

Will Townsend

Dr. E.A. Lu

COSC 370-750

5 March 2021

Lab 3

Lab Report: I had a little trouble with my MacBook air, getting the information I need. However, I figured out the terminal commands specific to Mac. I completed this lab 100% independently with minimal help from outside resources (googling the mac terminal commands for ifconfig).

All screenshots and Wireshark information are attached.

Part 1:

- 1) zhihu.com IP: 103.41.167.234
- 2) kcl.ac.uk One authoritative DNS server: ns3.ja.net
- 3) Address of ns3.ja.net: 193.63.106.103#53

Part 3:

- 4) Sent over UDP
- 5) Both are 53
- 6) 208.67.222.222 No, they are different
- 7) It is a standard query. There are no answers
- 8) One answer is provided. Contains a name, type, class, time to live, data length, and address.
- 9) No different addresses are used.
- 10) No, only two queries are seen.
- 11) Both are 53
- 12) 208.67.222.222 No, they are different

- 13) Standard query, no answers
- 14) 3 answers (2 CNAME types and one A type) They all have name, type, class, time to live, and data length, however, differ in having a CNAME (CNAME types) and an address (A type).
- 16) 208.67.222.222 No, they are different
- 17) Standard, no answers

18:

```
mit.edu    nameserver = eur5.akam.net
mit.edu    nameserver = use2.akam.net
mit.edu    nameserver = use5.akam.net
mit.edu    nameserver = usw2.akam.net
mit.edu    nameserver = asia1.akam.net
mit.edu    nameserver = asia2.akam.net
mit.edu    nameserver = ns1-37.akam.net
mit.edu    nameserver = ns1-173.akam.net
```

No, it does not provide the IP addresses

- 20) 96.7.49.64 which corresponds to use2.akam.net
- 21) Standard, no answers (for the first or second)
- 22) It contains no answer in the second query response message. The first responds with use2.akam.net