

# **Computer Networks Assignment-2**

## **Performance under different Network Conditions**

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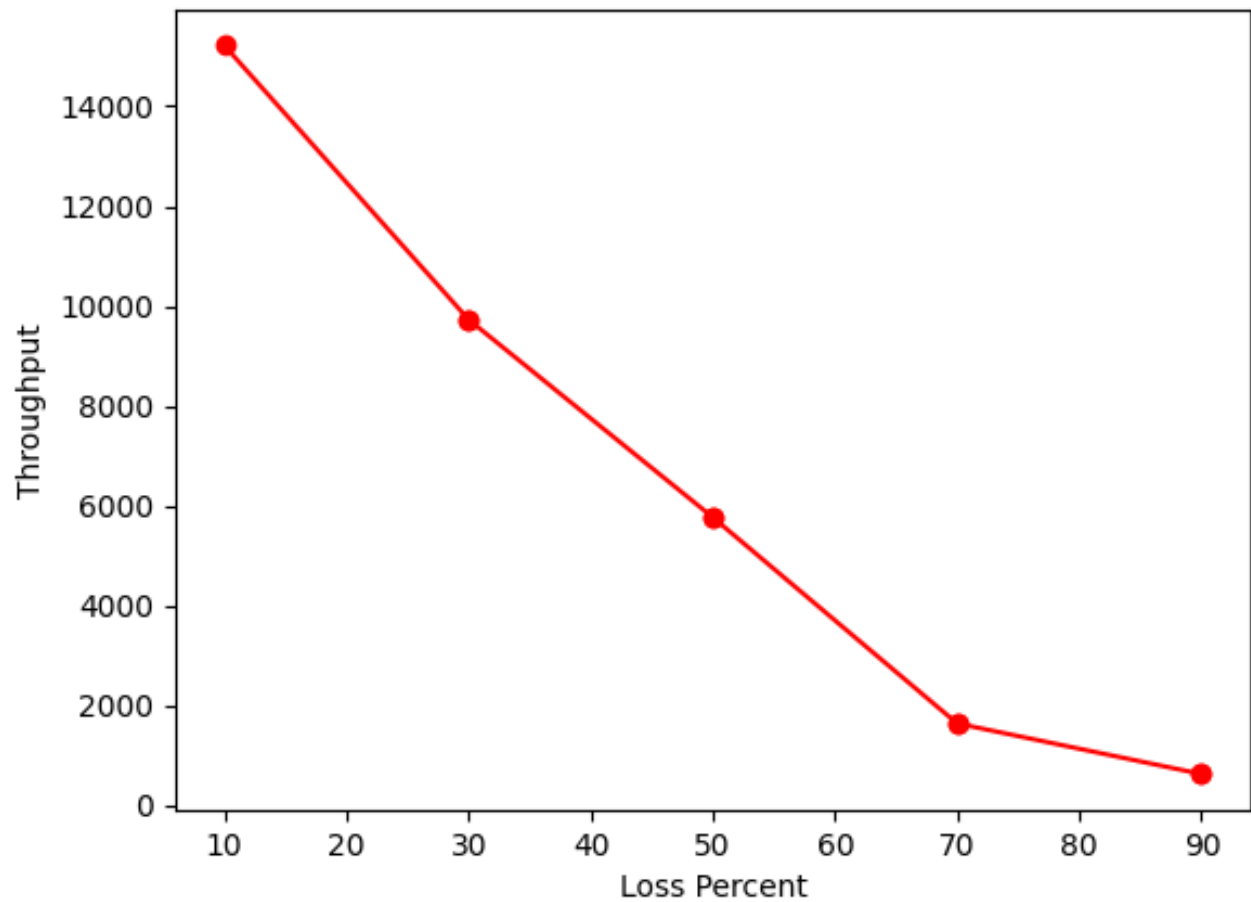
### **Specifications:**

Window size = 8 (This is the default value, but can be changed by the user upon input )

Reliability test passed in each of the cases

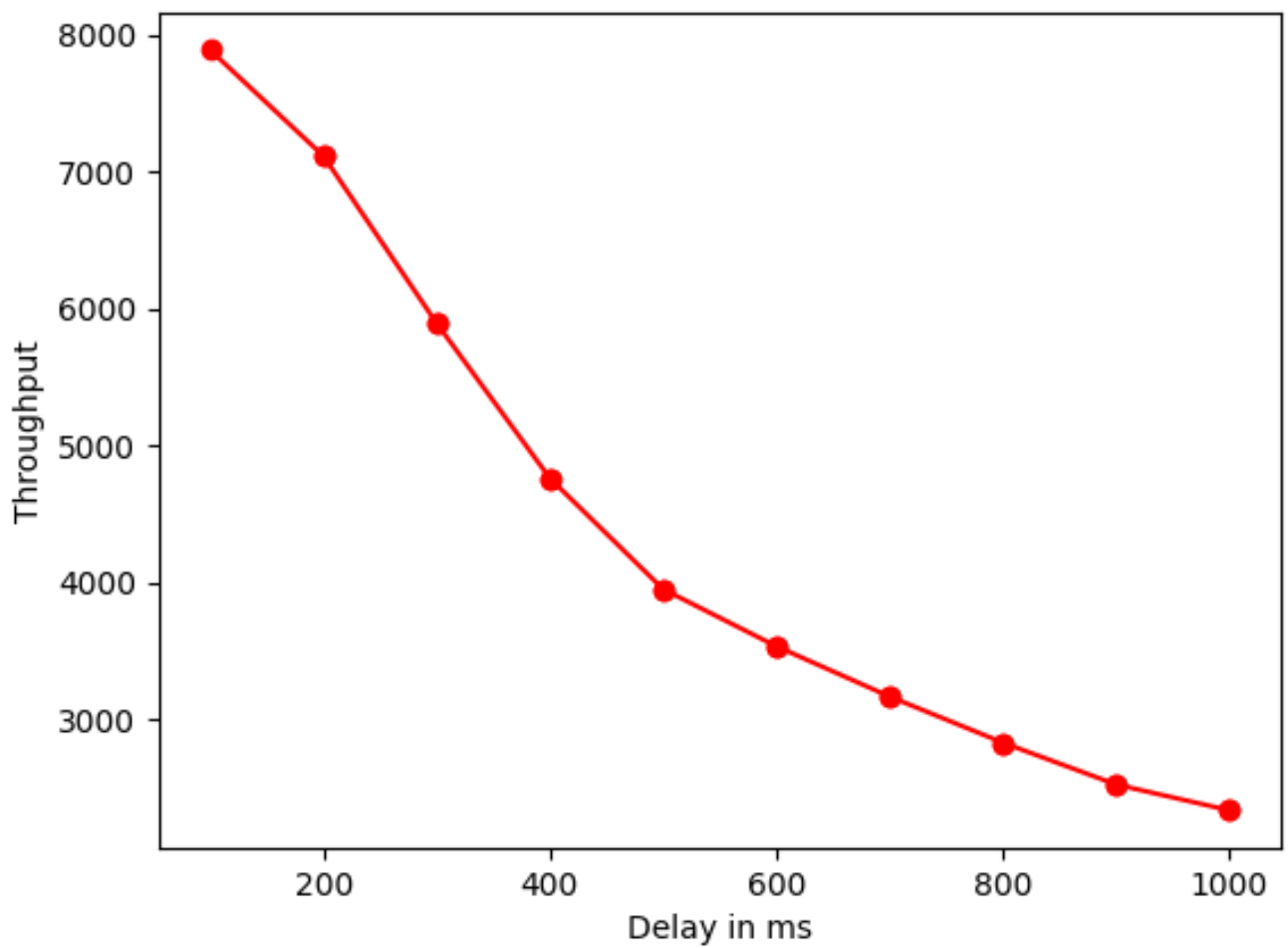
## Throughput vs Packet Loss

10%	30%	50%	70%	90%
15218.035 B/s	9730.9315 B/s	5769.7380 B/s	1644.1656 B/s	630.9712 B/s



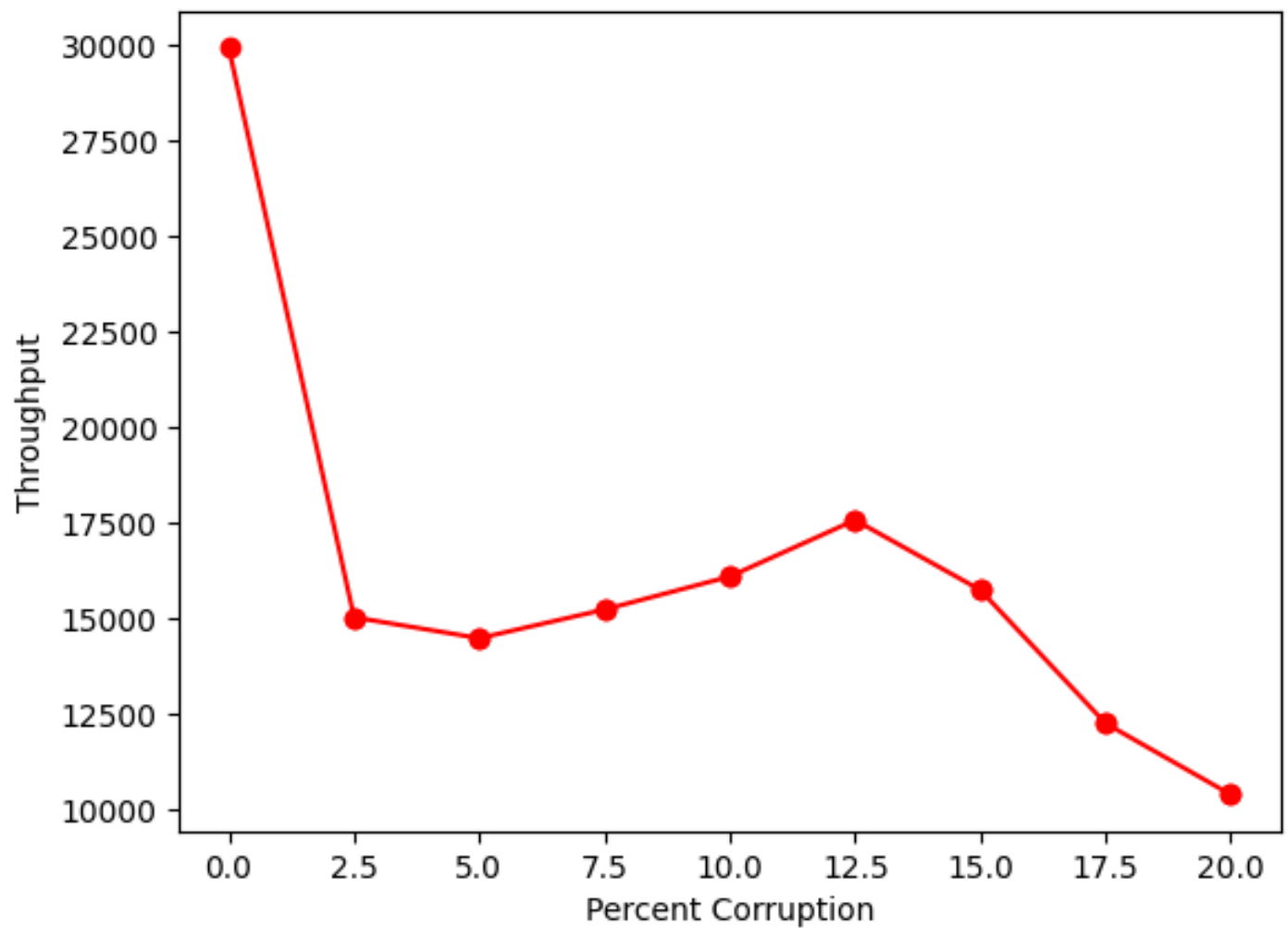
## Throughput vs Network Delay

100ms	300ms	500ms	700ms	800ms	900ms
7892.1107 B/s	5849.6048 B/s	3949.4027 B/s	3164.0093 B/s	2826.9951 B/s	2332.6301 B/s



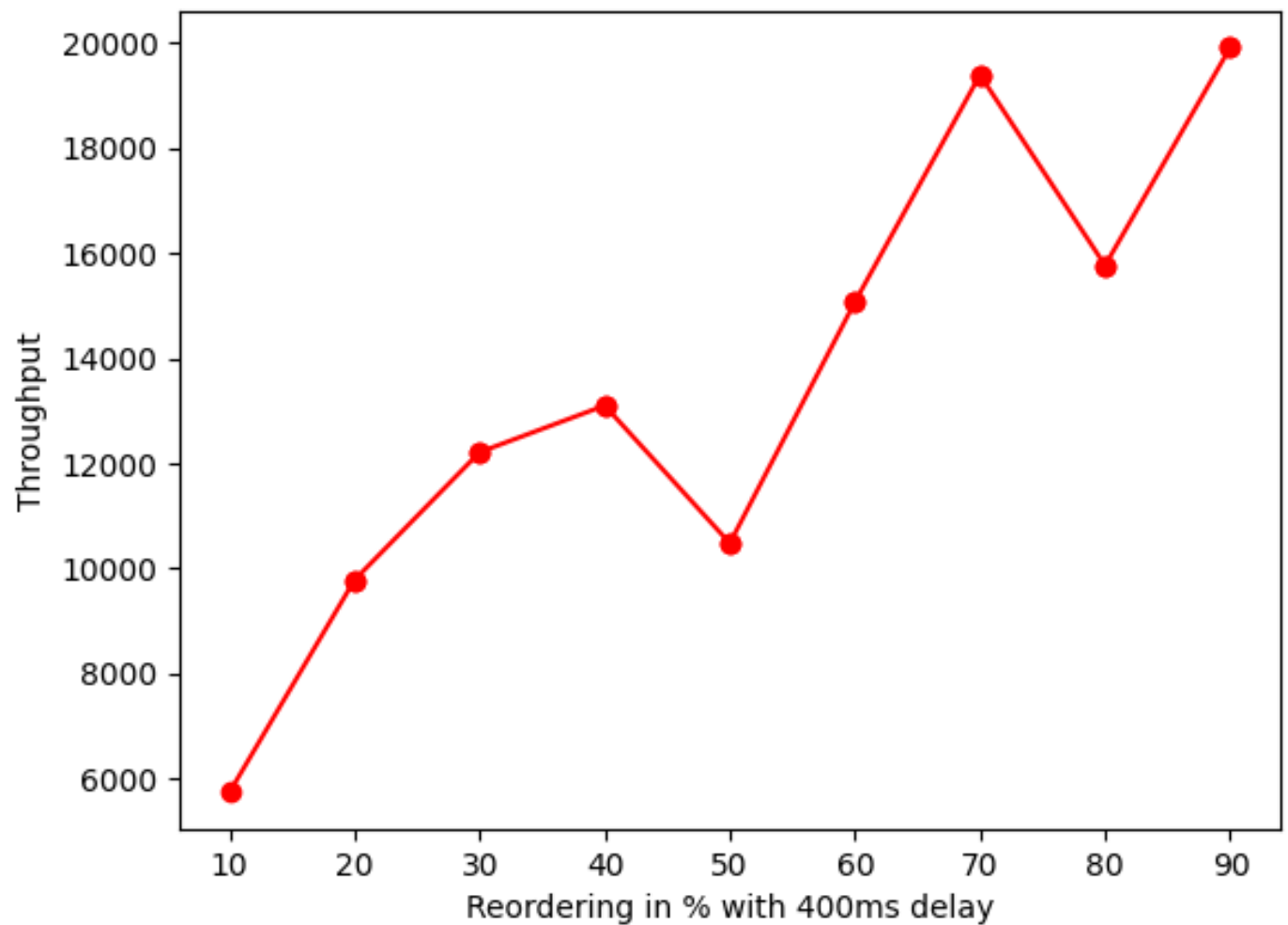
## Throughput vs Packet Corruption

0%	5%	7.5%	10%	12.5%	15%	17.5%	20%
29945.97 69 B/s	14485.94 91 B/s	15235.67 63 B/s	16101.28 48 B/s	17580.57 12 B/s	15749.31 71 B/s	12257.75 77 B/s	10390.37 34 B/s



## Throughput vs Packet Reordering

10%	30%	50%	70%	90%
5741.4494 B/s	12215.010 B/s	10483.29942 B/s	19397.5023 B/s	19917.52039 B/s



**Useful Commands:**

To check all active rules: `tc q`

To delete all active rules: `tc qdisc delete dev lo root`

Add packet loss: `tc qdisc add dev lo root netem loss 20%`

Add packet delay: `tc qdisc add dev lo root netem delay 400ms`

Add packet corruption: `sudo tc qdisc add dev lo root netem corrupt 7.5%`