TFWCs w/ reverse TCP Sack

TFWC

1...n

50Mbs, random delay

Drop Tail

15Mbs, 20ms
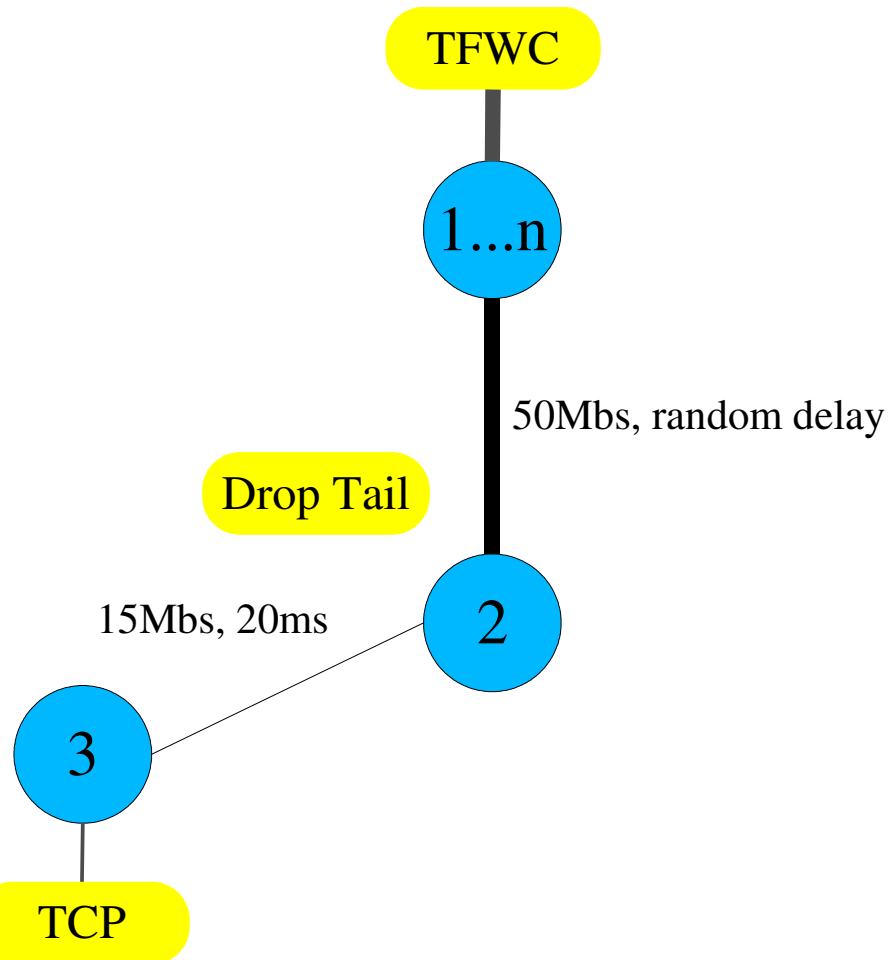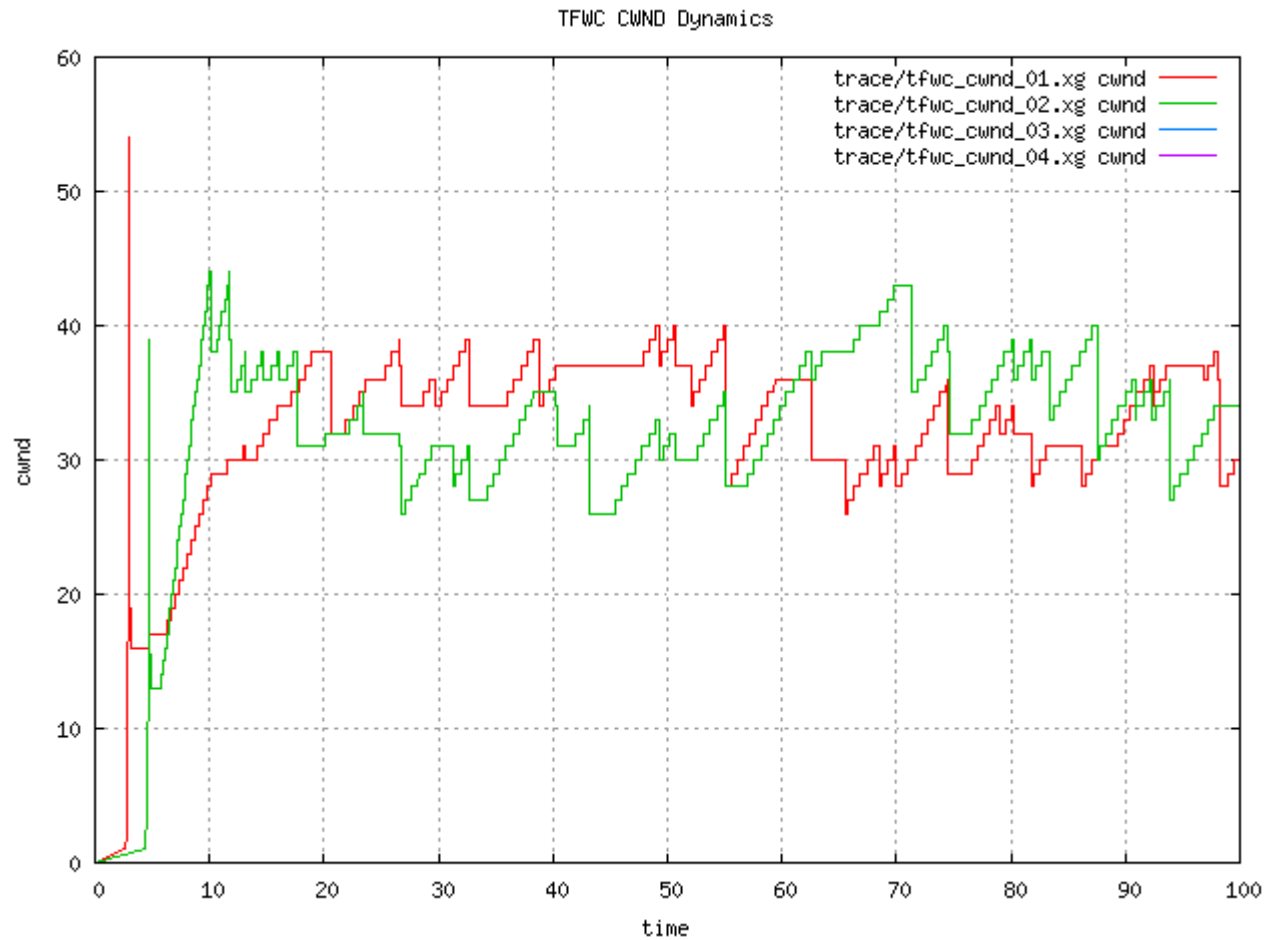
2

3

TCP

Reverse TCP

- Random FTP start time: 1s ~ 5s

- Random Access Link Delay: 2ms ~ 5ms
- e2e RTT = 44ms ~ 50ms

- Delay x Bandwidth = 20ms x 15Mb/s
  = 300 Kbits

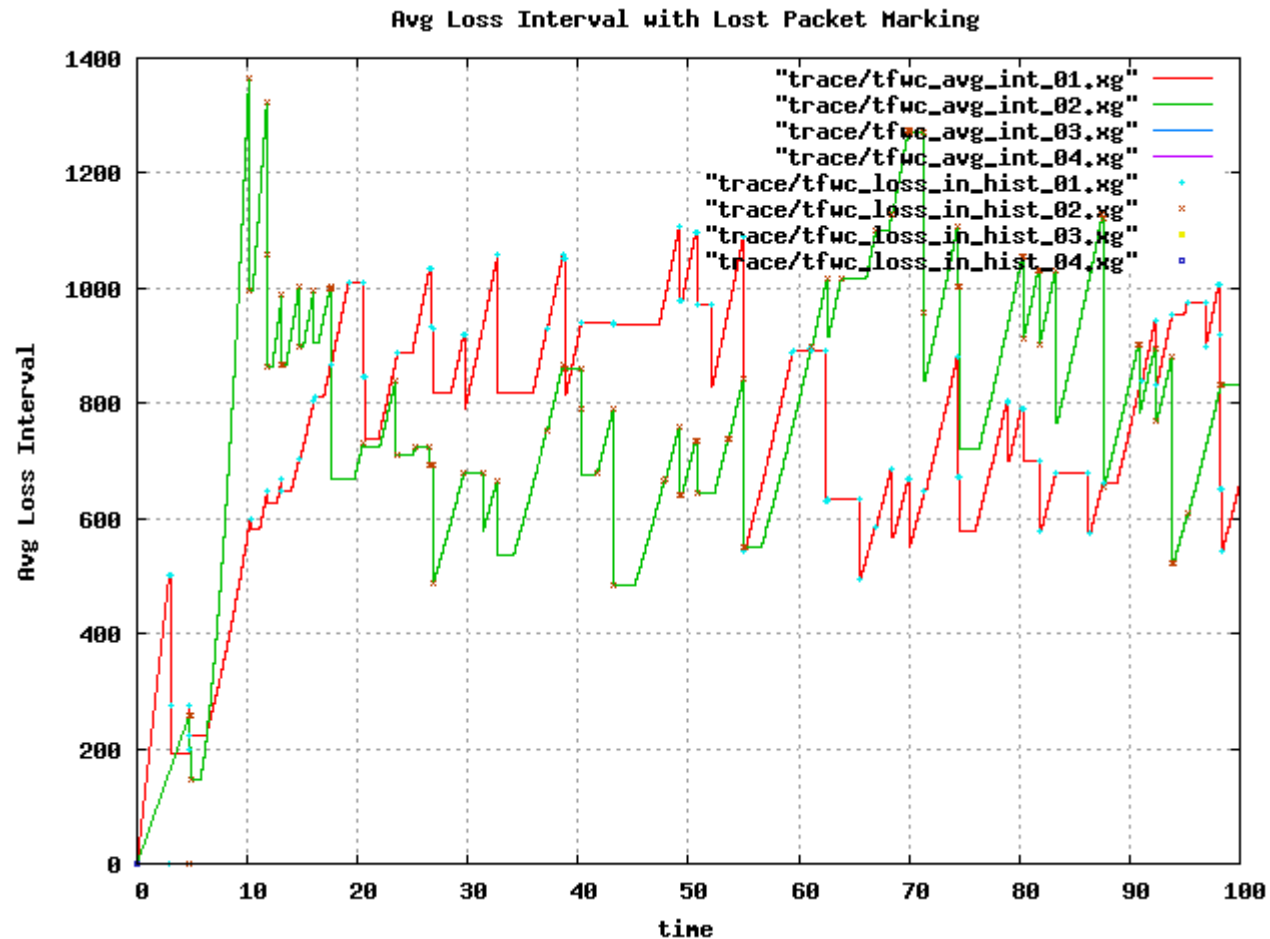- 1 packet = 1000 bytes = 8000 bits
- Delay x BW = 37.5 packets

2 TFWC w/ 2 reverse TCP
Bottleneck (RED) Q = 20
Simulation Time = 100
Random Seed Number = 177

Phase Break = On
Probability = 10%

cwnd dynamics

TFWC CWND Dynamics

average loss interval

Avg Loss Interval with Lost Packet Marking

2 TFWC w/ 2 reverse TCP
Bottleneck (RED) Q = 40
Simulation Time = 100
Random Seed Number = 177
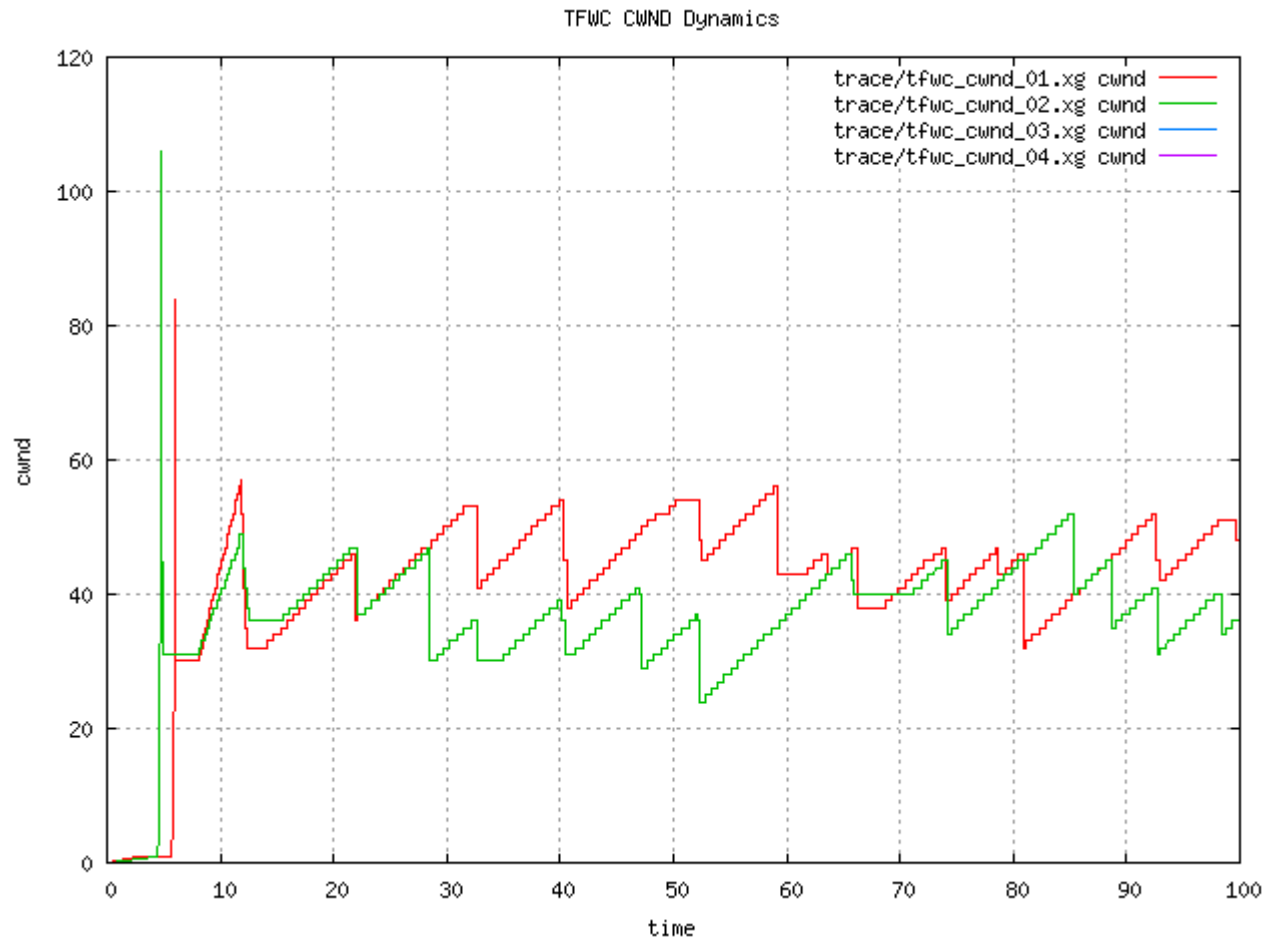
Phase Break = On
Probability = 10%

cwnd dynamics

TFWC CWND Dynamics

average loss interval

Avg Loss Interval with Lost Packet Marking

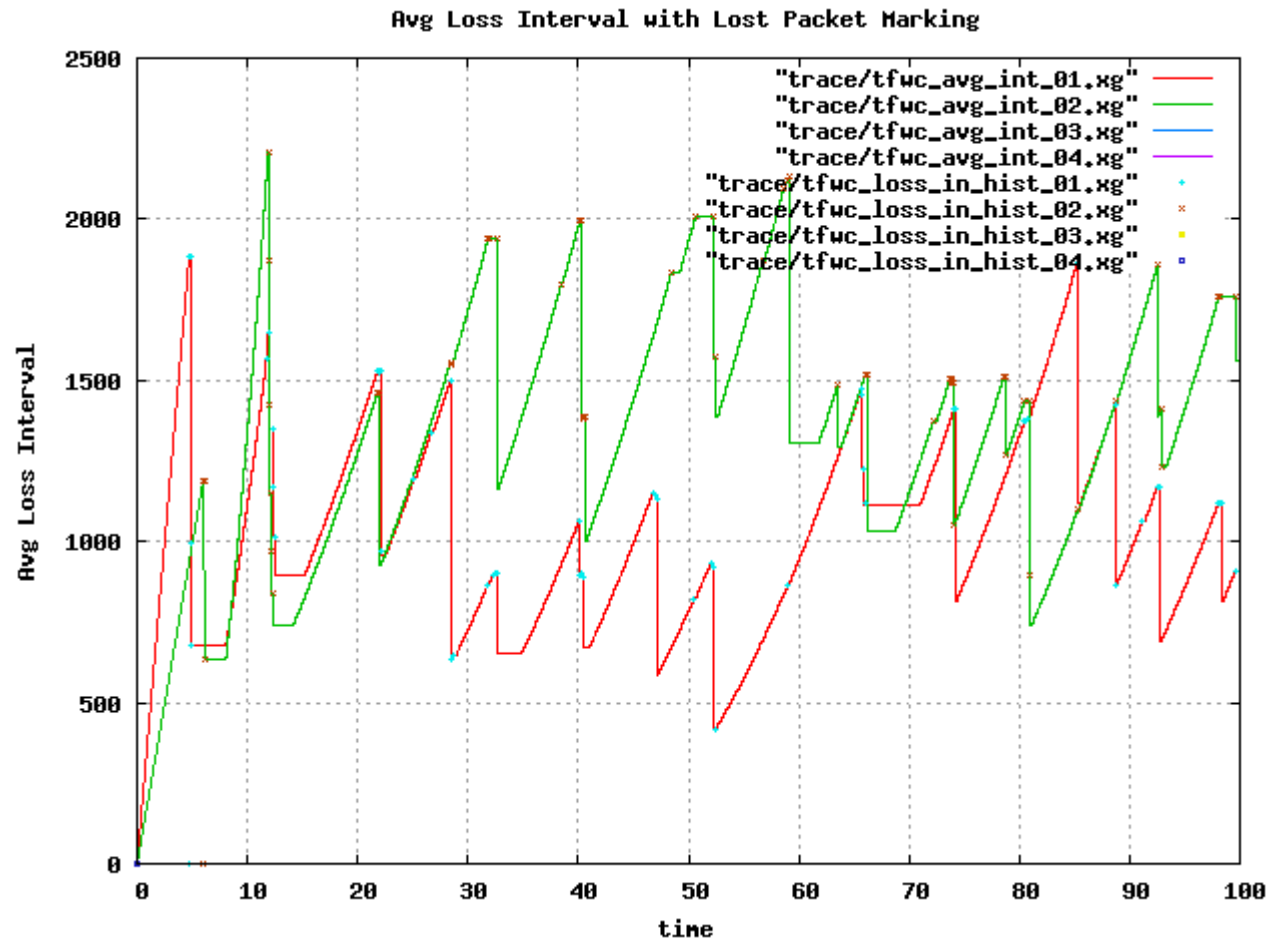2 TFWC w/ 2 reverse TCP
Bottleneck (RED) Q = 80
Simulation Time = 100
Random Seed Number = 177

Phase Break = On
Probability = 10%

cwnd dynamics

TFWC CWND Dynamics

average loss interval

Avg Loss Interval with Lost Packet Marking

4 TFWC w/ 4 reverse TCP
Bottleneck (RED) Q = 20
Simulation Time = 100
Random Seed Number = 177
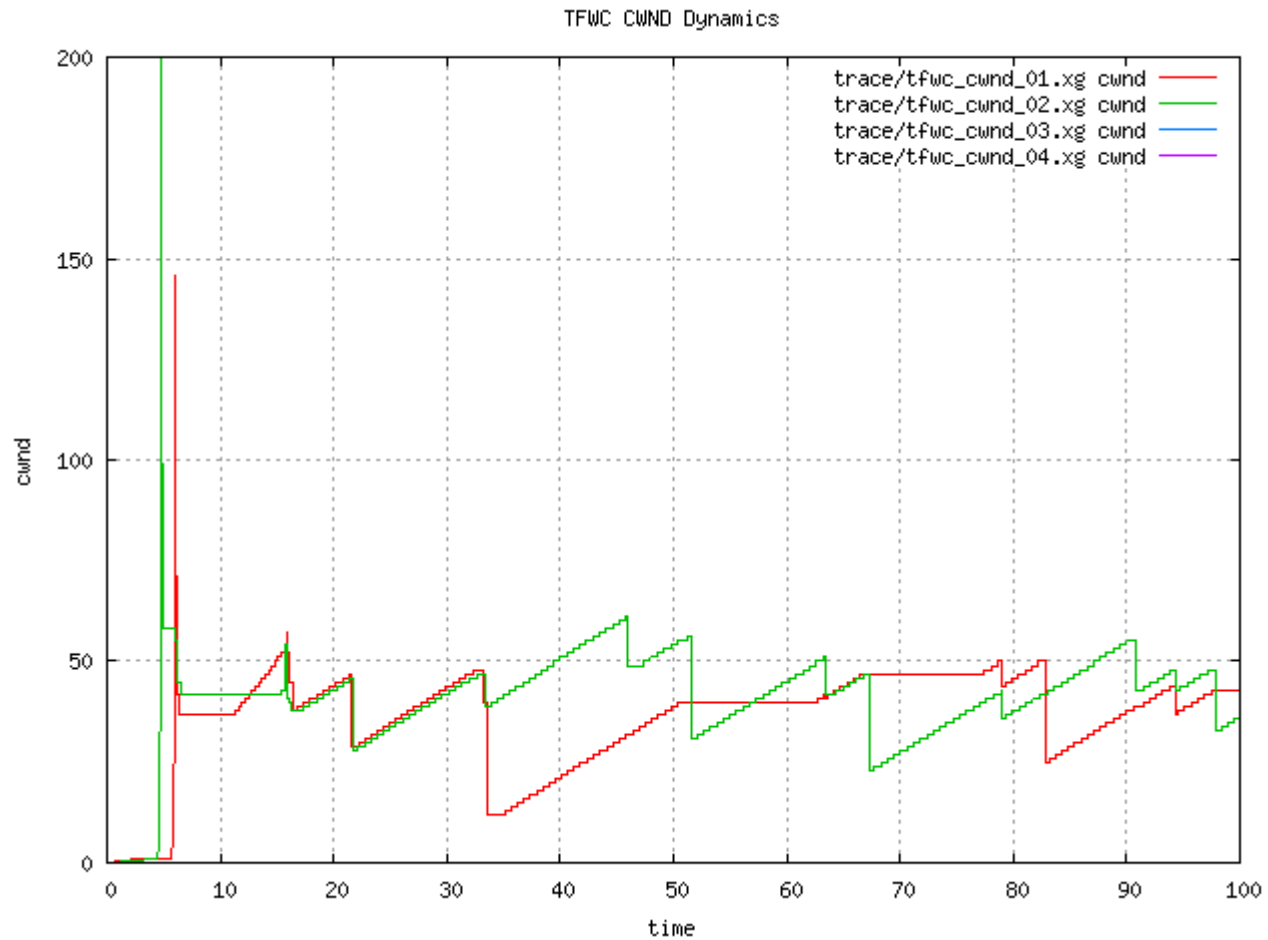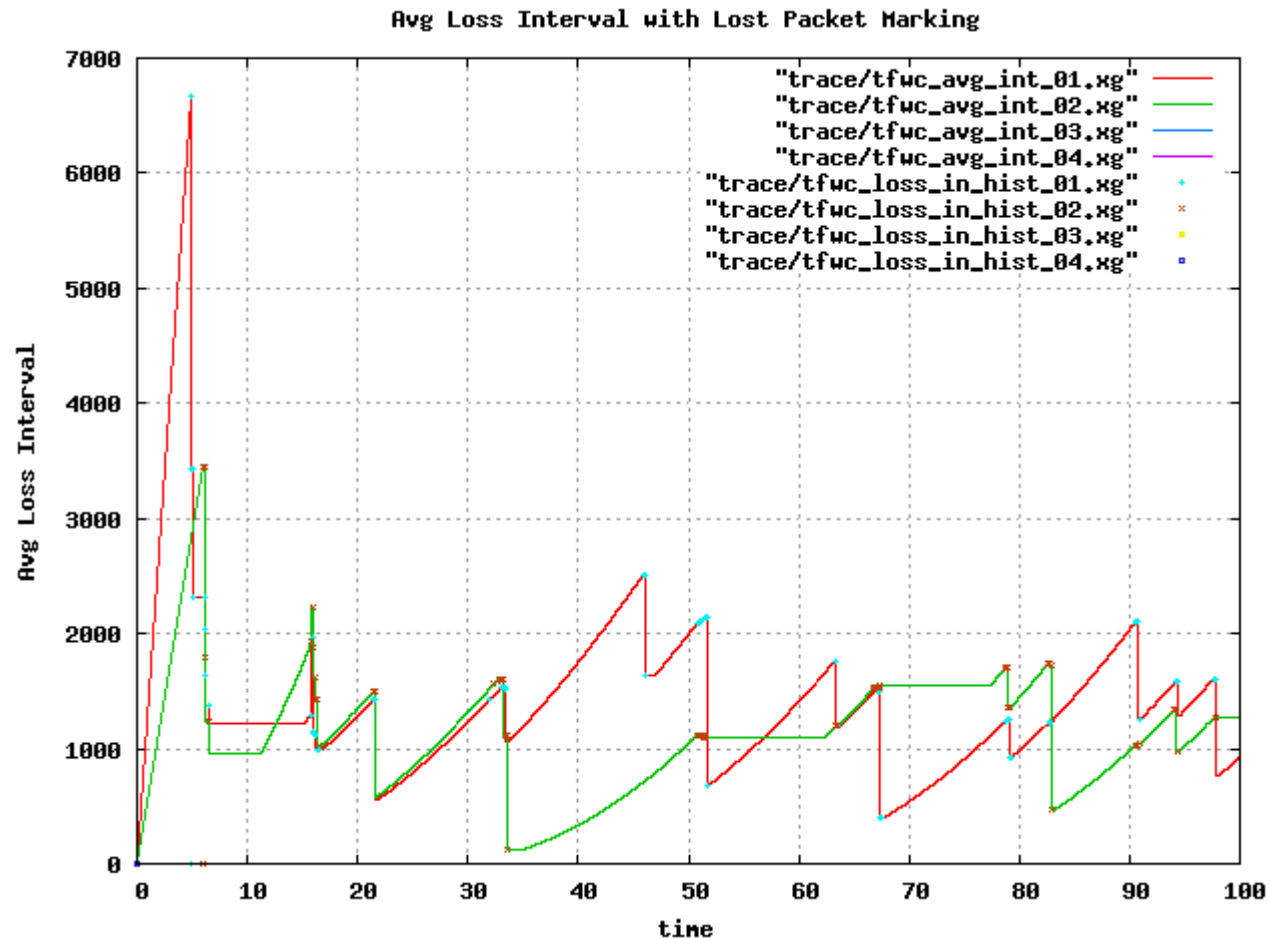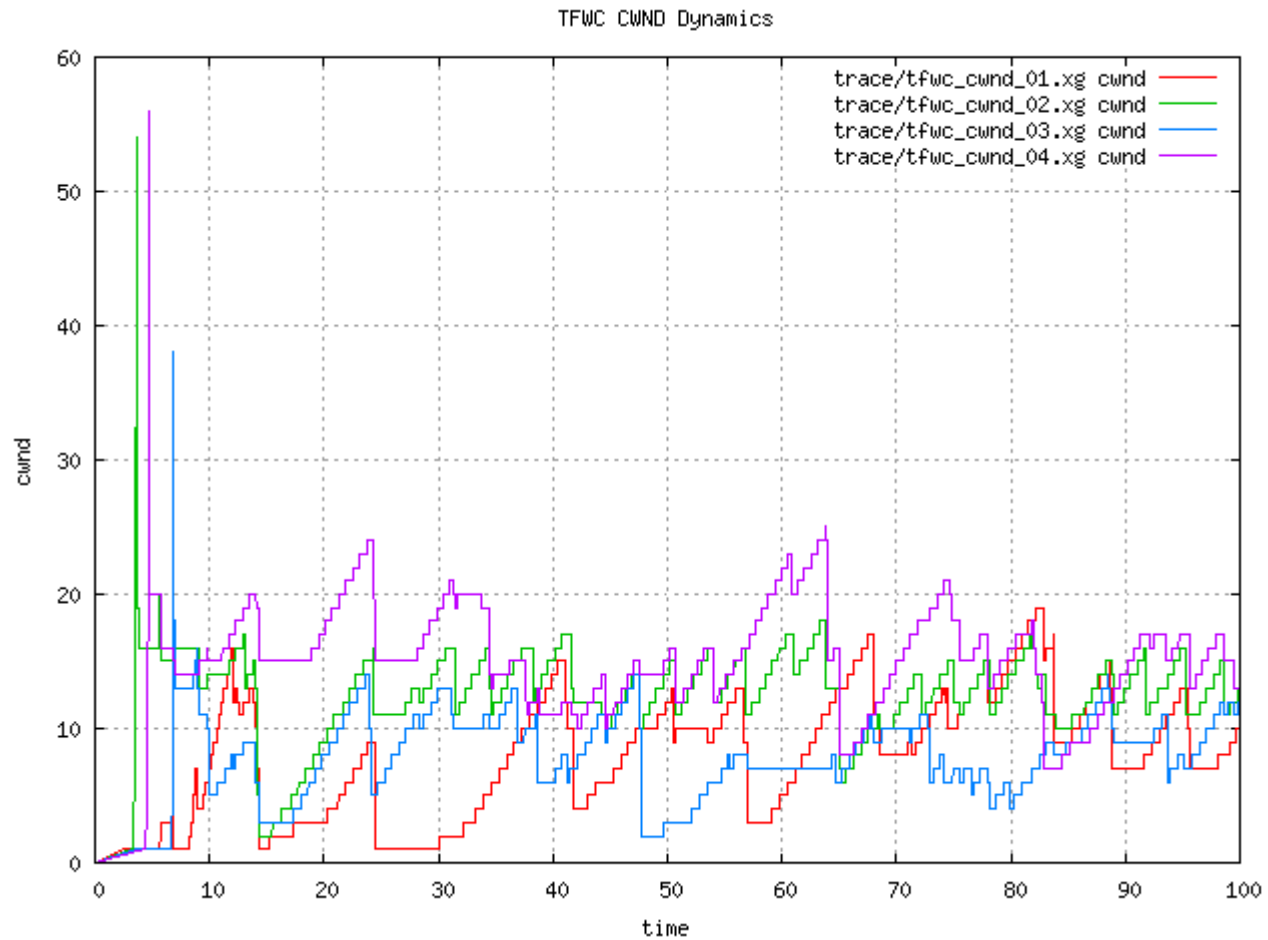
Phase Break = On
Probability = 10%

cwnd dynamics

TFWC CWND Dynamics

average loss interval

Avg Loss Interval with Lost Packet Marking

"trace/tfwc_avg_int_01.xg"
"trace/tfwc_avg_int_02.xg"
"trace/tfwc_avg_int_03.xg"
"trace/tfwc_avg_int_04.xg"
"trace/tfwc_loss_in_hist_01.xg"
"trace/tfwc_loss_in_hist_02.xg"
"trace/tfwc_loss_in_hist_03.xg"
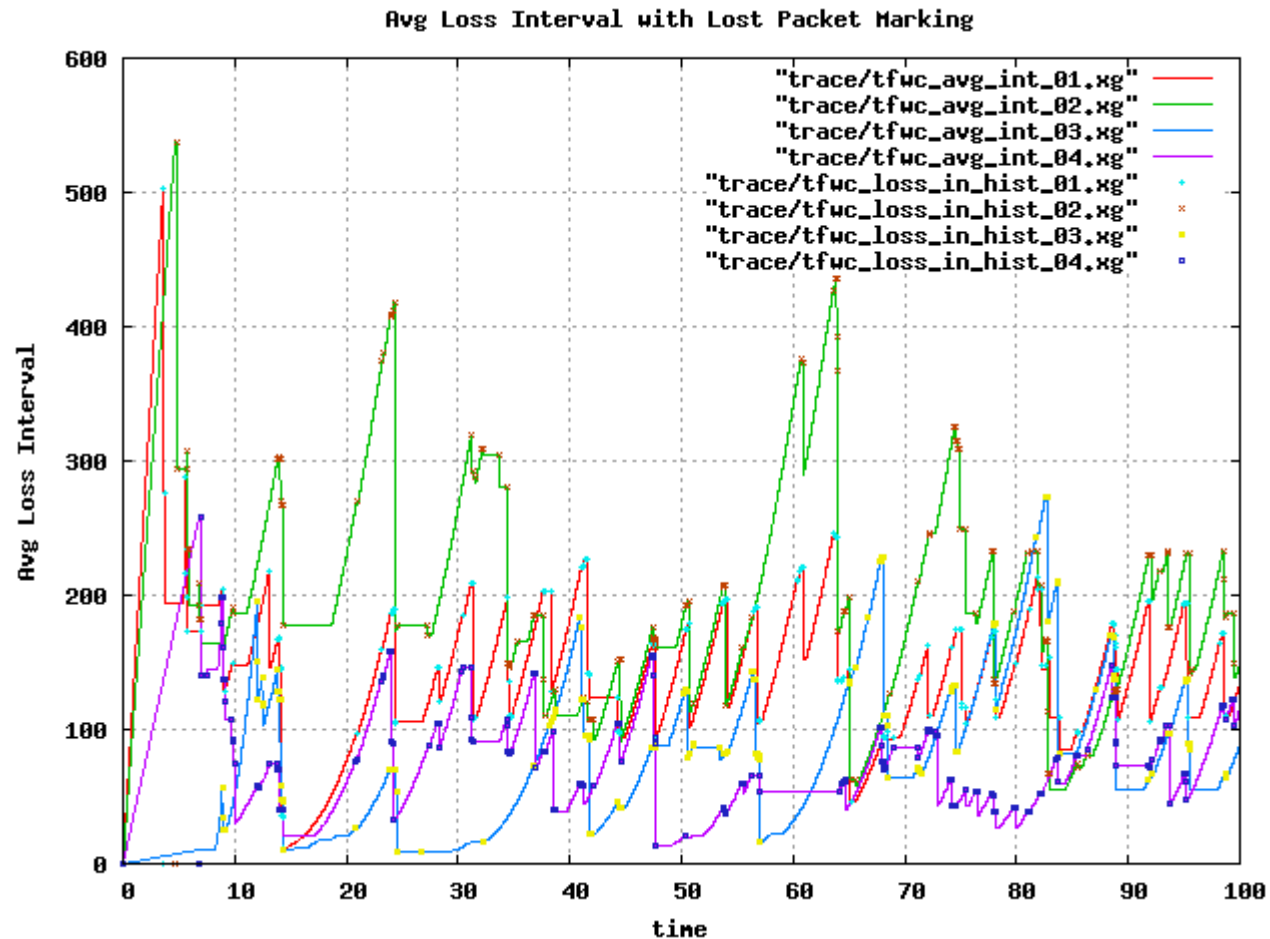"trace/tfwc_loss_in_hist_04.xg"

4 TFWC w/ 4 reverse TCP
Bottleneck (RED) Q = 40
Simulation Time = 100
Random Seed Number = 177
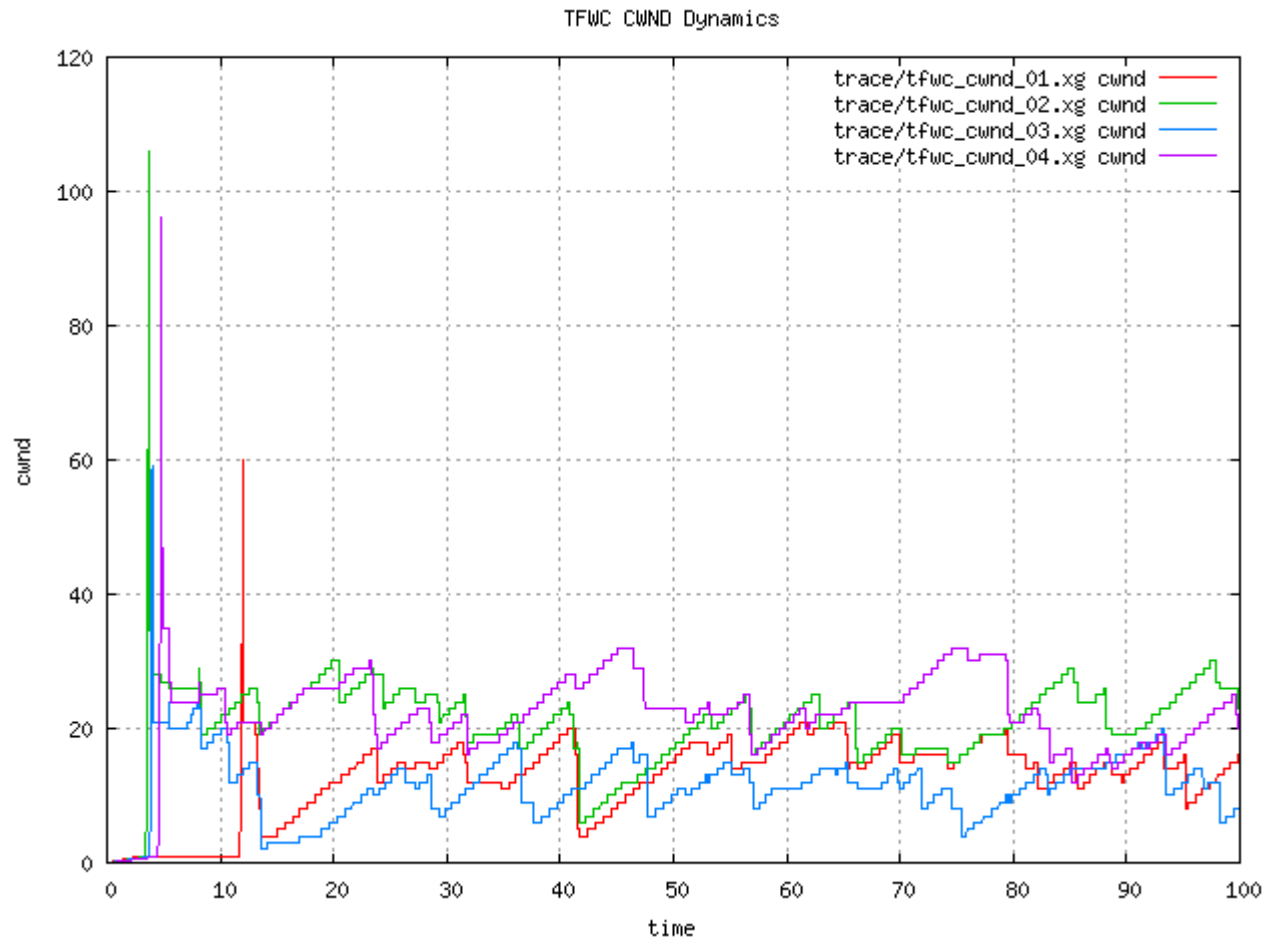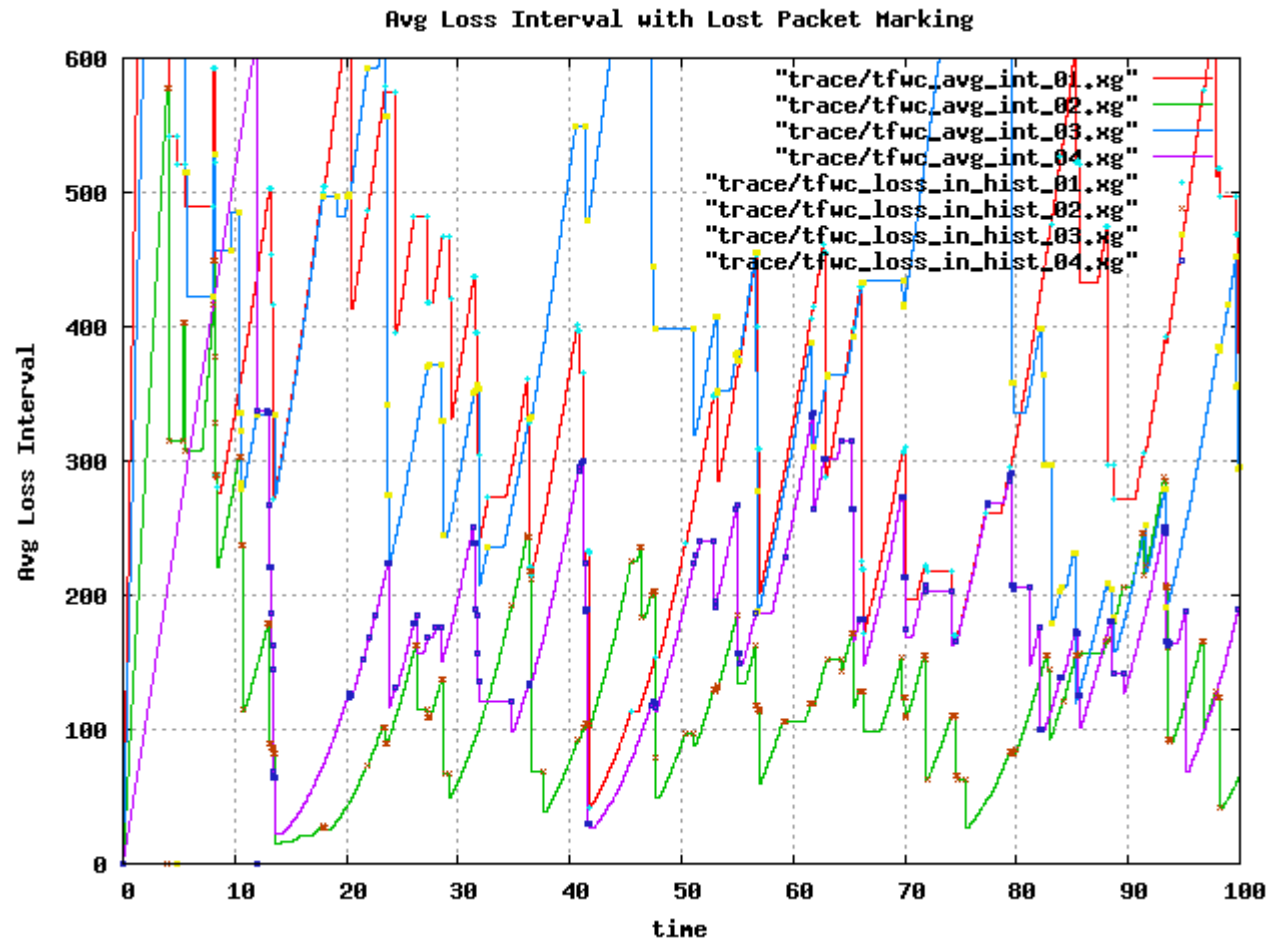
Phase Break = On
Probability = 10%

cwnd dynamics

average loss interval

Avg Loss Interval with Lost Packet Marking

Legend:
"trace/tfwc_avg_int_01.xg"
"trace/tfwc_avg_int_02.xg"
"trace/tfwc_avg_int_03.xg"
"trace/tfwc_avg_int_04.xg"
"trace/tfwc_loss_in_hist_01.xg"
"trace/tfwc_loss_in_hist_02.xg"
"trace/tfwc_loss_in_hist_03.xg"
"trace/tfwc_loss_in_hist_04.xg"

y-axis: Avg Loss Interval
x-axis: time

4 TFWC w/ 4 reverse TCP
Bottleneck (RED) Q = 80
Simulation Time = 100
Random Seed Number = 177
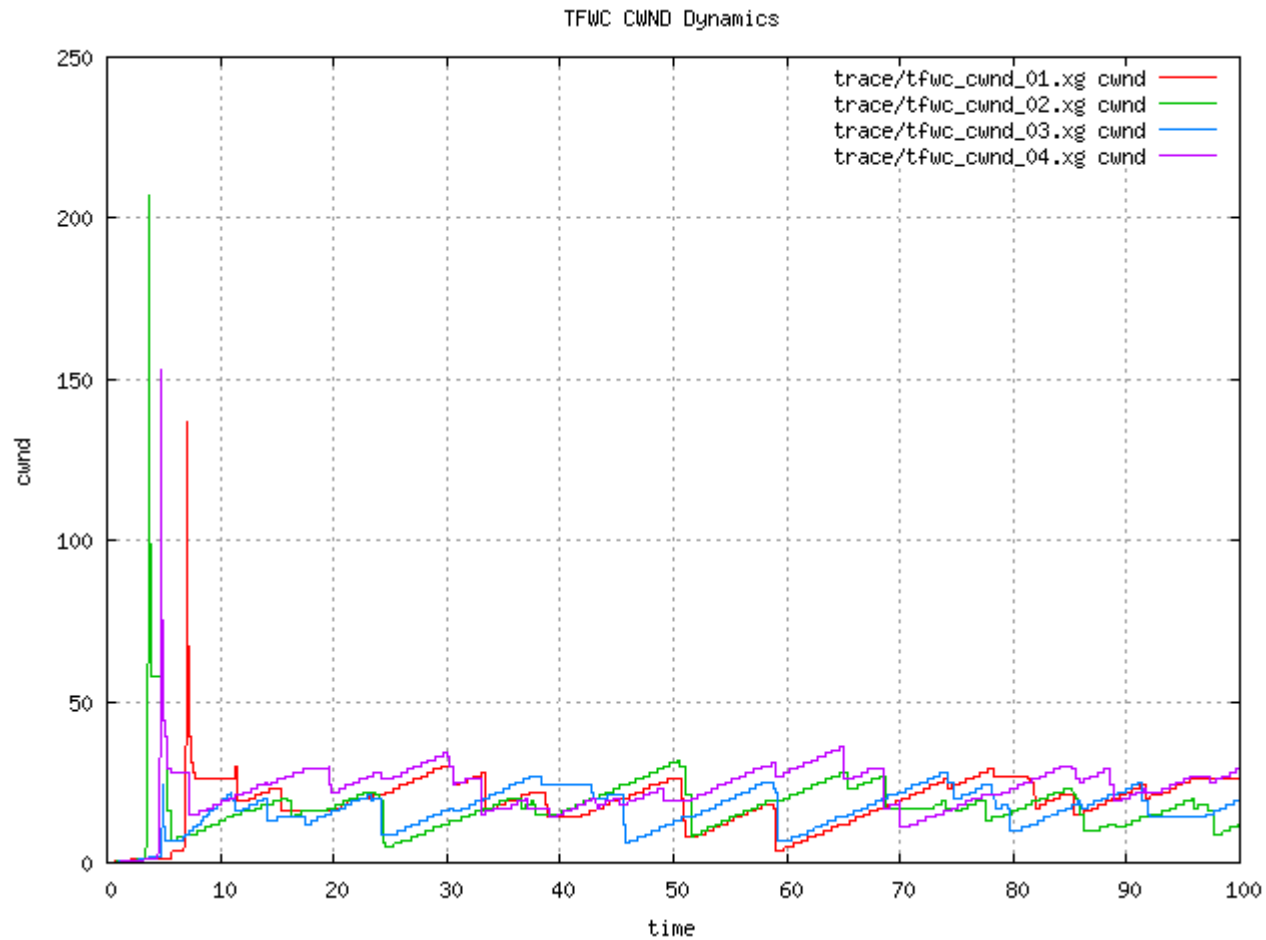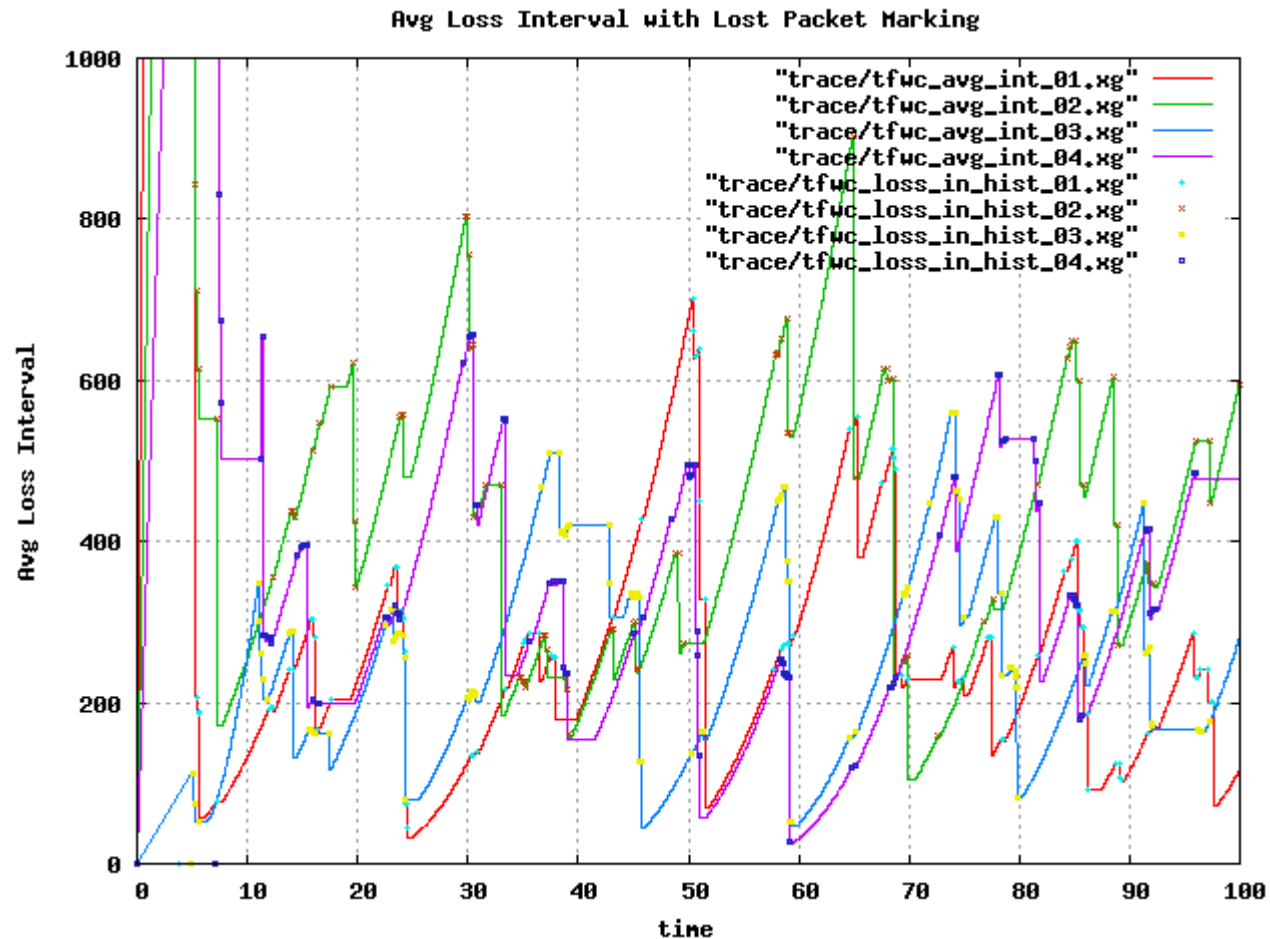
Phase Break = On
Probability = 10%

cwnd dynamics

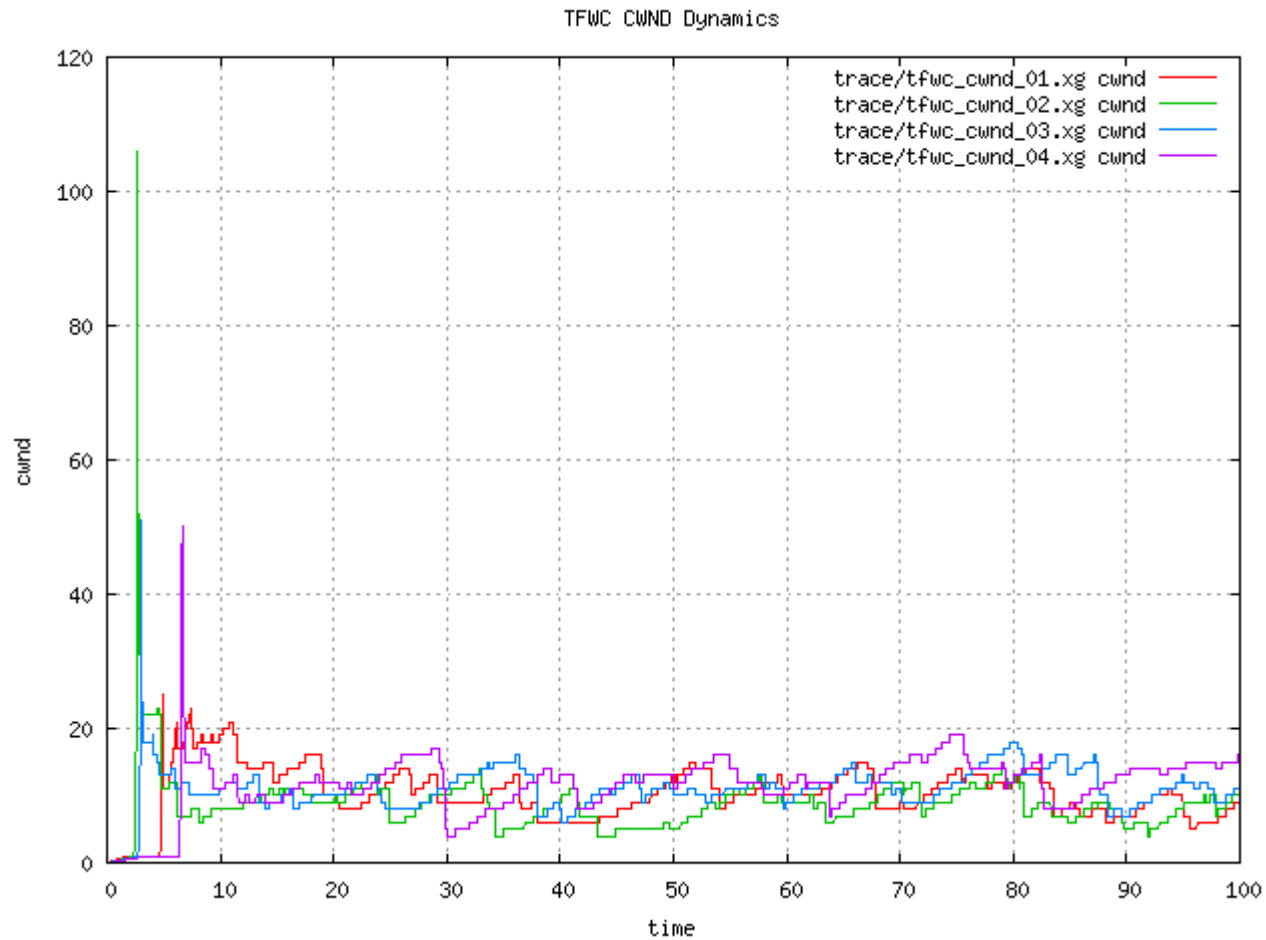# average loss interval

Avg Loss Interval with Lost Packet Marking

8 TFWC w/ 8 reverse TCP
Bottleneck (RED) Q = 40
Simulation Time = 100
Random Seed Number = 177

(draw only for the first four traffic sources)

Phase Break = On
Probability = 10%

cwnd dynamics

TFWC CWND Dynamics

average loss interval
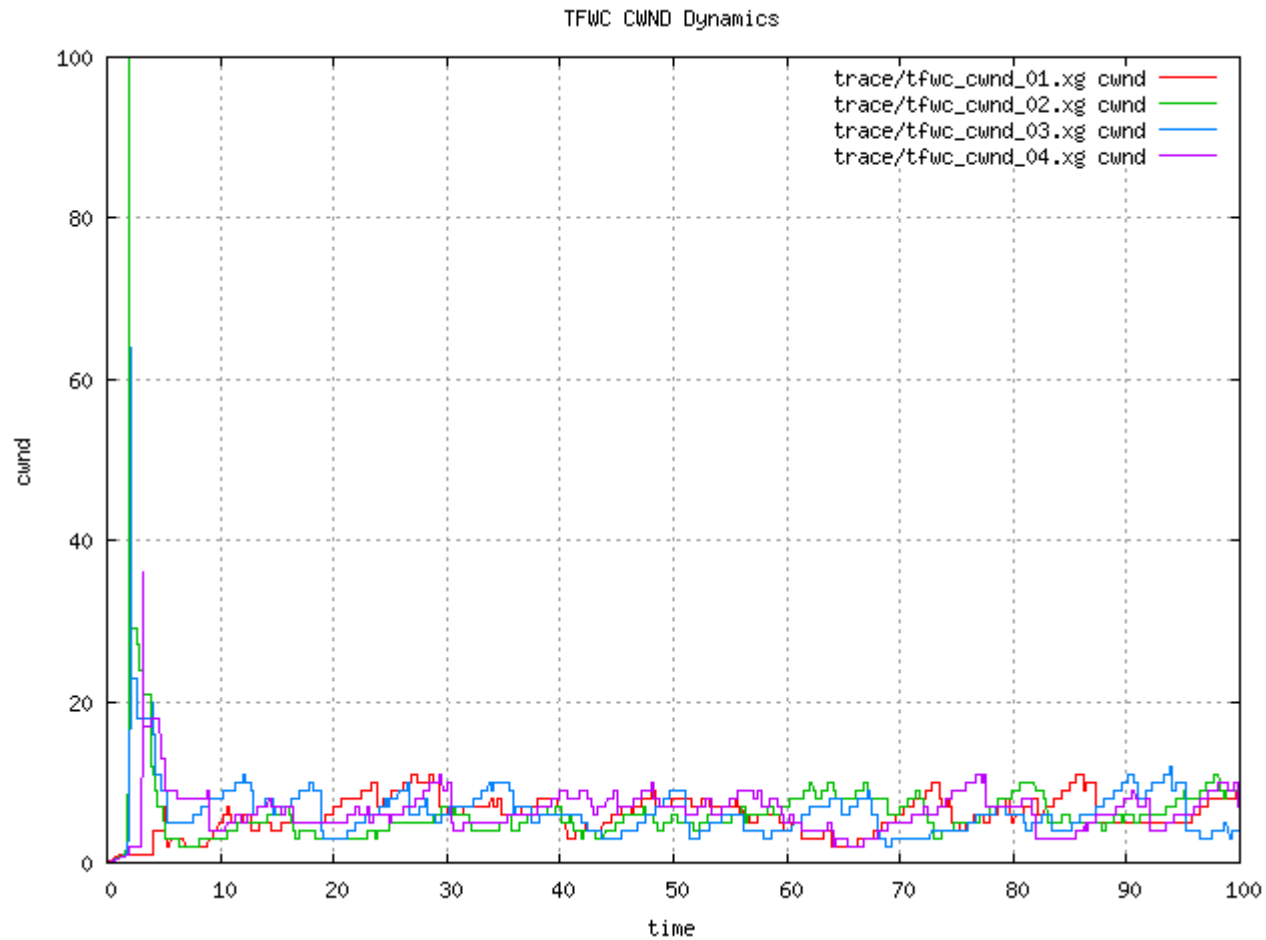

Avg Loss Interval with Lost Packet Marking
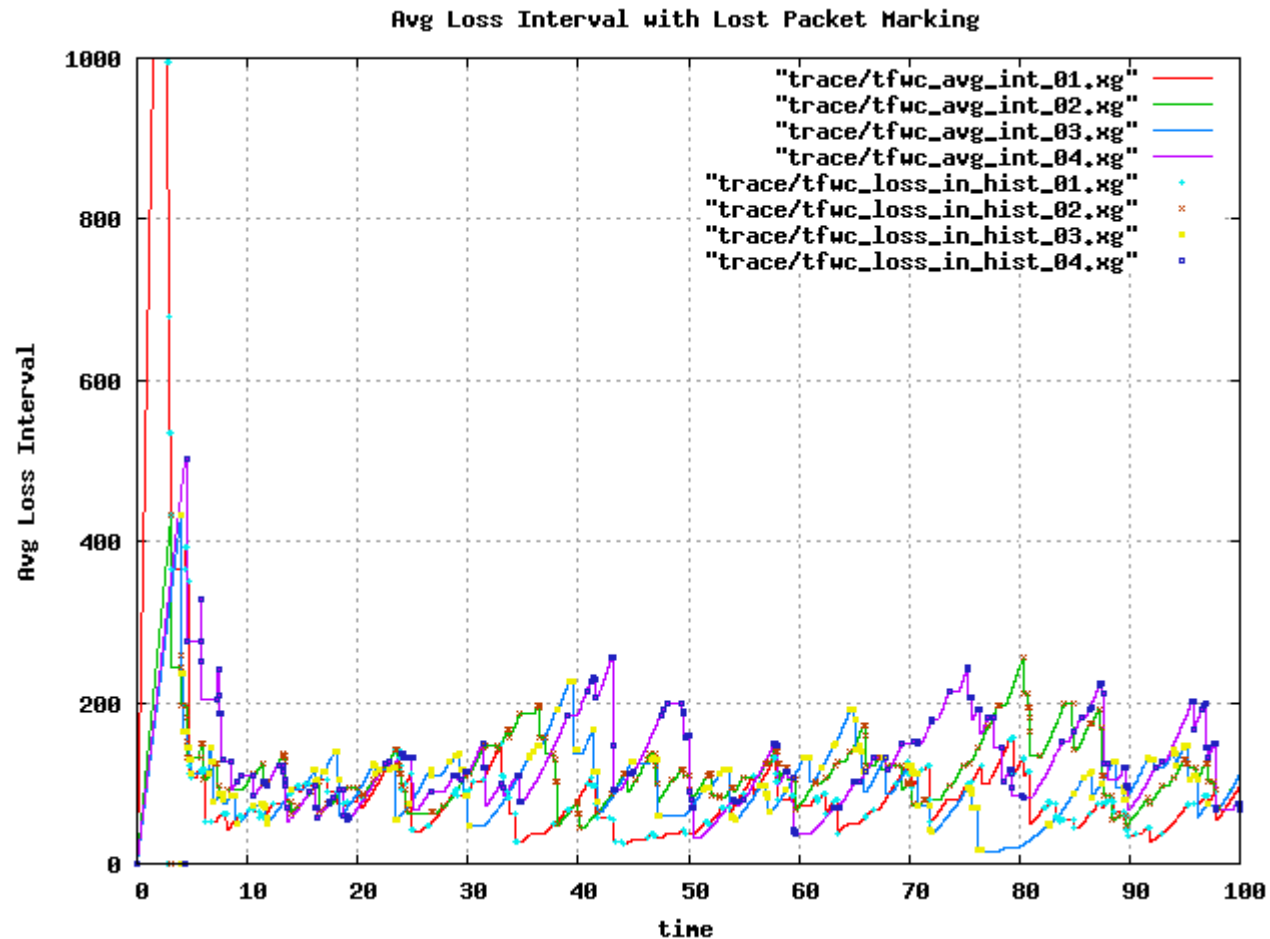
16 TFWC w/ 16 reverse TCP
Bottleneck (RED) Q = 40
Simulation Time = 100
Random Seed Number = 177

(draw only for the first four traffic sources)

Phase Break = On
Probability = 10%

cwnd dynamics

TFWC CWND Dynamics

average loss interval

Avg Loss Interval with Lost Packet Marking