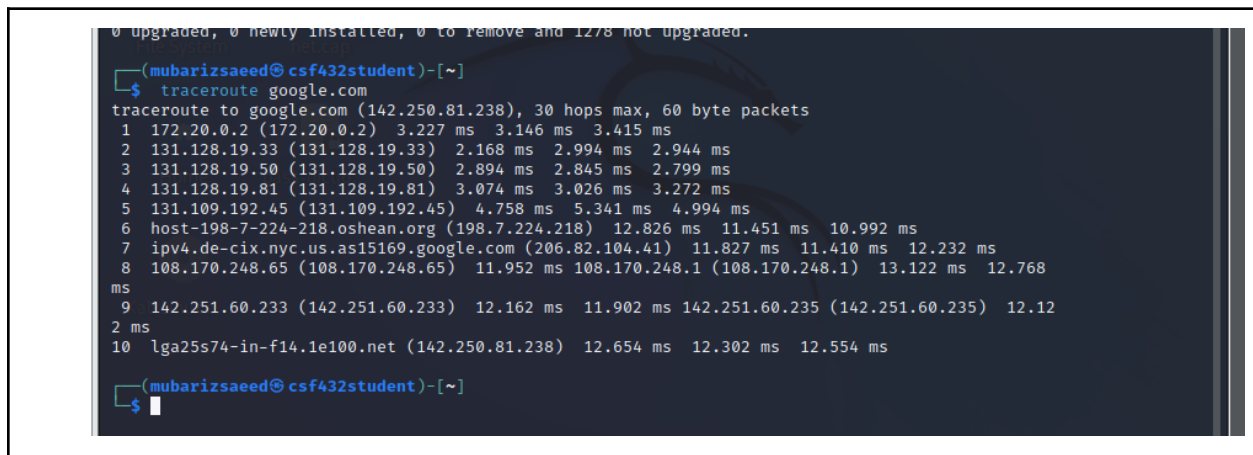


Lab 13: Traceroute and DNS Zone Transfer Attack using Dig

Part 1: Traceroute

!/? Question 1 - Submit a screenshot of your output.



```
0 upgraded, 0 newly installed, 0 to remove and 1278 not upgraded.
(mubarizsaeed@csf432student)-[~]
$ traceroute google.com
traceroute to google.com (142.250.81.238), 30 hops max, 60 byte packets
 1 172.20.0.2 (172.20.0.2)  3.227 ms  3.146 ms  3.415 ms
 2 131.128.19.33 (131.128.19.33)  2.168 ms  2.994 ms  2.944 ms
 3 131.128.19.50 (131.128.19.50)  2.894 ms  2.845 ms  2.799 ms
 4 131.128.19.81 (131.128.19.81)  3.074 ms  3.026 ms  3.272 ms
 5 131.109.192.45 (131.109.192.45)  4.758 ms  5.341 ms  4.994 ms
 6 host-198-7-224-218.oshean.org (198.7.224.218)  12.826 ms  11.451 ms  10.992 ms
 7 ipv4.de-cix.nyc.us.as15169.google.com (206.82.104.41)  11.827 ms  11.410 ms  12.232 ms
 8 108.170.248.65 (108.170.248.65)  11.952 ms  108.170.248.1 (108.170.248.1)  13.122 ms  12.768
ms
 9 142.251.60.233 (142.251.60.233)  12.162 ms  11.902 ms  142.251.60.235 (142.251.60.235)  12.12
2 ms
10 lga25s74-in-f14.1e100.net (142.250.81.238)  12.654 ms  12.302 ms  12.554 ms
(mubarizsaeed@csf432student)-[~]
$
```

!/? Question 2 - How many hops did it take to reach a google web server?

10

!/? Question 3 - Assume you force all of your machine traffic to pass through a VPN concentrator that is located in Japan. How do you think this would affect the latency (ms times) shown in this traceroute report?

It would slow down the latency

!/? Question 4 - What does a packets TTL mean?

Time-to-live (TTL)

!/? Question 5 - Write a traceroute command that strictly uses IPv4 addresses, ICMP echos for probes, runs through your default gateway interface (not IP address, interface name), and is un-fragmented.

```
File Actions Edit View Help
default via 172.20.0.1 dev eth0 proto dhcp src 172.20.85.65 metric 100

(mubarizsaeed@csf432student)~$
(mubarizsaeed@csf432student)~$
(mubarizsaeed@csf432student)~$
$ sudo traceroute -g 172.20.0.1 google.com
traceroute to google.com (142.250.81.238), 30 hops max, 72 byte packets
 1 * * *
 2 * * *
 3 * * *
 4 * * *
 5 * * *
 6 * * *
 7 * * *
 8 * * *
 9 * * *
10 * * *
11 * * *
12 * * *
13 * * *
14 * * *
15 * * *
16 * * ^C

(mubarizsaeed@csf432student)~$
```

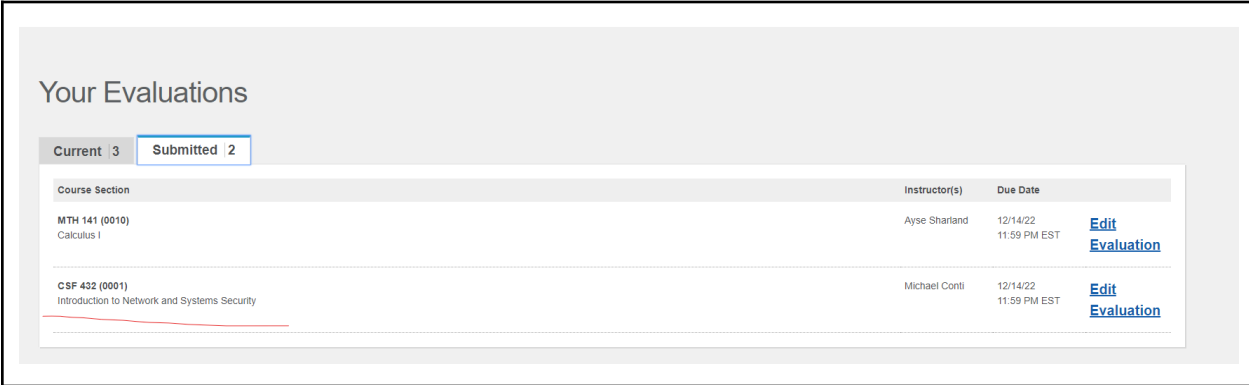
Part 2: DNS Zone Transfer

!/? Question 6. Submit a screenshot of your badge demonstrating the completion of this immersive lab module.



Part 3: Course Feedback

!? Question 7. Submit a screenshot confirming that you have submitted your Course Feedback report



Part 4: Submission

Convert your network document into a .PDF and upload a single `lastname_lab13.pdf` file to Brightspace through the attachment uploads option.