Assignment 2: Familiarity with ns-3

Arani Bhattacharya

Due on April 23, 2021

1. Simulate a home network consisting of two personal computers (PC) connected to a wired Ethernet network, and 5 other devices connected over WiFi (any standard is fine).

2. Assume that the devices at home are connected through a router, which in turn is connected over a wired network to an ISP server. Then, utilize the tcp-example.cc file given with the assignment and run an application on each of the node to generate saturated traffic.

3. Simulate the following situations:

    (a) Only one PC is running and no other device is running,

    (b) Both PC's are running, and no other devices are running,

    (c) Both PC's are running, and 3 other devices are running,

    (d) All devices are running.

4. Parse their PCAP files and obtain the throughput seen by the devices.

5. Document the parameters you have created in a separate PDF file, and comment each function to explain their arguments and their functionality.

Grading Scheme

1. Creating the right topology – 3 marks

2. Simulating each of the four cases – 1 mark each

3. Parsing the PCAP files – 3 marks

4. Proper documentation – 1 mark