IIT PALAKKAD

COMPUTER SCIENCE AND ENGINEERING
Indian Institute of Technology, Palakkad
CS4150: Computer Networks Lab
Lab 10 (Raw Socket Programming)

15 Nov, 2021

1. You are given the virtual network in Fig. 1. This network has two subnets, and one node common to both these subnets. Your first exercise is to write a simple packet sniffer at node

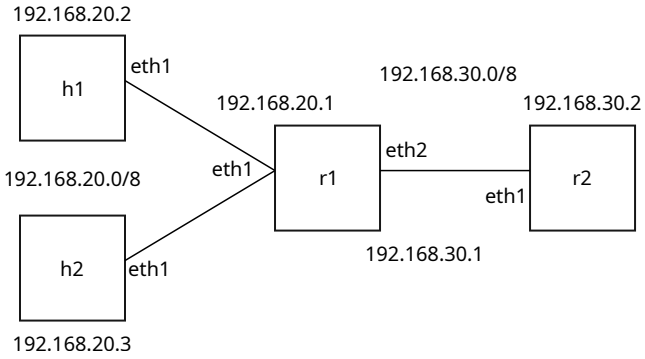

Figure 1: A network with 2 subnets.

r1. This packet sniffer should print the MAC addresses (source and destination), IP addresses (source and destination) of all IP packets sent and received by **r1**. Refer `https://www.binarytides.com/raw-sockets-c-code-linux/` and `http://squidarth.com/networking/systems/rc/2018/05/28/using-raw-sockets.html` [50]

2. Modify the packet sniffer in the previous exercise to print the MAC addresses (source and destination), IP addresses (source and destination) of only those IP packets that are received by **r1** on interface *eth1*. [20]

3. Enhance the program created in the previous exercise so that you transfer IP packets across the subnets in Fig. 1. Infact, you will essentially be building a rudimentary router. Some hints can be found at `https://opensourceforu.com/2015/03/a-guide-to-using-raw-sockets/` [30]

End of paper