**Lab 7 Assignment AWK**

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Timestamp,Src\_IP,Dest\_IP,Protocol,Source\_Port,Destination\_Port,Packet\_Size,Status

2024-09-30 10:15:10,192.168.1.10,172.217.12.206,TCP,443,51413,1500,Accepted 2024-09-30 10:15:12,192.168.1.15,203.0.113.5,UDP,53,55432,512,Dropped 2024-09-30 10:15:14,10.0.0.2,192.168.1.10,TCP,80,61324,1420,Accepted 2024-09-30 10:15:16,172.16.0.5,192.168.1.15,ICMP,64,Dropped 2024-09-30 10:15:18,192.168.1.10,198.51.100.23,TCP,443,1025,1500,Accepted 2024-09-30 10:15:20,198.51.100.23,192.168.1.10,TCP,443,1025,1400,Accepted 2024-09-30 10:15:22,203.0.113.5,192.168.1.15,UDP,123,49152,512,Dropped

Src IP – Source Ip

Dest Ip – Destination Ip

Write a awk script to

1. count how many packets use each protocol (TCP, UDP, ICMP)

A screen shot of a computer

Description automatically generated

1. filter and print only the dropped packets.

A screen shot of a computer

Description automatically generated

1. print the Timestamp, Source\_IP, Destination\_IP, and Packet\_Size for packets that have a size greater than 1000 bytes.

A computer screen shot of a program

Description automatically generated

1. display traffic that is directed to destination port 443.

A screen shot of a computer program

Description automatically generated

1. print all unique Source\_IP addresses from the network\_traffic.csv file.

A screen shot of a computer program

Description automatically generated

1. filter only TCP traffic and calculate the average packet size.



1. Count invalid records

A screen shot of a computer

Description automatically generated

1. extract and print all rows where the Source\_IP is in the 192.168.x.x range.

A computer screen shot of a code

Description automatically generated

1. match traffic directed to either port 80 (HTTP) or port 443 (HTTPS).

A computer screen shot of a computer code

Description automatically generated

1. filter out rows where the Destination\_Port contains any alphanumeric characters (letters or numbers).

A computer screen shot of a computer code

Description automatically generated

1. filter out traffic where the protocol is TCP AND the destination port is 443 (HTTPS traffic).

A screenshot of a computer program

Description automatically generated

1. filter out and print traffic where the Packet\_Size is greater than 1000 OR the Status is Dropped.

A screen shot of a computer screen

Description automatically generated

1. print traffic NOT originating from 192.168.x.x IP addresses.

A screen shot of a computer program

Description automatically generated

1. filter rows where both Source\_IP and Destination\_IP are within the 192.168.x.x range.

A screen shot of a computer

Description automatically generated

1. filter out traffic where the destination port is 22 OR the packet size is less than 100 bytes.

A screen shot of a computer

Description automatically generated