



Mawlana Bhashani Science and Technology University

Lab-Report

Report No: 05

Course code: ICT-4202

Course title: Wireless and Mobile Communication Lab

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Experiment No: 05

Experiment Name: Comparative Analysis of Wired and Wireless data using Wireshark

Objectives:

1. We have to find out the Wired data packages Using the Wireshark in order to compare with the wireless data packages.
2. Filter the packages
3. Find out the host, IP of the data packages
4. Create the Statistics for both of the data packages.
5. Finally compare the wired and wireless data packages simultaneously with the help of Wireshark.

Capturing Packets:

If we click any menu option, then it will show the available interfaces list. After clicking the menu, we need to start Capturing on interface that has IP address/Source/Host.

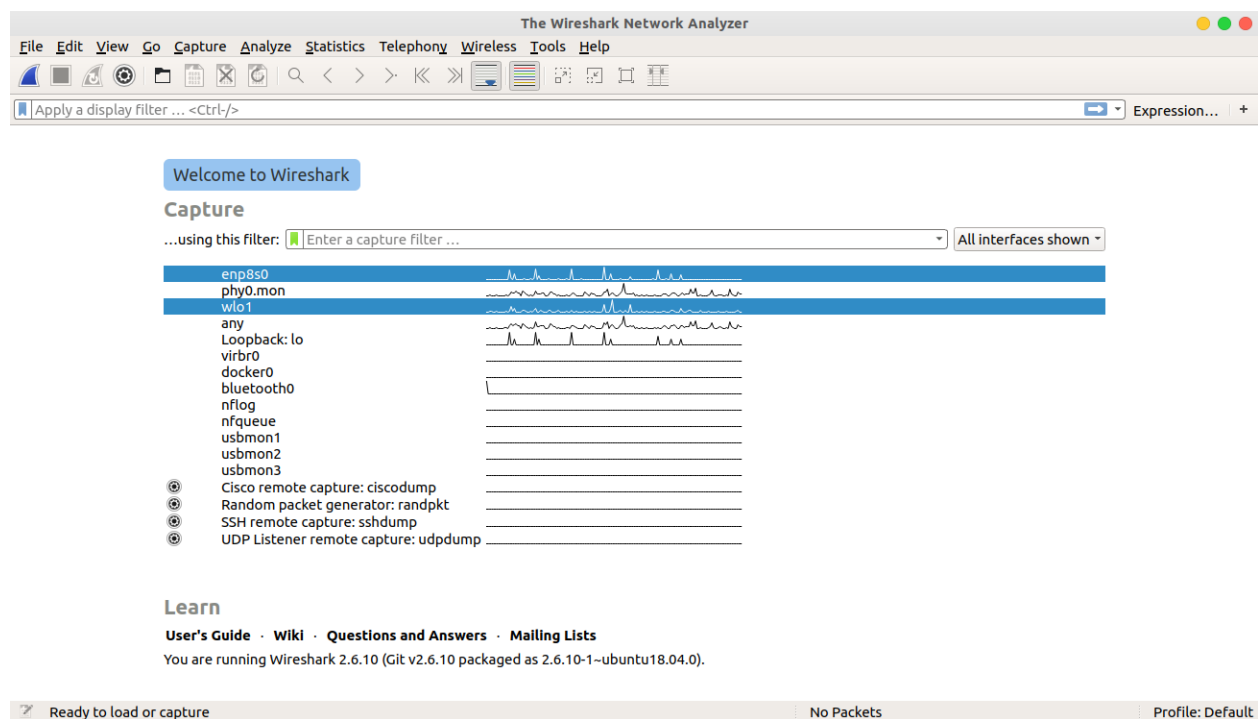


Figure 01: Wireshark Interface List

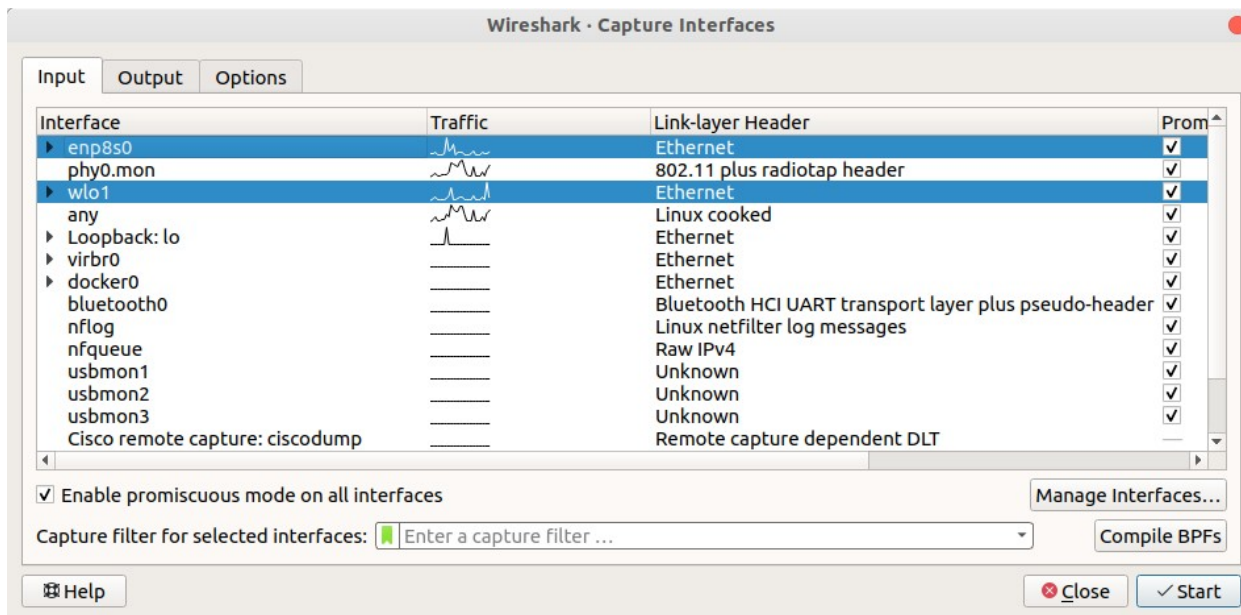


Figure 02: Start Capturing Interface that has for both wireless and wired data

Packet list pane

Packet details pane

Packet bytes pane

Figure 03-A: A sample packet capture window for both Wireless and Wired Data Pack

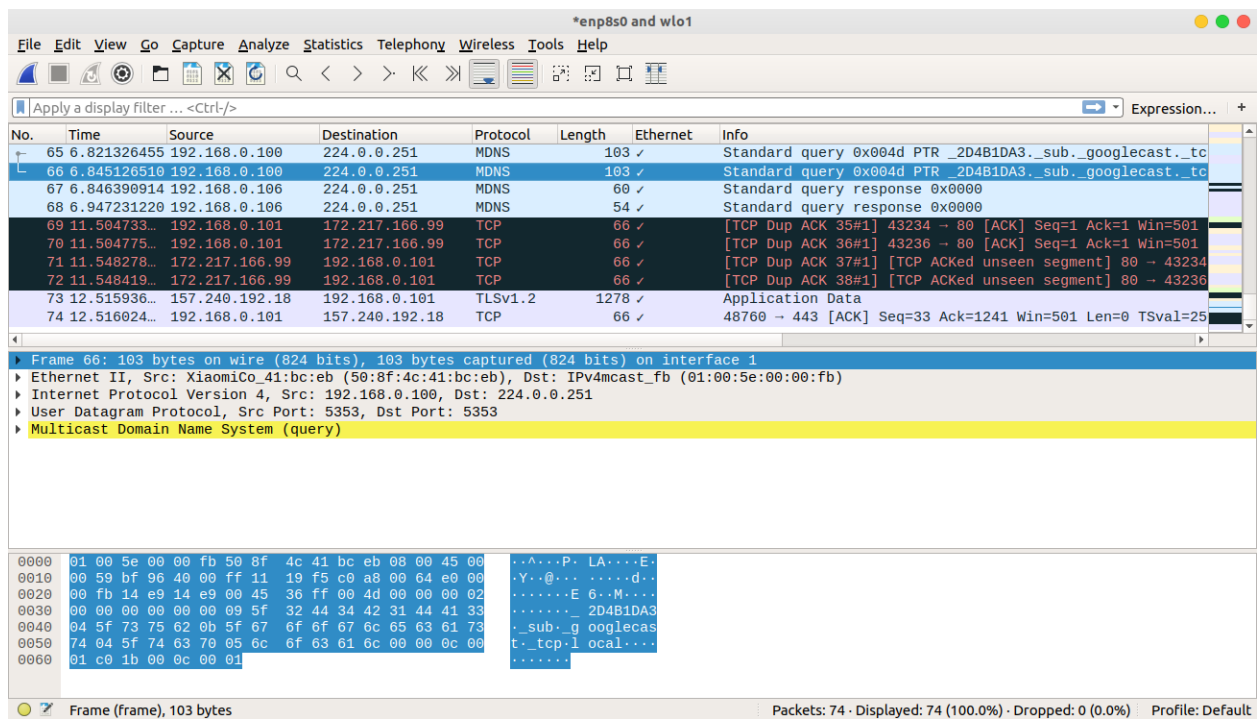


Figure 04-A: Stopping Capture for both wireless and wired data

Filtering:

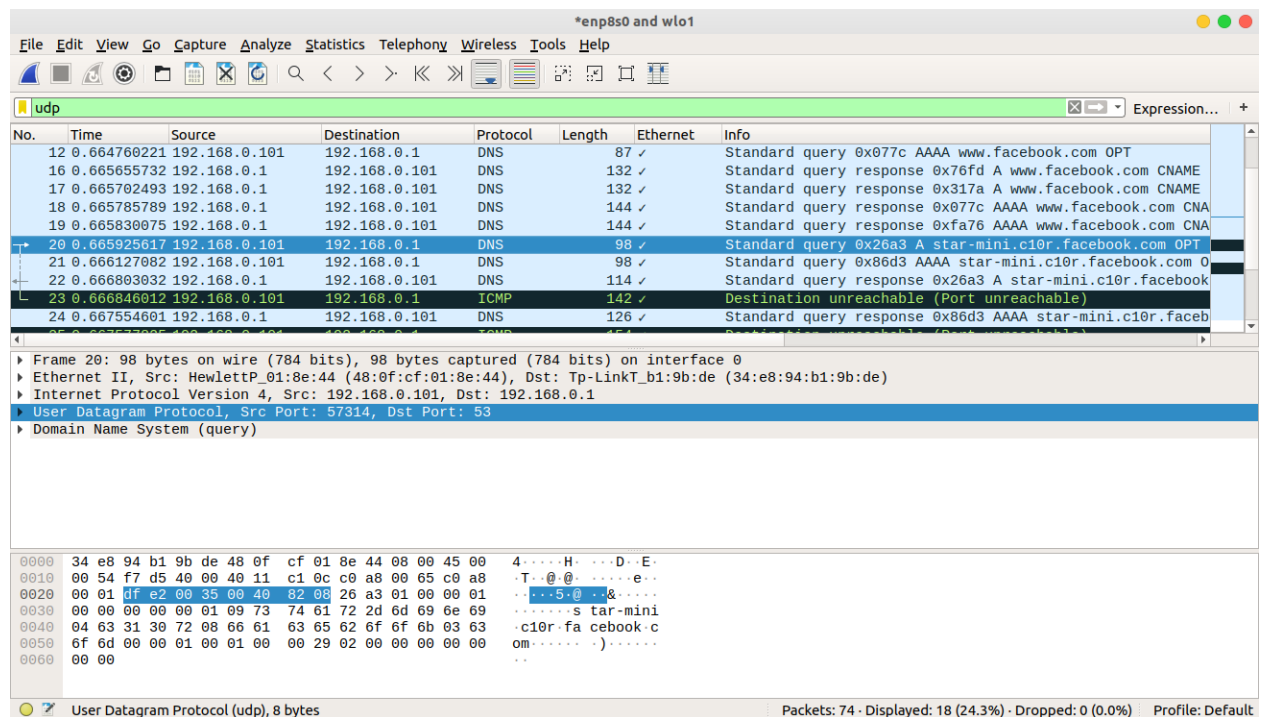


Figure 05-A: Filter by UDP in Wired and Wireless Data Packages

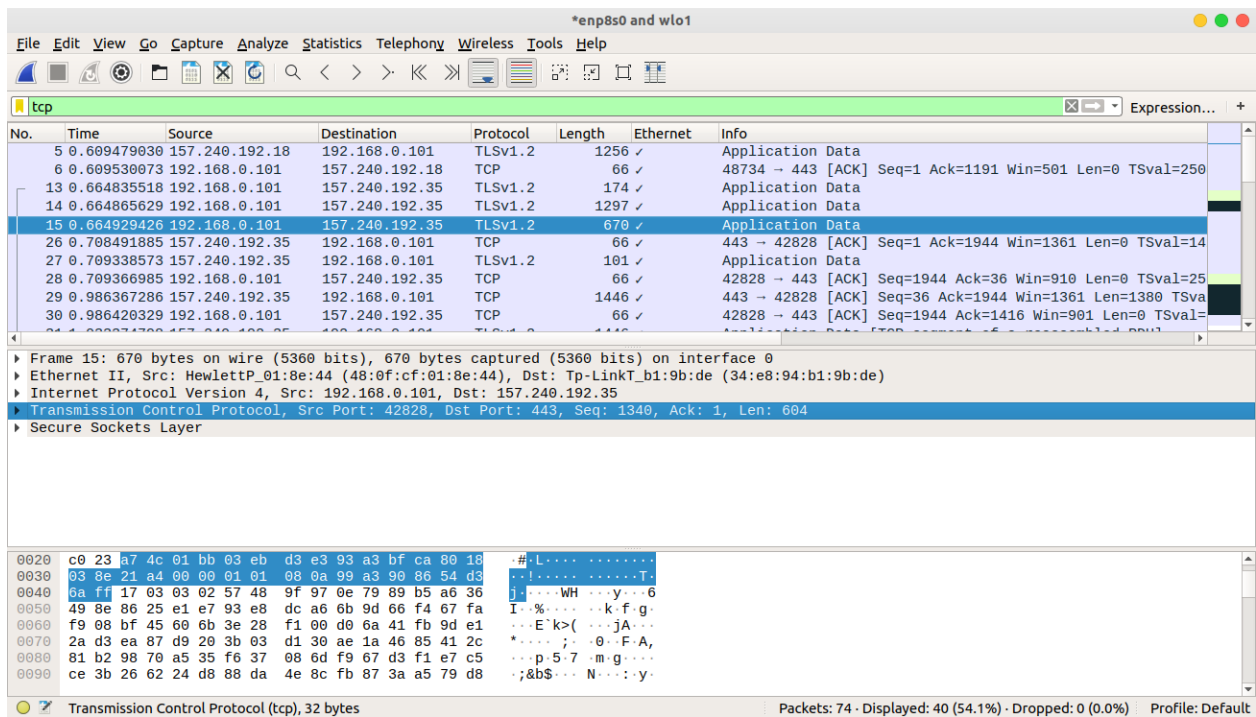


Figure 05-B: Filter by TCP in and Wireless Data Packages

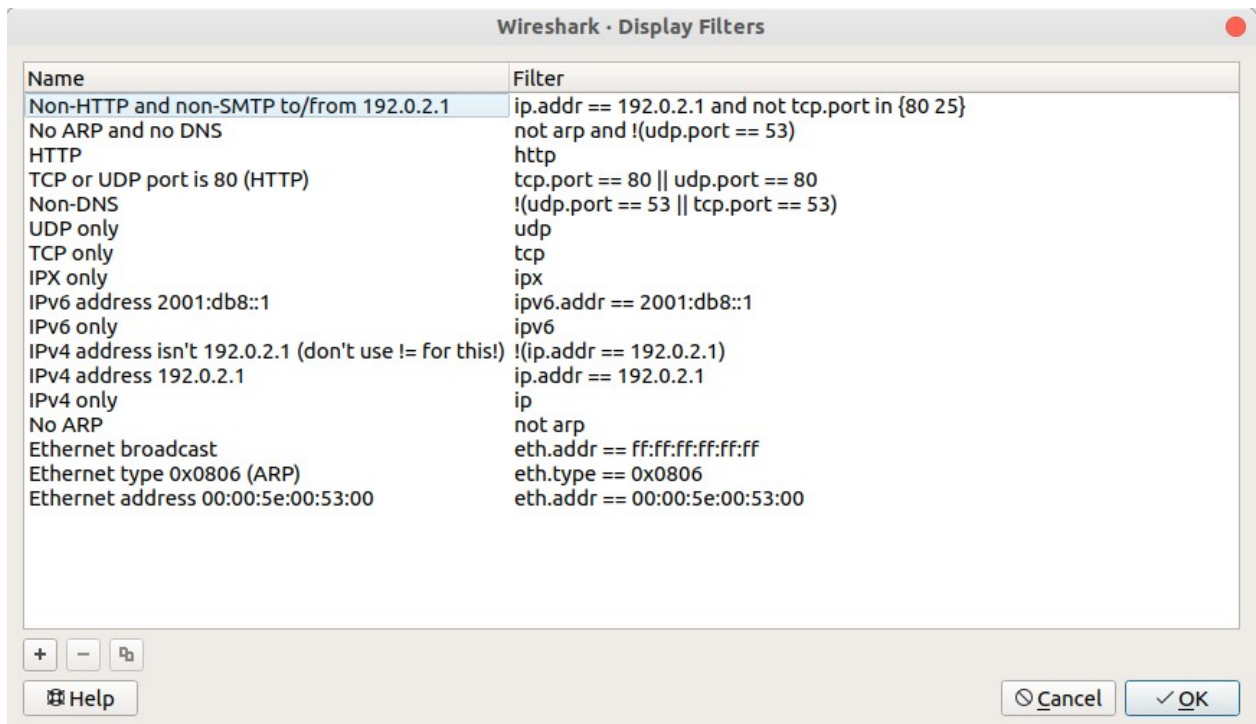


Figure 06: Display filters for both Wired and Wireless Data Packages.

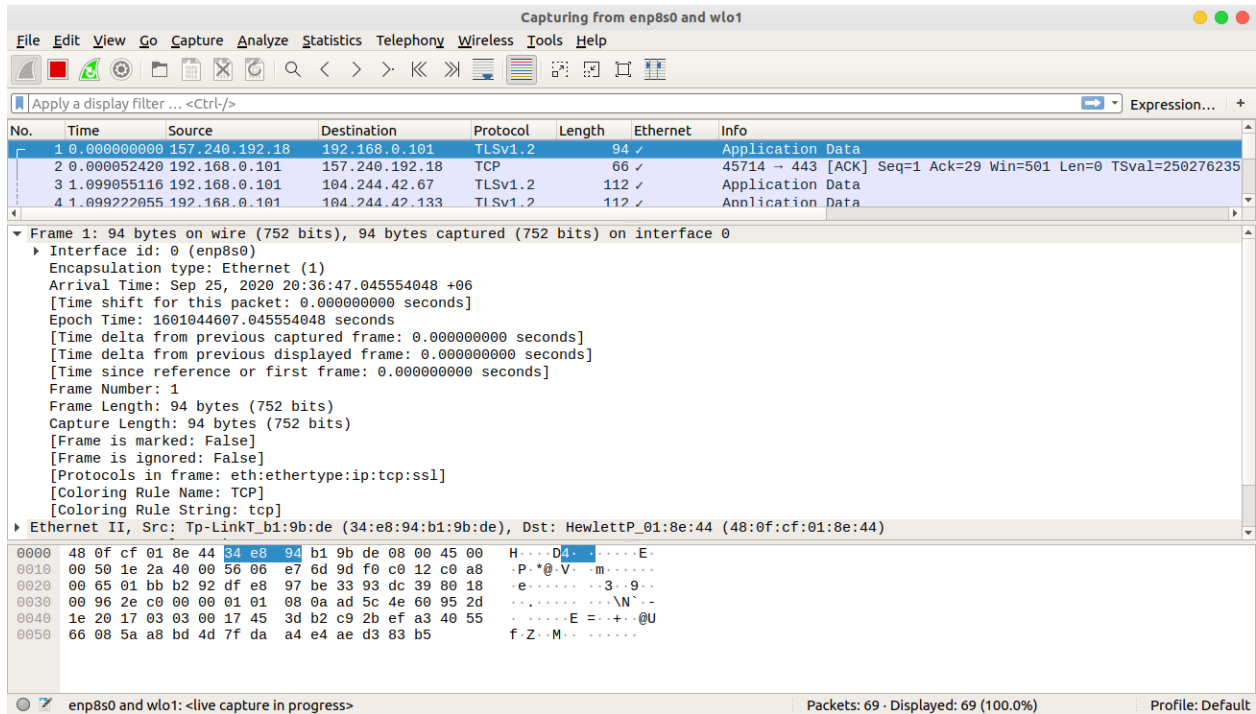


Figure 07-A: Packet Details Pane (Frame segment) for Wired Data Packages.

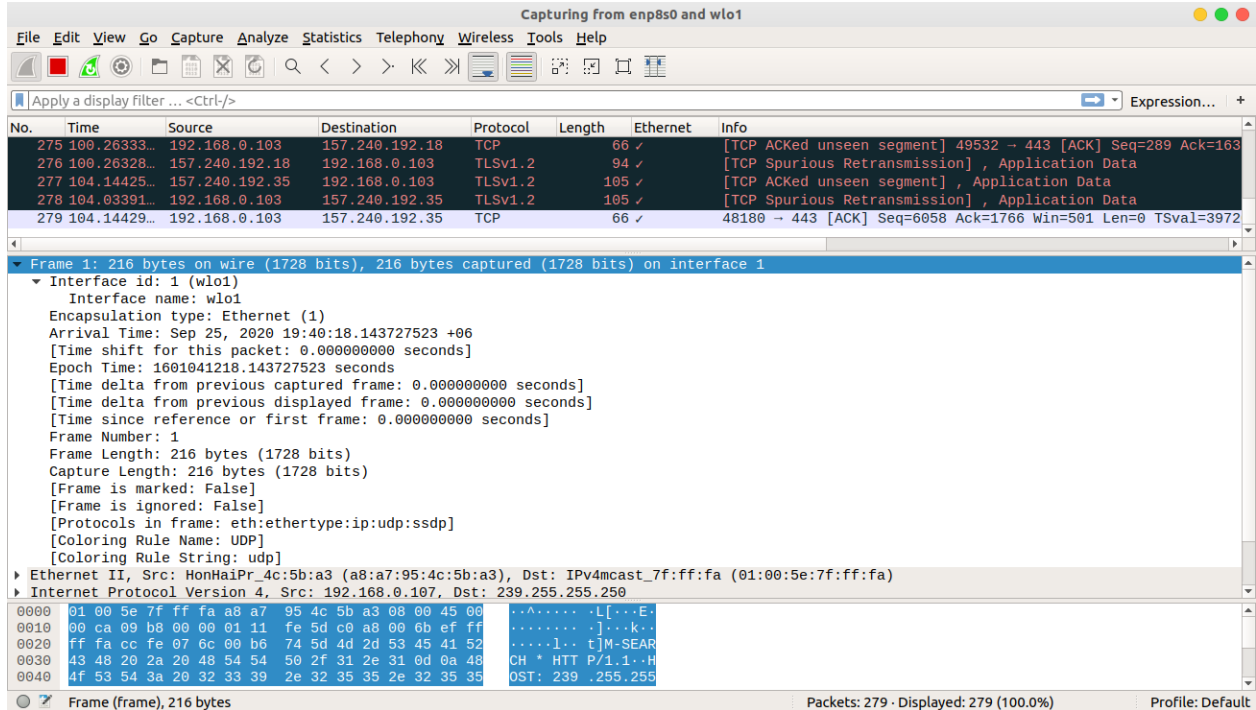


Figure 07-B: Packet Details Pane (Frame segment) for Wireless Data Packages.

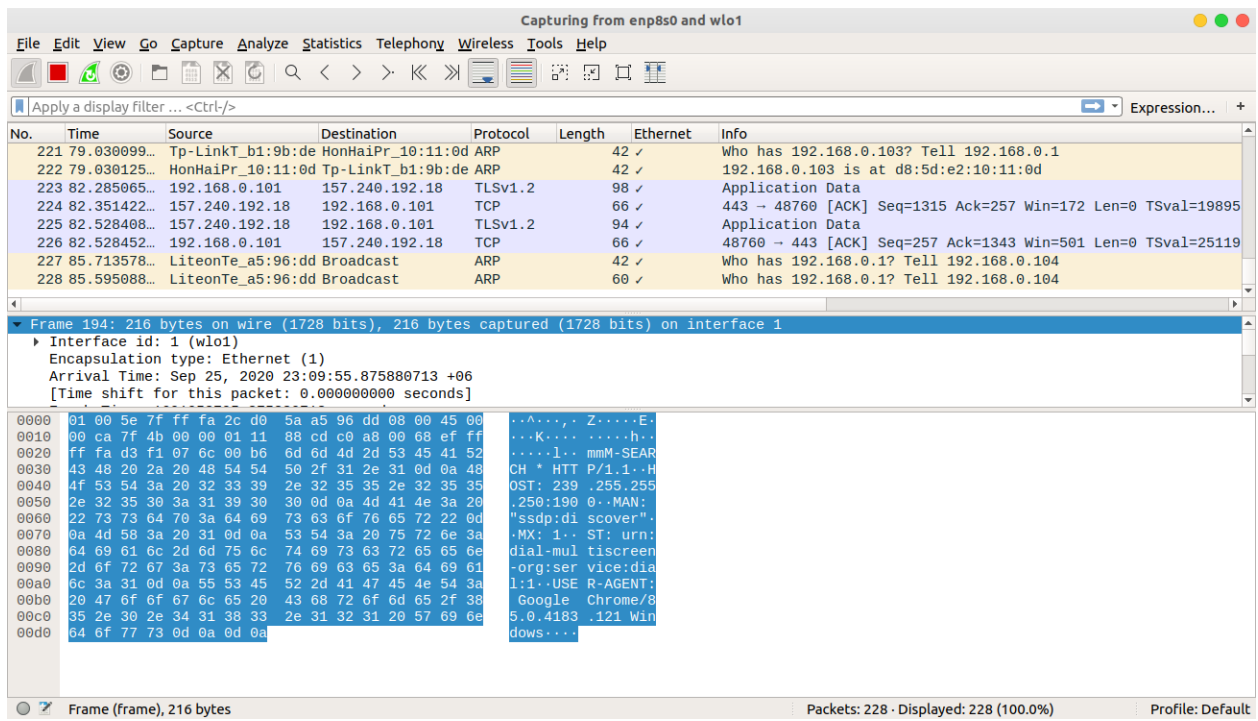


Figure 08-A: Packet Byte Pane for Wireless data packages.

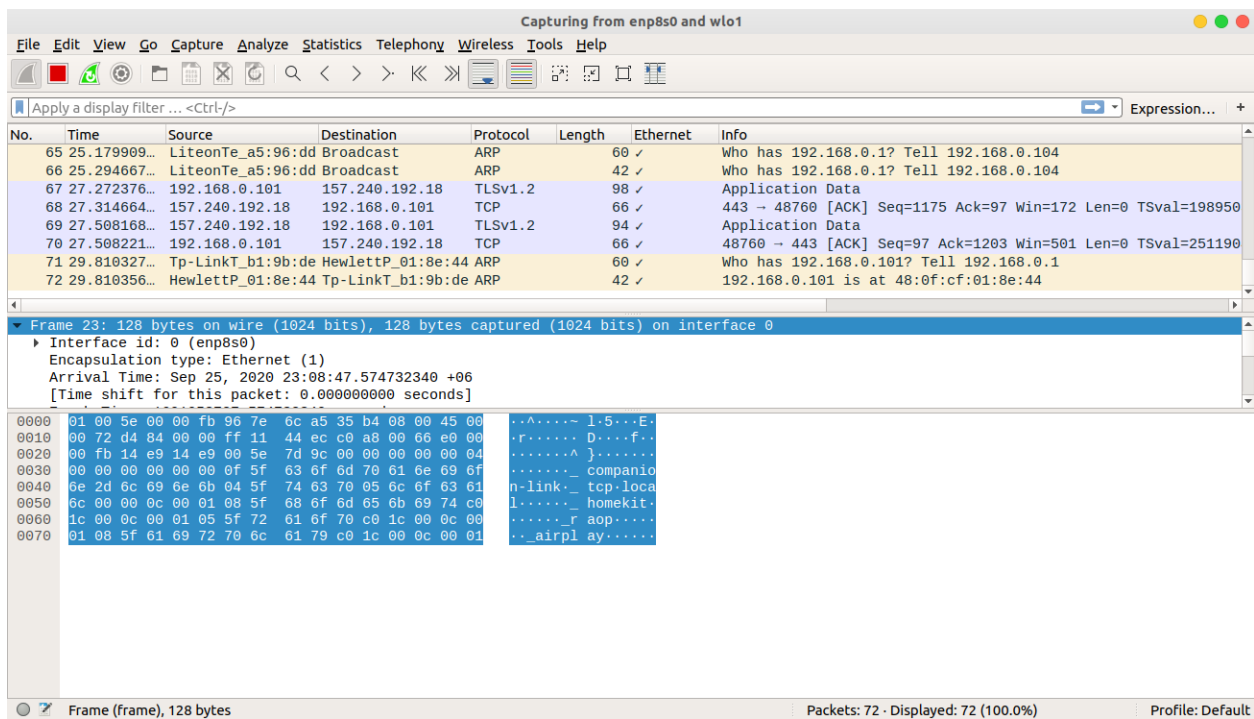


Figure 08-B: Packet Byte Pane for Wired data packages.

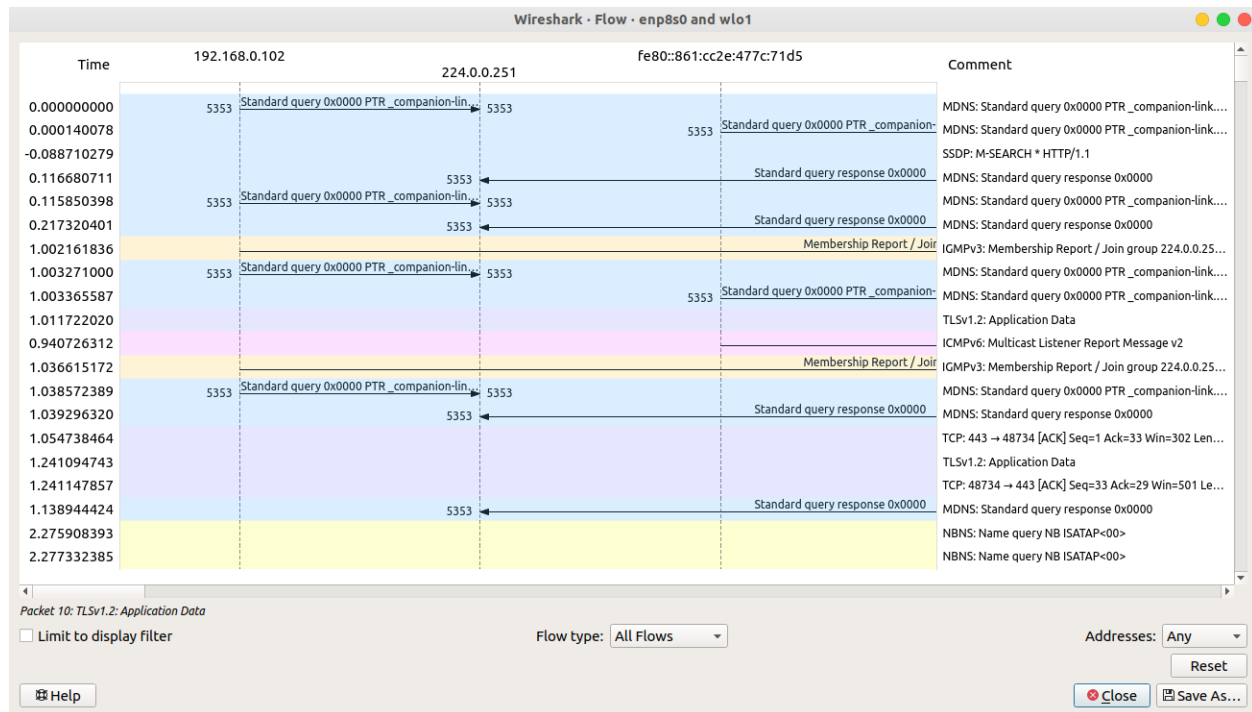


Figure 09: Statistics- Flow Graph -All Flows for Wi-Fi (Wireless Data Packages)

Conclusion:

From the above comparison between Wired and Wireless Data Connection, it can be said that wired network connection is much better than wireless network connection as it providing continuous data packages without losing much more data packets in network.

Wired data are more highly secured and speedy as compared to the wireless network.

Hence , it is preferred wired network connection over wireless connection for better , smoother user experience.