Progess on Validating the model given by NYU students

Week V Presentation

Santwana Verma

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Doubts and Possible Explanations

[fragile]

- **Data in flight** not found.
- Not equal number of points for 0.75 and 1.25 in the pacing gain plot.
  - In **ProbeBW** phase, the pacing gain cycle of [1.25, 0.75, 1, 1, 1, 1, 1, 1] is followed.
  - The following line of code shows that it does not necessarily follow the cycle.

```
bbr->pacing_gain = bbr->lt_use_bw ? BBR_UNIT :
bbr_pacing_gain [bbr->cycle_idx];
```

  - **Still not clear!** The **Startup phase** should be followed by the **Drain phase** which requires the **pacing_gain** to be **0.35**

The pacing gain plot

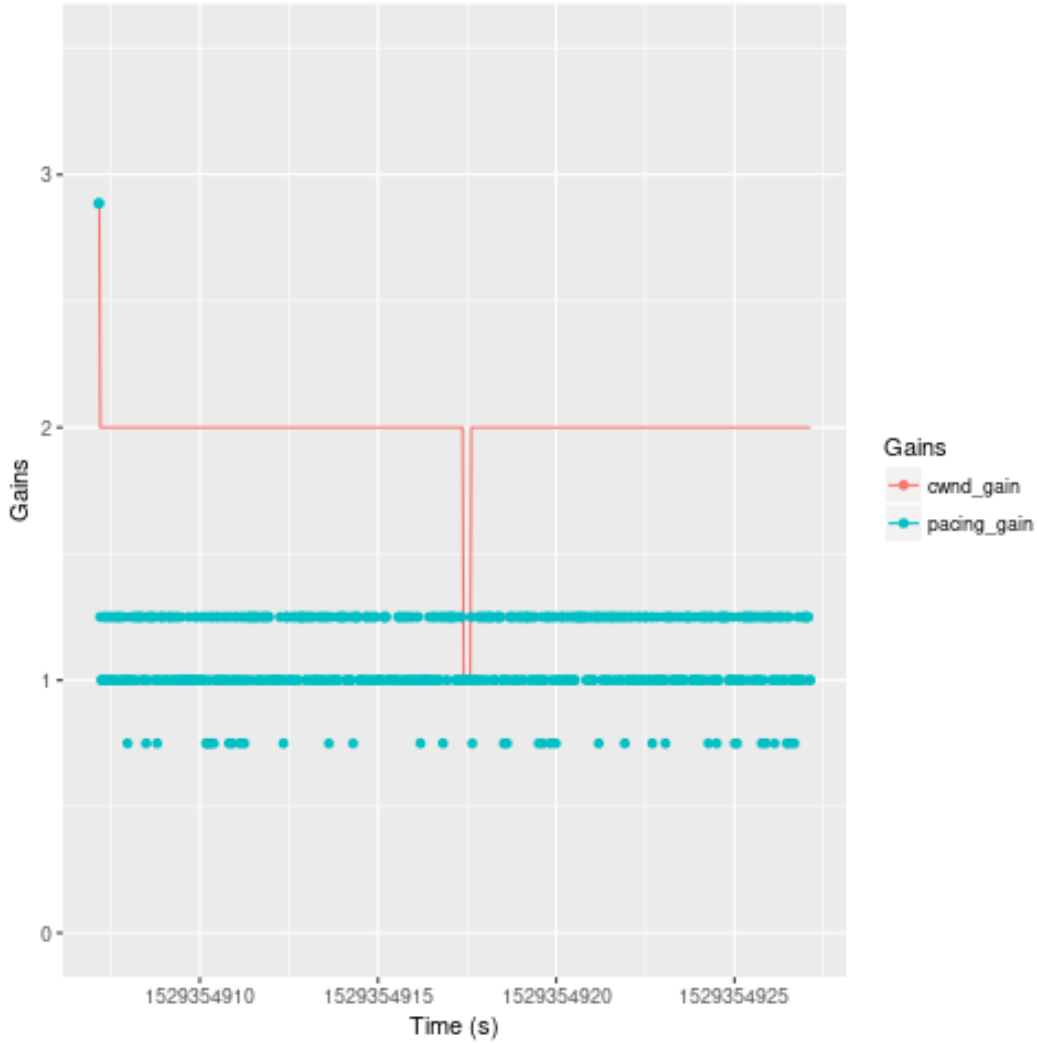
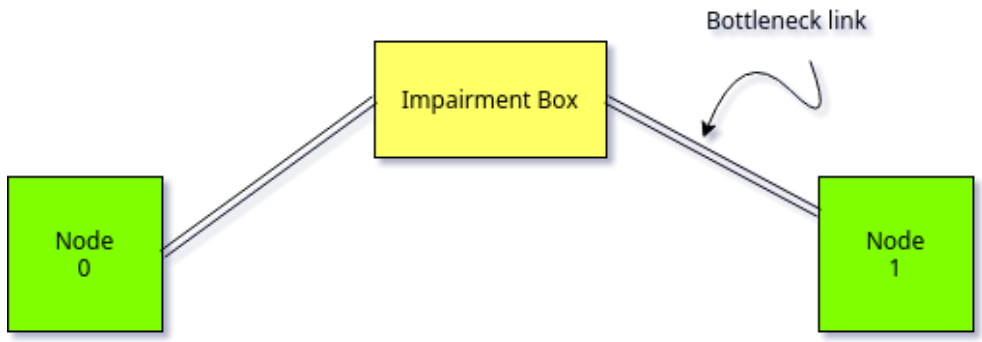


Figure: Gains vs Time

Delays and Losses

Recap: The Experimental Setup



Experimental Setup

Delays and Losses

- Delay:
  - 10ms
  - 20ms
  - 60ms
  - Pacing gain ¡ 1 should increase with increasing delay.
- Losses:
  - 0.1% (1 in 1000 packet is lost)
  - 1%

Delay and Losses (RTT increases with delay)

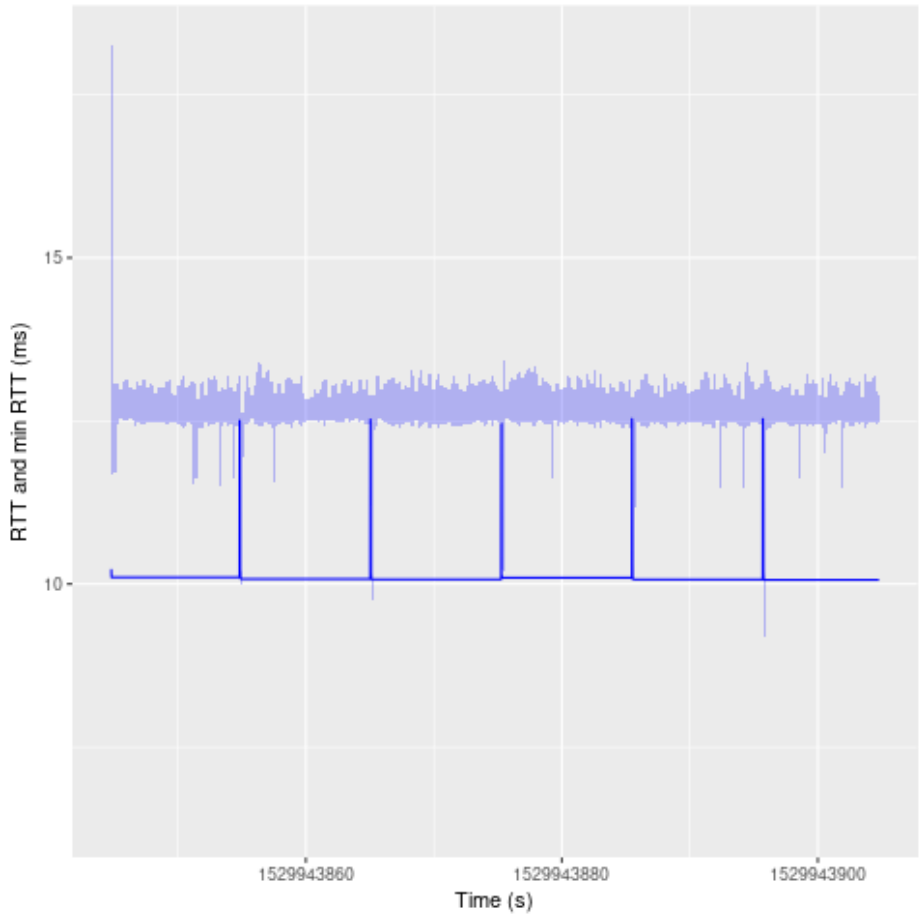


Figure: RTT in a delay of 10ms

Delay and Losses (RTT increases with delay)

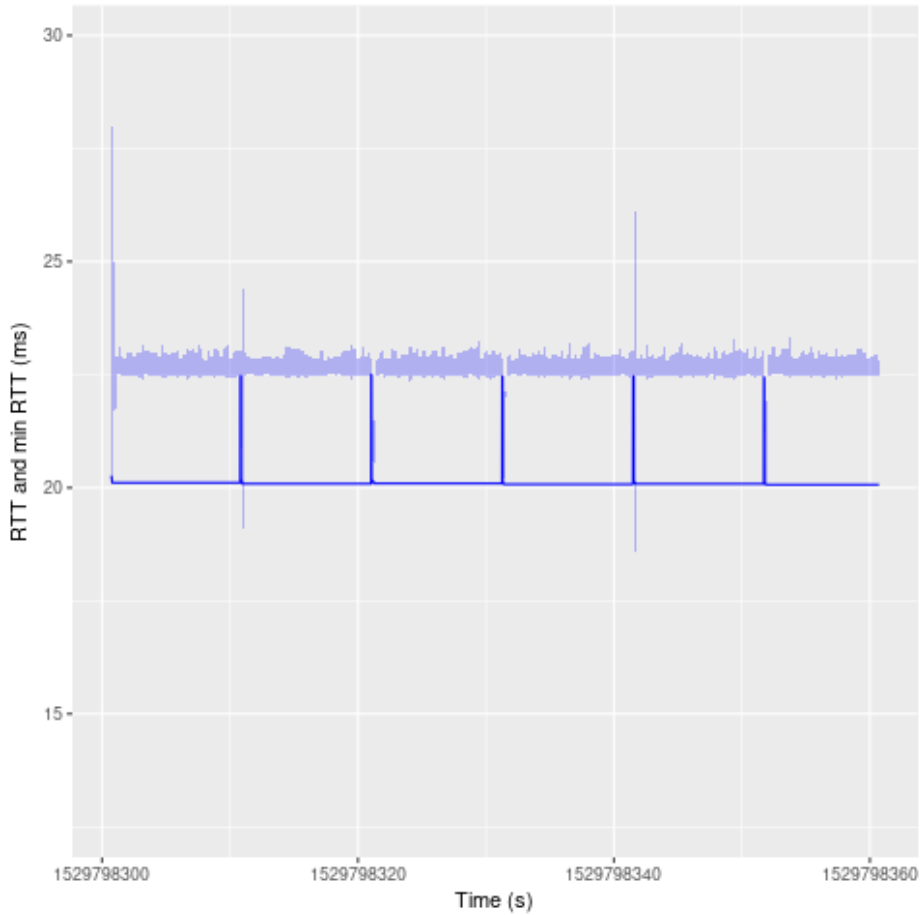


Figure: RTT in a delay of 20ms

Delays and Losses (RTT increases with delay)

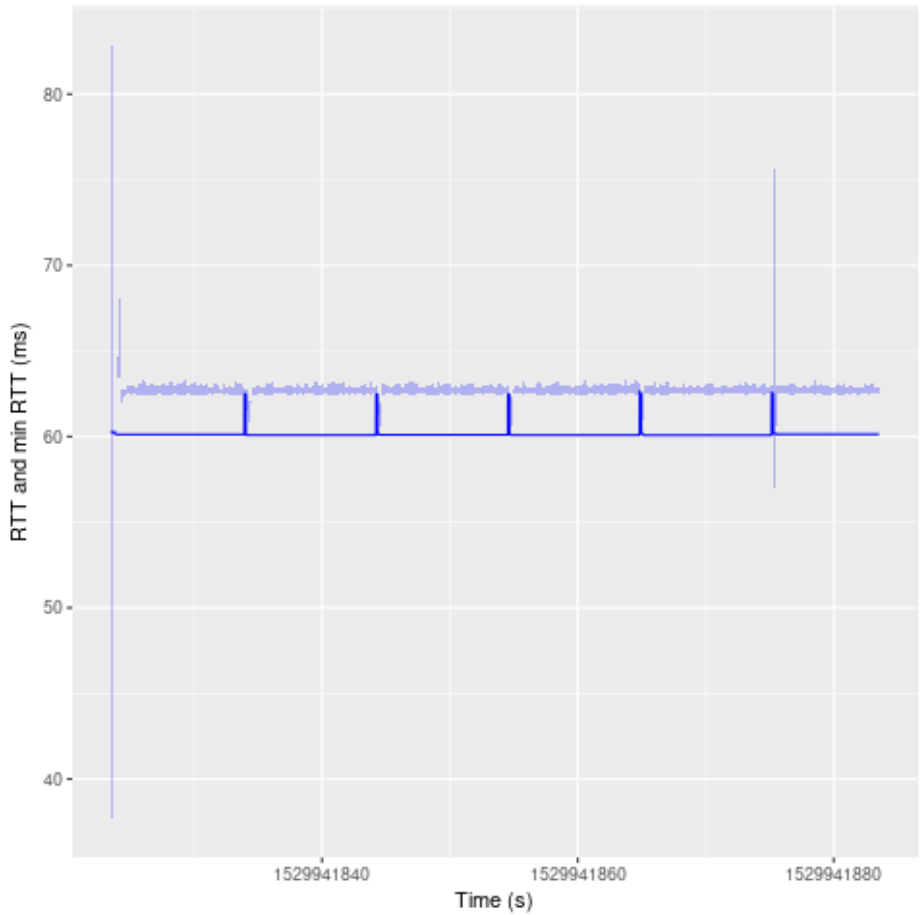


Figure: RTT in a delay of 60ms

CWND and Queue Formation

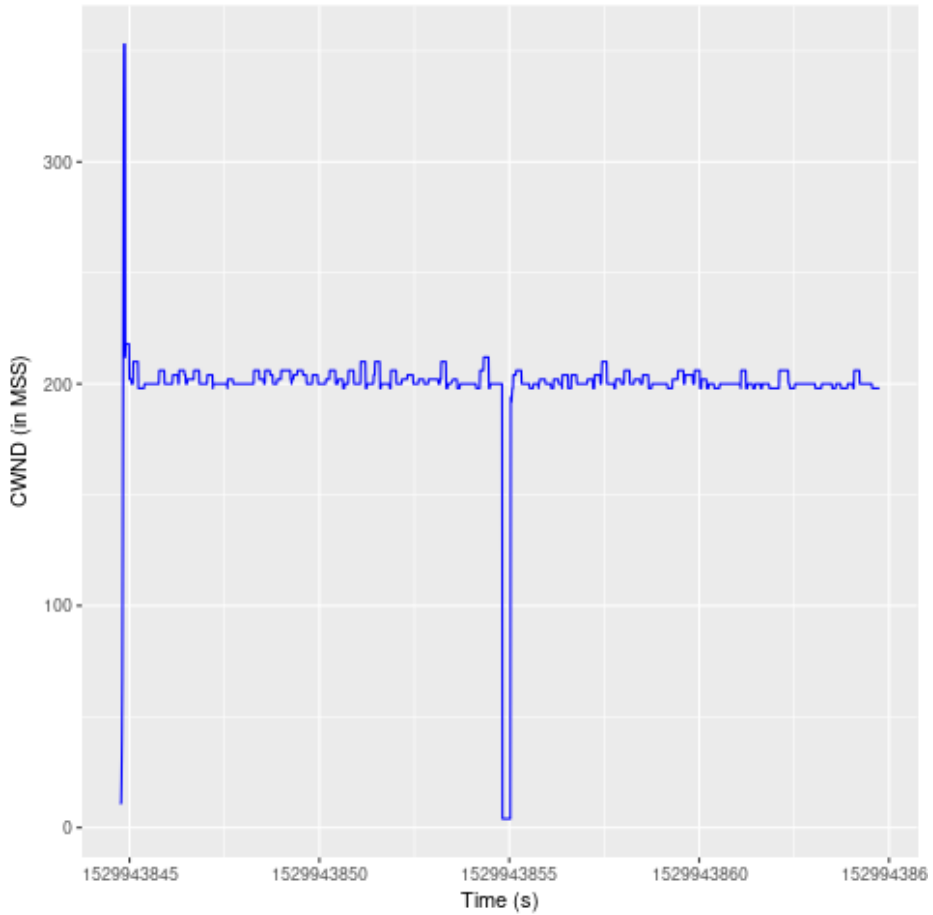


Figure: Cwnd in a delay of 10ms for the first 20sec

CWND and Queue Formation

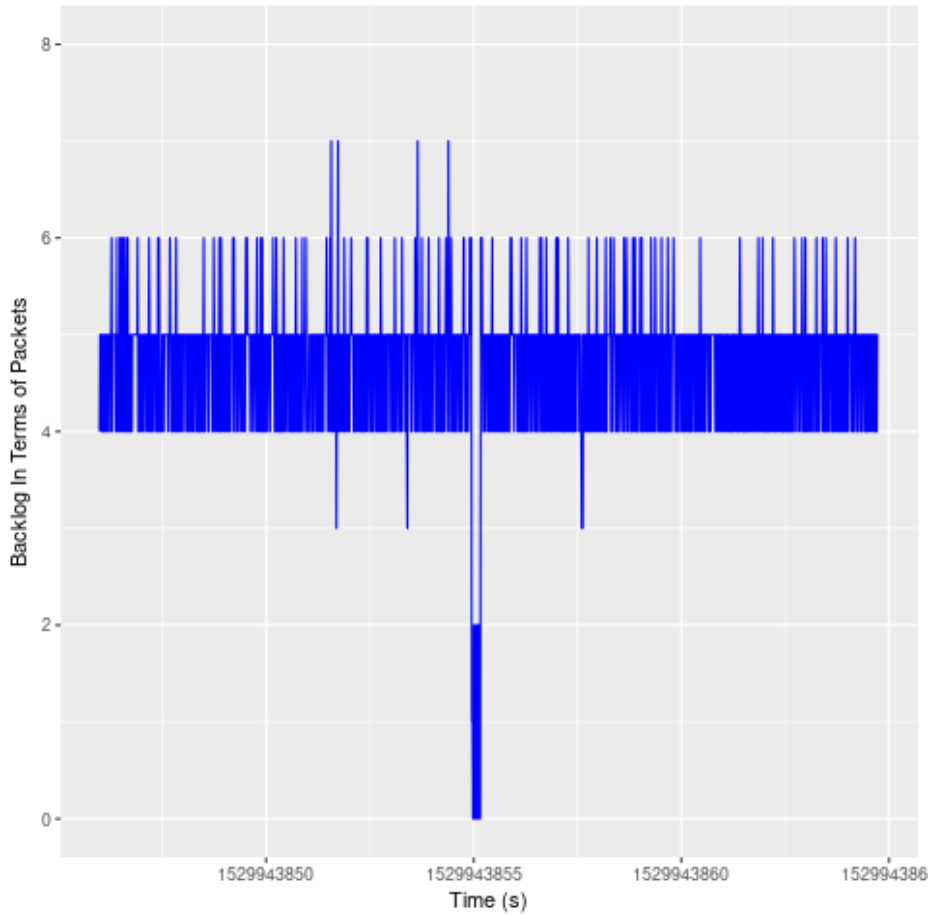


Figure: Backlog in a delay of 10ms for the first 20sec

Work for immediate future

- Analyze the plots obtained for various values of losses and delays.
- Observe the effect of packet loss on BBR by comparing with other flows such as Cubic.
- Observe the effect of multiple flows with BBR.

Questions and Suggestions

Thank You!

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