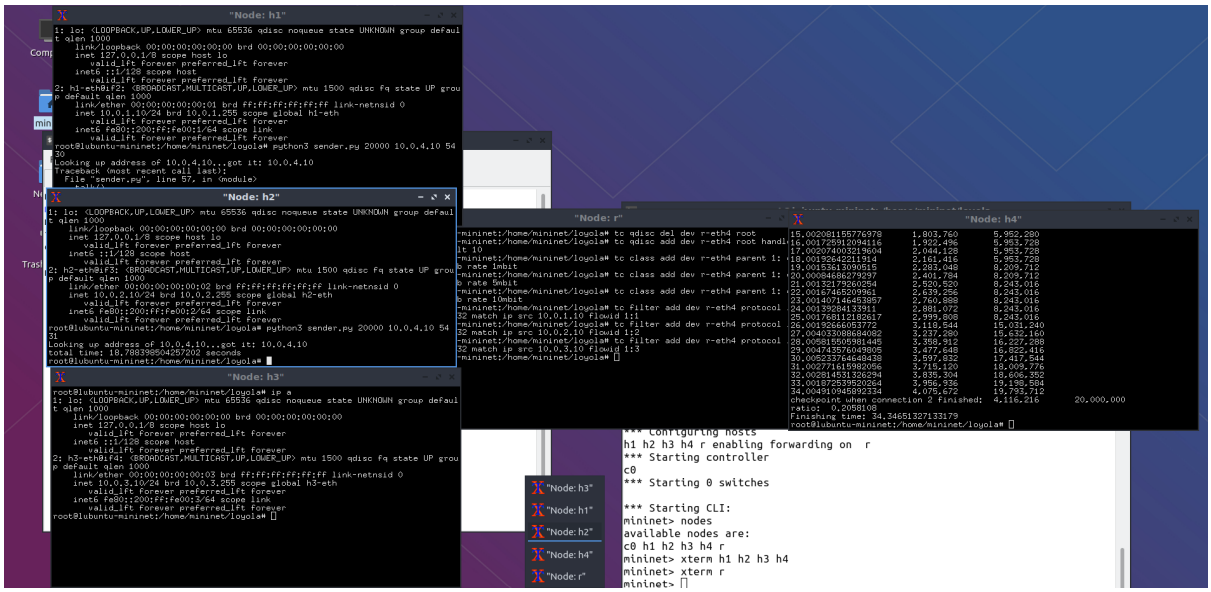
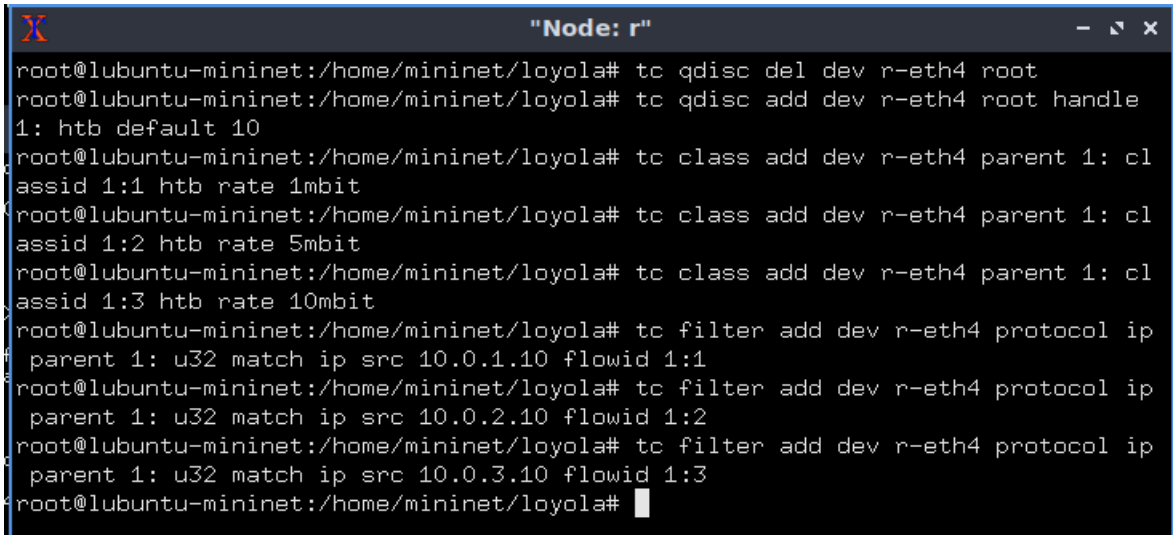
3. Bandwidth limits

The topology is setup according to the given diagram:

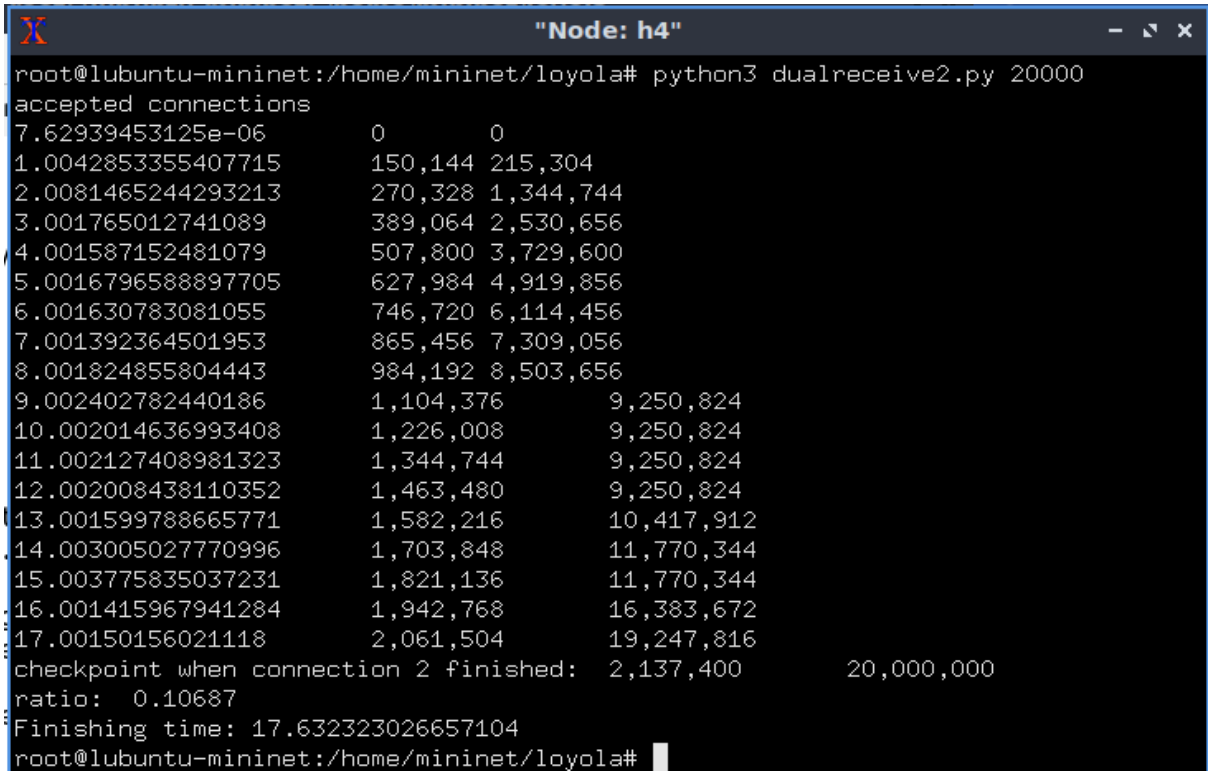


Below screenshot shows the commands used to setup bandwidth limits on the router ‘r’:



The dualreceive.py output confirms that limits are working perfect for h1 and h2 in the ratio 1:5.

Output of dualreceive.py also confirms that bandwidth limits for h1 and h3 works perfectly with the ratio 1:10:



List of commands used:

```
tc qdisc del dev r-eth4 root

tc qdisc add dev r-eth4 root handle 1: htb default 10


tc class add dev r-eth4 parent 1: classid 1:1 htb rate
1mbit

tc class add dev r-eth4 parent 1: classid 1:2 htb rate
5mbit

tc class add dev r-eth4 parent 1: classid 1:3 htb rate
10mbit


tc filter add dev r-eth4 protocol ip parent 1: u32 match
ip src 10.0.1.10 flowid 1:1

tc filter add dev r-eth4 protocol ip parent 1: u32 match
ip src 10.0.2.10 flowid 1:2

tc filter add dev r-eth4 protocol ip parent 1: u32 match
ip src 10.0.3.10 flowid 1:3
```