

Coupled Congestion Control for RTP Media

draft-welzl-rmcat-coupled-cc-05

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REDUCING INTERNET TRANSPORT LATENCY

RMCAT
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What's New?

- Text on how to apply coupled congestion control with *NADA*
- Results based on the RMCAT test cases
- Coupled congestion control with *Google congestion control*

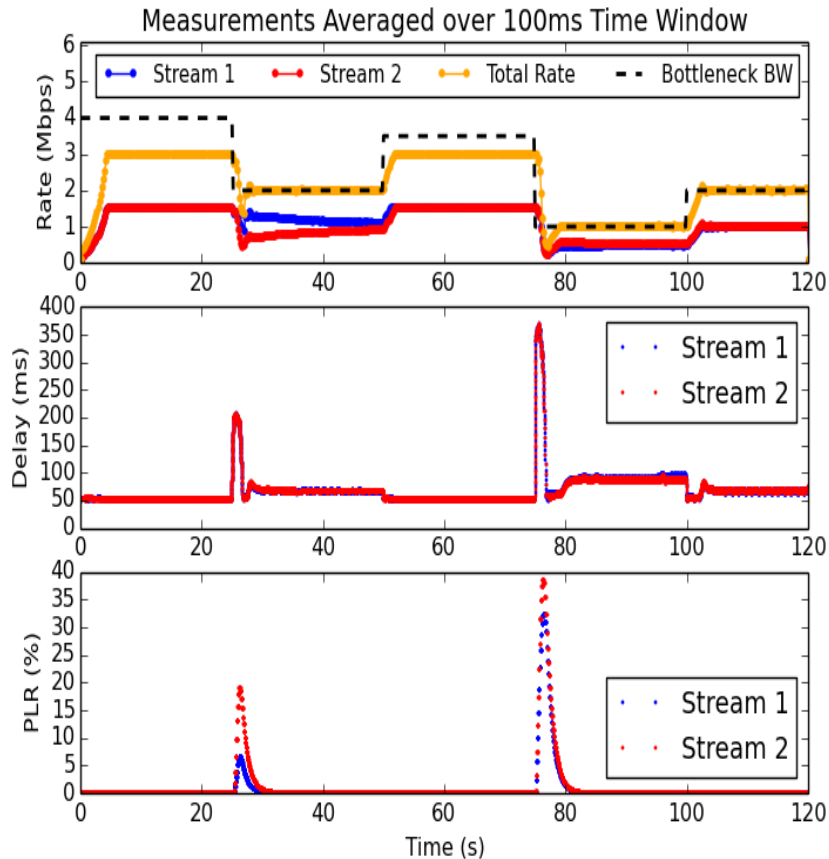
Coupled-CC with NADA

Test Cases: all multi-flow tests

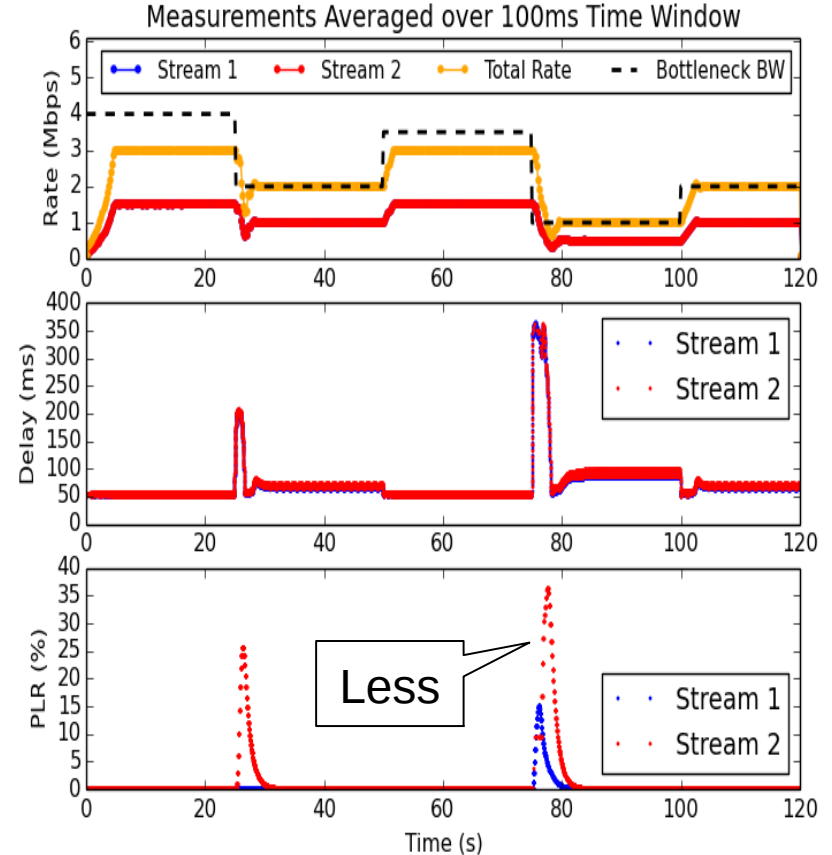
- **Test 5.2** – Variable available capacity with multiple RMCAT flows
- **Test 5.4** – Competing flows with same RMCAT algorithm
- **Test 5.5** – Round trip time fairness
- **Test 5.6** – RMCAT Flow^s competing with a long TCP Flow
- **Test 5.7** – RMCAT Flows competing with short TCP flows
- **Test 5.8** – Media pause and resume

Test 5.2: Variable Available Capacity with Multiple RMCAT Flows

Without FSE



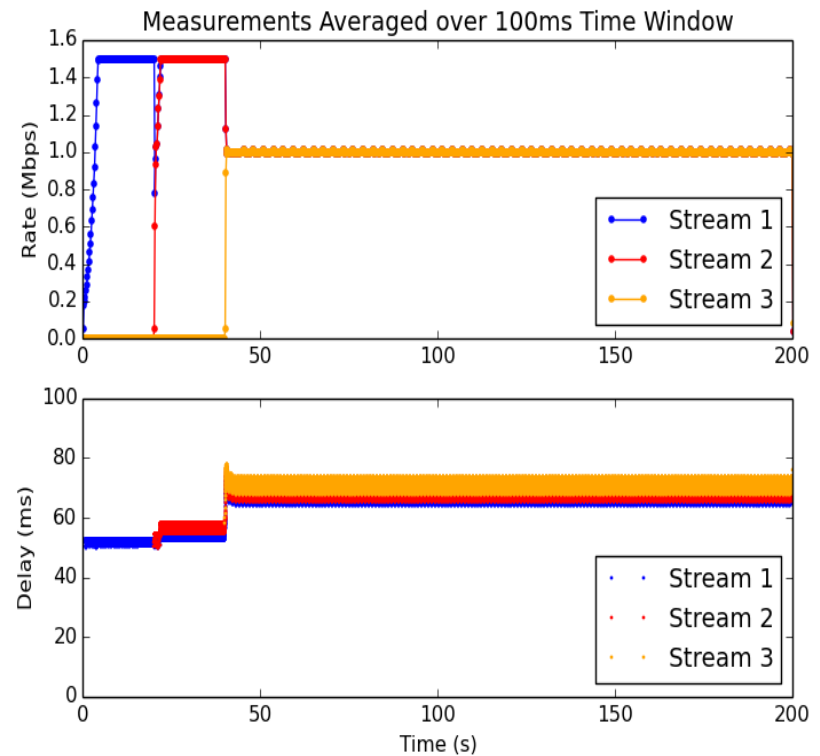
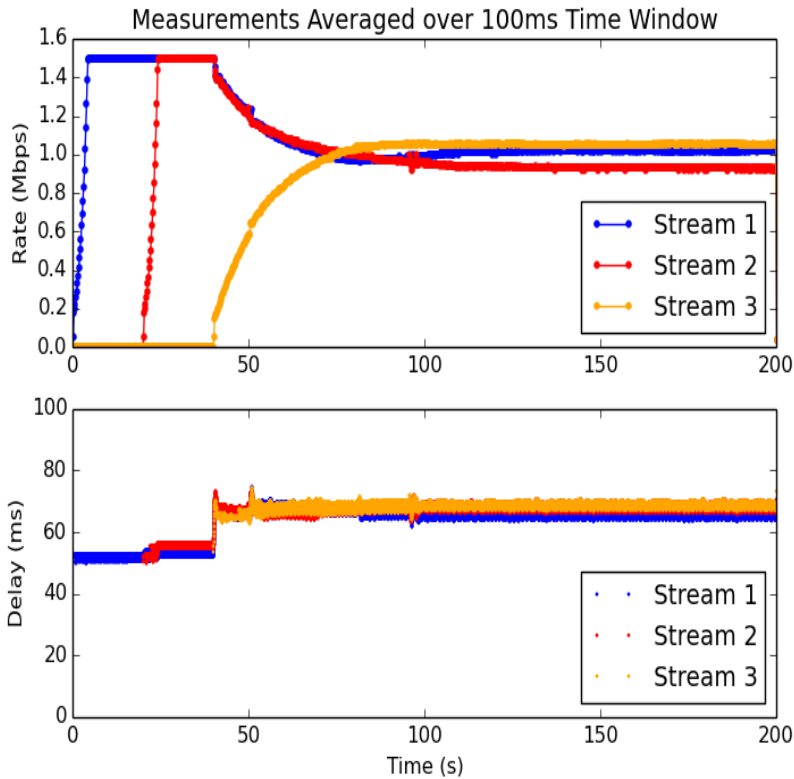
FSE



Test 5.4: Competing flows with same RMCAT algorithm

Without FSE

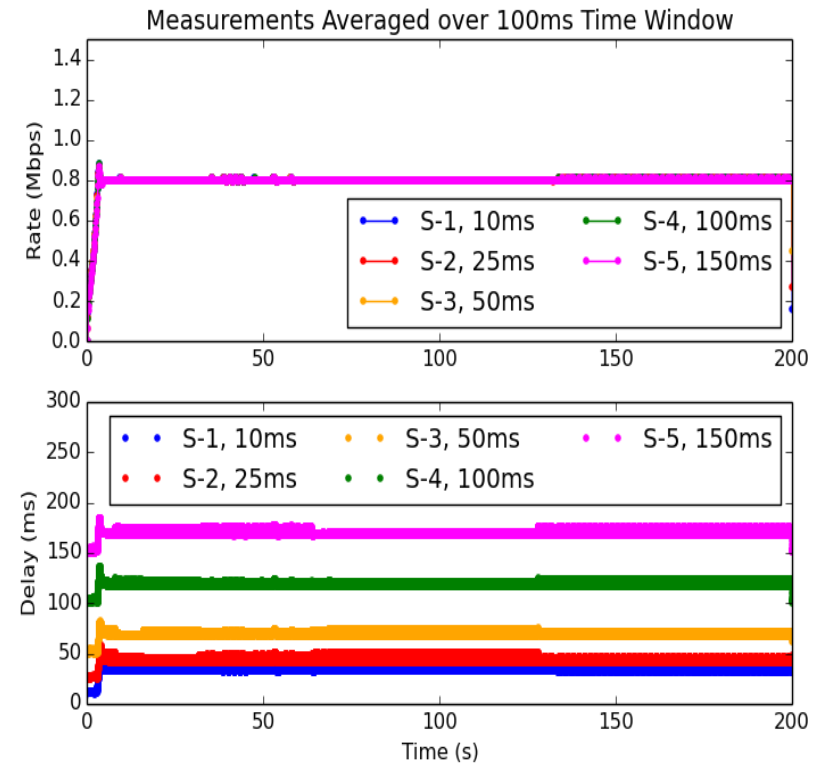
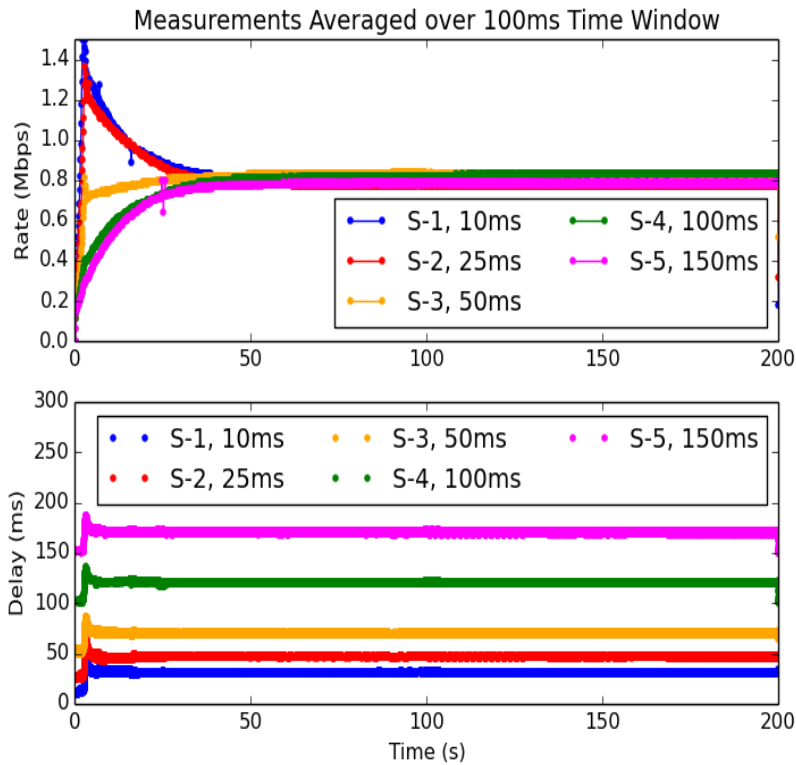
FSE



Test 5.5: Round Trip Time Fairness

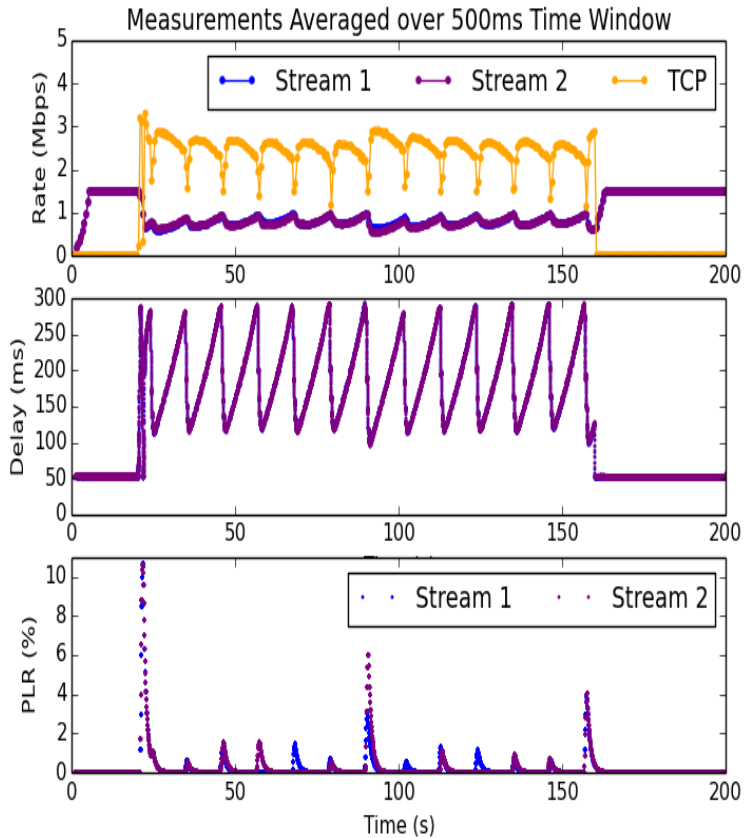
Without FSE

FSE

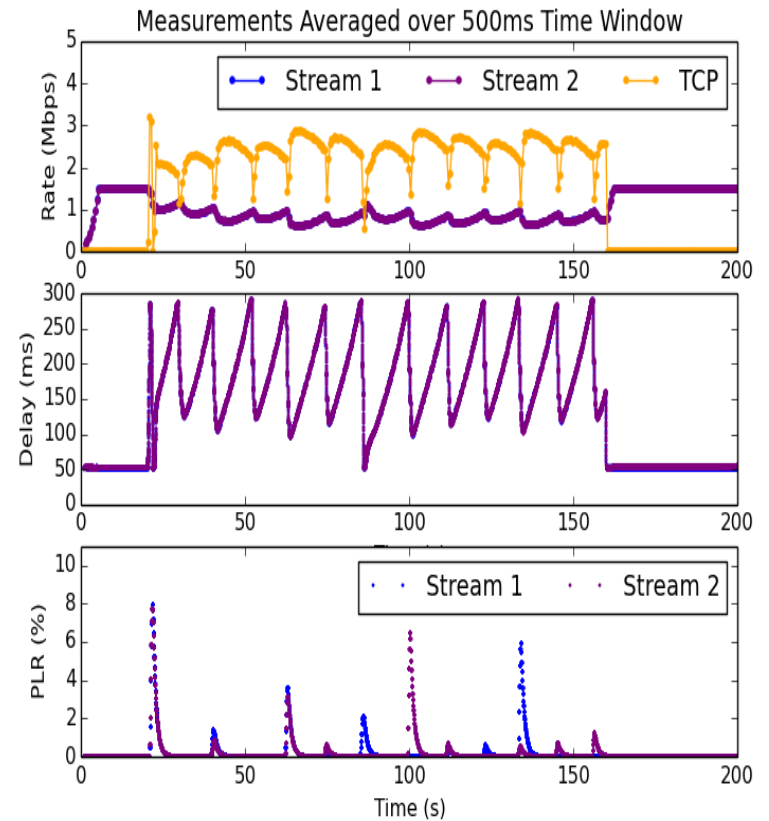


Test 5.6: RMCAT Flows Competing with a Long TCP flow

Without FSE

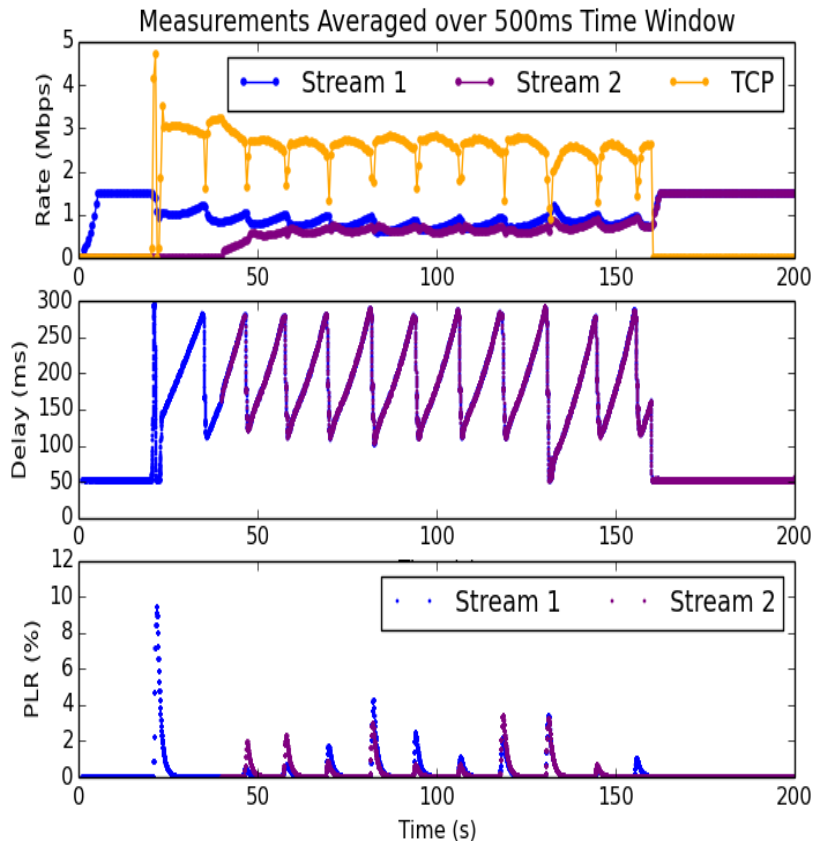


FSE

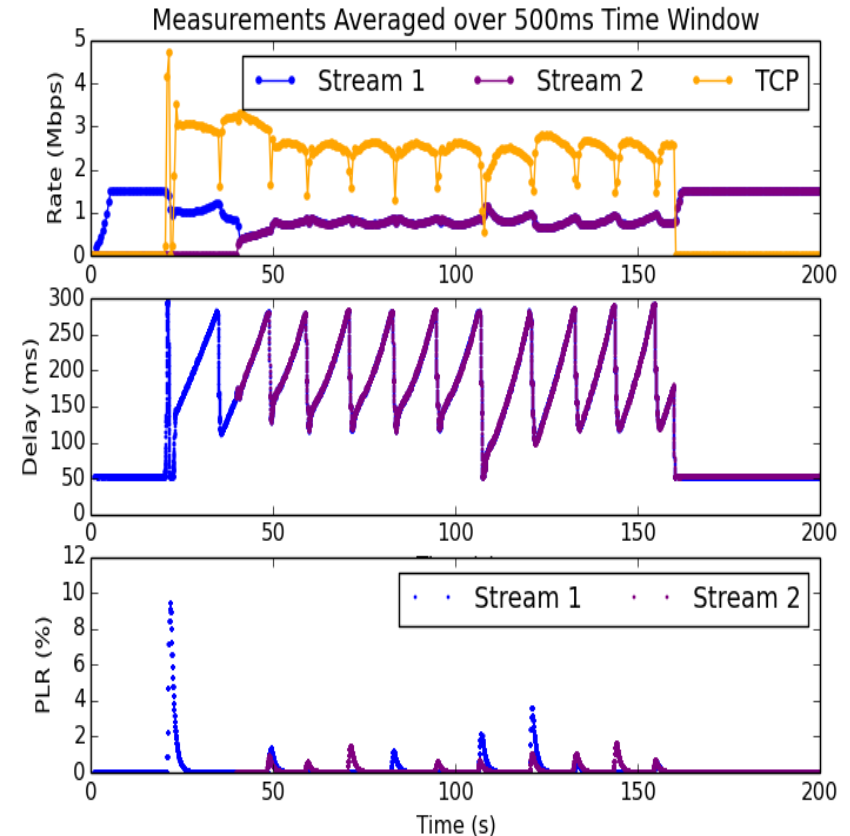


RMCAT Flows Competing with a Long TCP flow (extra test: starting 20s apart)

Without FSE

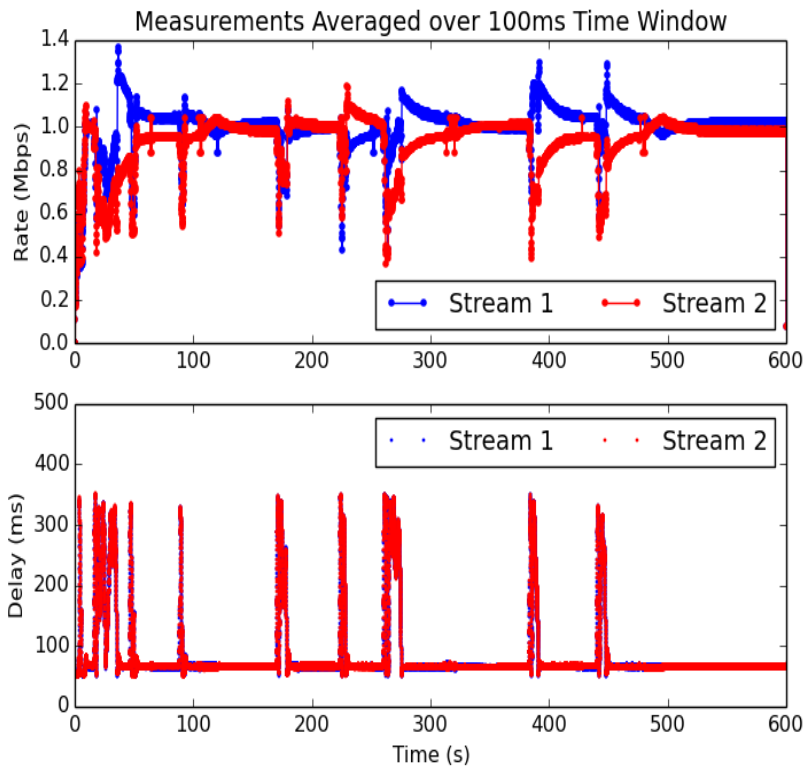


FSE

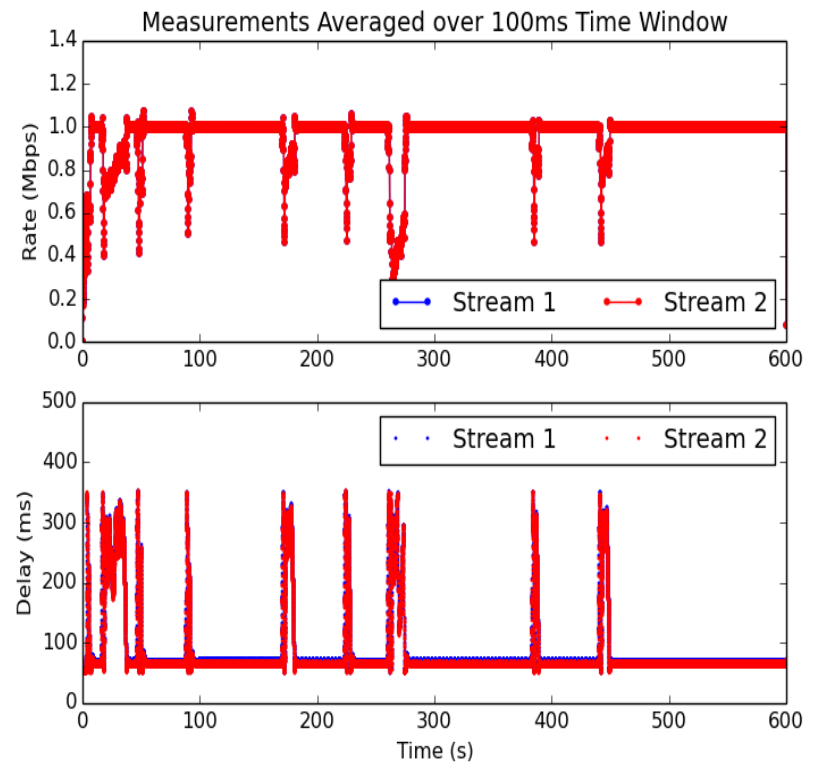


Test 5.7: RMCAT Flows Competing with Short TCP Flows

Without FSE



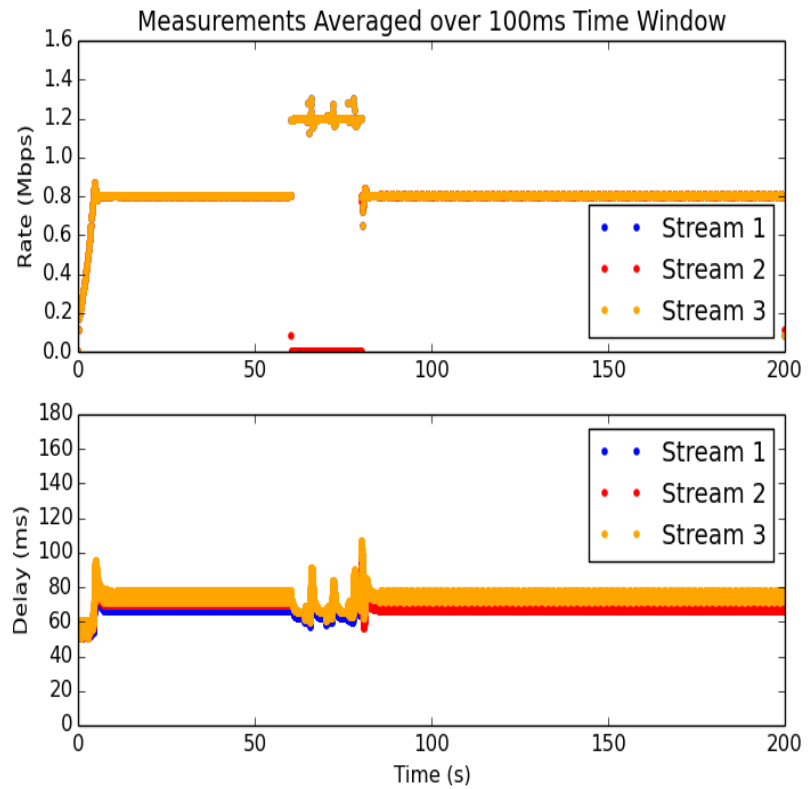
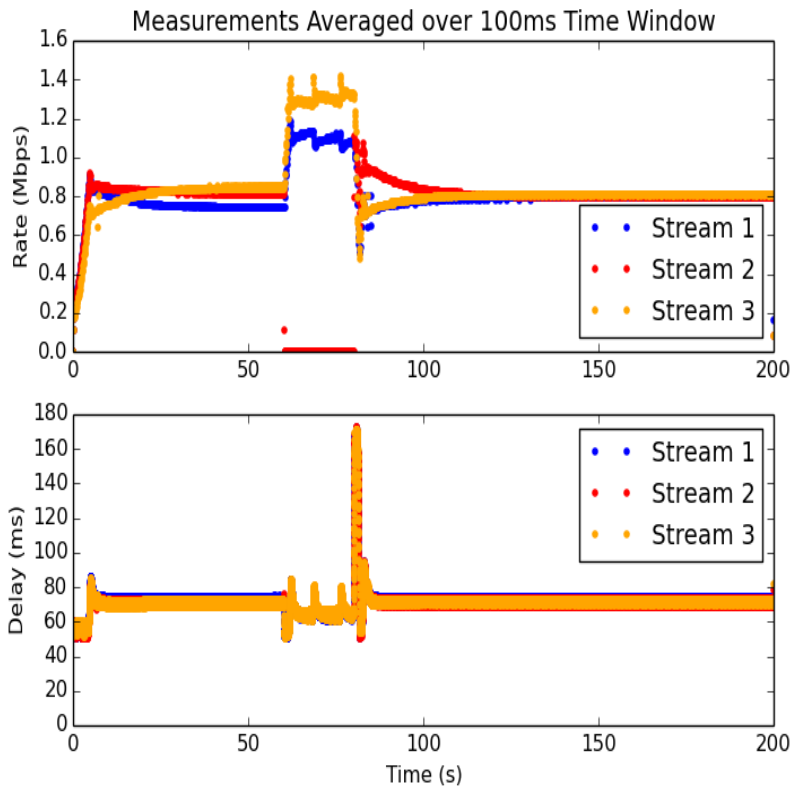
FSE



Test 5.8: Media Pause and Resume

Without FSE

FSE

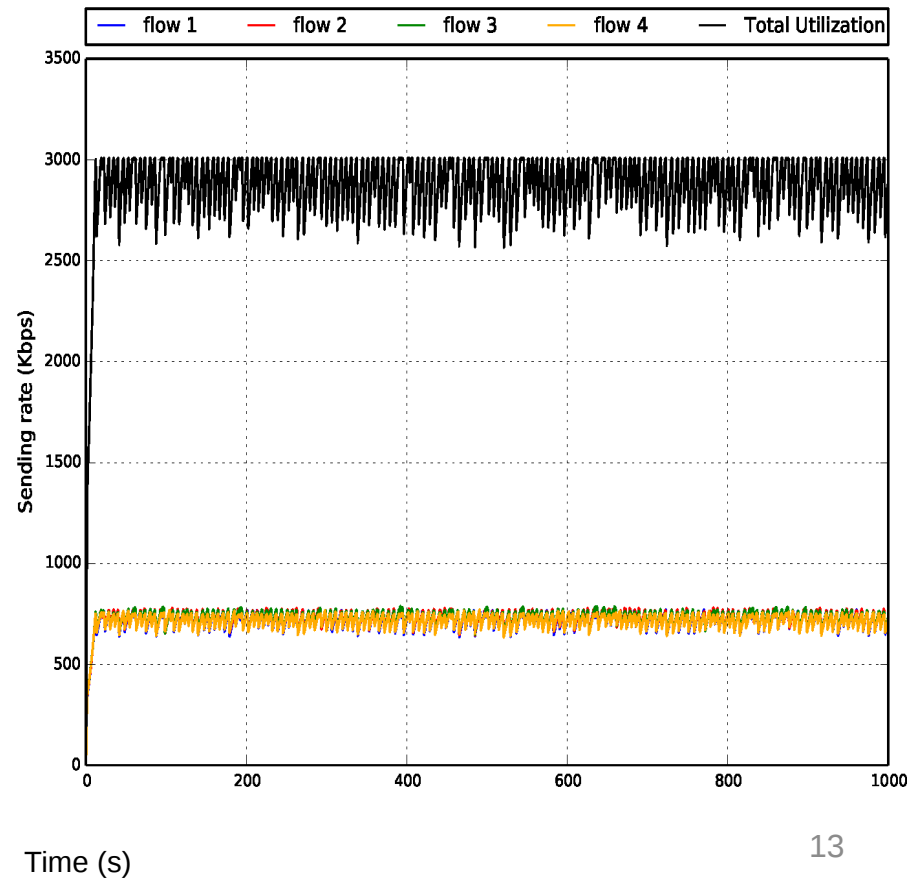
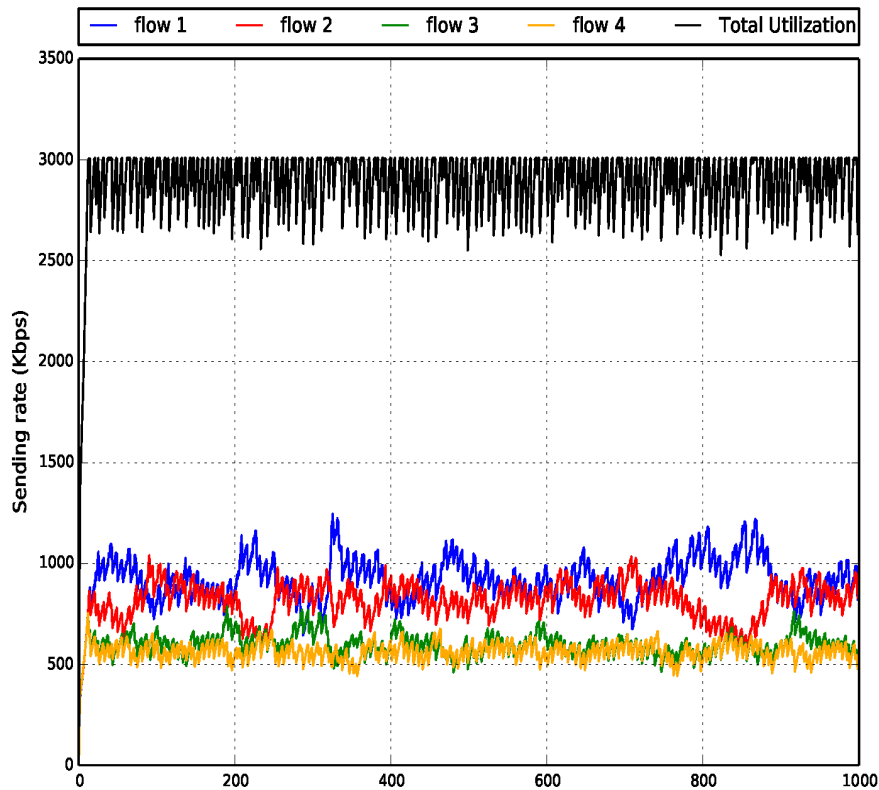


Coupled Congestion Control with GCC

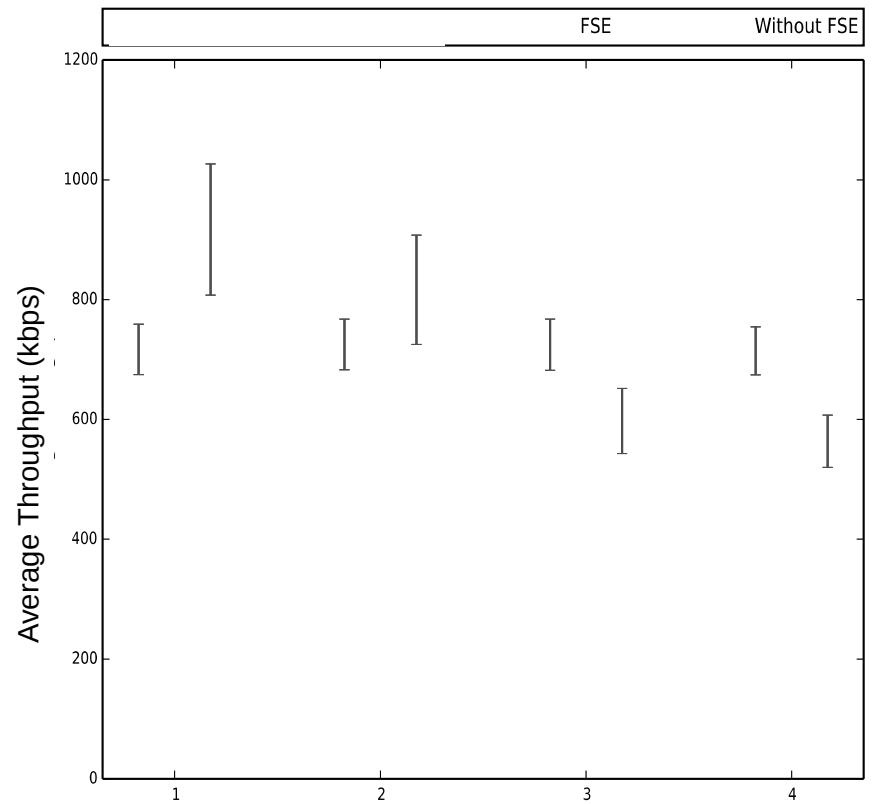
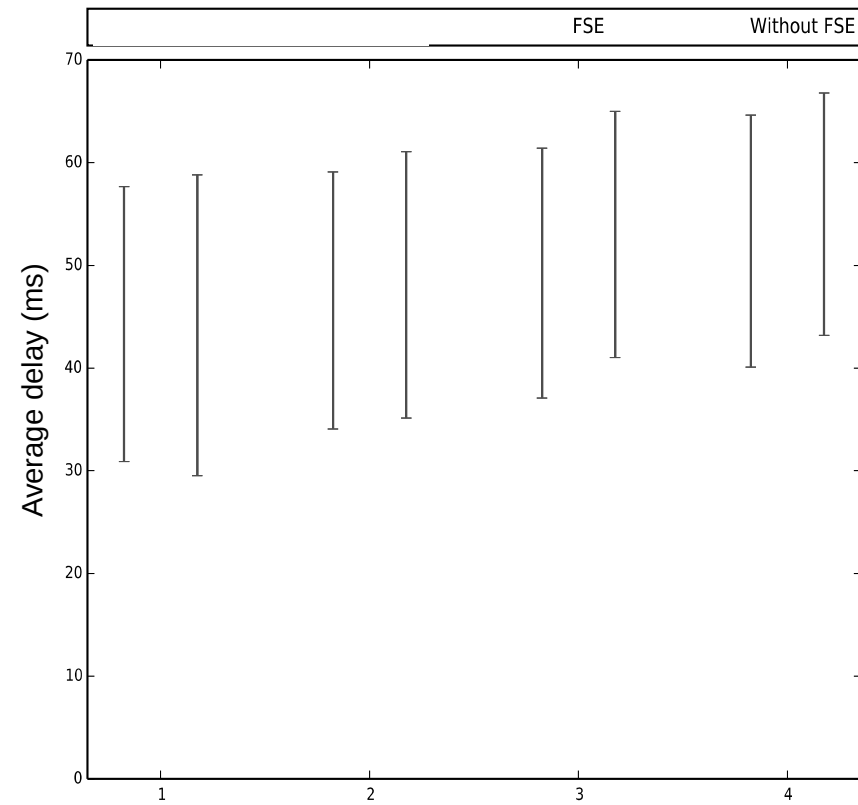
4 GCC Flows Sharing a Bottleneck

Without FSE

FSE



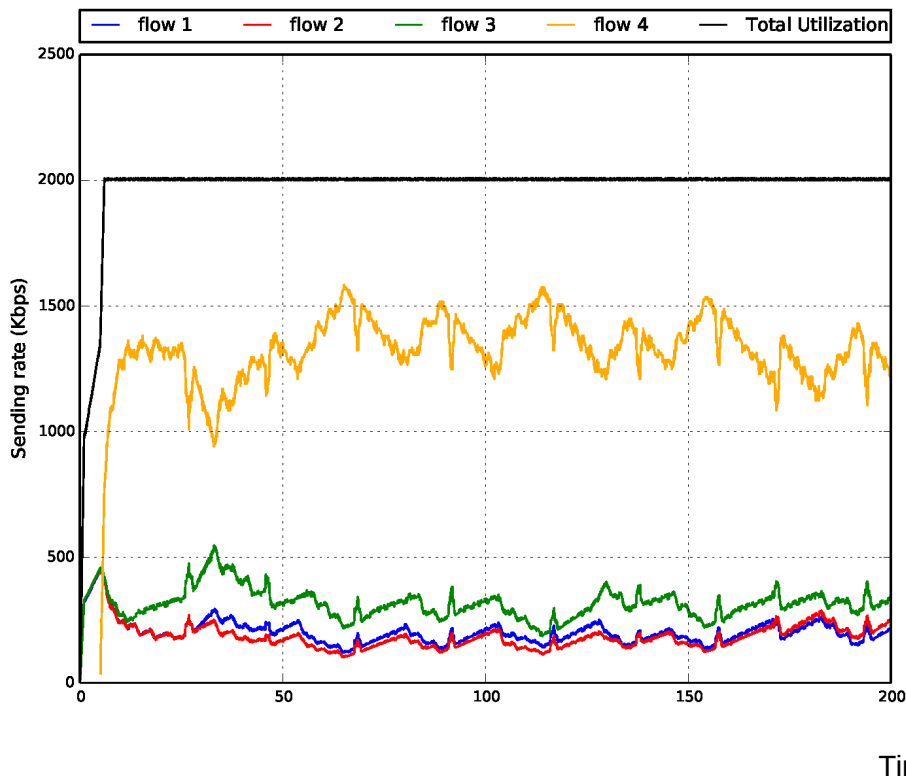
4 GCC Flows Sharing a Bottleneck



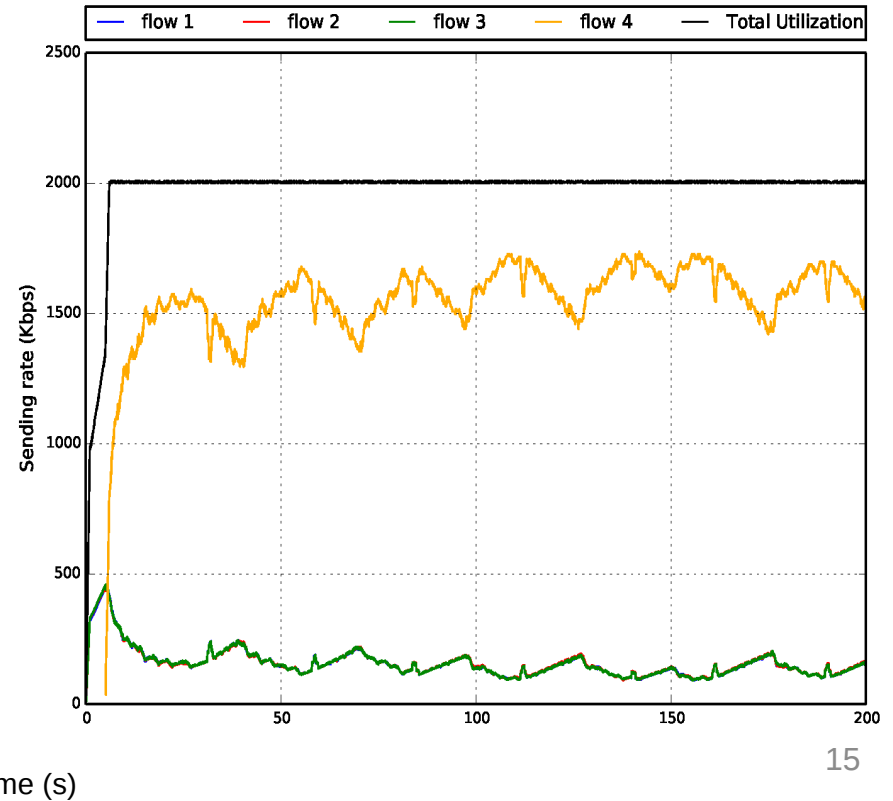
Flow #

3 GCC Flows with a TCP Flow

Without FSE



FSE



Q&A