National College of Ireland

Configuration Manual

MSc Internship
Cyber Security

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MSc Project Submission Sheet

School of Computing

Student Name: …….PADMAJA SEKHER ……

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Programme: …MSc Cyber Security…… **Year:** 2019……..

Module: ……Academic Internship……..……

Lecturer: ……12-December-2019……..……

Submission Due Date: ……..……

Project Title: Network Traffic Based Analysis of Secured Communication Application (LINE)

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CONFIGURATION MANUAL:

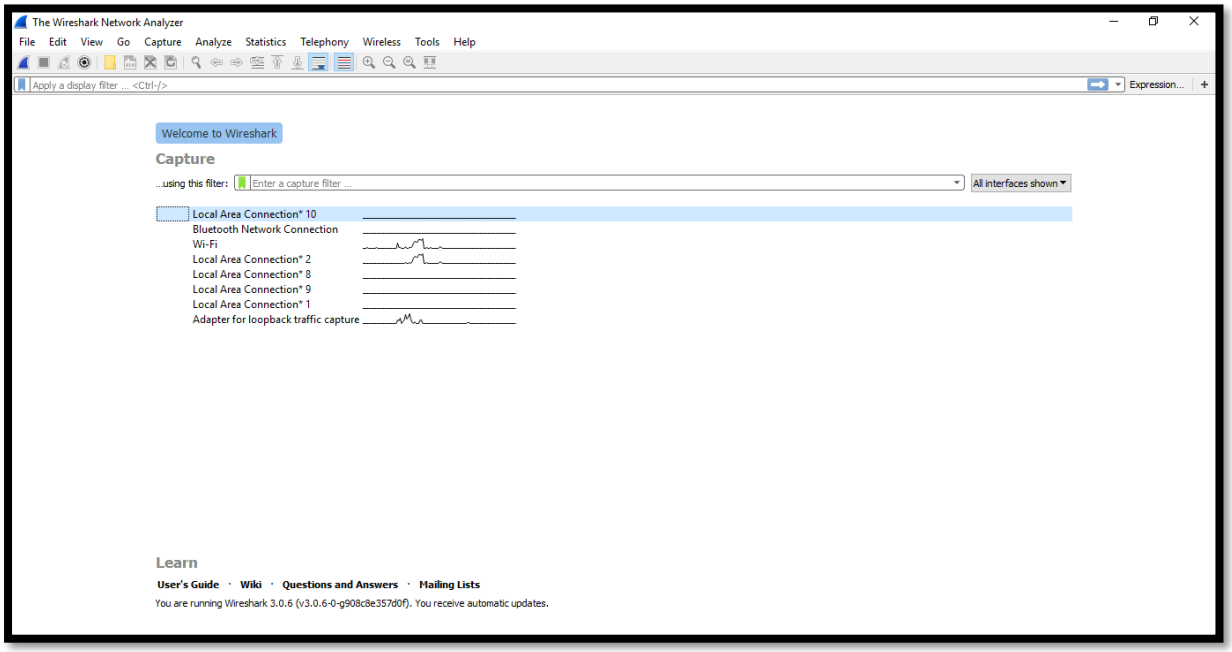
NETWORK TRAFFIC BASED ANALYSIS OF SECURE COMMUNICATION APPLICATION (LINE)

Step 1: Connect the monitoring devices (wireshark in laptop lenovo ideapad 330S) with the WiFi.

Step 2: Connect the target devices (android, iOS, windows) to the hotspot of the monitoring device.

Step 3: Open Wireshark. To analyse the network traffic.

Step 4:



This picture explains the network traffic analysed in the network. Local area connection 2 . The target devices are connected and the network traffic of the target devices are analysed.

Step 5: By clicking the local area connection 2. It starts analysing the network traffic of the target devices connected to the monitoring devices.

Step 6: Download LINE application in the target devices.

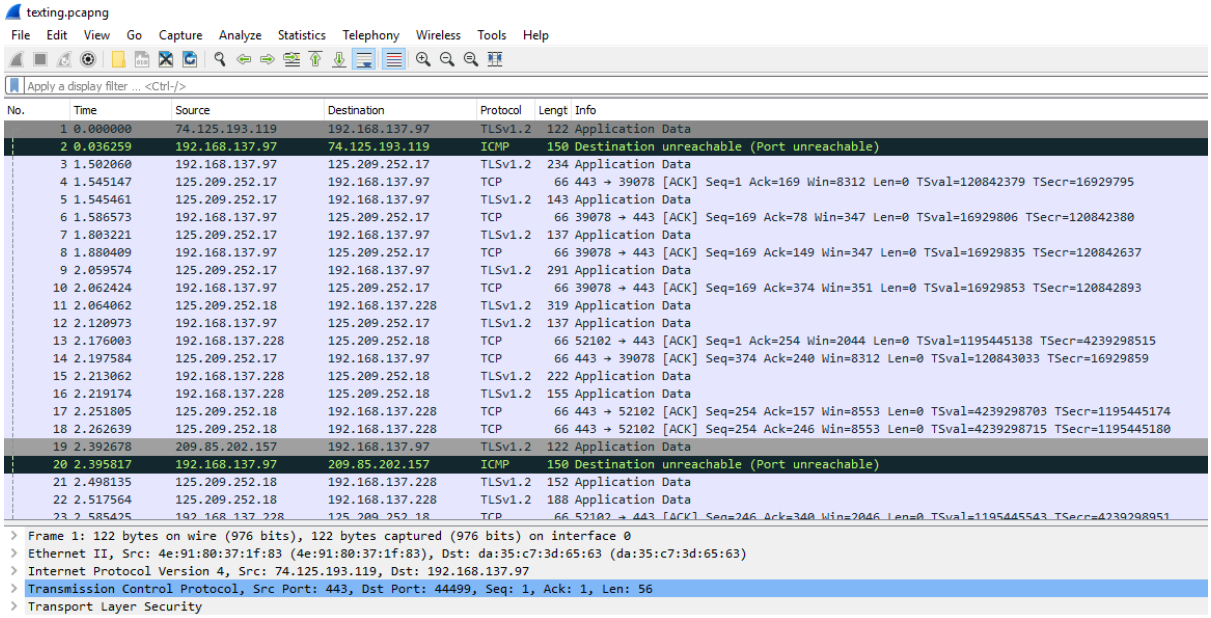
https://play.google.com/store/apps/details?id=jp.naver.line.android&hl=en_IE

Step 7: LINE is an instant messaging application which includes the features like voice call , video call, text messages, location accuracy, and sharing information.

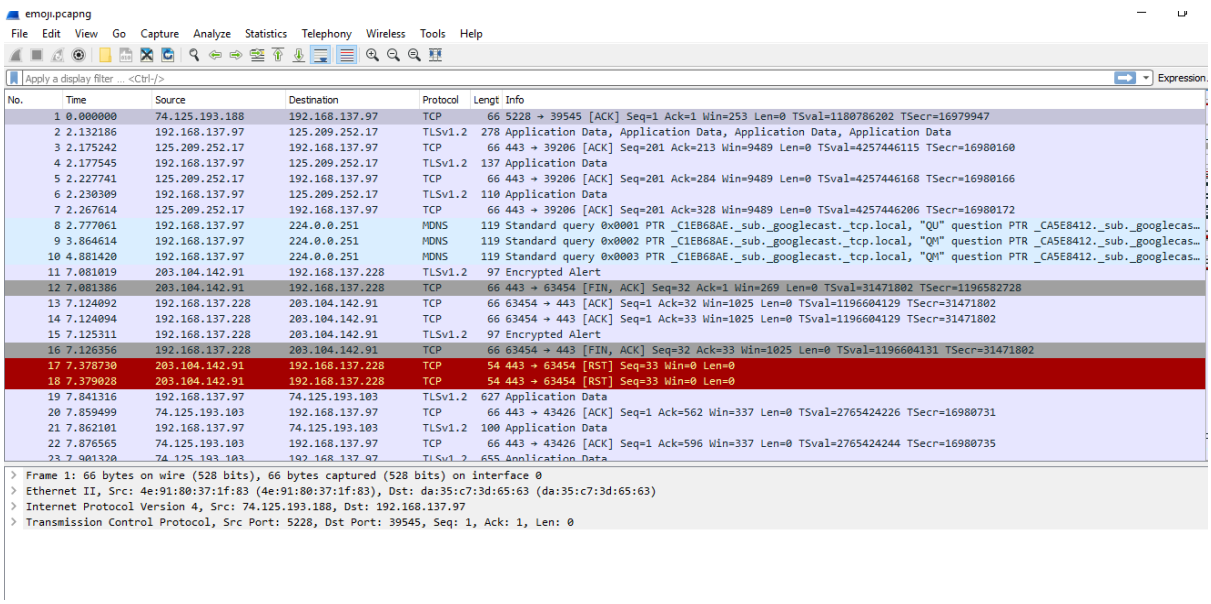
Step 8: By analysing the network traffic the unique signatures are found for the voice call , video call, attachments, and emoji in the target devices.

Step 9: The target devices are connected and the network traffic is analysed using Wireshark while sending the attachments between the devices.

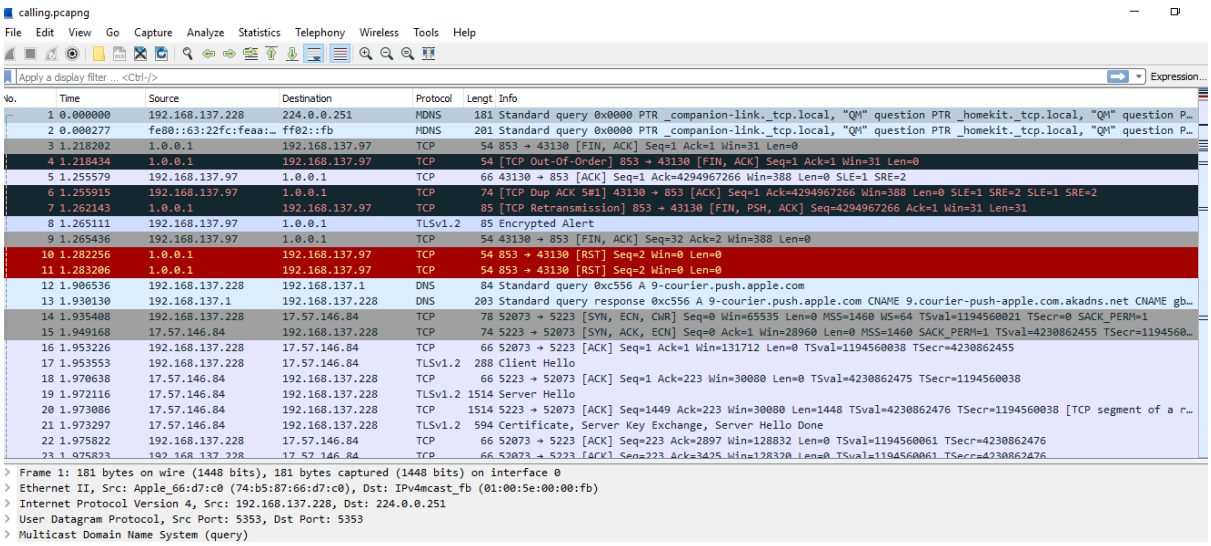
Step 10: The network traffic is analysed when sending the text messages using Wireshark.



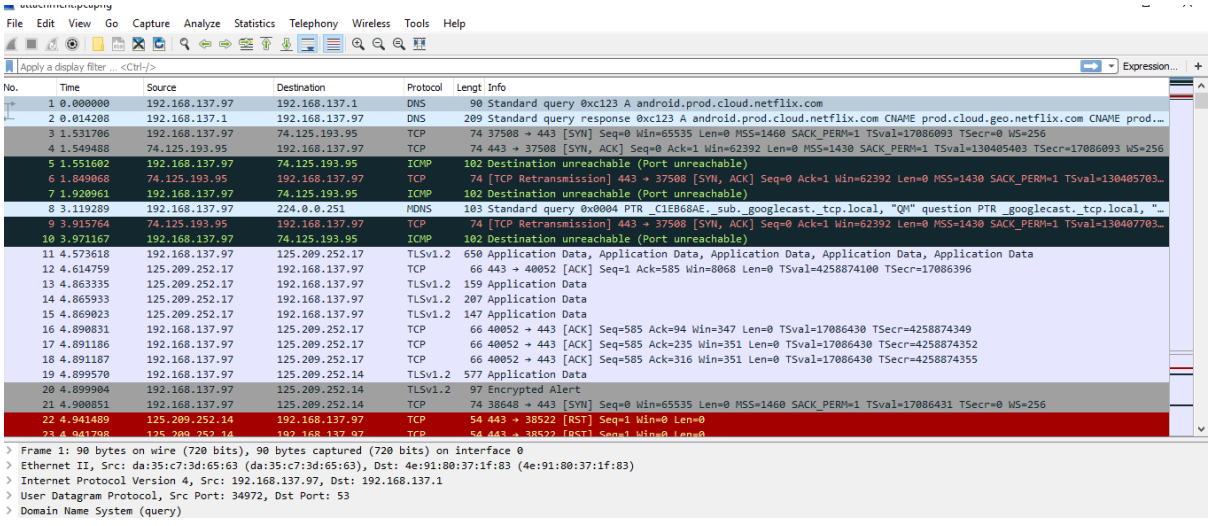
Step 11: By using Wireshark, The network traffic is analysed while sending emoji.



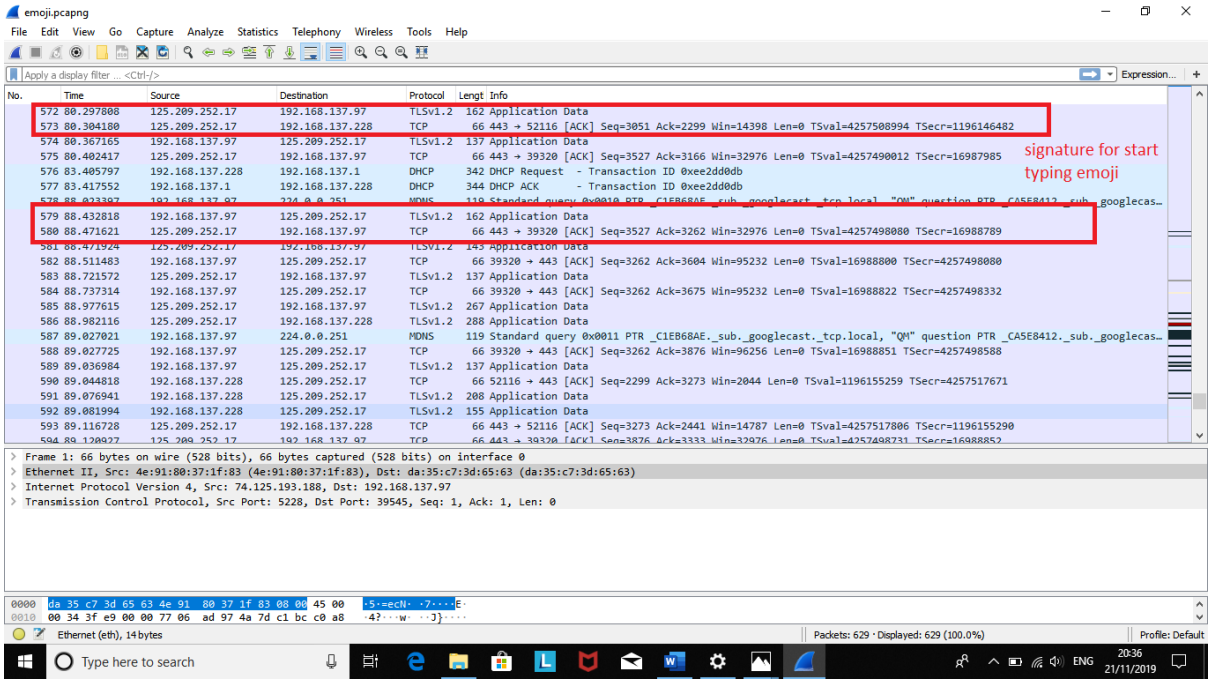
Step 12: When the target device is doing voice or video calling .The packet size is used to determine the type of calling.



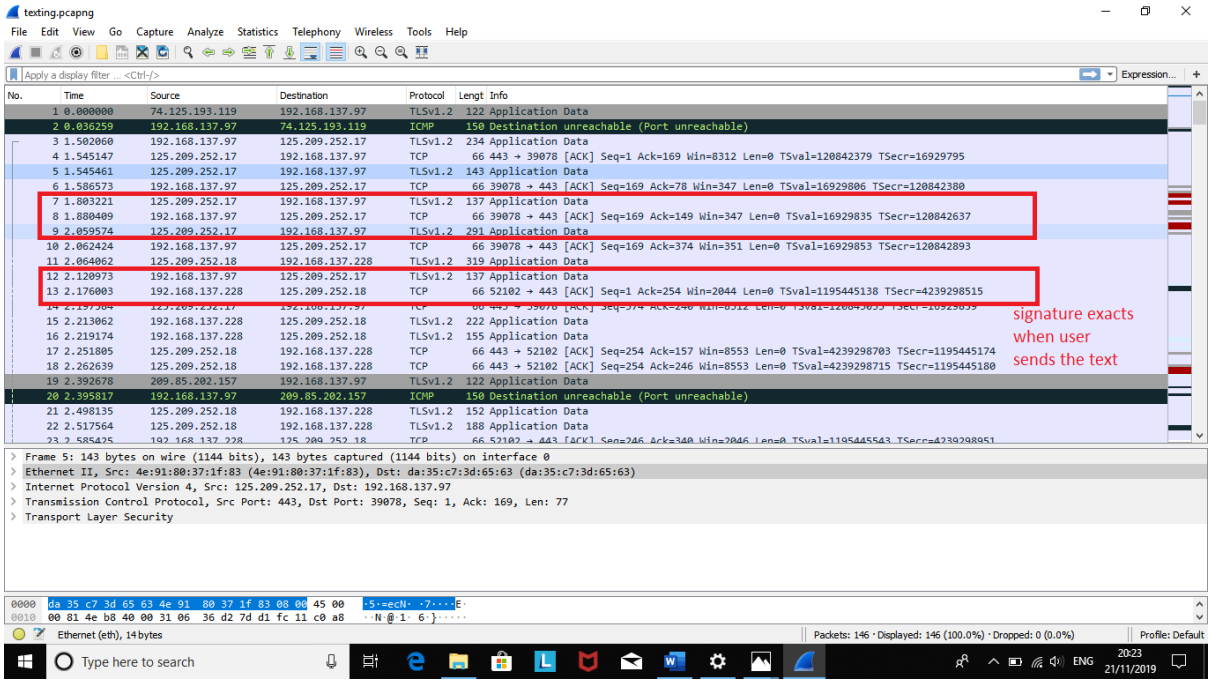
Step 13: Two target devices are Android and iOS . Signature found for the attachments sent between two devices.



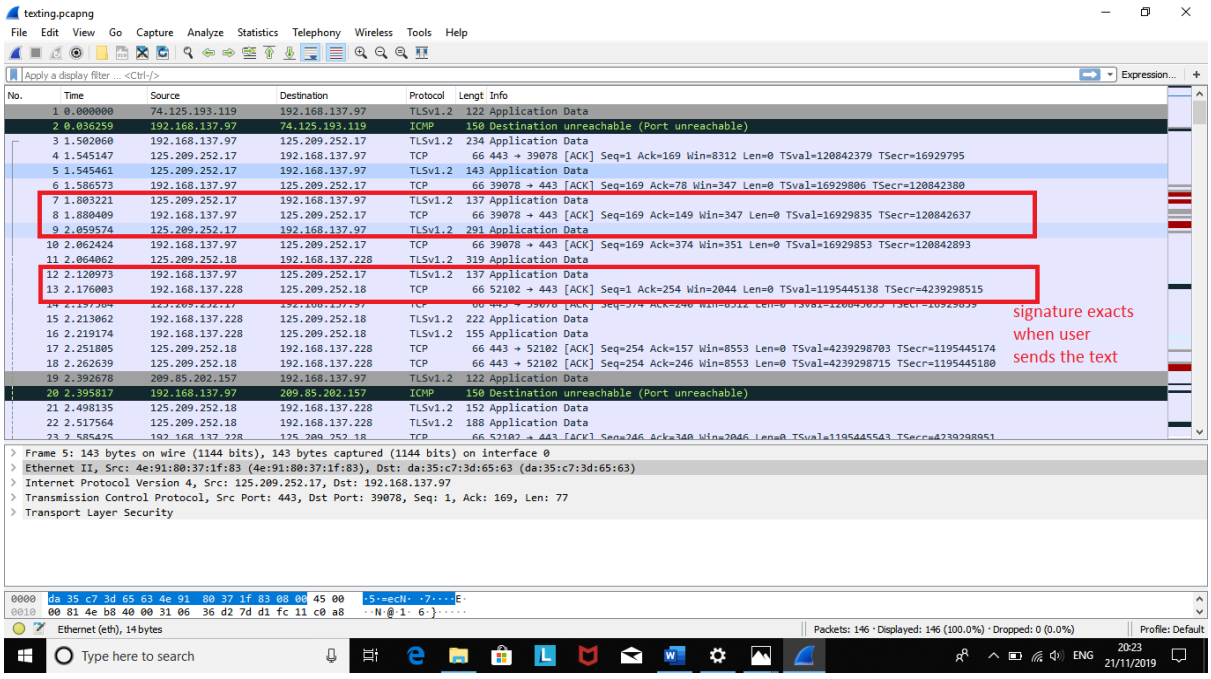
Step 14: Signature analysed for the emoji



Step 15: Signature found for the text messages.



Step 16: Signature extract from the calling (voice and video)



Step 17: Signature extract from attachment