Communication Networks 2

SS 2021

Assignment 4

Group 06

Name	Mat.Nummer
Paul Kloker	12034928
Juan Aramis Oposich	11701238

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1 Task description

2 NS3 Model

```
$ nmap --privileged -sn -n -T5 --min-parallelism 100 --min-hostgroup 100
10.0.0.0/16
```

No.	Network	IP address	latency
1	10.0.0.0/8	10.0.4.1	0.0075s
2	10.0.0.0/8	10.0.4.2	0.23s
3	10.0.0.0/8	10.0.120.1	0.20s
4	10.0.0.0/8	10.0.120.2	0.0085s
5	10.0.0.0/8	10.0.132.1	0.024s
6	10.0.0.0/8	10.0.132.68	0.18s
7	10.0.0.0/8	10.0.248.1	0.78s
8	10.0.0.0/8	10.0.248.2	0.16s
9	10.1.0.0/8	10.1.6.1	0.18s
10	10.1.0.0/8	10.1.6.110	0.18s
11	10.1.0.0/8	10.1.7.1	1.5s
12	10.1.0.0/8	10.1.7.123	0.78s

Table 1: Discovered IP addresses

3 Data analysis

This chapter supports the understanding of the simulation model. Network model are been used to further estimate a real world scenario without a concrete build. Those models contains nodes and links just like a real internet system. For this problem we used NS-3 deploys a discrete-event simulator.

The assignment describes the needed network parameter like the network topology and the associated metrics. One task is to setup one point to point connection and also a CSMA link. those connections are implemented with **PointToPointHelper** and **CsmaHelper**. This classes are used to set up the IP addresses, MAC address and also channel delay. The channel delays, also propagation delays, is the time that it takes for a bit to reach from one end of a link to the other. The delay depends on the distance between the sender and the receiver, and the propagation speed of the wave signal.

4 Conclusion