Assignment 2

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1) Attributes and Topologies

Link Attributes

- **Between R1 and R2**
  Data Rate = **100 Mbps**
  Delay = **2ms**

- **Between R1 and C1**
  Data Rate = **100 Mbps**
  Delay = **2ms**

- **Between R2, C2 and C3**
  Data Rate = **100 Mbps**
  Delay = **2ms**

Topologies

- **Between R1 and R2**
  Point to Point topology (given in assignment doc).

- **Between R1 and C1**
  I used CSMA for this as there is a Bus Topology between R1 and C1.

- **Between R2, C2 and C3**
  I used CSMA for this, as Computer C2, C3 are connected to R2 via Ethernet and they follow a Bus Topology between them.

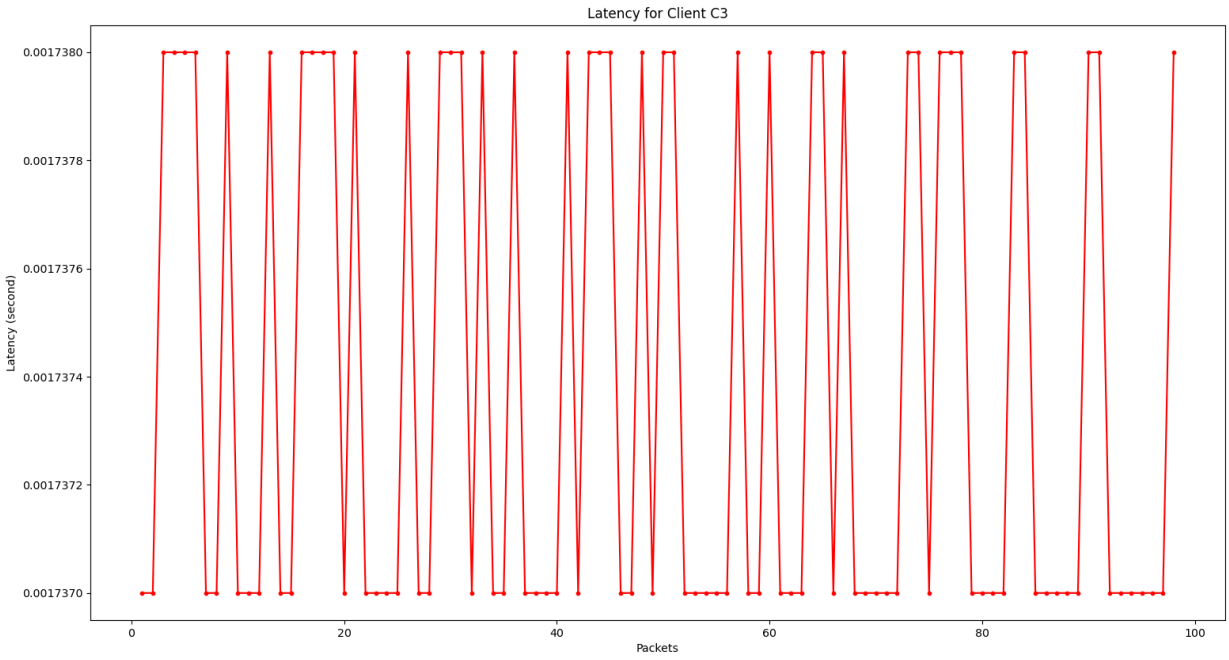
- **Between AP(R1) and Wifi Nodes (W1, W2, W3 & W4)**
  All wifi nodes are centrally connected to AP(R1).

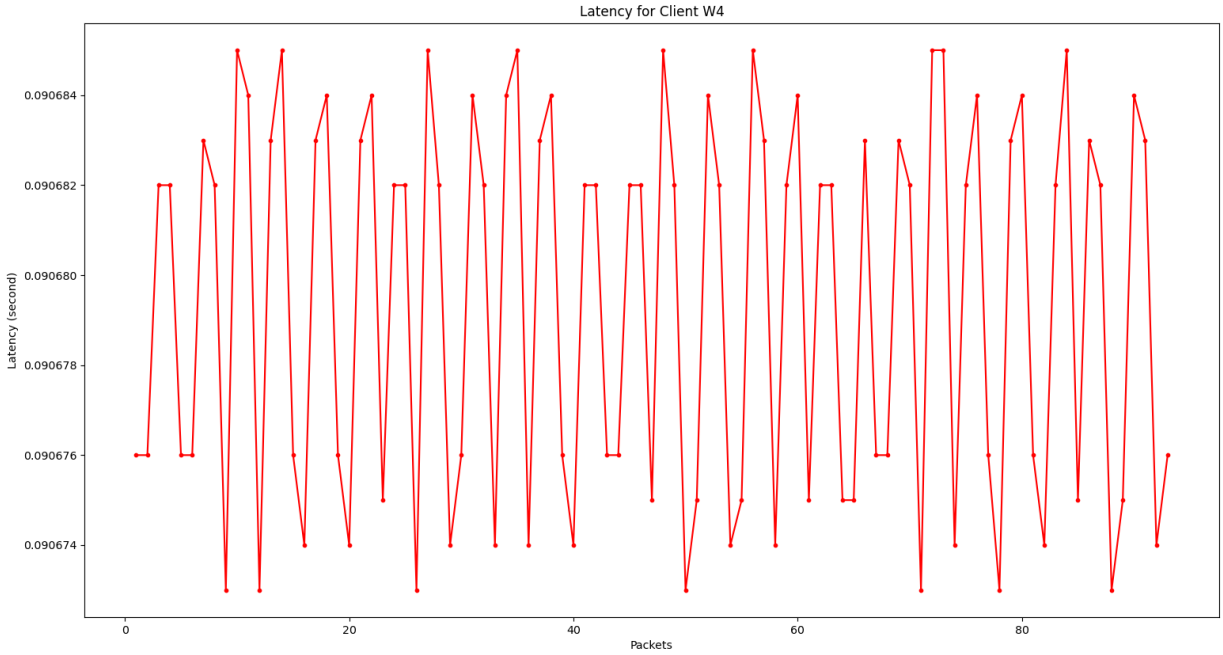
```
// Network Topology
//
//   Wifi 169.1.2.0
//                    AP
//   *   *     *     *     *
//   |   |     |     |     |     169.1.1.0
//   W4  W3    W2    W1    R1 ---------------- R2    C2    C3
//                         |  point-to-point  |     |     |
//                       ====                 ============
//                       |                    ETH 169.1.4.0
//                      C1
//                      169.1.3.0
```

2) a) Mean Latency and Latency Graph

Mean Latency for Client C3 = **0.0017374 second**

Mean Latency for Client W4 = **0.0906794 second**

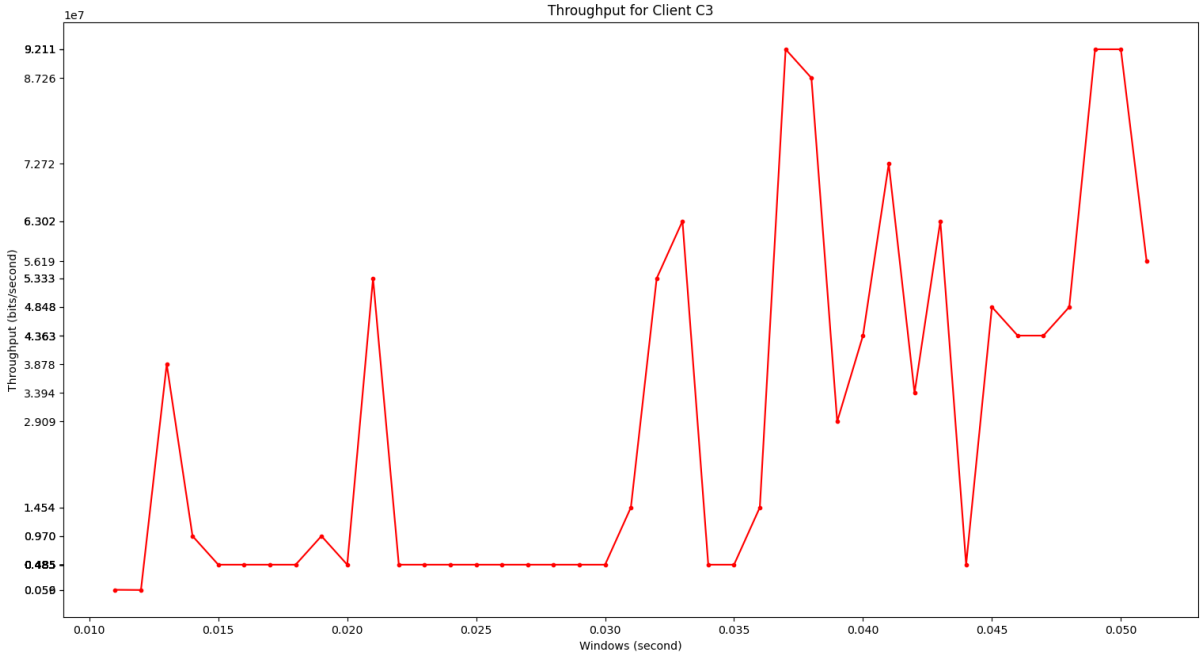


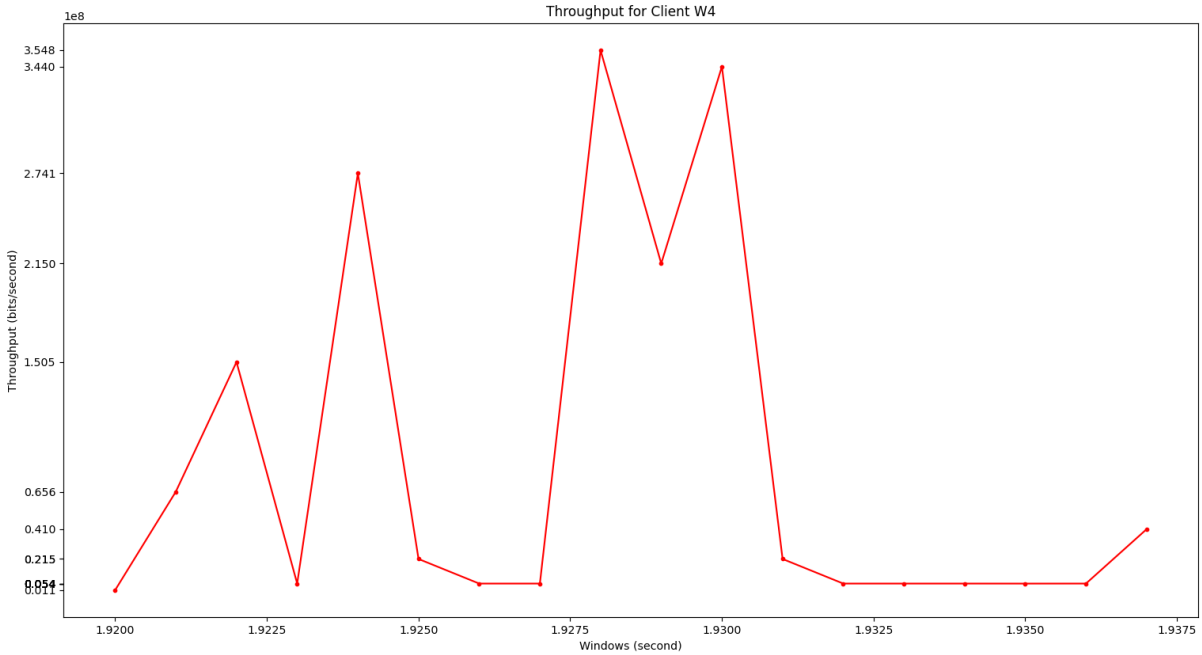


b) Mean Throughput and Throughput Graph

Mean Throughput for Client C3 = **28949463.415 bits/sec**

Mean Throughput for Client W4 = **85119111.111 bits/sec**





In this part for the calculation of Throughput I take the window size of **0.001 second**.