

----- **Network Simulation** -----

Lab 3 : Simulation techniques and performance evaluation

Objectives of the Lab:

- The objective of this lab is to get familiar with essential aspects related to network simulation and performance evaluation with NS-2 simulator.
- The simulation of different traffic models.

Create a wireless ad hoc network and simulate the communication among its nodes according to the following simulation parameters.

Simulation parameter	Value
Number of nodes	5
Wireless transmission technology	IEEE 802.11
Routing protocol	AODV
Queue type	Queue/DropTail/PriQueue
Queue size	20 packets
Node mobility	Random
Simulation time	50s

- Set the network traffic model to CBR (Constant Bit Rate)
 - Simulate the network throughput over the simulation time.
 - Simulate the packet loss with each transmitting node.
 - Then, increase the network size to 10 then 20 and evaluate the cumulative throughput and packet loss in the network.
- Change the network traffic to Exponential and redo the same steps.
- Compare the results obtained with the two traffic models.