

Computer Networks

Assignment 3

2021MCS2147

Q1. Application Data Rate =1Mbps Data Rate = 8Mbps Delay =3m s

Packet size = 3000 bytes. No of packets =100000

Table for Number of Packets Dropped

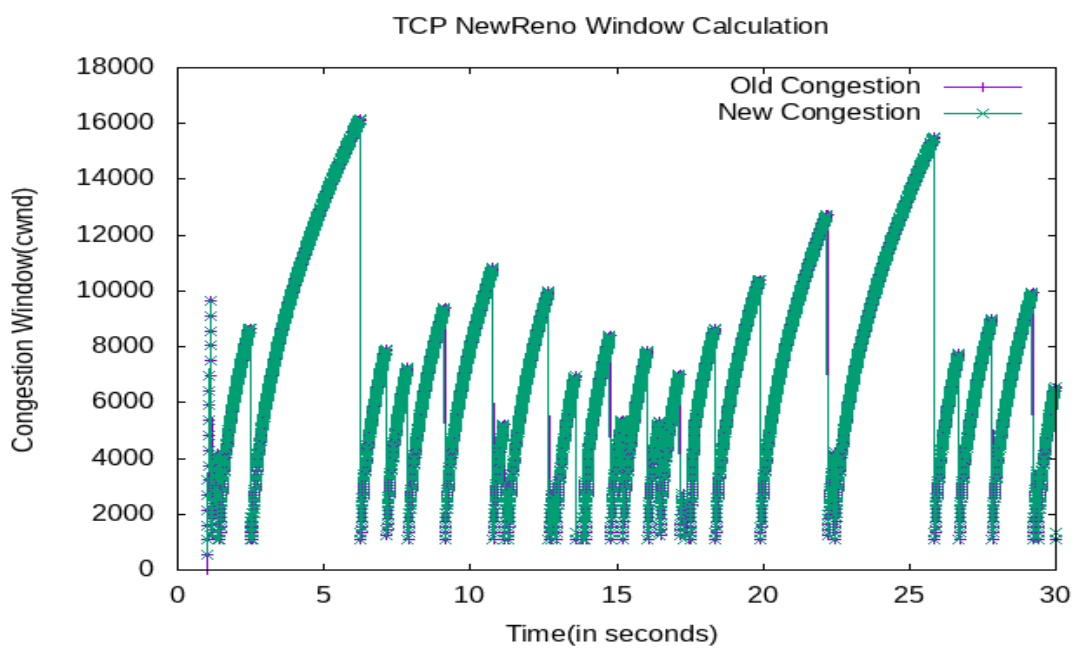
Protocol	No of Packets Dropped
TCP NewReno	38
TCP HighSpeed	38
TCP Veno	38
TCP Vegas	39

Observations.

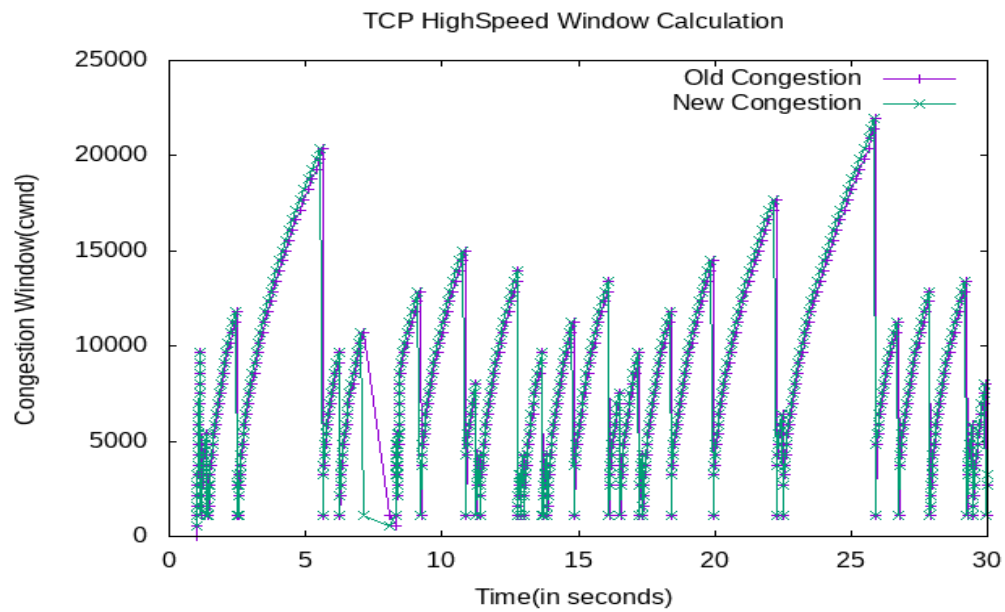
1. Numbers of packets drop for Veno, NewReno, HighSpeed is same but for vegas it is more.

Graph of Congestion Window vs time

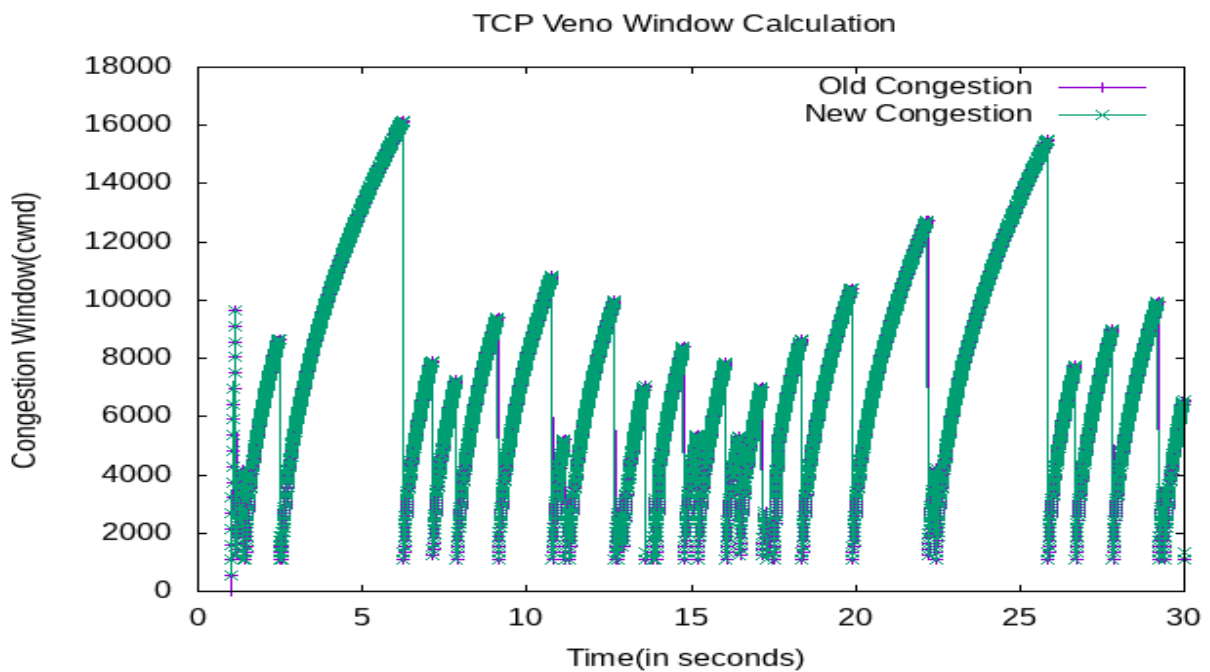
(a) TCP New Reno



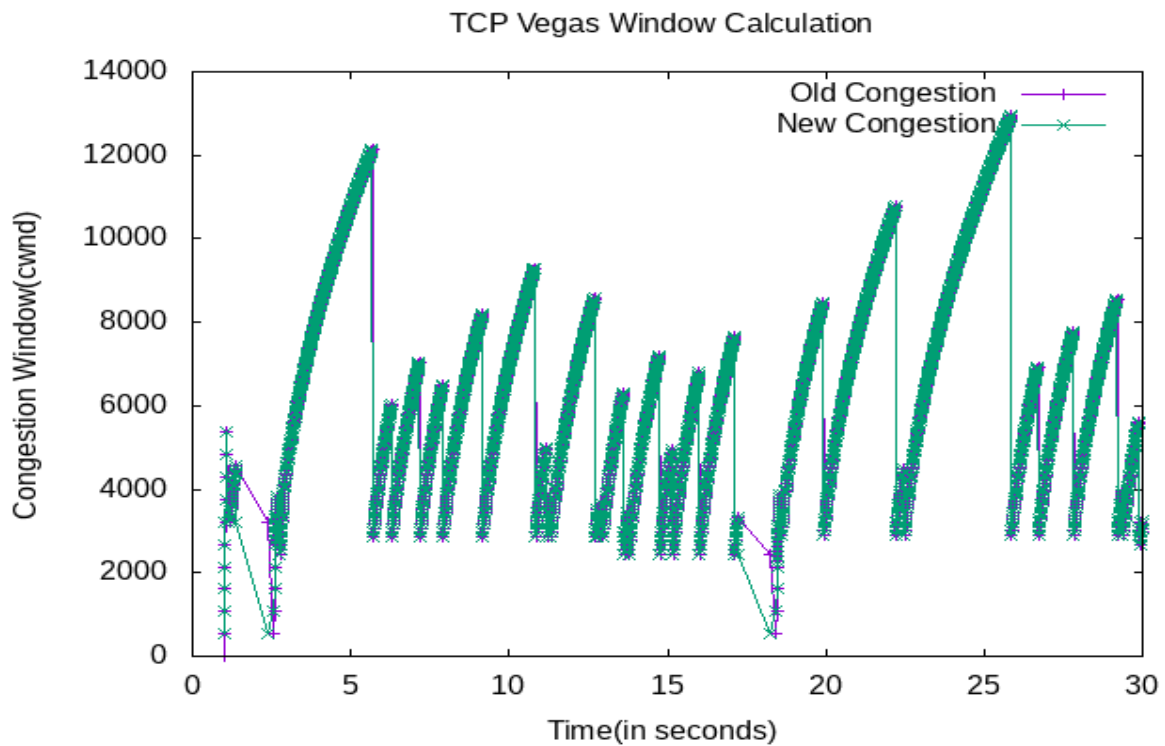
(b)TCP High Speed



(c)TCP Veno



(d)TCP Vegas



Q2 . 1 Application Data Rate =1Mbps , Delay =3m s

Packet size = 3000 bytes., No of packets =100000

No of Packets Dropped

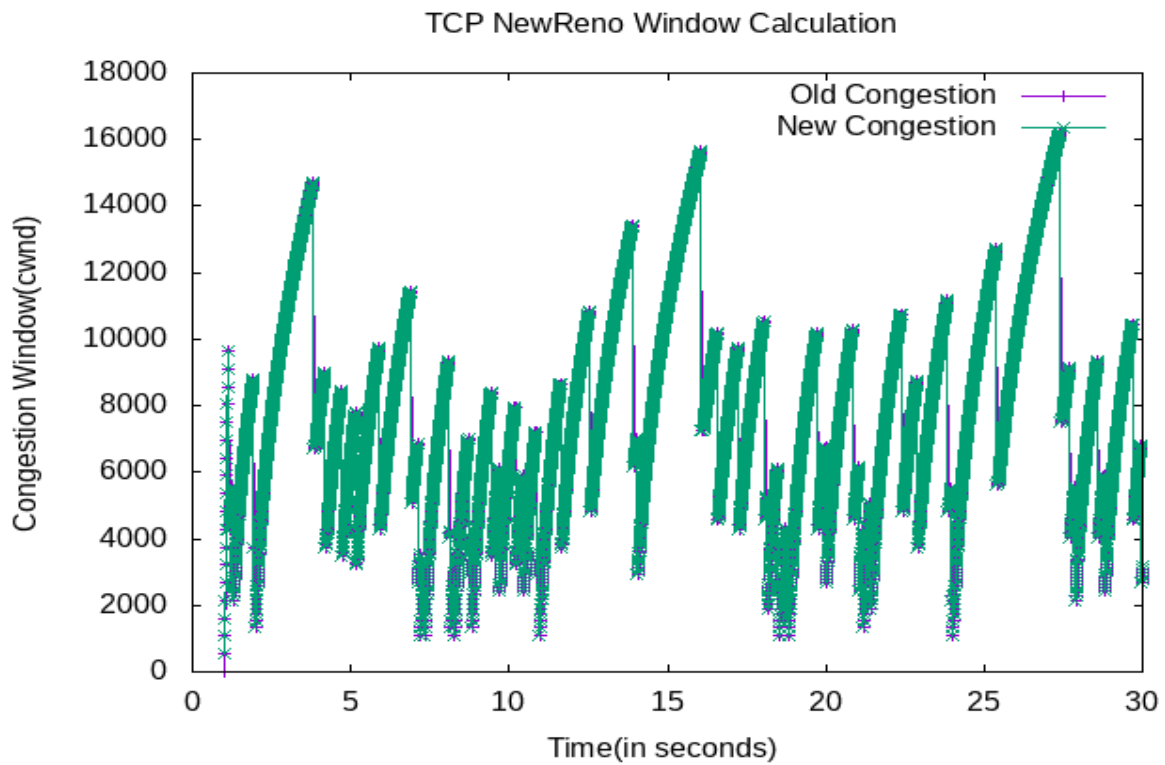
Data Rate	No of Packets Dropped
2Mb	62
4Mb	72
10Mb	73
20Mb	74
50Mb	75

Observations.

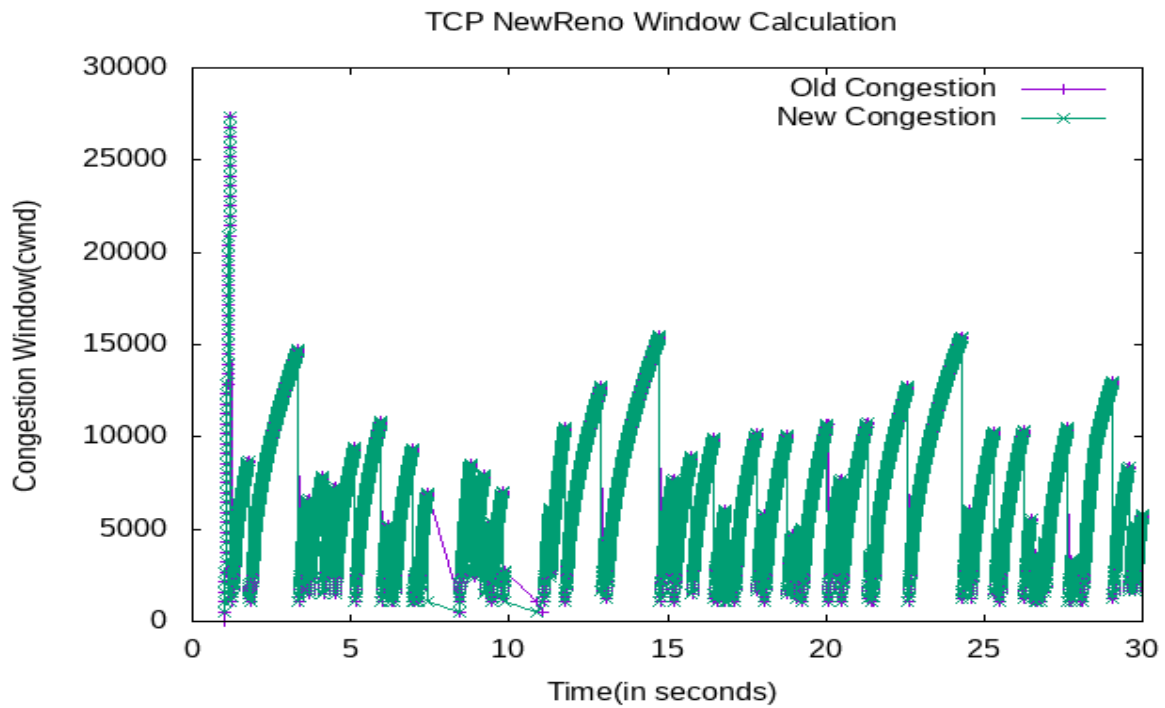
1. When we increase Data rate then the number of packet drop first increases sharply
And after 10 Mb it increases very slowly.

Graph of Congestion Window vs time

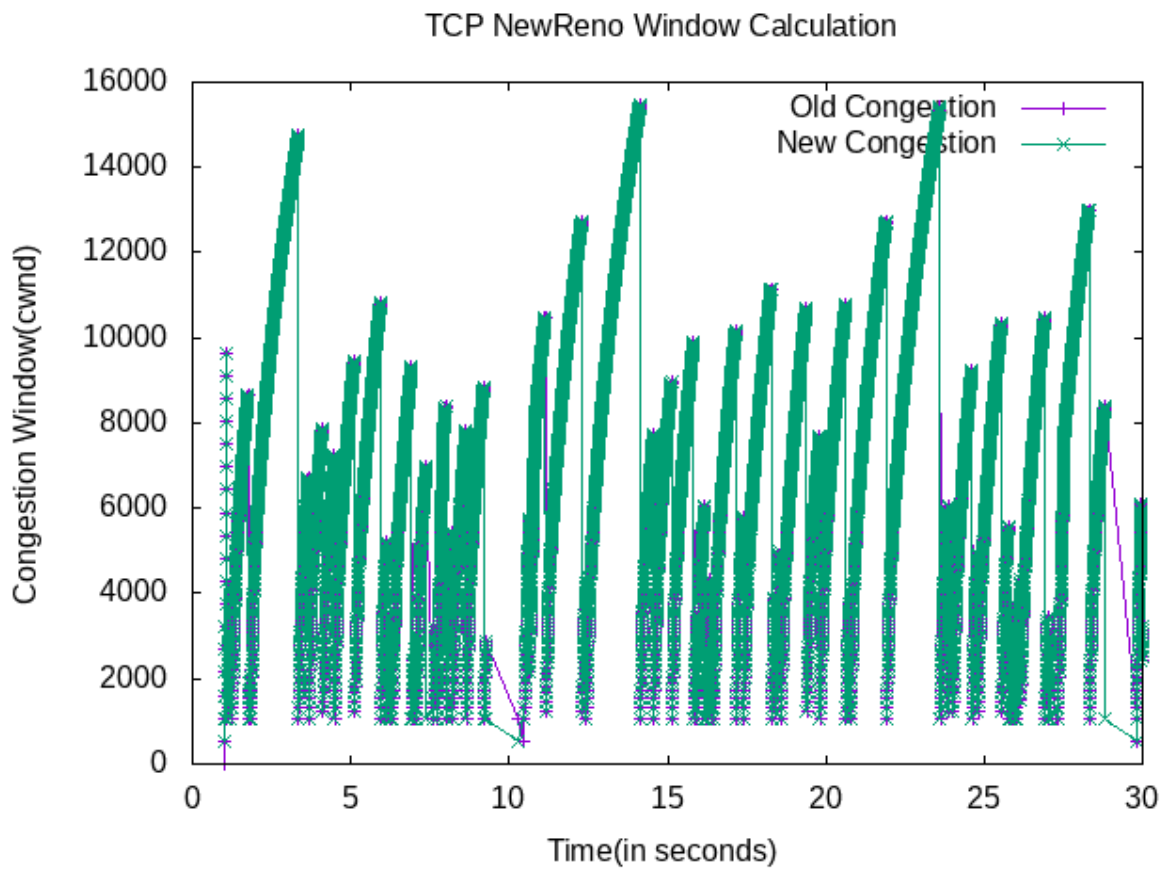
1 Data Rate = 2Mb



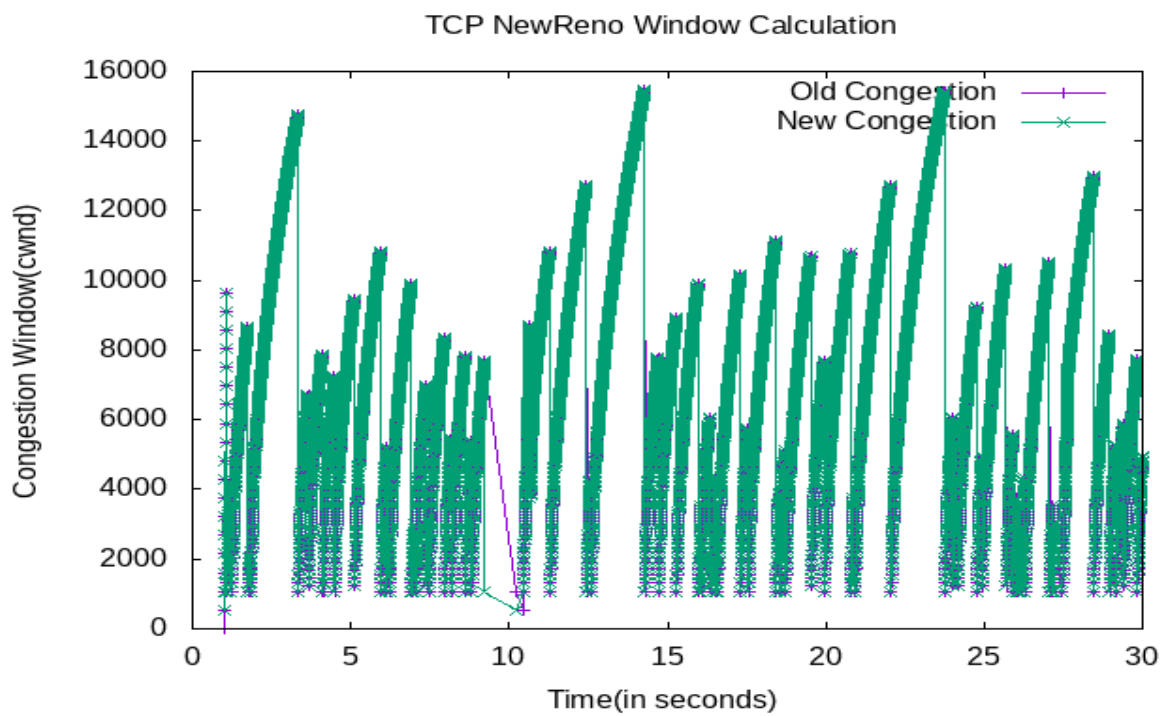
2 . Data Rate = 4Mb



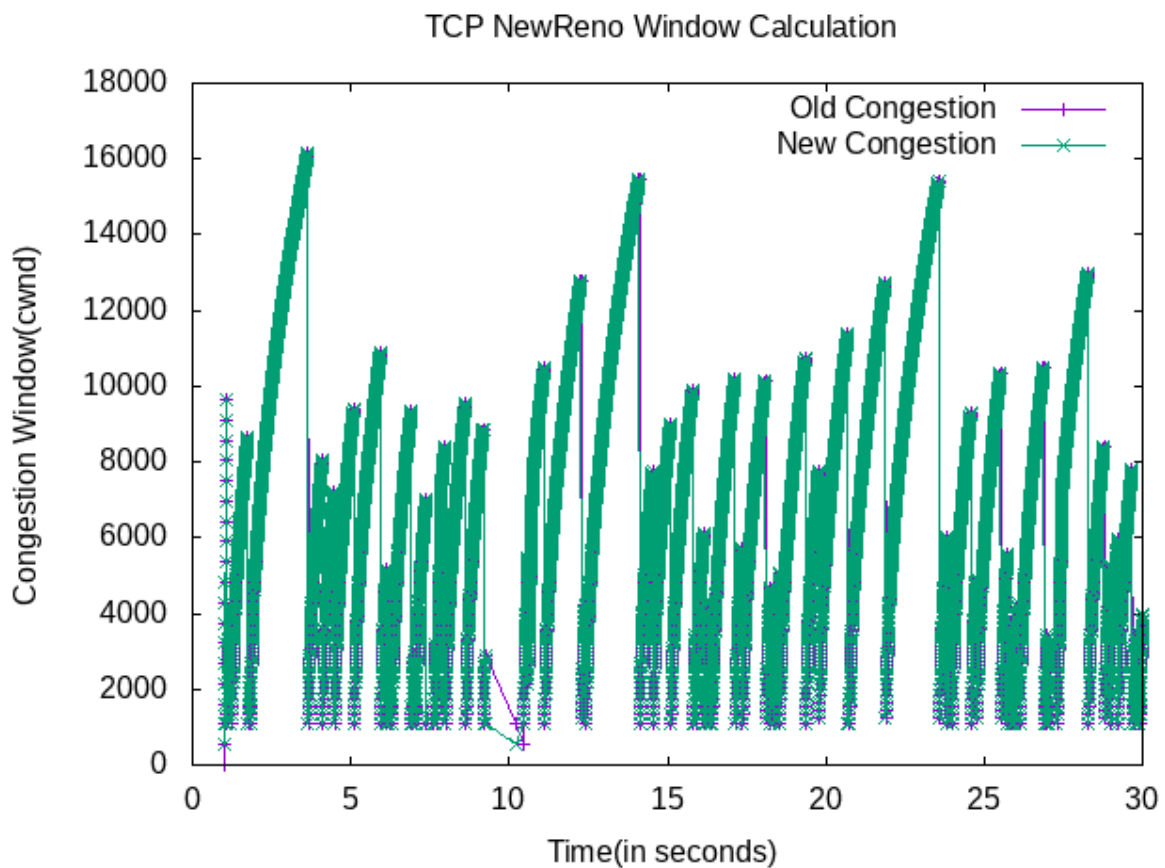
3. Data Rate =10Mb



4 . Data Rate =20Mb



5 . Data Rate =50Mb



Q2.2 Data Rate = 2Mbps Delay =3ms

Packet size = 3000 bytes. No of packets =100000

No of Packets Dropped

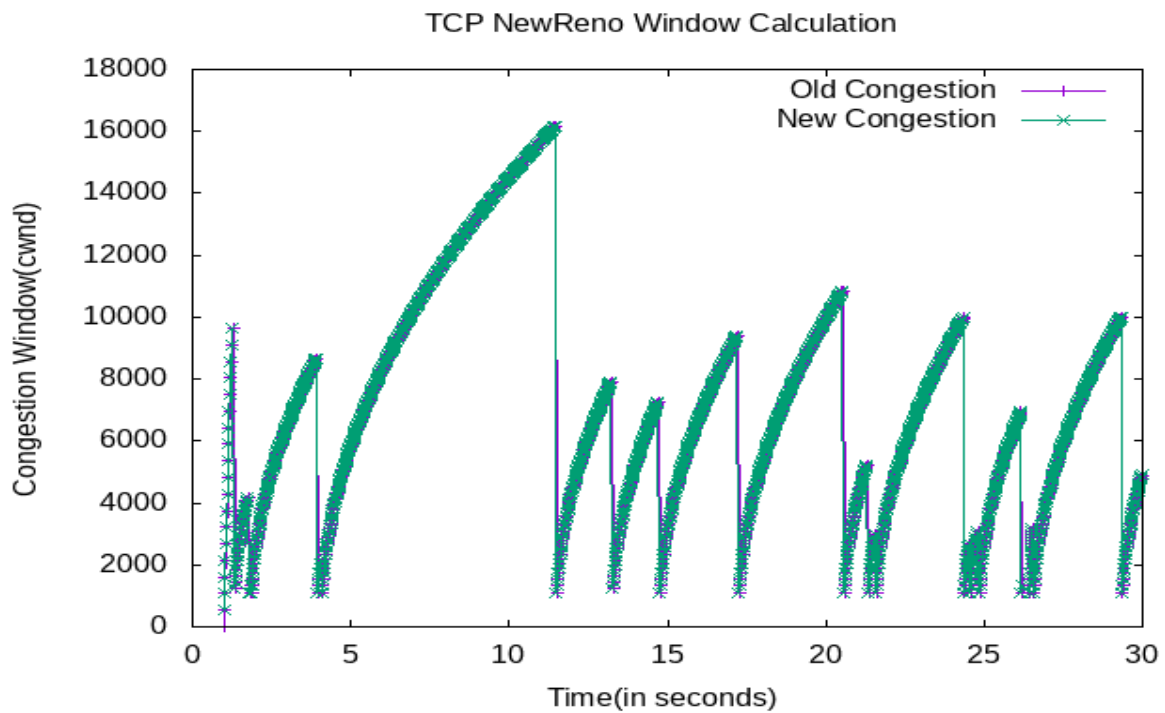
Application Data Rate	No of Packets Dropped
0.5Mb	22
1Mb	38
2Mb	71
4Mb	156
10 Mb	156

Observations.

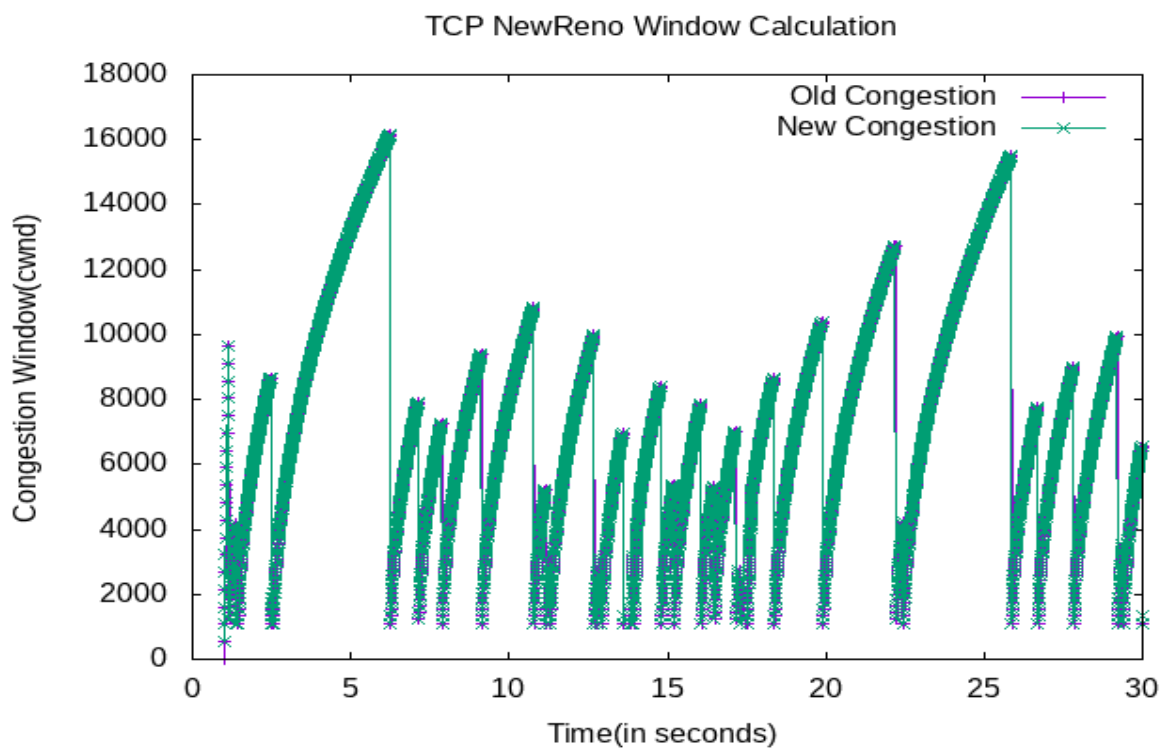
1. When we are increasing Application Data rate then the number of packet drop first increases
Then after 4Mb it remains constant.

Graph of Congestion Window vs time

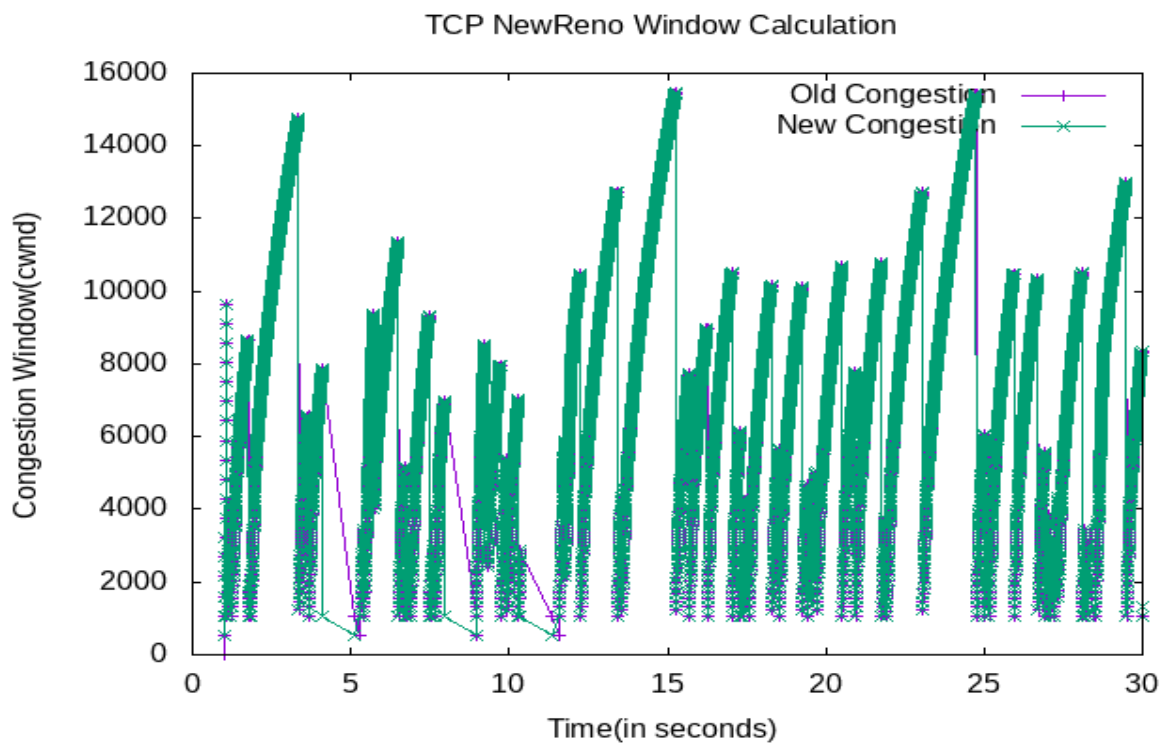
1 Application Data Rate = 0.5Mb



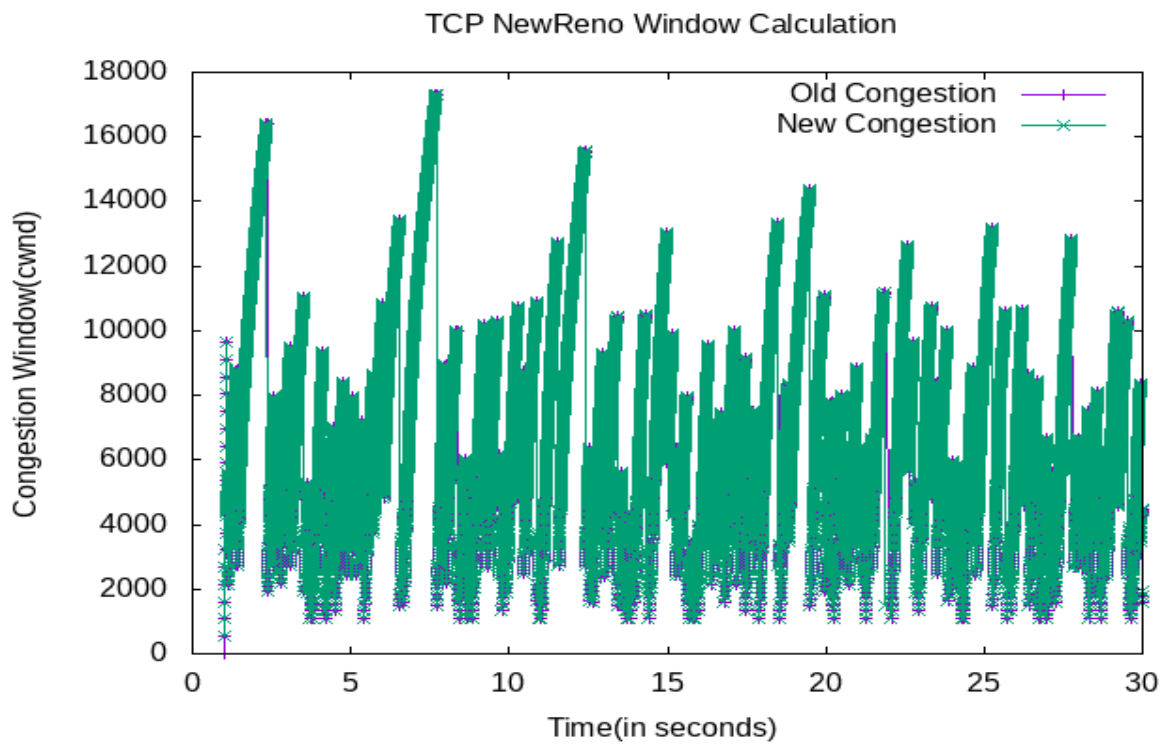
2 Application Data Rate= 1Mb



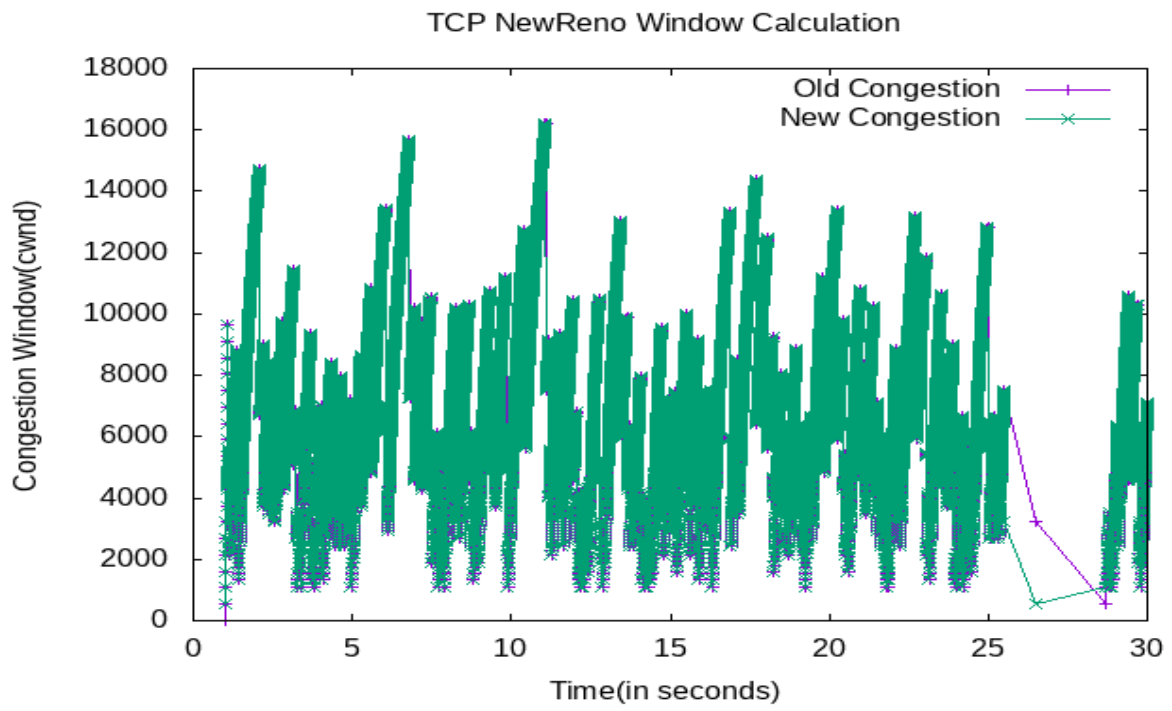
3. Application Data Rate= 2Mb



4 . Application Data Rate= 4Mb



5 Application Data Rate=10Mb

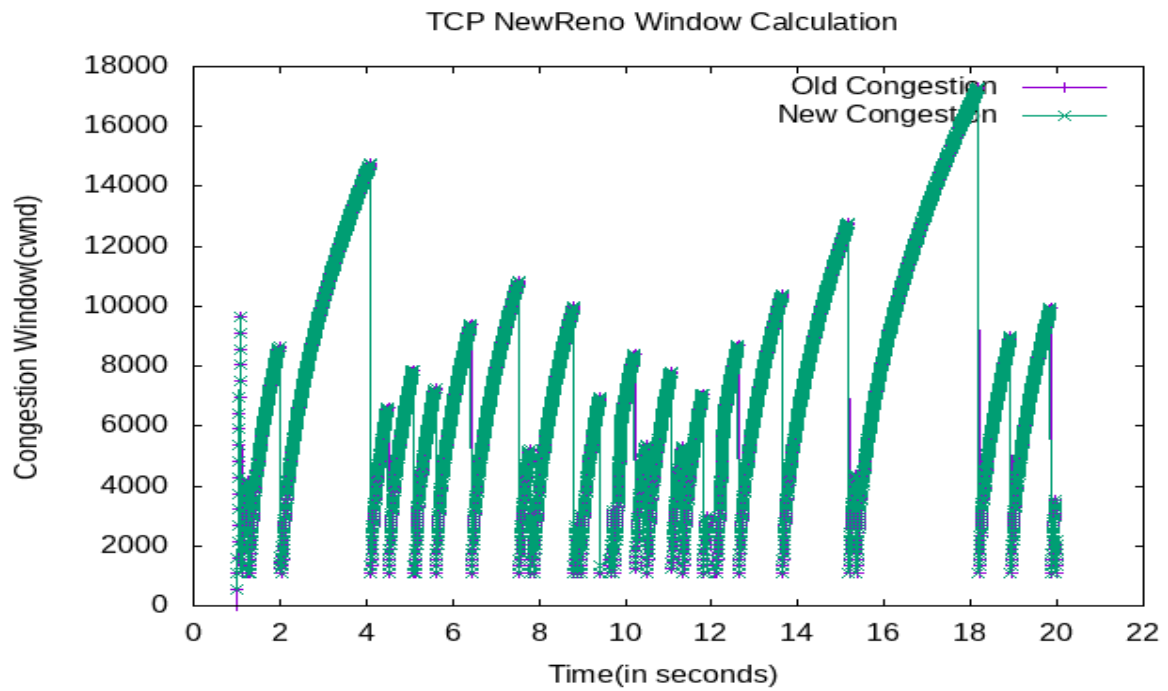


Q3.1

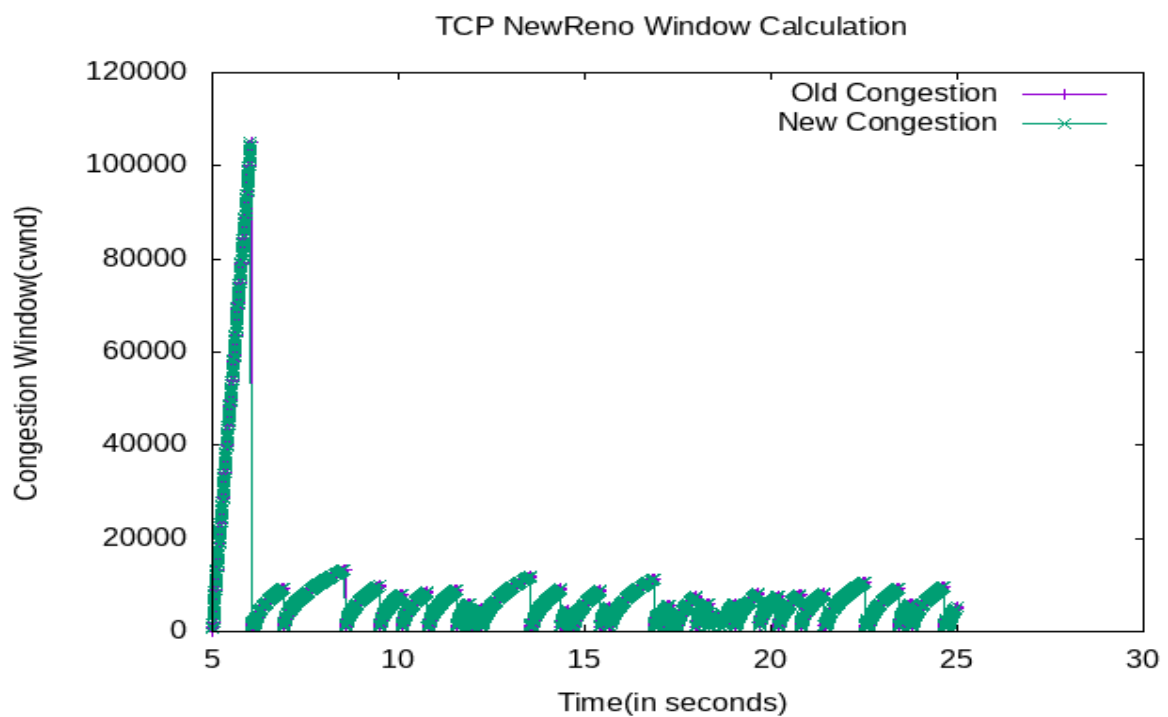
(1) Total no of packet drops =127

Graph

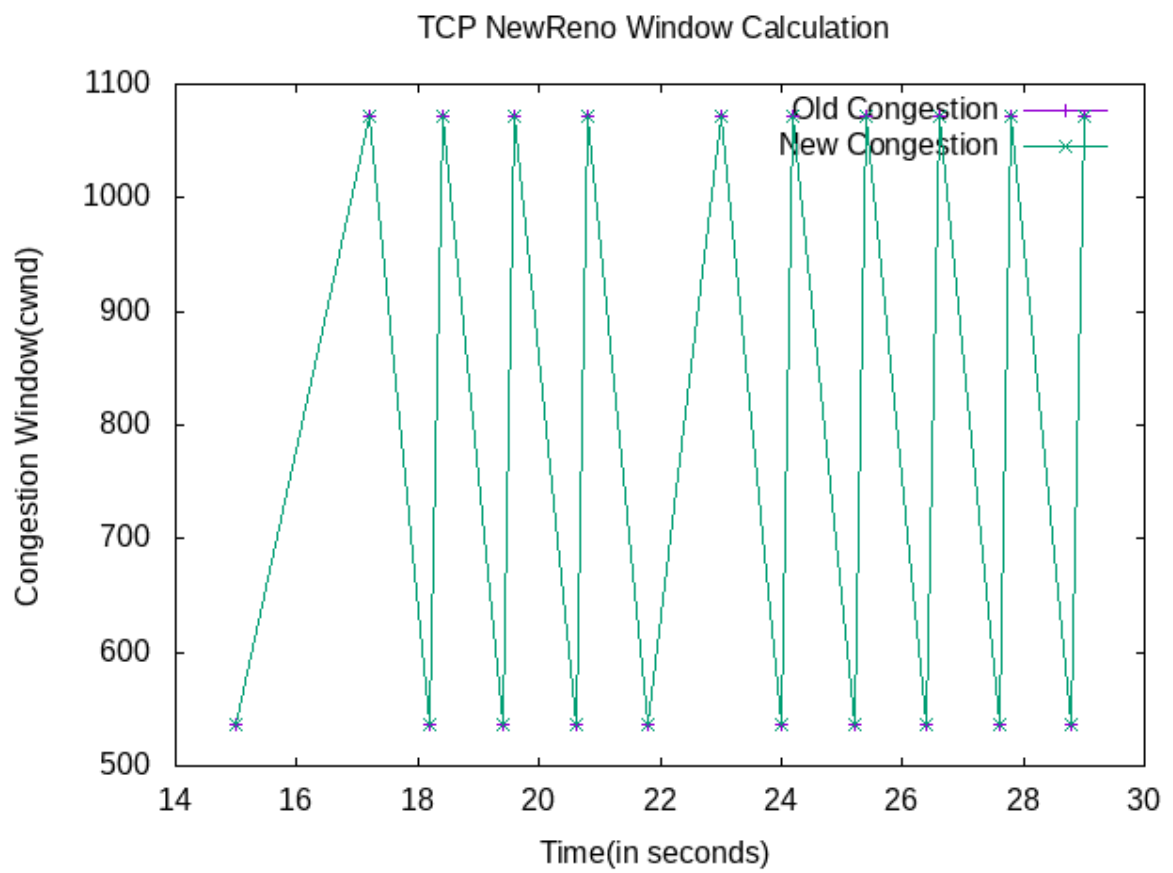
1.1



1.2



1.3

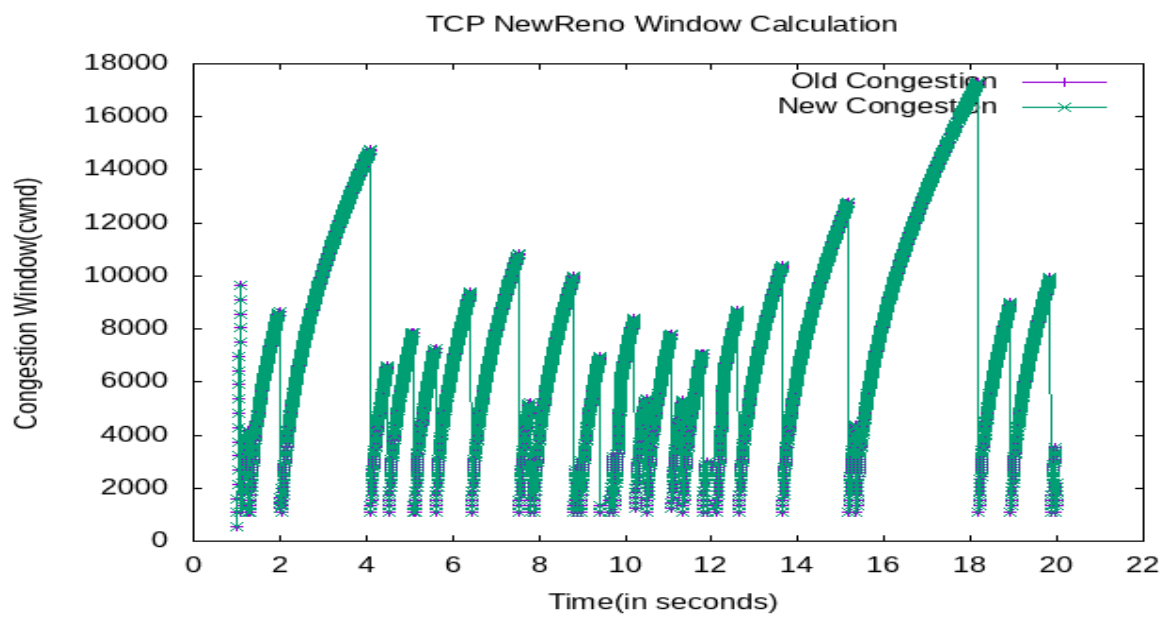


Q3.2 When source 3 Uses TCPNewRenoCSE

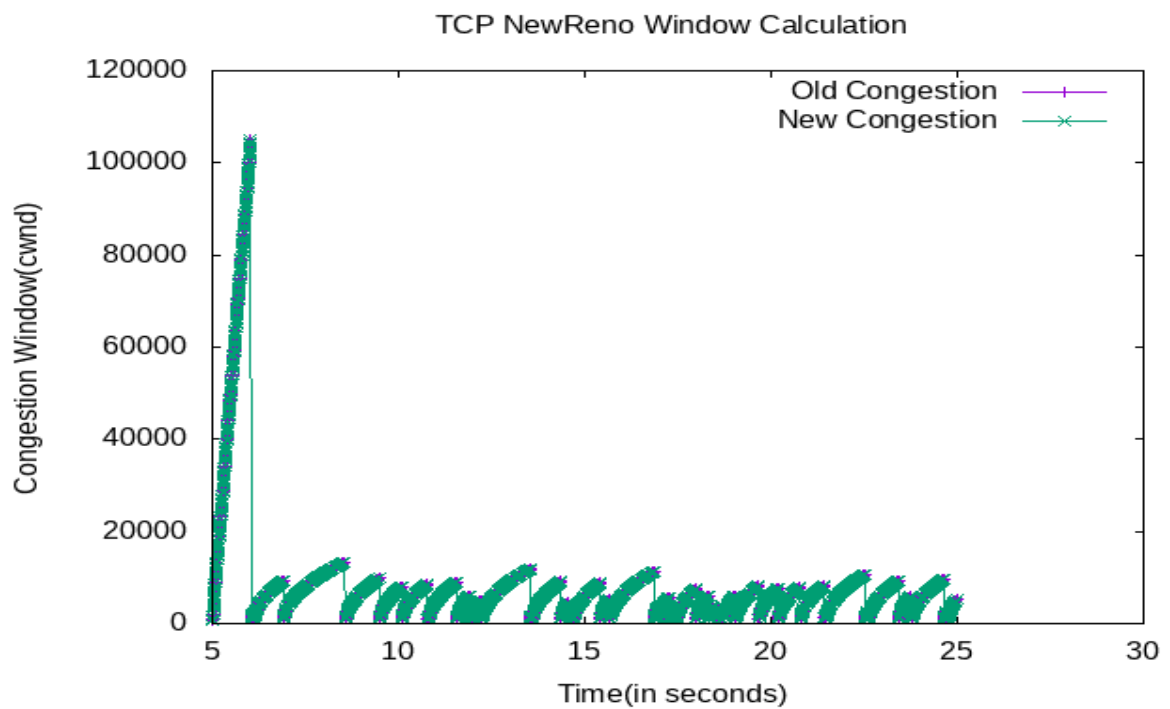
(2) Total no of packet drops =127

Graph

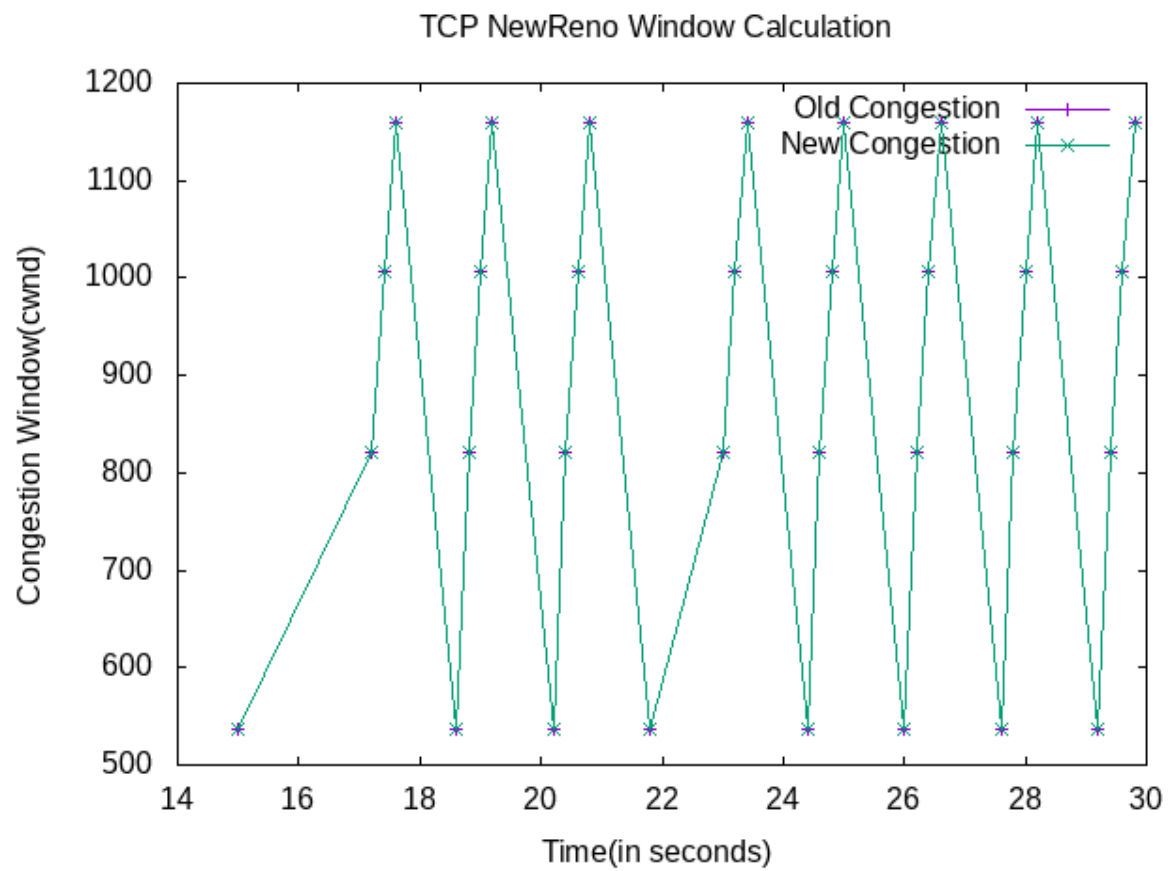
2.1



2.2



2.3

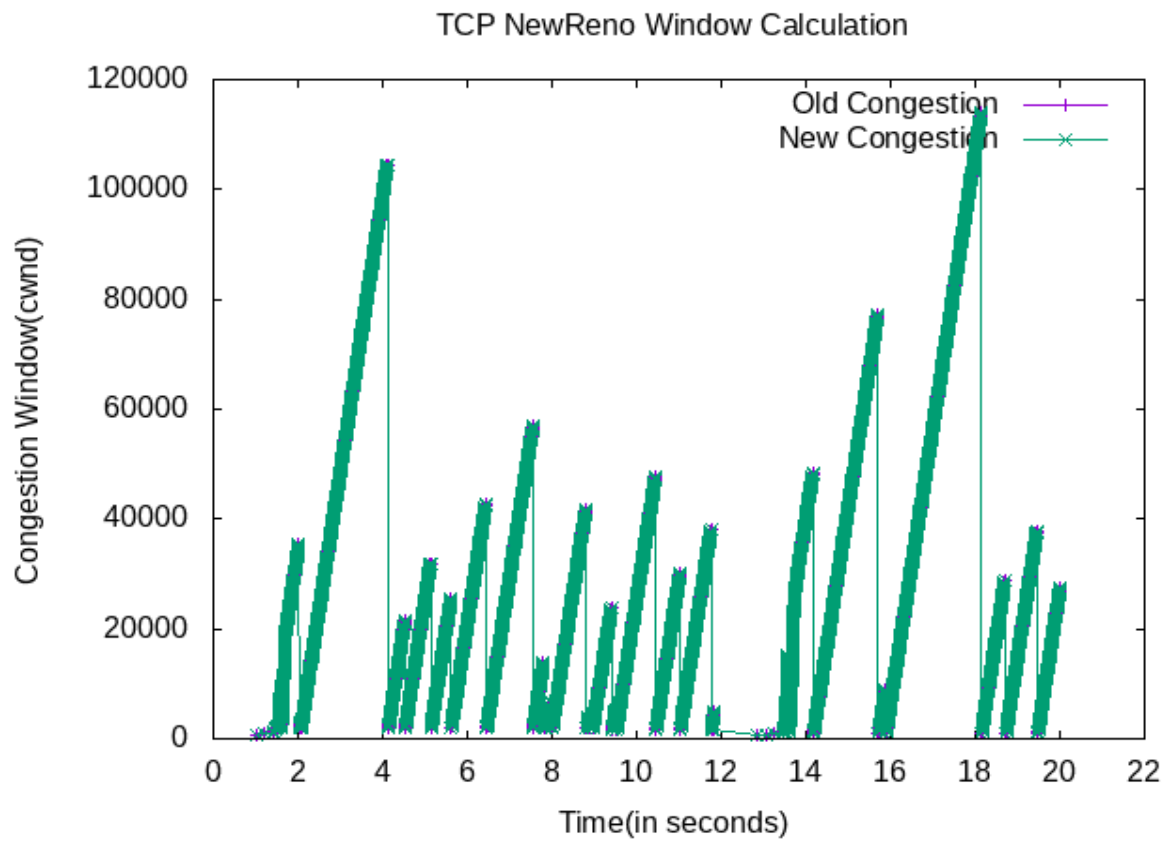


Q3.3 When all sources uses TCPNewRenoCSE

(3) Total no of packet drops =114

Graph

3.1



3.2

