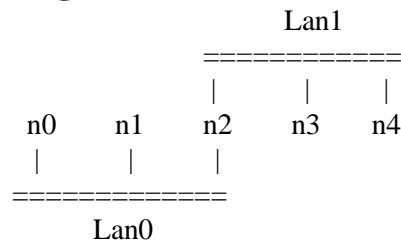


CSE 4840 [Internetworking Protocols Lab]

Lab #02

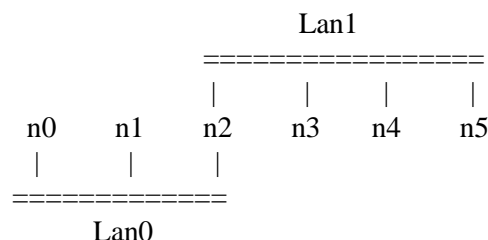
The attached ns3 script defines a topology. Upon execution, the following topology will be generated
Network topology configured in the attached file:



- In the topology, node n0 is the Multicast source.
- Node n2 is the Multicast Router. Node n2 forwards the multicast packet onto Lan1.
- Node n4 listens for the data. Node n4 is a member of a multicast group.

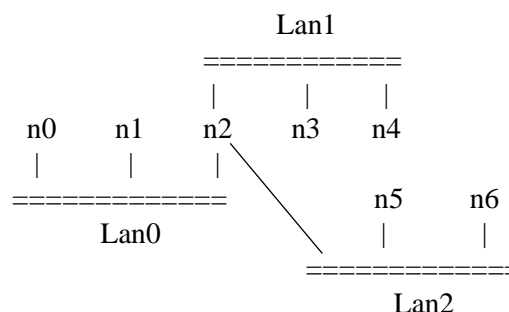
Please complete tasks 1, 2, 3, 4 based on the properties of the topology:

Task 1:



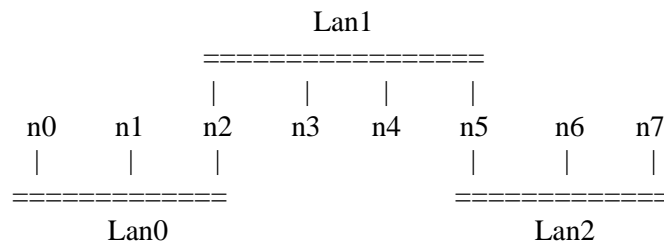
1. Add one more node, n5, to the existing topology. Node n5 should be connected to the Lan1.
2. Change the configuration so that nodes n4 and n5 are the members of the same multicast group.
3. Both n4 and n5 should listen for the data [Source n0].

Task 2:



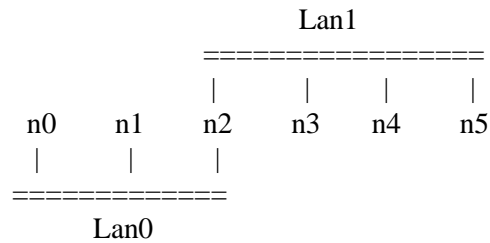
1. Add two more nodes, n5, n6, to the existing topology.
2. Nodes n5 and n6 should create different Lan, Lan2, and be connected through the node n2.
3. Now, node n2 is the Multicast Router. Node n2 forwards the multicast packet onto both Lan1 and Lan2.
4. Nodes n4 in Lan1 and n6 in Lan2 listen for the data [Source n0]. Both the nodes n4 and n6 are the members of the same multicast group.

Task 3:



1. Add three more nodes, n5, n6, n7, to the existing topology.
2. Now, node n2 and n5 are the Multicast Routers. Node n2 forwards the multicast packet onto Lan1. Node n5 forwards the multicast packet onto Lan1. Node n5 first listens for the data and then forwards.
3. Nodes n4 in Lan1 and n7 in Lan2 listen for the data [Source n0]. Both the nodes n4 and n7 are the members of the same multicast group.

Task 4:



1. Add one more node, n5, to the existing topology. Node n5 should be connected to the Lan1.
2. In the topology, now, both the nodes n0 and n1 should be the source.
3. Change the configuration so that nodes n4 and n5 are the members of two different multicast groups.
4. Node n4 should listen for the data from the source n0. Node n5 should listen for the data from the source n1.