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Cpre 489 – Lab 1

9/4/2021

Lab 1 Report

Exercise 1:

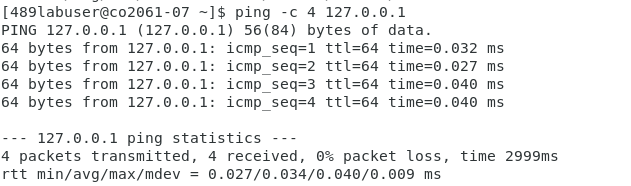
A picture containing text, newspaper, screenshot, receipt

Description automatically generatedAve. Round Trip time for [www.iastate.edu](http://www.iastate.edu): 0.783 ms

Ave. Round Trip time for [www.cam.ac.uk](http://www.cam.ac.uk): N/A

Ave. Round Trip time for [www.lenovo.com.cn](http://www.lenovo.com.cn): 30.8 ms

Exercise 2:

The IP is a loopback address which means the machine is sending pings to itself, as such the latency is very low.

Exercise 3:

Text

Description automatically generatedFacebook: 31.13.93.35 – star-mini.c10or.facebook.com

Microsoft: 23.35.205.40 – [www.microsoft.com-c-3.edgekey.net.globalredir.akadns.net](http://www.microsoft.com-c-3.edgekey.net.globalredir.akadns.net)

g.www.ms.akadns.net – N/A

Exercise 4:

Text

Description automatically generated

10 vulcan.ece.iastate.edu

Exercise 5:

Text

Description automatically generated

Spock.ee.iastate.edu

Spock.ee.iastate.edu

Exercise 6:

Text

Description automatically generated

192.168.254.7 (Lab Computer 7)

Exercise 7:

Graphical user interface, text

Description automatically generated

The connection has to be around 1 Gbps since the bandwidth is showing 555 Mbps.

Text

Description automatically generatedExercise 8:

Number of hops: 22

Routes: The packets move through ISU’s network in 22 hops and are then routed through the web to reach CMU’s network. Once it’s in CMU’s network the routing tables find the correct path to [www.cmu.edu](http://www.cmu.edu)

Gateways: The gateways on this route go from ISU’s network, to the web, to CMU’s network

Latency: The round trip times for these packets were 41.654, 42.661, 44.221. So the average round time trip was 42.845.

Reachability: This host was very reachable because it did not block any of the ICMP packets that were being sent.

Exercise 9:

Text

Description automatically generated

The tcptraceroute shows a lot more hop information. I think this because the gateways that are closer to the destination have a firewall that blocks the ICMP packets. The TCP SYN/ACK packets are able to break through more firewalls, allowing us to get more information.

Text

Description automatically generatedExercise 10:

Port 22 (SSH) is open.

Exercise 12:

Text

Description automatically generated

The IP address of the attacking computer is 192.168.254.1

Text

Description automatically generatedExercise 13:

Table

Description automatically generated

1. Source IP: 192.168.254.7 Destination IP: 82.221.107.34
2. Duration of connection: 20 seconds
3. Total amount of packets sent: 11

Graphical user interface, application, table

Description automatically generatedExercise 14:

Data each ICMP packet contains: 98 bytes

Inter-arrival time: 207 (rough average)

Exercise 15:

A picture containing diagram

Description automatically generated

A picture containing table

Description automatically generatedTraceroute sends ICMP and UDP packets, TCPtraceroute sends TCP/SYN packets.