62 ms int-0-5-0-2.tamp61-ser1.netops.charter.com [72.31.1.243]

4 263 ms 101 ms 41 ms lag-33.tamp20-car1.netops.charter.com [71.44.2.195]

5 43 ms 32 ms 100 ms lag-25-10.tamsflde20w-bcr00.netops.charter.com [66.109.6.42]

6 46 ms 37 ms 38 ms lag-401.hstqtx0209w-bcr00.netops.charter.com [66.109.9.140]

7 123 ms 347 ms 103 ms lag-412.dllstx976iw-bcr00.netops.charter.com [66.109.6.90]

8 487 ms 202 ms 141 ms lag-0.pr3.dfw10.netops.charter.com [66.109.5.121]

9 187 ms 104 ms 100 ms eqix-da1.automattic.com [206.223.118.177]

10 209 ms 306 ms 100 ms wordpress.com [198.181.119.135]

11 \* \* \* Request timed out.

12 38 ms 39 ms 38 ms 192.0.66.168

Trace complete.

1. Tracert to www.sse.com.cn record the entire transaction showing the number of hops:

Tracing route to gslb.www.sse.com.cn [202.122.113.73]

over a maximum of 30 hops:

1 54 ms 77 ms 158 ms 192.168.0.1

2 46 ms 306 ms 100 ms 072-031-128-181.res.spectrum.com [72.31.128.181]

3 42 ms 168 ms 140 ms int-0-7-1-7.tamp61-ser2.netops.charter.com [71.46.27.163]

4 85 ms 102 ms 101 ms lag-33.tamp20-car2.netops.charter.com [71.44.2.205]

5 43 ms 201 ms 19 ms lag-3.tamp20-car1.netops.charter.com [71.44.3.24]

6 101 ms 204 ms 43 ms lag-25-10.tamsflde20w-bcr00.netops.charter.com [66.109.6.42]

7 117 ms 101 ms 101 ms lag-17.hstqtx0209w-bcr00.netops.charter.com [66.109.1.70]

8 100 ms 172 ms 132 ms lag-22.dllstx976iw-bcr00.netops.charter.com [107.14.19.49]

9 349 ms 103 ms 98 ms lag-12.tustca4200w-bcr00.netops.charter.com [66.109.6.0]

10 169 ms 100 ms 140 ms lag-14.lsancarc0yw-bcr00.netops.charter.com [66.109.6.4]

11 119 ms 164 ms 101 ms lag-0.pr0.lax00.netops.charter.com [66.109.6.135]

12 158 ms 203 ms 99 ms 218.30.54.98

13 313 ms 305 ms \* 202.97.52.177

14 \* \* \* Request timed out.

15 \* \* \* Request timed out.

16 415 ms 308 ms 261 ms 61.152.25.173

17 268 ms 305 ms 306 ms 101.95.95.166

18 \* \* \* Request timed out.

19 \* \* \* Request timed out.

20 \* \* \* Request timed out.

21 \* \* \* Request timed out.

22 \* \* \* Request timed out.

23 329 ms 306 ms 305 ms 202.122.113.73

Trace complete.

1. The difference between the two tracert captures is that there are more hops and a different route on the [www.sse.com.cn](http://www.sse.com.cn), with a total being 23 compared to the 12 hops on the whitehouse.gov capture. A possible reason is because the websites are on different networks, and it takes a longer path to get to the [www.sse.com.cn](http://www.sse.com.cn) destination.
2. Internet standard RFC 1918:
   1. This provides a standard in which IP addresses are assigned in a private network. This standard was adopted because of limited IPv4 address space since there weren’t enough unique addresses for every single host/device in the world. These private addresses can be used on multiple private networks if they are kept separate from each other and cannot be used on the Internet.
   2. The RFC 1918 private address ranges/groups are:

* 10.0.0.0 - 10.255.255.255 (10/8 prefix)
* 172.16.0.0 - 172.31.255.255 (172.16/12 prefix)
* 192.168.0.0 - 192.168.255.255 (192.168/16 prefix)