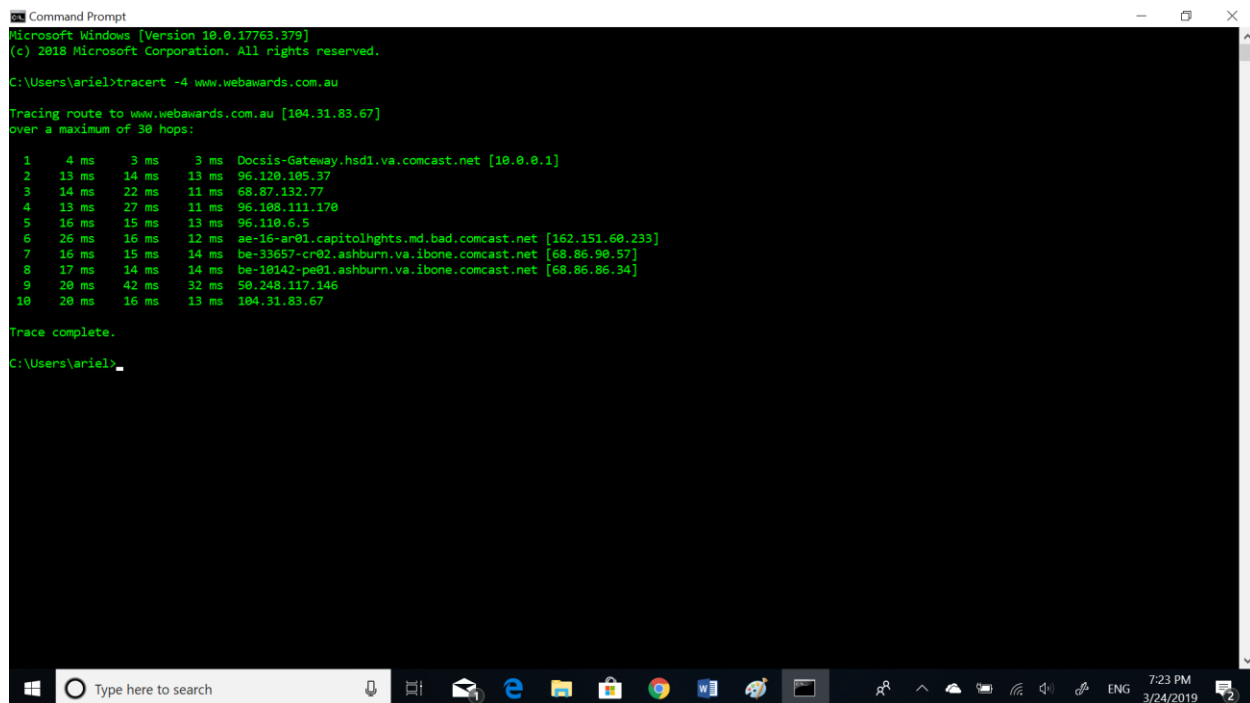**Instructions:**

In this lab, you'll be using the traceroute diagnostic tool to packets route across the IP network.

On Windows:

• Go to Command Prompt (start menu, search for "cmd")

• Type: "tracert www.webawards.com.au"

• Take a full screenshot of your tracert result page

On Mac:

• Go to Terminal (Finder, Applications, Utilities and open "terminal")

• Type: "traceroute www.webawards.com.au"

• Take a full screenshot of your traceroute result page.

Questions:

1. What is your computers IP address? (This is not included in your traceroute results). Take a screenshot of your computers IP address. Your screenshot should indicate the time and date on your computer.

IP address: 10.0.0.3

2. With reference to private/public IP addresses. What type of IP address is the first IP from your traceroute result.

The first IP address (10.0.0.1) is a ***private*** IP address.

The range of the IP addresses are:

10.0.0.0 to 10.255.255.255

172.16.0.0 to 172.31.255.255

192.168.0.0 to 192.168.255.255

3. With reference to private/public IP addresses. What type of IP address is the second IP from your traceroute result.

The second IP address (96.120.105.37) is a *public* IP address

4. In a tabular format (use table example below), and in sequential order. Indicate the location of each IP address (include state for US states) and the organization that owns the IP address. (Use https://www.ultratools.com/tools/ipWhoisLookup to look up IP address whois information). Add a row for every single IP in your traceroute result page.

Hop count	IP address	Organization (IP Owner)	Location (US state)/Country
1	10.0.0.1	Internet Assigned Numbers Authority	Address: 12025 Waterfront Drive Suite 300 City: Los Angeles State/Province: CA Country: United States
2	96.120.105.37	Comcast IP Services, L.L.C.	Address: 1800 Bishops Gate Blvd City: Mt Laurel State/Province: NJ Country: United States
3	68.87.132.77	Comcast Cable Communications, Inc.	Address: 1800 Bishops Gate Blvd City: Mt Laurel State/Province: NJ Country: United States
4	96.108.111.170	Comcast Cable Communications, LLC	Address: 1800 Bishops Gate Blvd City: Mt Laurel State/Province: NJ Country: United States
5	96.110.6.5	Comcast Cable Communications, LLC	Address: 1800 Bishops Gate Blvd City: Mt Laurel State/Province: NJ Country: United States
6	162.151.60.233	Comcast Cable Communications, LLC	Address: 1800 Bishops Gate Blvd City: Mt Laurel State/Province: NJ Country: United States
7	68.86.90.57	Comcast Cable Communications, Inc	Address: 1800 Bishops Gate Blvd City: Mt Laurel State/Province: NJ Country: United States
8	68.86.86.34	Comcast Cable Communications, Inc.	Address: 1800 Bishops Gate Blvd City: Mt Laurel State/Province: NJ Country: United States
9	50.248.117.146	Comcast Cable Communications, LLC	Address: 1800 Bishops Gate Blvd City: Mt Laurel State/Province: NJ Country: United States
10	104.31.83.67	Cloudflare, Inc.	Address: 101 Townsend Street City: San Francisco State/Province: CA Country: United States

5. In your own words, explain everything you just did, and what route did your packet took from source to destination. How many US states did your packet go through? How many countries if any?

Using the command 'tracert", I sent a packet of information to the website www.webawards.com.au and it showed me the path that this packet took to reach its destination.

According to the results, the packet did 10 hops. First, it went to Los Angeles-California, then to Mt Laurel-New Jersey, then the packet stayed in New Jersey for 7 hops more. At the end, the packet went

to San Francisco-California. The packet went through 2 states: California and New Jersey (it would be three if we count the source of the packet, Virginia) in the United States. The packet didn't leave the country.

Even though the website reached is and Australian website, the packet reached the server of the organization Cloudflare that provides content delivery network for services. Cloudflare sits between the visitor and the Cloudflare's user's hosting provider, acting as a reverse proxy for websites.