

I. Create a simple topology of two nodes (Node1, Node2) separated by a point-to-point link. Setup a UdpClient on one Node1 and a UdpServer on Node2. Let it be of a fixed data rate Rate1. Start the client application, and measure end to end throughput whilst varying the latency of the link. Now add another client application to Node1 and a server instance to Node2 and measure the throughput.

II. Create a topology of 7 nodes (n0, n1, n2, n3, n4, n5, n6), as shown in figure below:

```
// Wifi 10.1.3.0
//      AP
// *   *   *   *
// |   |   |   | 10.1.1.0
// n5  n6  n7  n0 ----- n1  n2  n3  n4
//      point-to-point |   |   |   |
//                      =====
//                      LAN 10.1.2.0
```

Node n0 is the sink for all the other nodes. Generate appropriate data from the nodes. Calculate average throughput and delay in the network.