Mawlana Bhashani Science and Technology University

Lab-Report

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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:

First off, clicking on Capture menu the capturing process will be started. It shows all available interfaces list. After that we need to start capturing an interface that has IP Address.

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

We can stop capturing by clicking on the Stop the running capture button on the main toolbar.
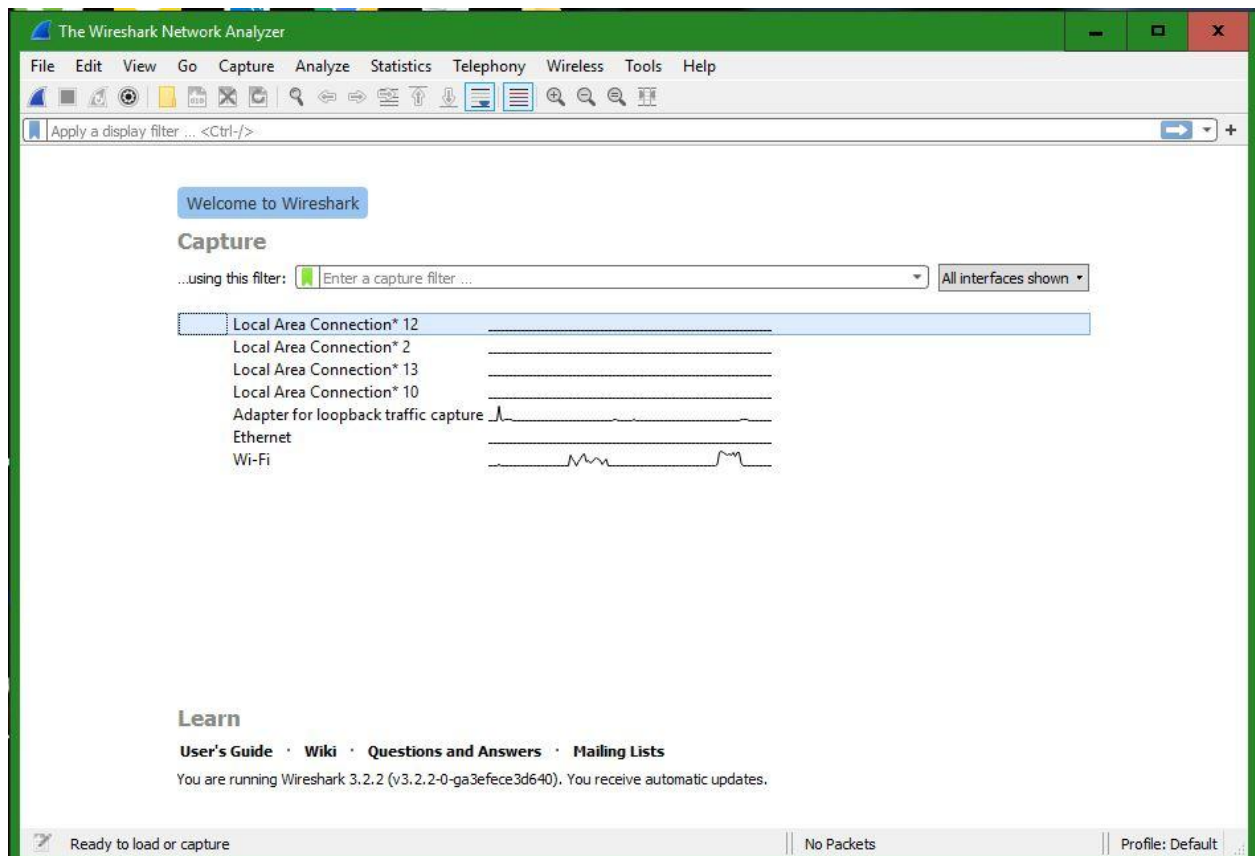
Figure 01: Wireshark Interface List
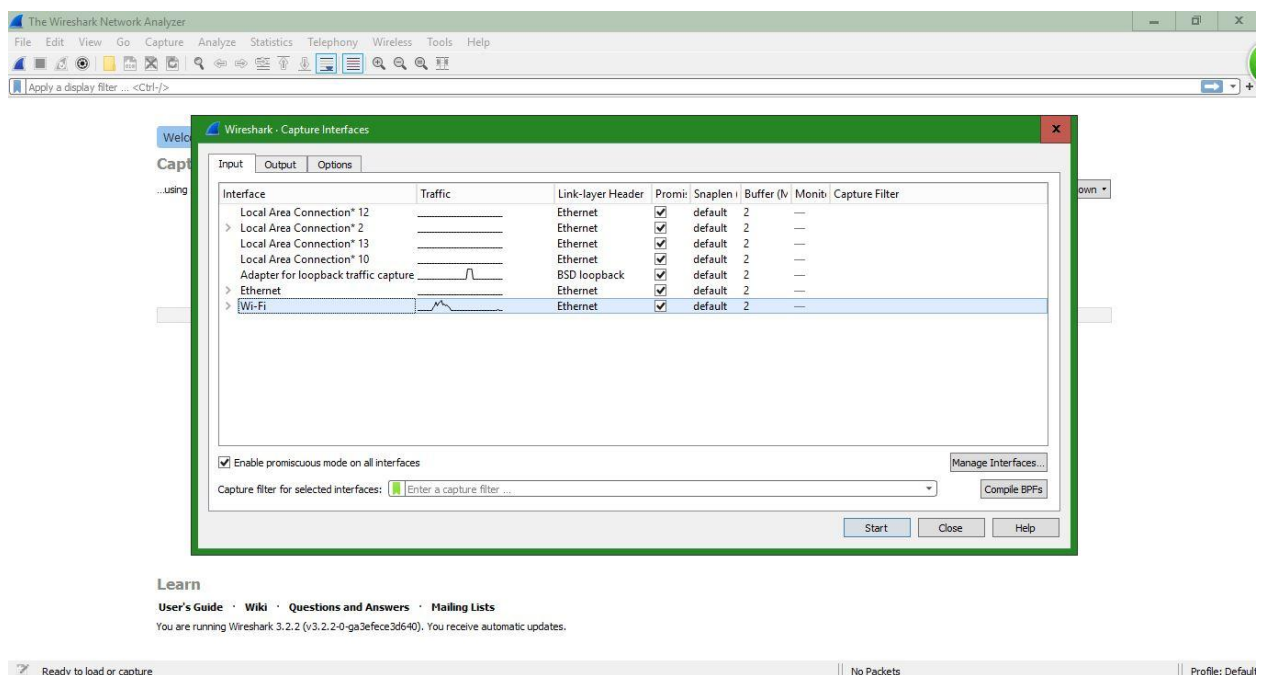
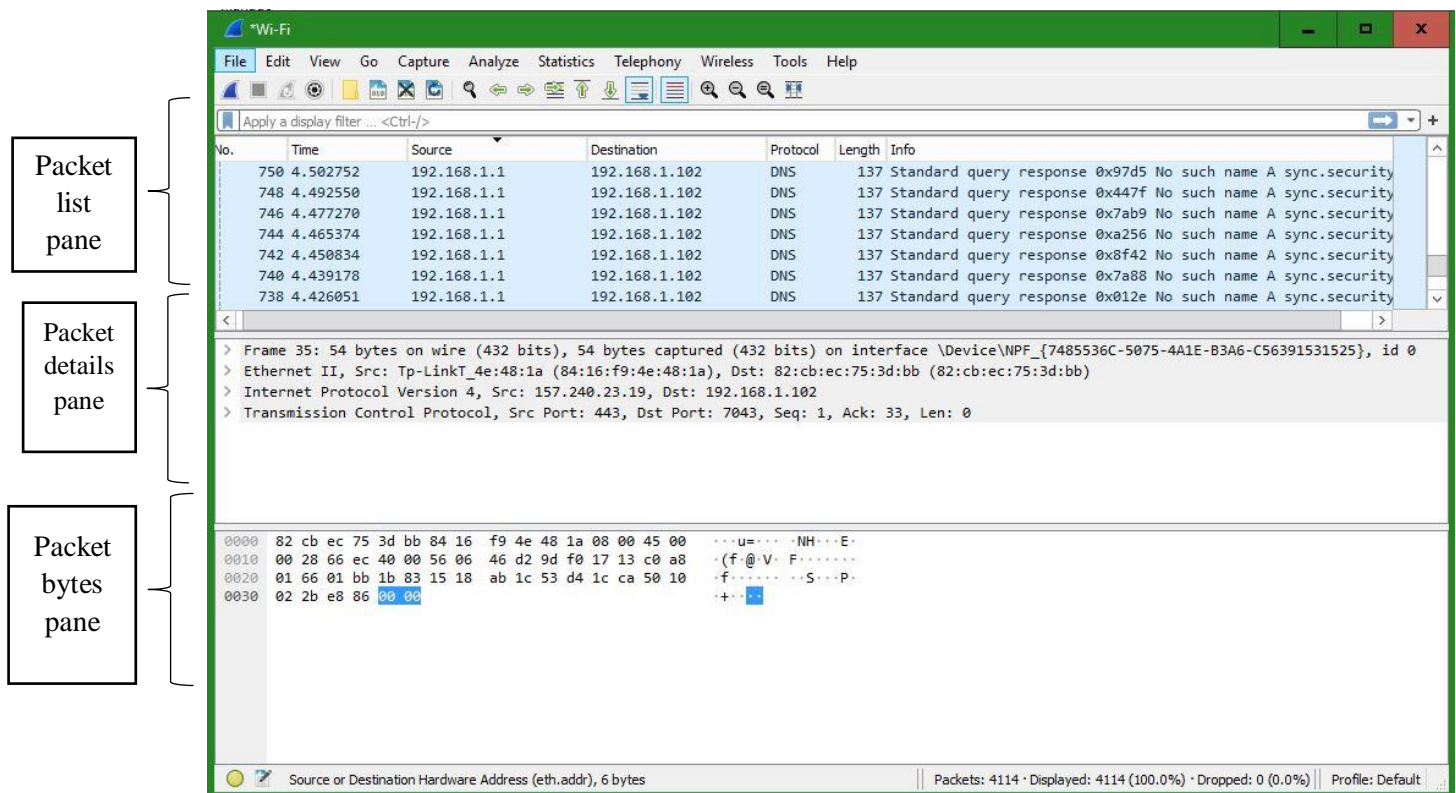**Figure 02: Start Capturing Interface that has IP address**
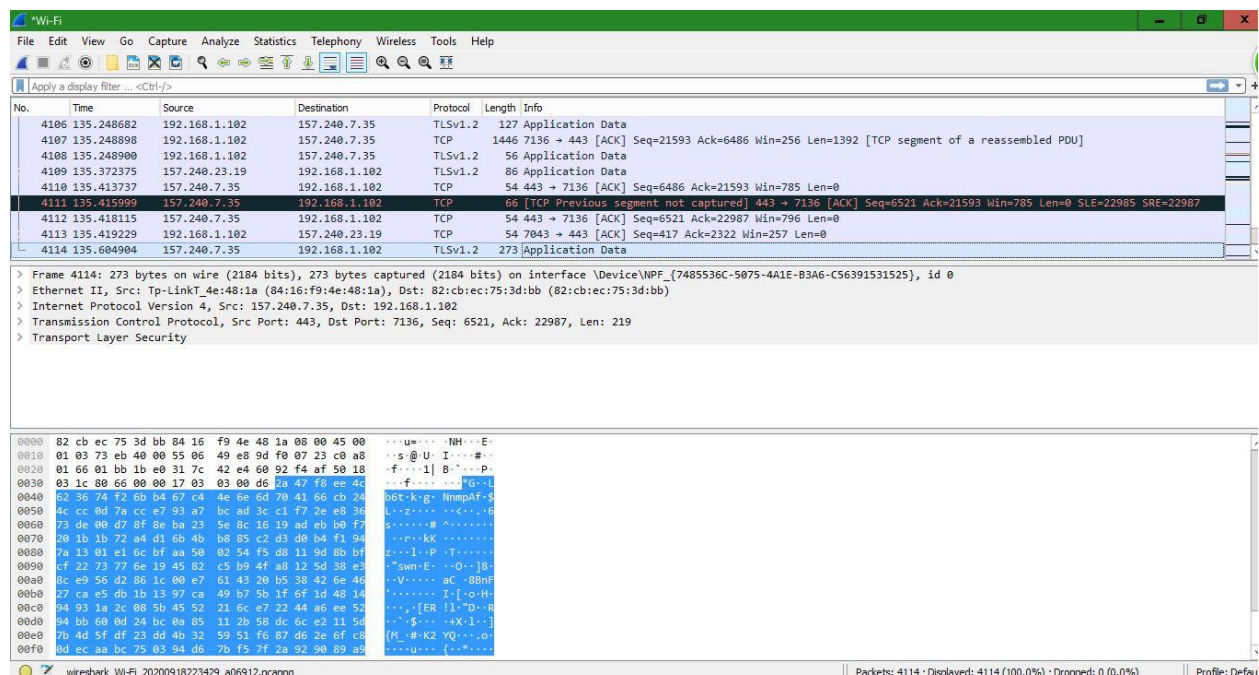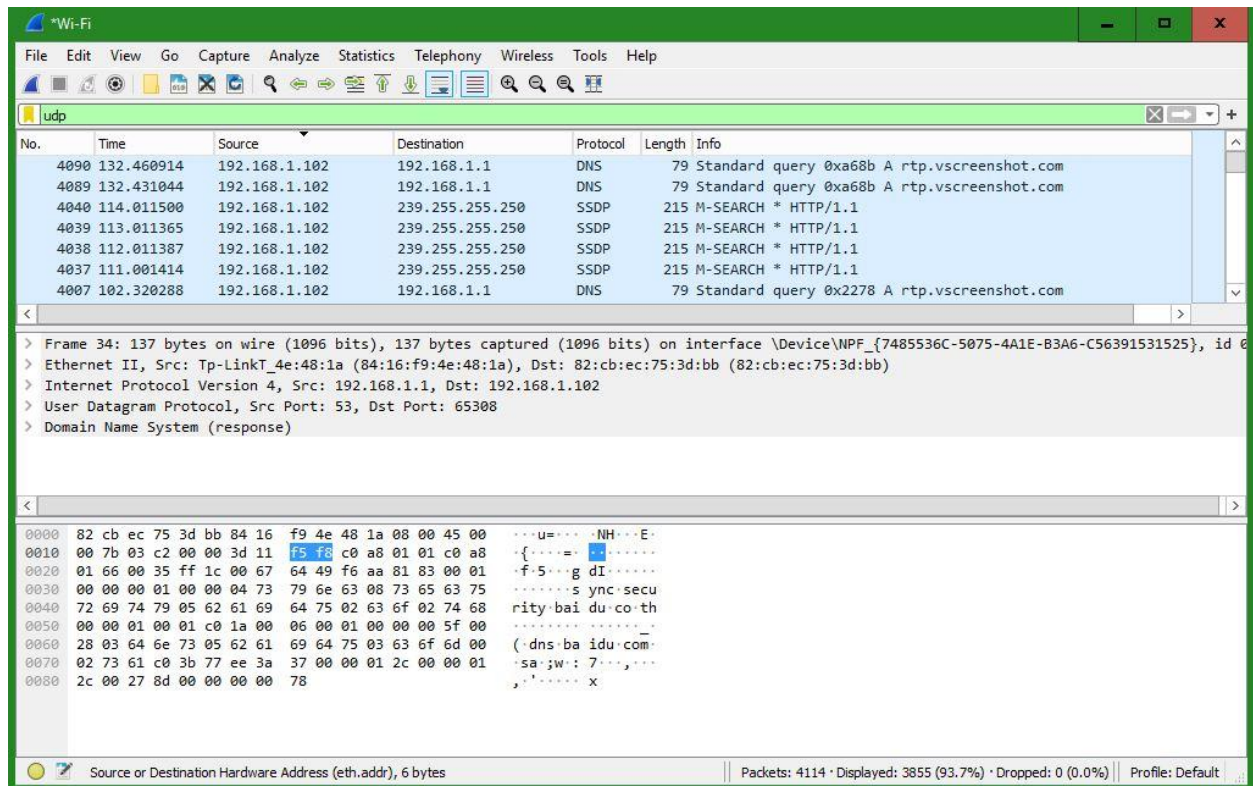
Figure 03: A sample packet capture window

Figure 04: Stopping Capture

Filtering:

Figure 05: Filter by Protocol

A source filter can be applied to restrict the packet view in wireshark to only those packets that have source IP as mentioned in the filter.
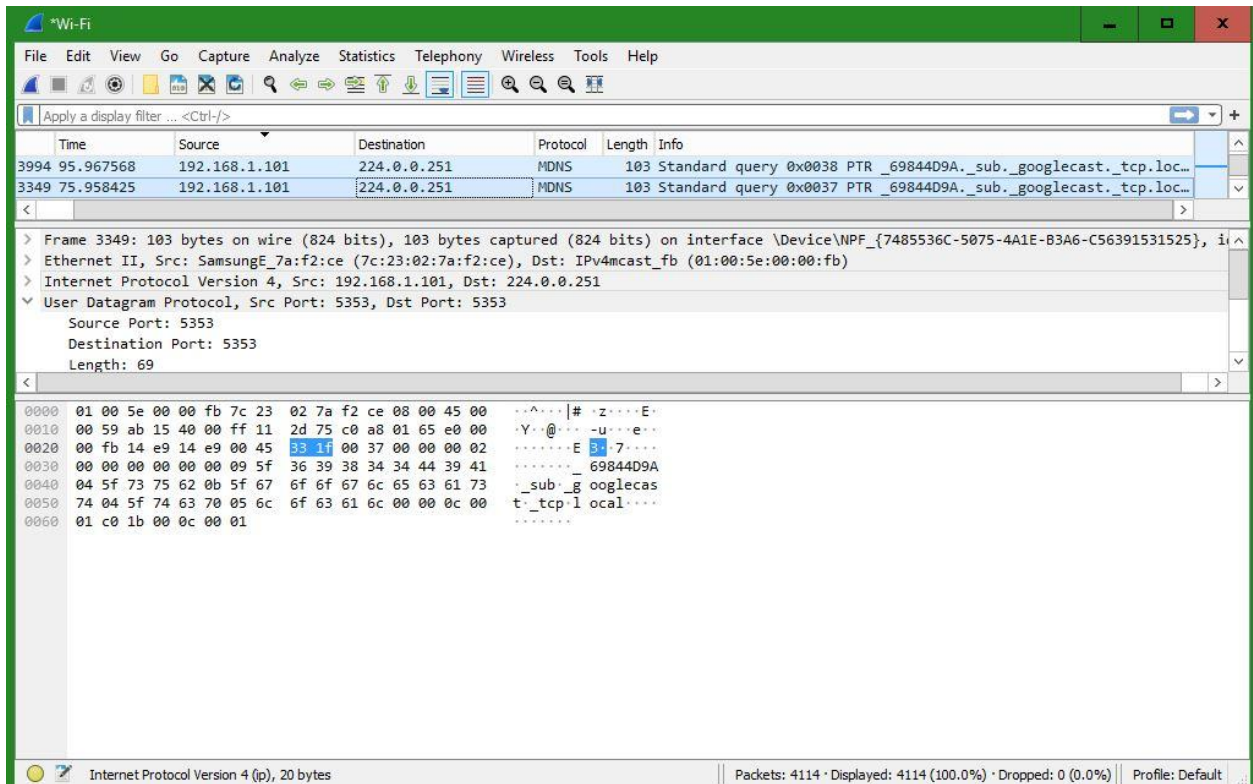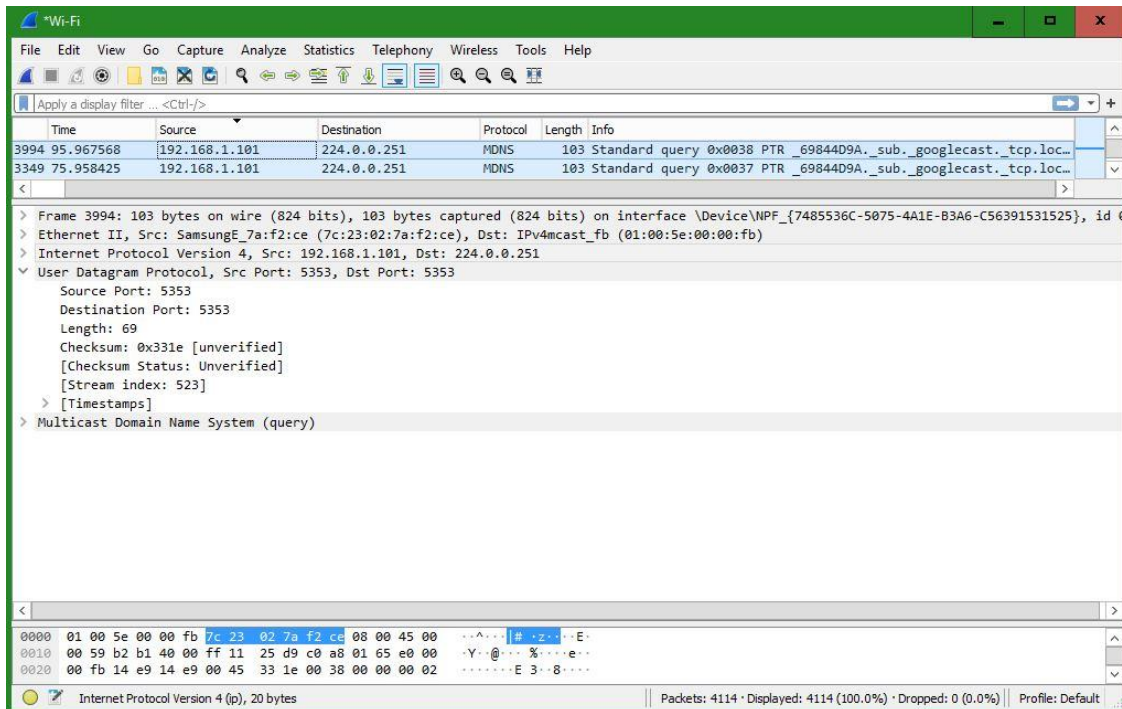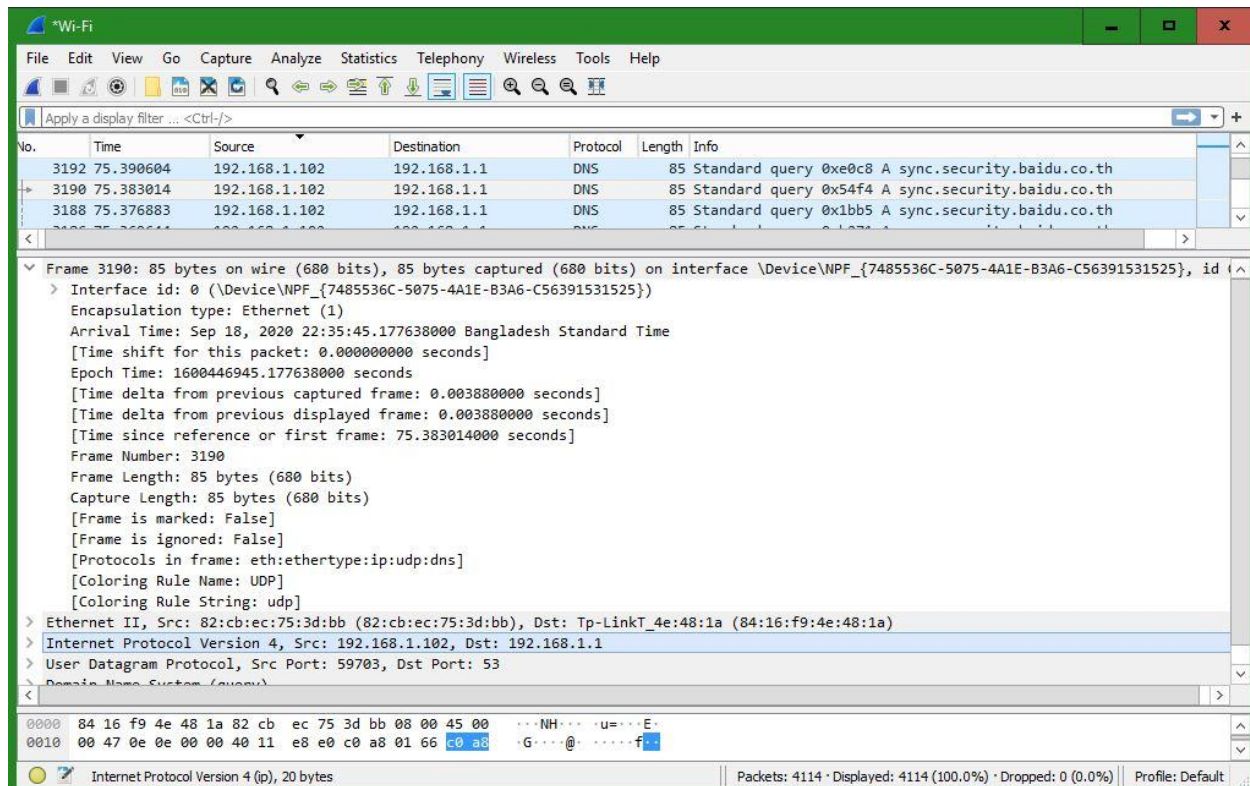
Figure 06: Source IP filter

Figure 07: Destination IP filter

• 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

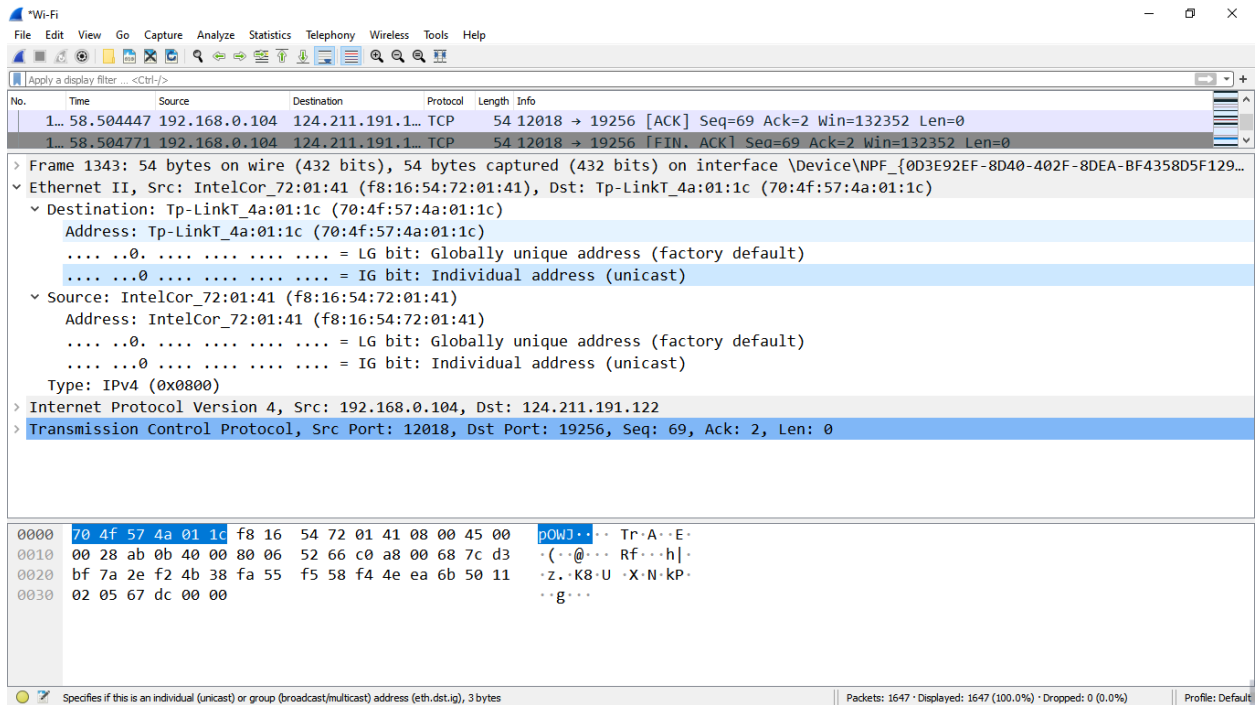**Figure 08: Packet Details Pane(Frame segment)**

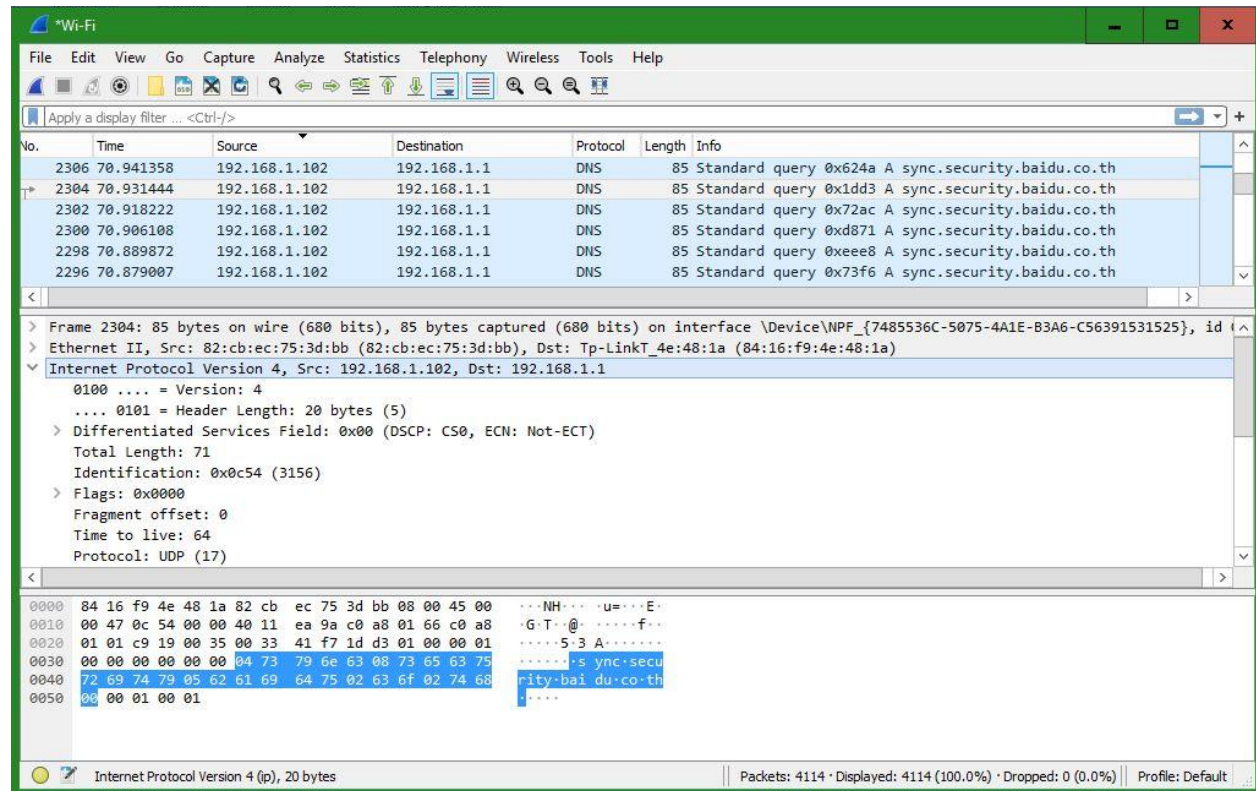**Figure 09: Packet Details Pane (Ethernet Segment)**
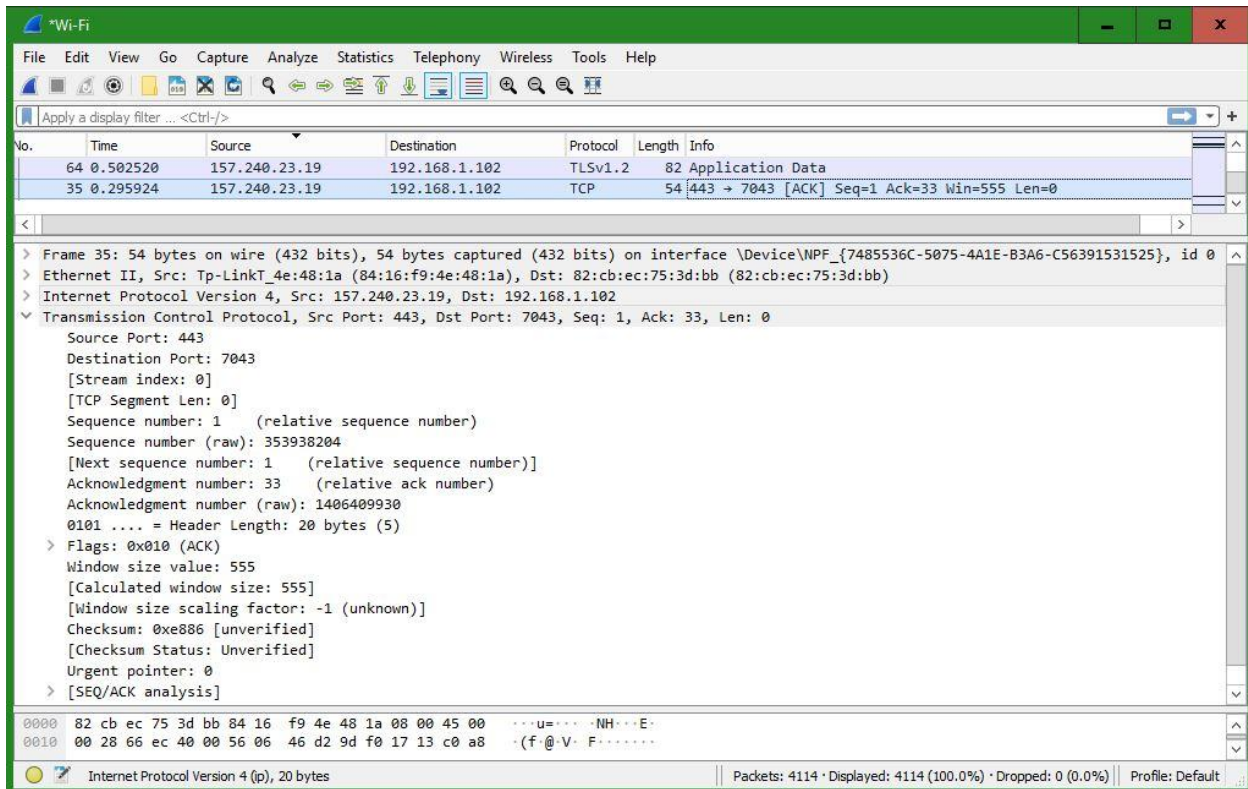

Figure 10: Packet Details Pane(IP segment)
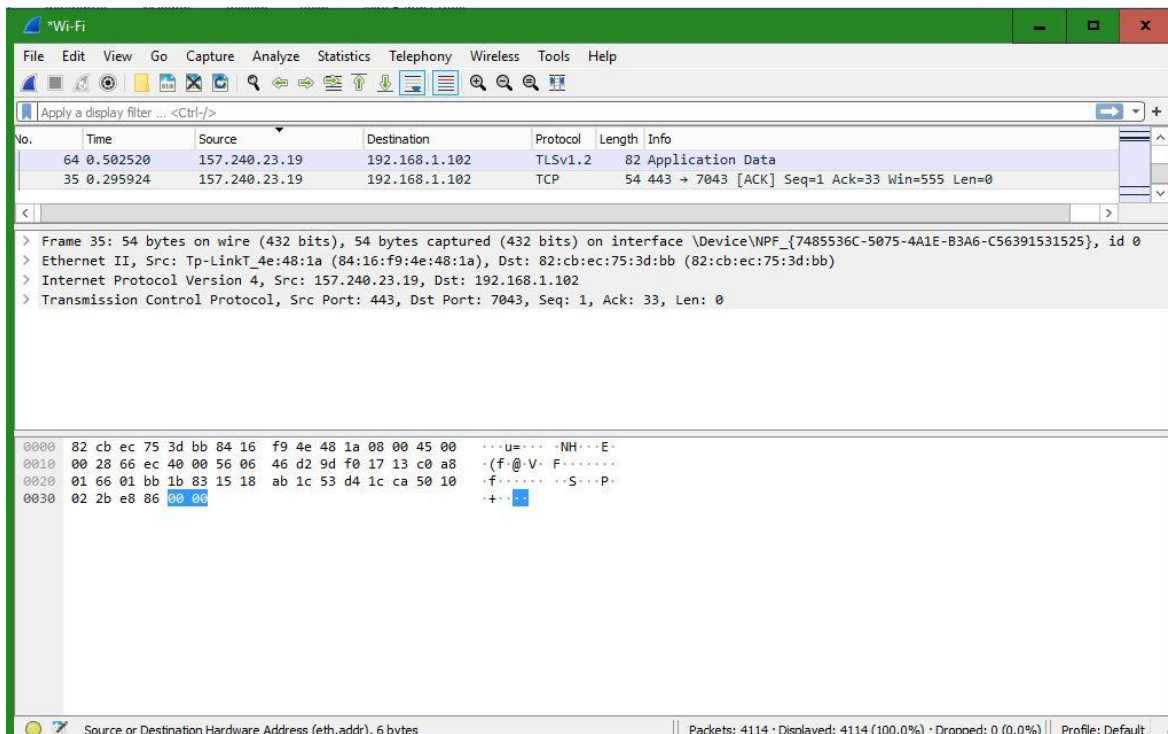
Figure 11: Packet Details Pane (TCP Segment)
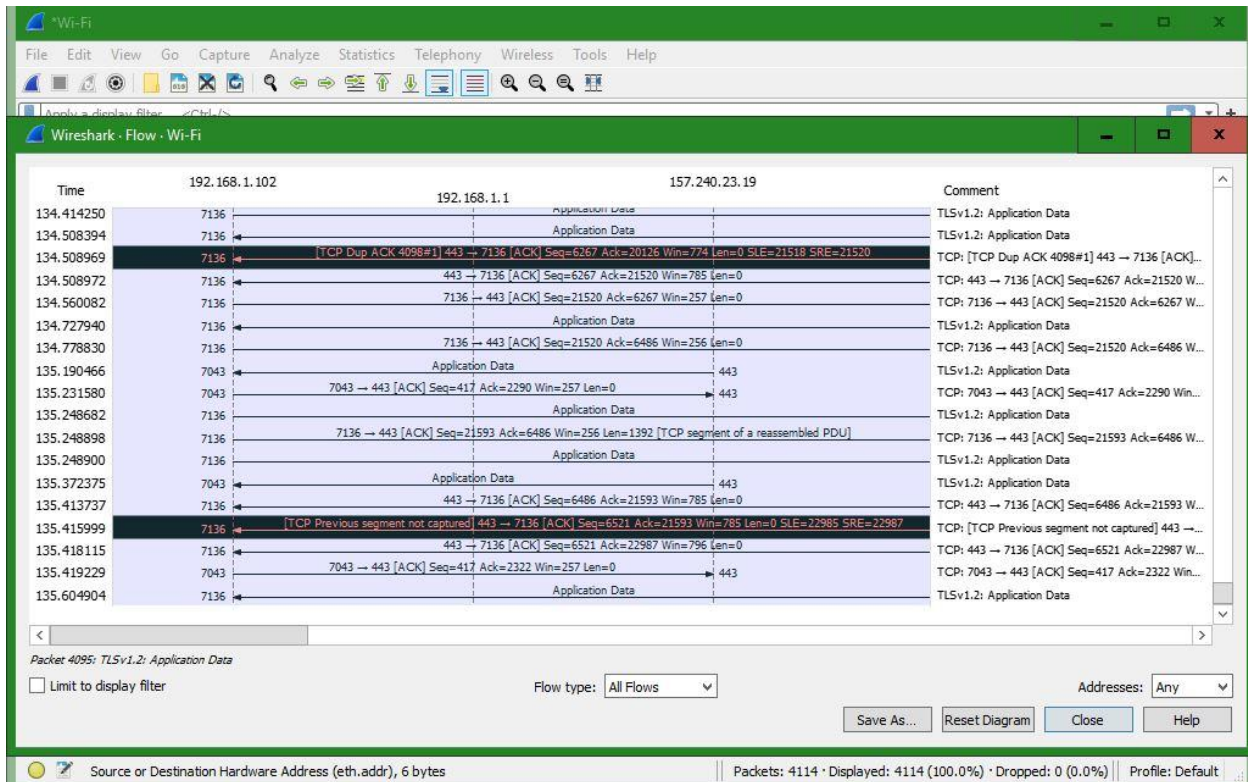

Figure 12: Packet Byte Pane

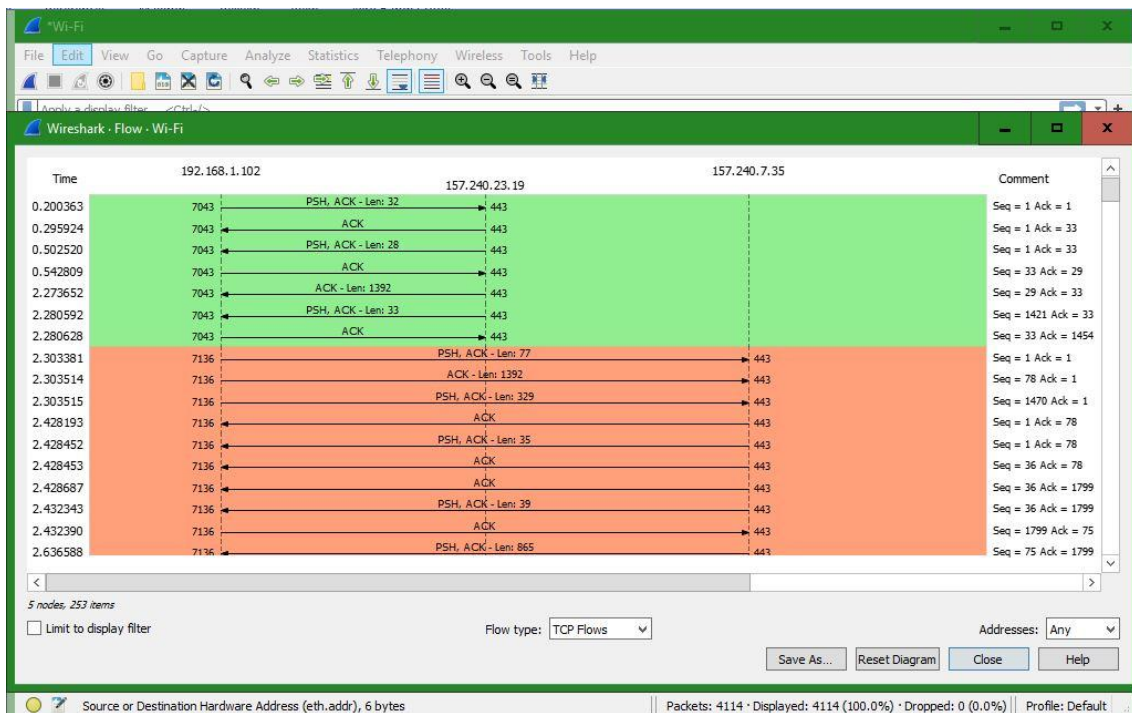**Figure 13: Statistics- Flow Graph(All Flows)**

Figure 13: Statistics- Flow Graph(TCP Flows)

Conclusion:

So,By Wireshark we can easily Capture live packet data from a network interface. We showed all Wireshark interface lists. Packet details are showed specifically such as IP segment, TCP segment.

 The TCP Stream Throughput graph have shown us the throughput from one TCP stream, in one direction, based on the selected packet. Statistics flow graph are shown with TCP flows.