



# Mawlana Bhashani Science and Technology University

## Lab-Report

Report No: 04

Course code:ICT-4202

Course title: Wireless and Mobile Communication Lab

Date of Performance: 11.09.2020

Date of Submission: 18.09.2020

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4<sup>th</sup> year 2<sup>nd</sup> semester

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## **Experiment No: 04**

### **Experiment Name: Protocol Analysis with Wireshark**

#### **Objectives:**

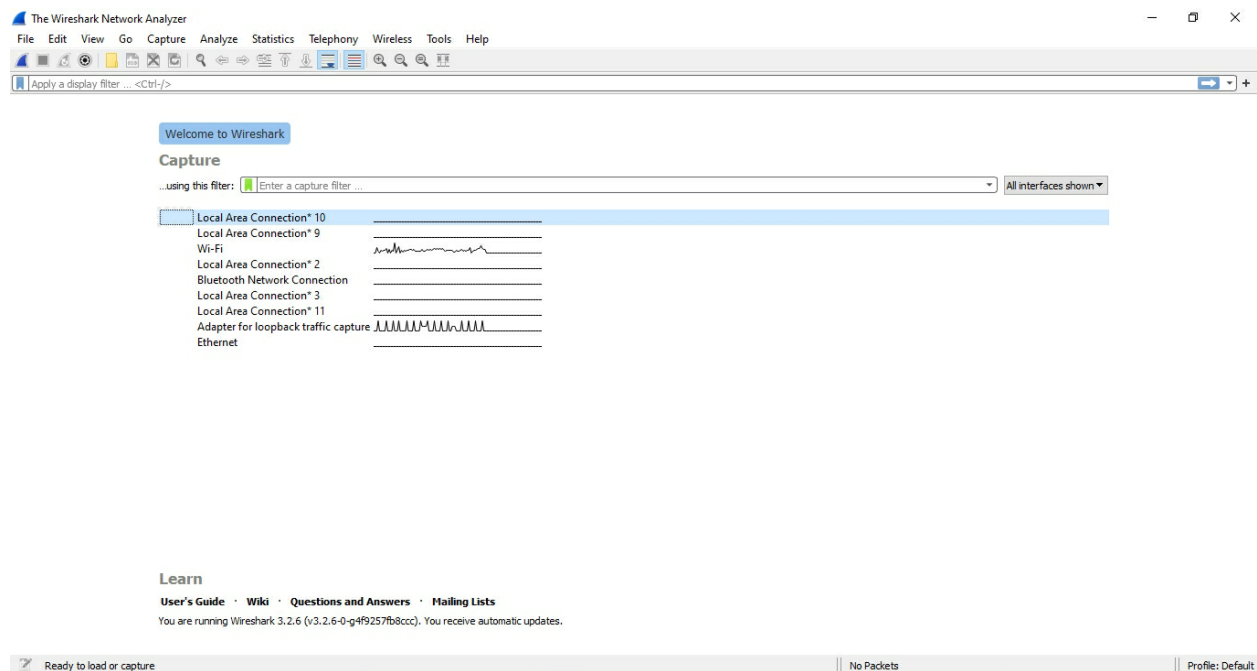
- Capture live packet data from a network interface.
- Display packets with very detailed protocol information.
- Filter packets on many criteria.
- Search for packets on many criteria.
- Colorize packet display based on filters.
- Create various statistics.

#### **Capturing Packets:**

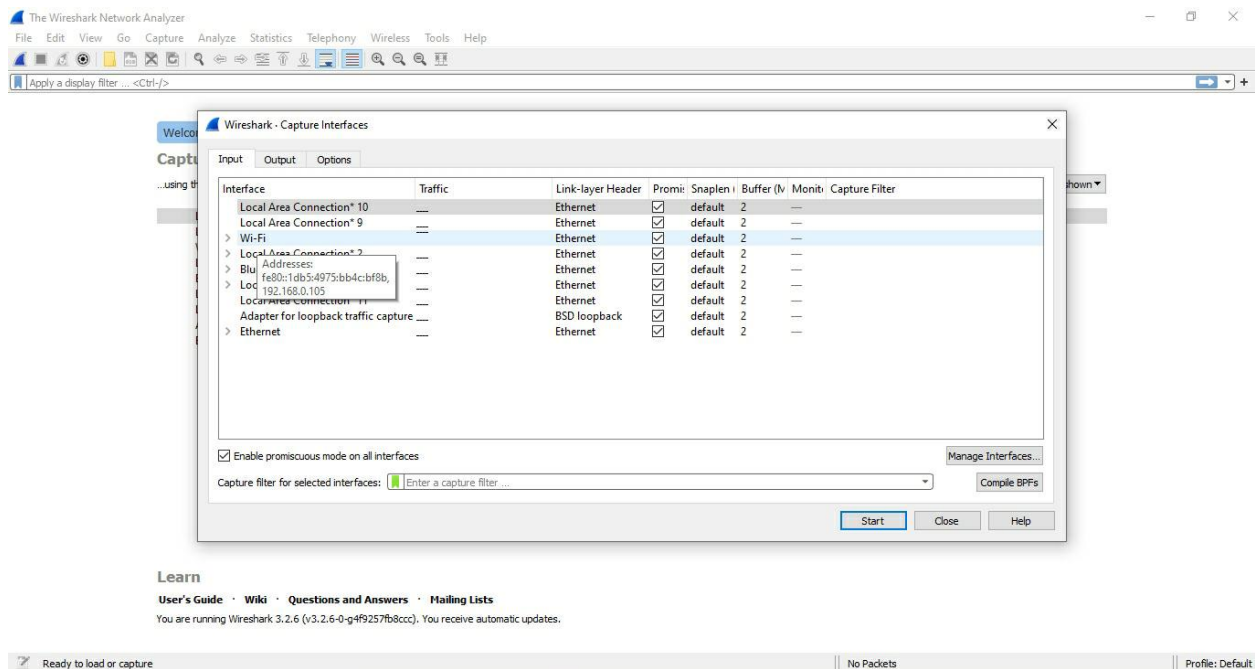
By clicking Capture menu the process of capturing will be started. It will show the available interfaces list. Then, we need to start Capturing on interface that has IP address

The packet capture will display the details of each packet as they were transmitted over the wireless LAN.

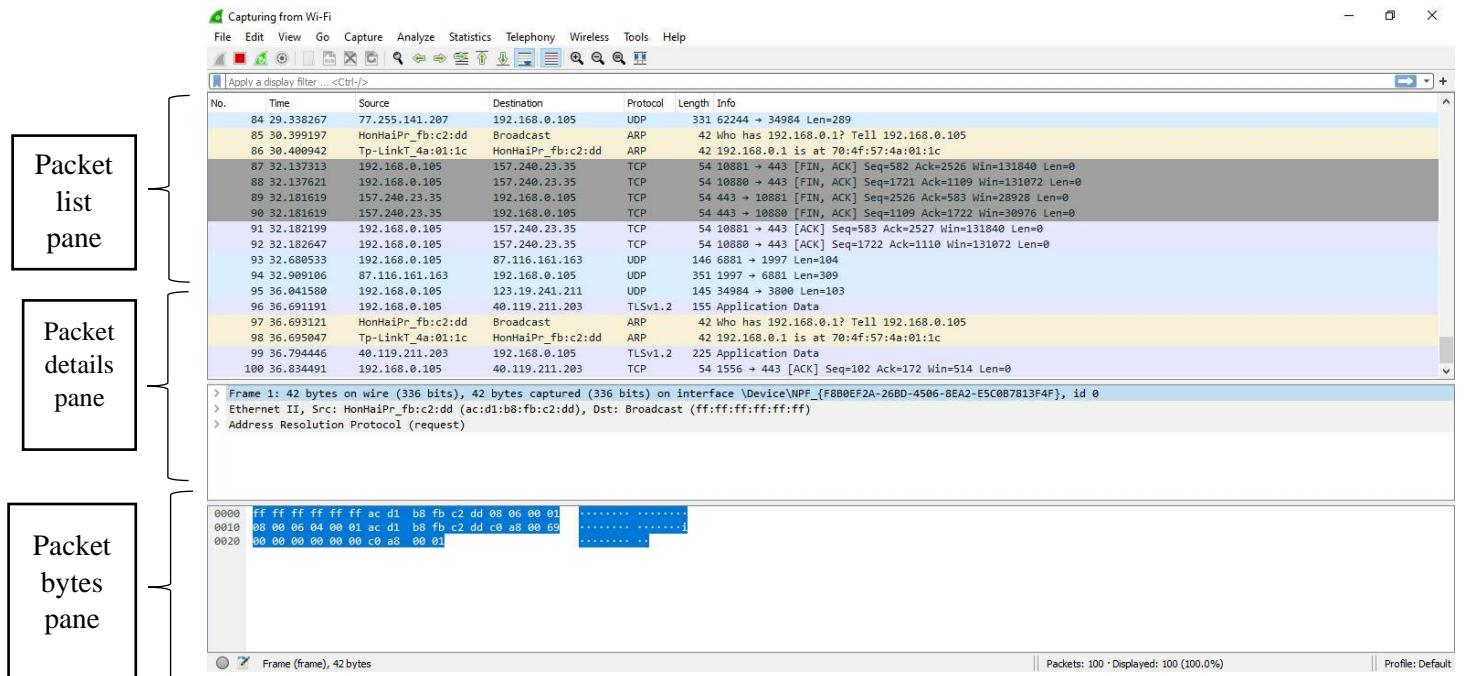
Capturing can be stopped by clicking on Stop the running capture button on the main toolbar.



**Figure 01: Wireshark Interface List**



**Figure 02: Start Capturing Interface that has IP address**



**Figure 03: A sample packet capture window**

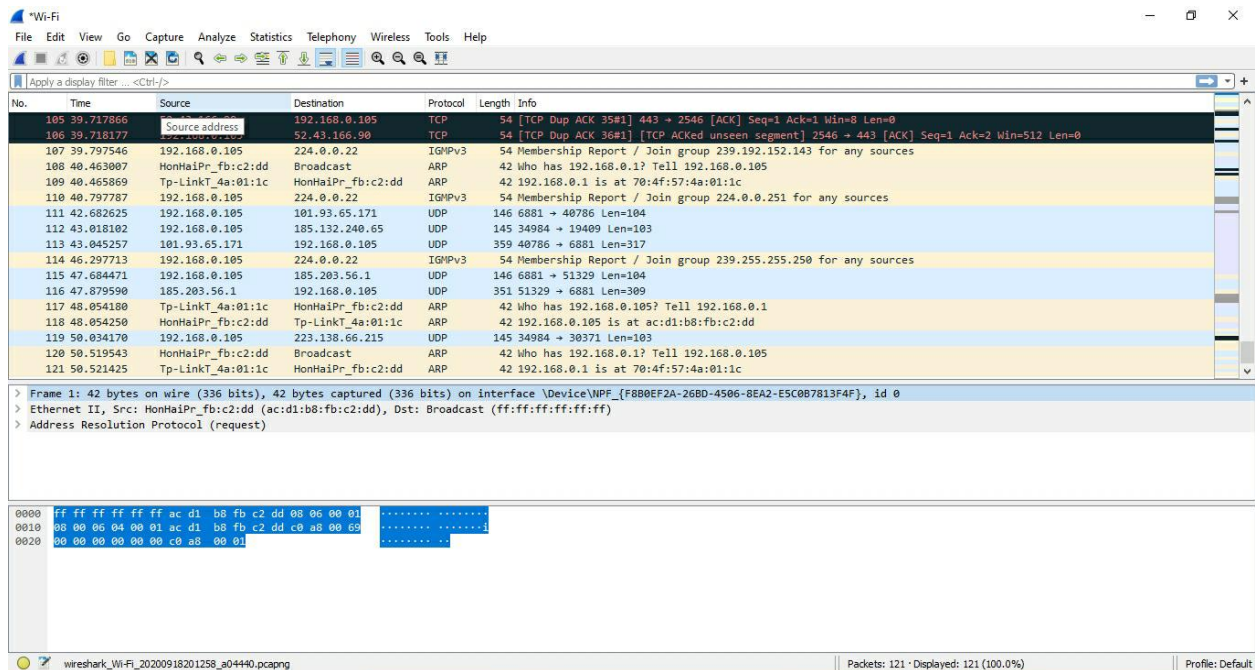


Figure 04: Stopping Capture

## Filtering:

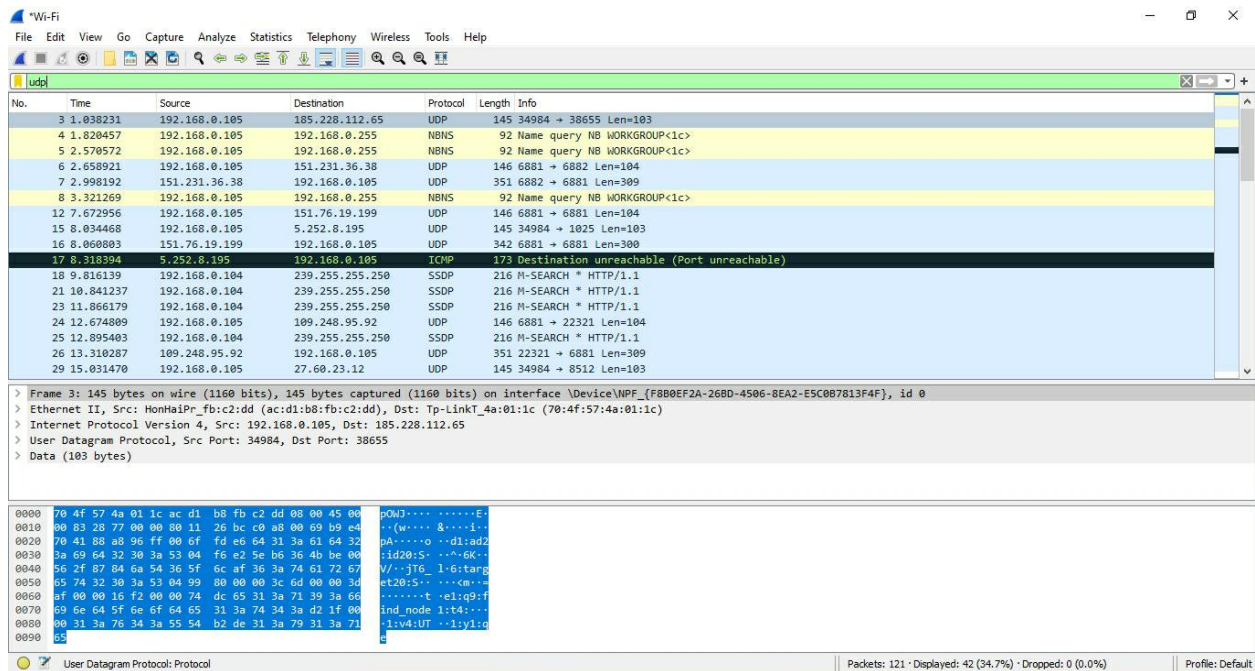
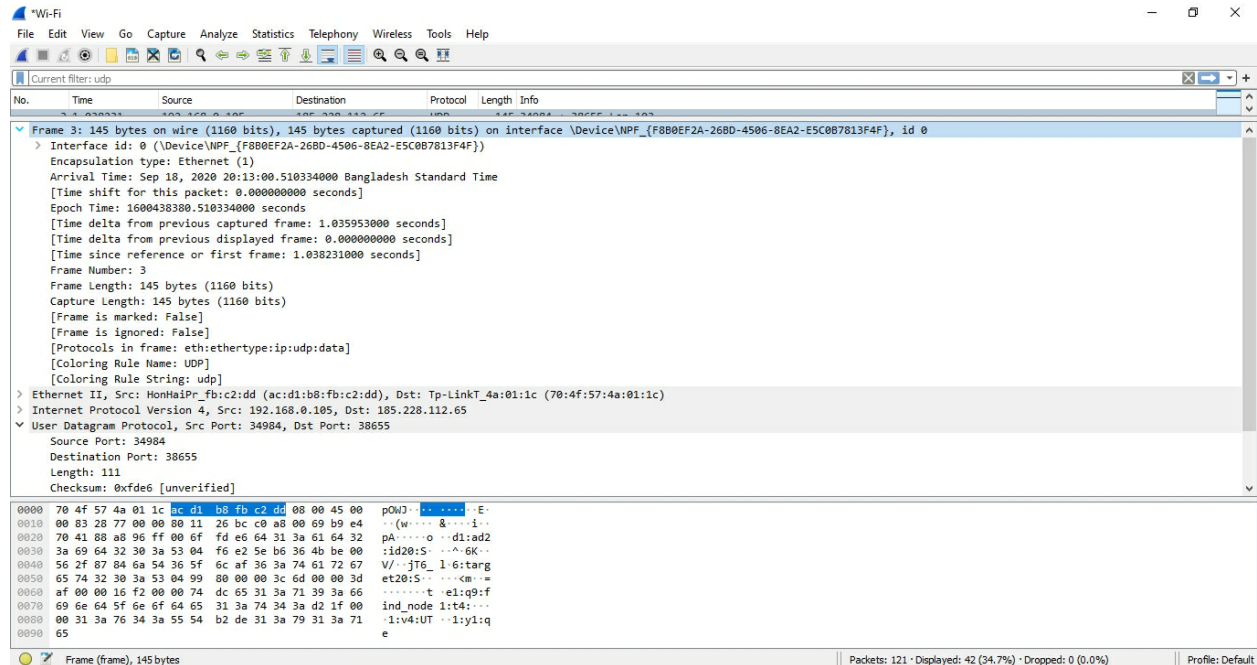
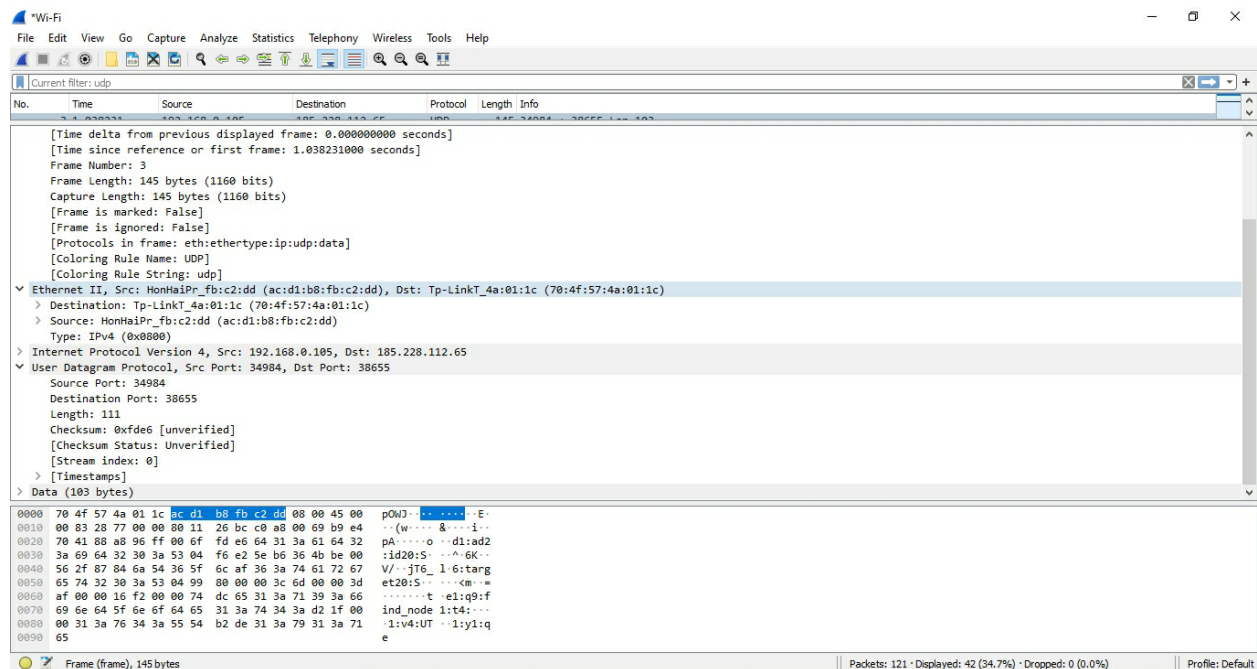


Figure 05: Filter by Protocol

- Packets and protocols can be analyzed after capture
- Individual fields in protocols can be easily seen
- Graphs and flow diagrams can be helpful in analysis

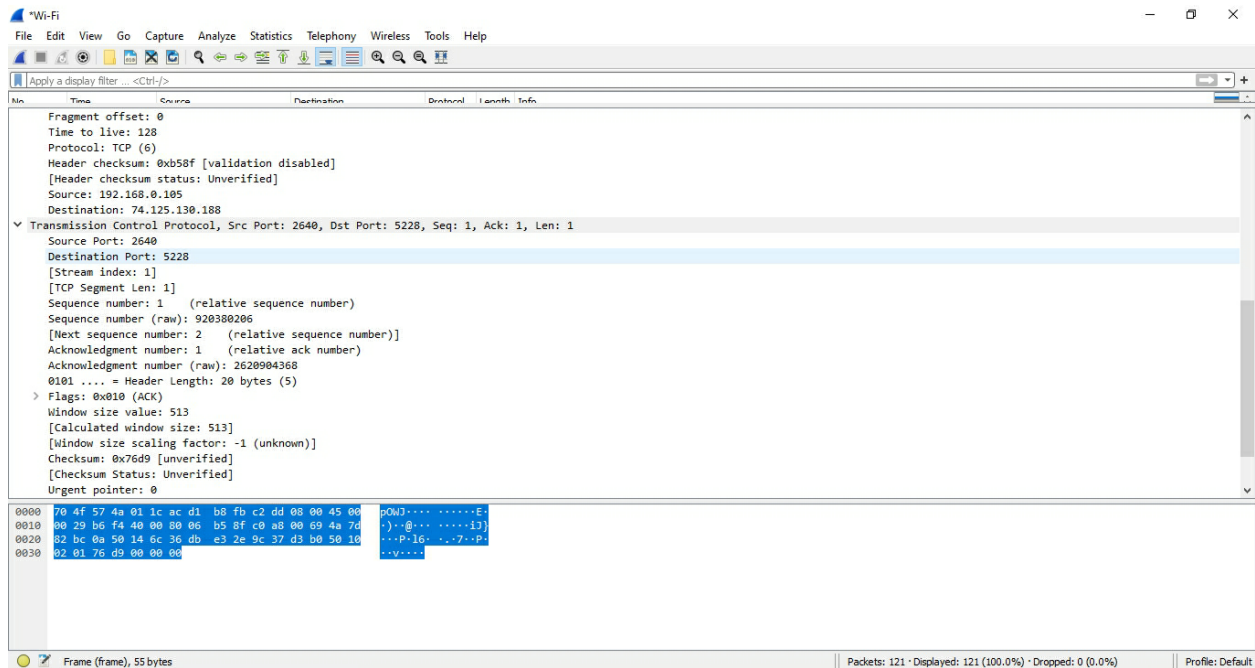


**Figure 06: Packet Details Pane(Frame segment)**

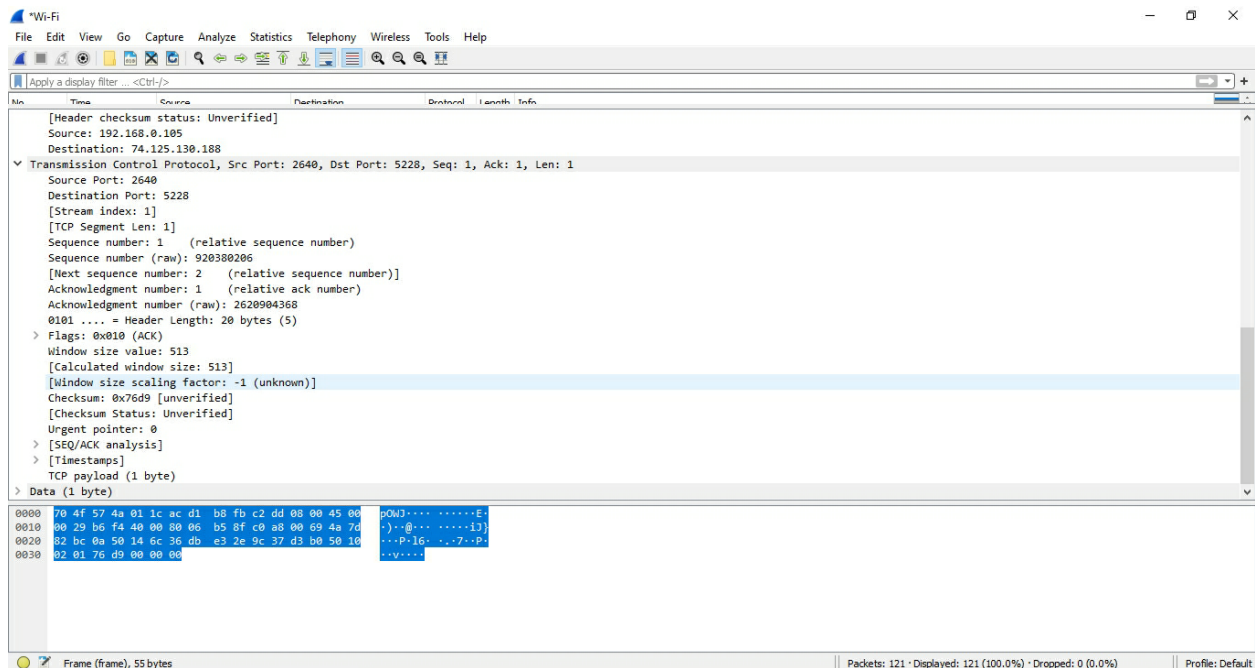


**Figure 07: Packet Details Pane (Ethernet Segment)**





**Figure 08: Packet Details Pane (TCP Segment)**



**Figure 09: Packet Byte Pane**

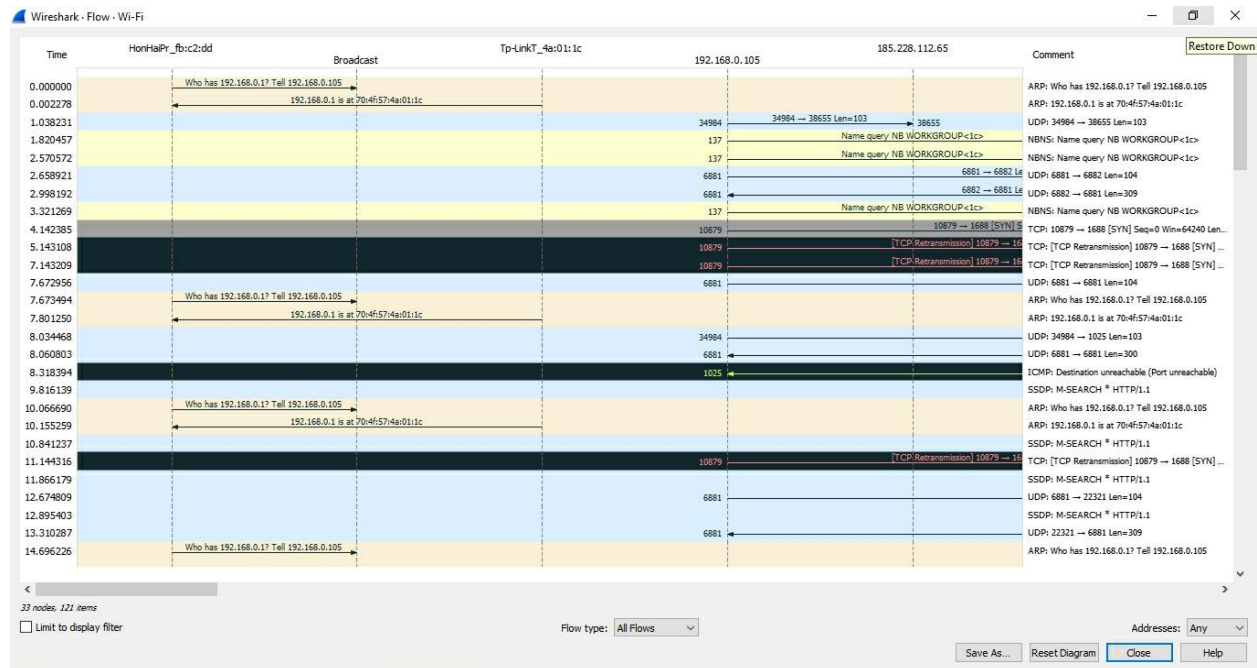


Figure 10: Statistics- Flow Graph(All Flows)

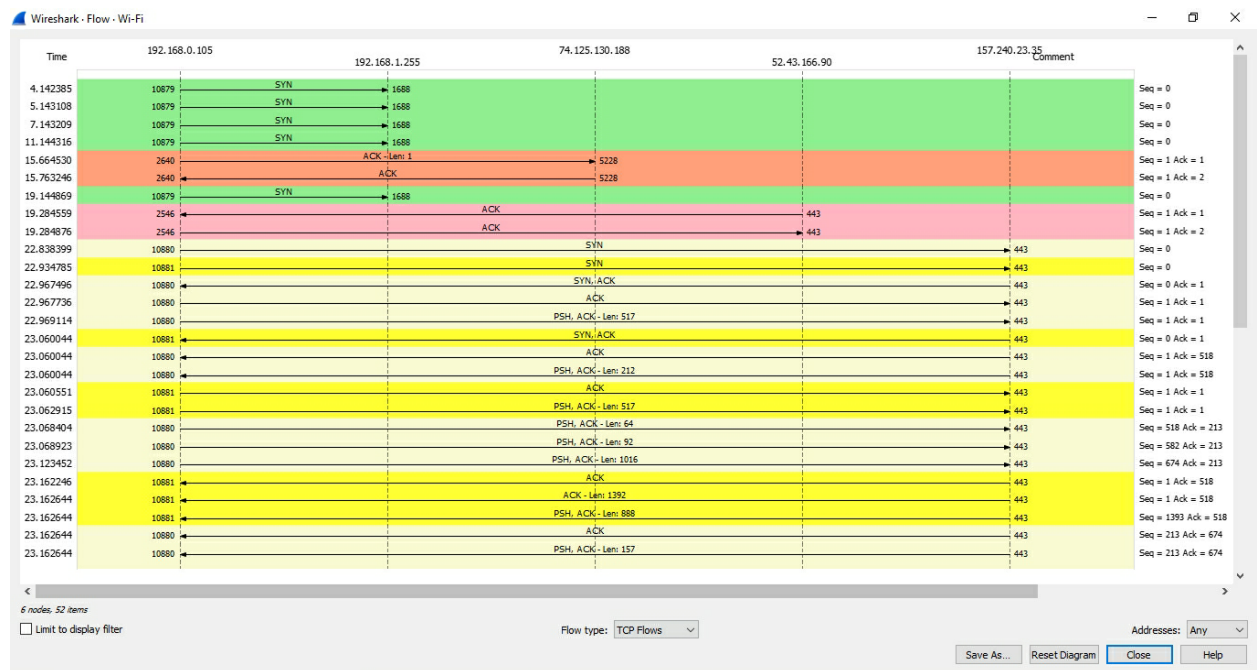


Figure 11: Statistics- Flow Graph(TCP Flows)

**Conclusion:**

First of all, we downloaded and installed wireshark. Live packet data from a network which has ip address is captured by using wireshark. Filter is applied to monitor a specific traffic. TCP stream and all stream is plotted by using the statistics menu.