

Chapter 7 Networking -- Discovering network information

1. A)

Microsoft Windows [Version 10.0.14393]

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C:\Users\Tony>tracert www.utep.edu

Tracing route to www.utep.edu [129.108.0.145]

over a maximum of 30 hops:

| | | | | |
|----|-------|-------|-------|--|
| 1 | 2 ms | 2 ms | 1 ms | 172.24.0.1 |
| 2 | 9 ms | 2 ms | 4 ms | big-mama-vlan900.nmsu.edu [128.123.128.153] |
| 3 | 1 ms | 1 ms | 5 ms | nmsu-gate-ict-po1.nmsu.edu [128.123.128.38] |
| 4 | 2 ms | 1 ms | 3 ms | 192.65.78.197 |
| 5 | 10 ms | 4 ms | 17 ms | 206.206.145.54 |
| 6 | 9 ms | 9 ms | 8 ms | abq-edge-07.inet.qwest.net [67.134.119.53] |
| 7 | 37 ms | 39 ms | 37 ms | iah-edge-18.inet.qwest.net [67.14.13.218] |
| 8 | 43 ms | 53 ms | 54 ms | 67-132.154-154.qwest.net [67.132.154.154] |
| 9 | 67 ms | 67 ms | 74 ms | elp-core-ge-1-0-0-420.tx-bb.net [192.12.10.74] |
| 10 | * | * | * | Request timed out. |
| 11 | * | * | * | Request timed out. |
| 12 | * | * | * | Request timed out. |
| 13 | * | * | * | Request timed out. |
| 14 | * | * | ^C | |

C:\Users\Tony>tracert www.asu.edu

Tracing route to www.asu.edu.cdn.cloudflare.net [104.16.51.14]

over a maximum of 30 hops:

| | | | | |
|---|-------|-------|-------|--|
| 1 | 1 ms | 2 ms | 1 ms | 172.24.0.1 |
| 2 | 2 ms | 1 ms | 1 ms | big-mama-vlan900.nmsu.edu [128.123.128.153] |
| 3 | 9 ms | 2 ms | 6 ms | nmsu-gate-ict-po1.nmsu.edu [128.123.128.38] |
| 4 | 2 ms | 3 ms | 2 ms | 192.65.78.197 |
| 5 | 5 ms | 3 ms | 3 ms | te0-1-0-7.ccr21.elp01.atlas.cogentco.com [38.104.193.33] |
| 6 | 17 ms | 17 ms | 15 ms | be3046.ccr21.den01.atlas.cogentco.com [154.54.0.46] |
| 7 | 16 ms | 16 ms | 21 ms | te0-0-2-0.rcr12.b006467-1.den01.atlas.cogentco.com [154.54.45.182] |

8 23 ms 20 ms 20 ms 38.140.185.234

9 16 ms 17 ms 16 ms 104.16.51.14

Trace complete.

C:\Users\Tony>

B.)

For www.utep.edu:

ROUTER: abq-edge-07.inet.qwest.net IP: 67.134.119.53 LOCATION: Albuquerque

For www.asu.edu:

ROUTER: te0-1-0-7.ccr21.elp01.atlas.cogentco.com IP: 38.104.193.33 LOCATION: El Paso

C.)

Because they have to travel through multiple networks before it gets to the internet 'backbone'. The 'packet' goes through the local network first, then the regional network, then the wide area network, and then the same route backwards before it reaches its destination.

2. A)

Using nslookup on command prompt:

Name: www.google.com

Addresses: 2607:f8b0:400f:802::2004 216.58.217.4

Name: kitpack.com

Address: 216.223.228.53