Project: Sniffer and Packet counter

University of Puerto Rico
Río Piedras Campus
Dept. Computer Science
Operating Systems

Instructor: José R. Ortiz-Ubarri

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Goal: Your goal is to implement a packet counter of protocols. You will modify the code in the file pkt_sniffer_students.py such that you develop a counter of protocols over ethernet, a counter of protocols over IP, and a counter of application protocols. The following are the protocols to be counted:

1. Ethernet:
    a. IP
    b. ARP
    c. Others
2. IP
    a. TCP
    b. UDP
    c. ICMP
    d. Others
3. Application
    a. HTTP
    b. SSH
    c. DNS
    d. SMTP
    e. Others

To accomplish this you need to complete the code in the file whenever you find the comment: # Missing code here

Also you need to modify the code to add the counters. You will find in the code an exception to handle the CTRL-C signal. The sniffer continuously sniffs packets from the network until the program is killed with CTRL-C. When the program receives the kill signal your program must STOP and display the results.

See below for an example of the final output of the program:

The packet sniffer processed a total of N packets.

Of the N packets:
    X are ARP packets
    Y are IP packets
    Z are Other packets

Of the IP packets:
    T are TCP packets
    U are UDP packets
    V are ICMP packets
    W are Other packets

Of the TCP and UDP packets:
    I are HTTP packets
    J are SSH packets
    K are DNS packets
    L are SMTP packets
    M are Other packets

Thanks for using our simple sniffer. In python… :)