SHRED

An Active Queue Management

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References

   Paper Link `https://core.ac.uk/download/pdf/47187389.pdf`

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Motivation

- Most of the Improvements of RED are focused on Long-lived flows
- For Web only traffic, RED performs worse than Droptail
- Short-lived flows have small congestion window
- Short-lived flows are sensitive to packet drop

Algorithm

- It extends gentle RED algorithm
- In SHRED, we send host or edge routers the information about current congestion window
- min_{th} and max_p is adjusted according to current window
- the slop of the drop probability line remains same for given parameter
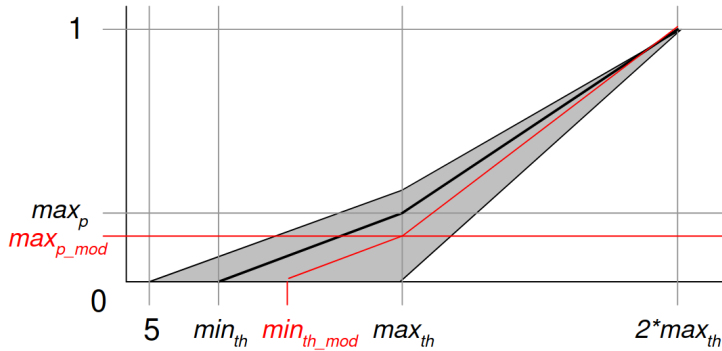
Drop Probability
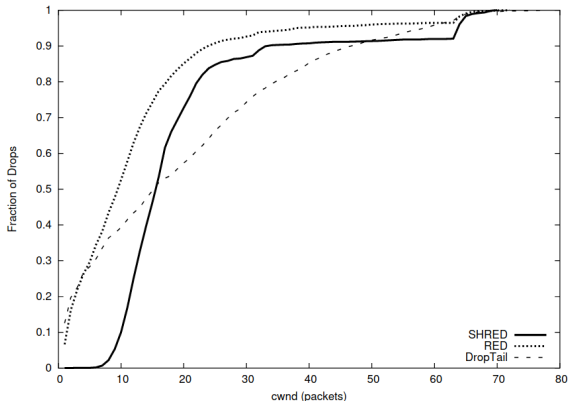

Figure: Computing Drop Probability in SHRED

Improvement

Figure: Drop probability vs congestion window