Testing Congestion Control and Queue Management Mechanisms

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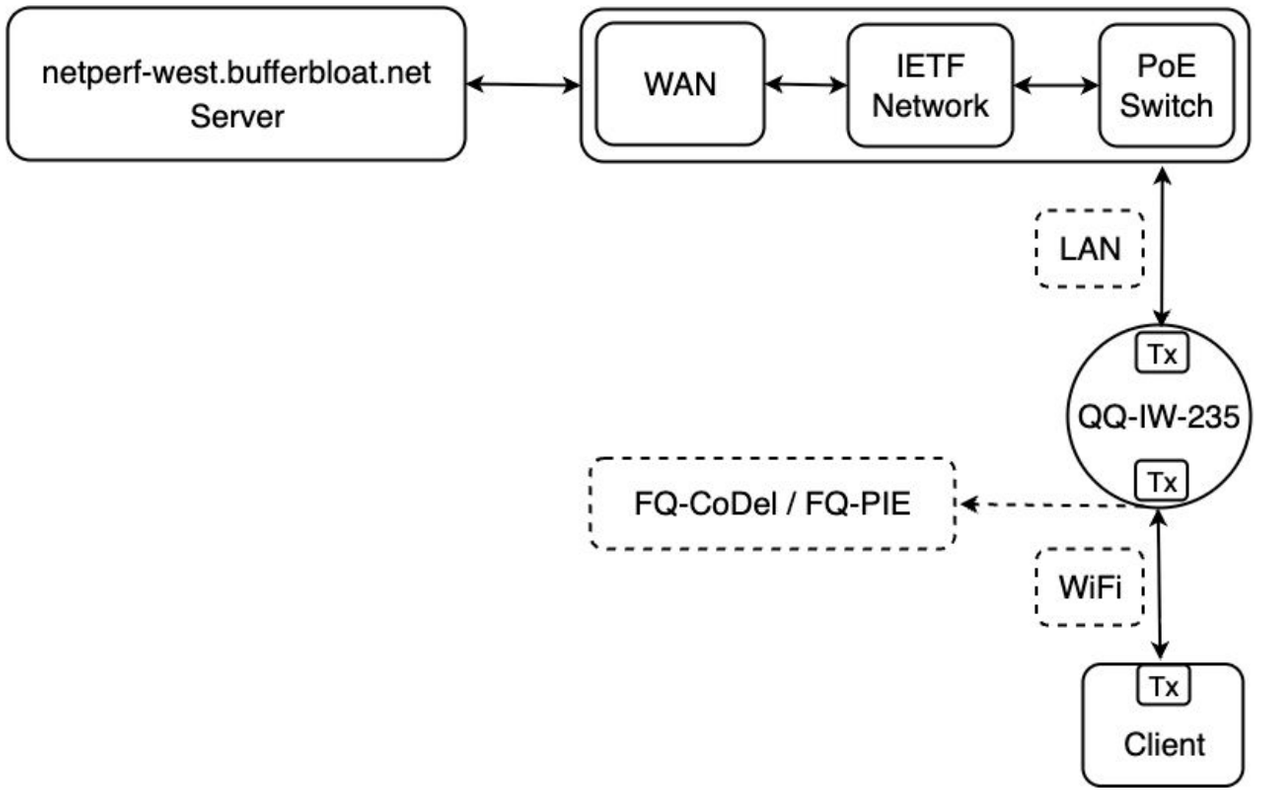
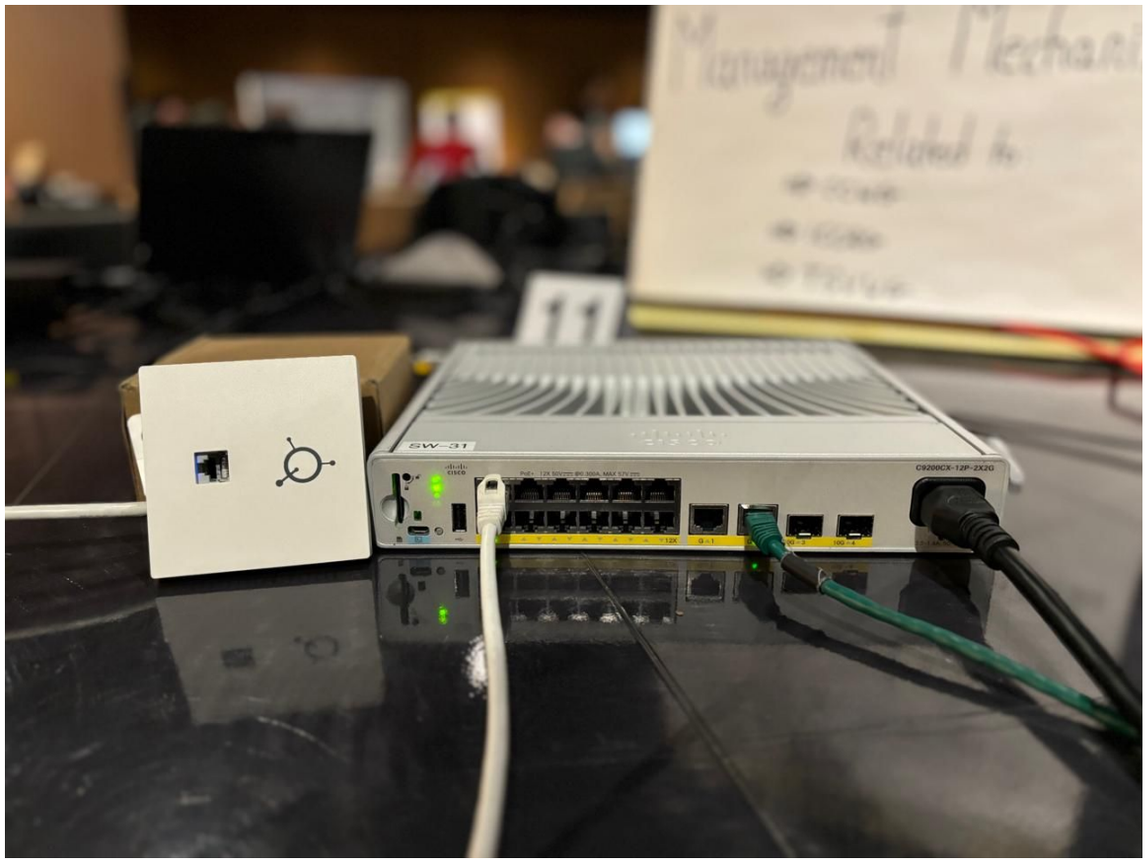
Related groups: ccwg, iccrg and tsvwg

Objectives

1. Testing of FQ-CoDel and FQ-PIE using ns-3, NeST and WiFi APs (QQ-IW-235)
    - Status: **completed**
2. NeST based AQM Evaluation Suite compliant with RFC 7928
    - Status: **completed**
3. Fixing a bug related to rate-limited sender implementation in ns-3
    - Status: **ongoing**
4. NeST based Congestion Control Evaluation Suite compliant with RFC 9743
    - Status: **partially completed**

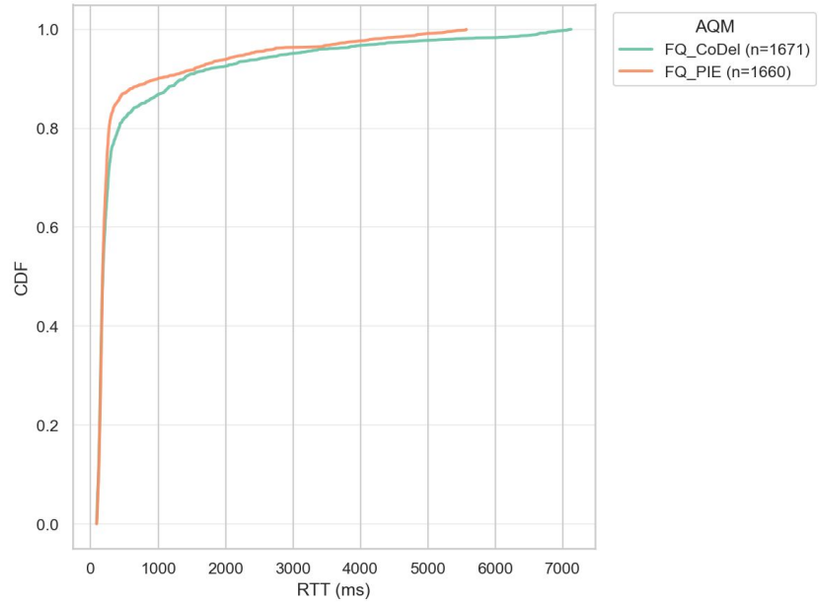
FQ-CoDel vs FQ-PIE: RRUL test from Flent using QQ-IW-235

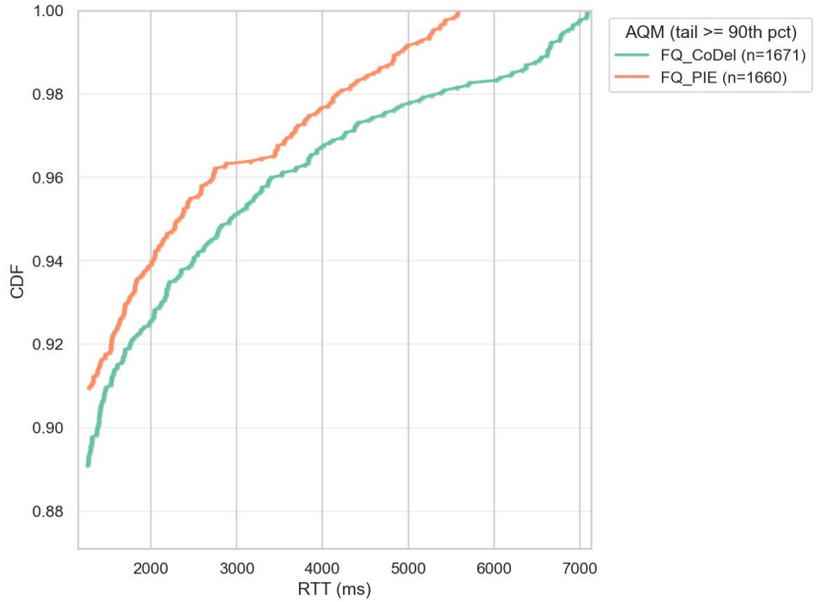


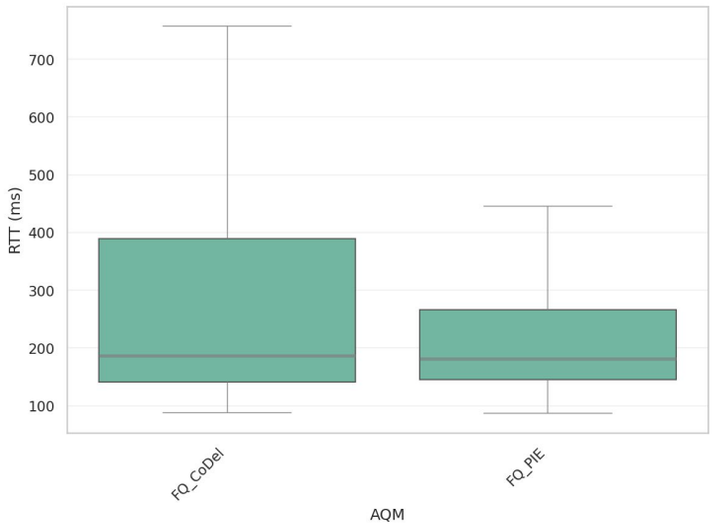


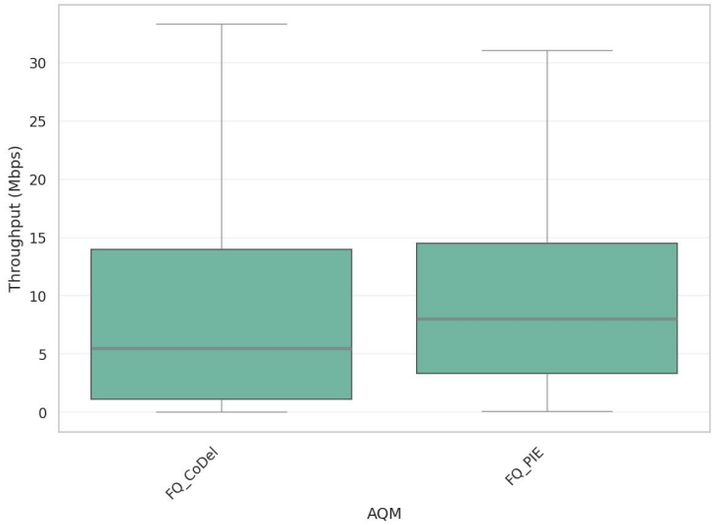
Thanks to: Alen Basil Thelappilly and Rathod Smit Amitkumar for helping us remotely with the experiments

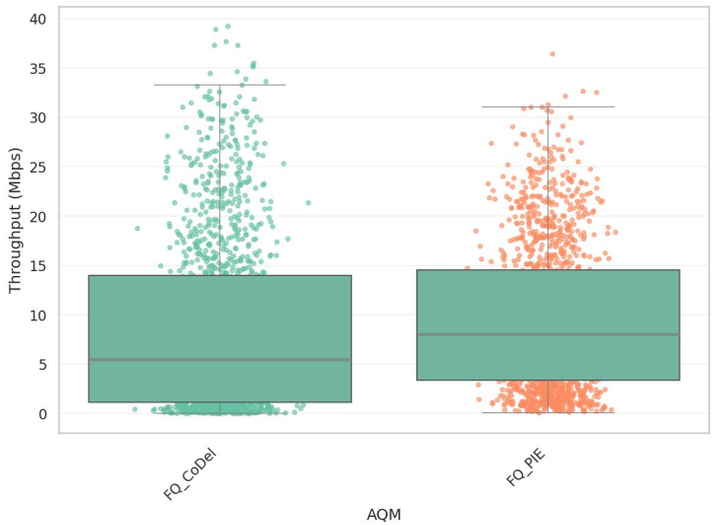
FQ-CoDel vs FQ-PIE: RRUL test from Flent using QQ-IW-235











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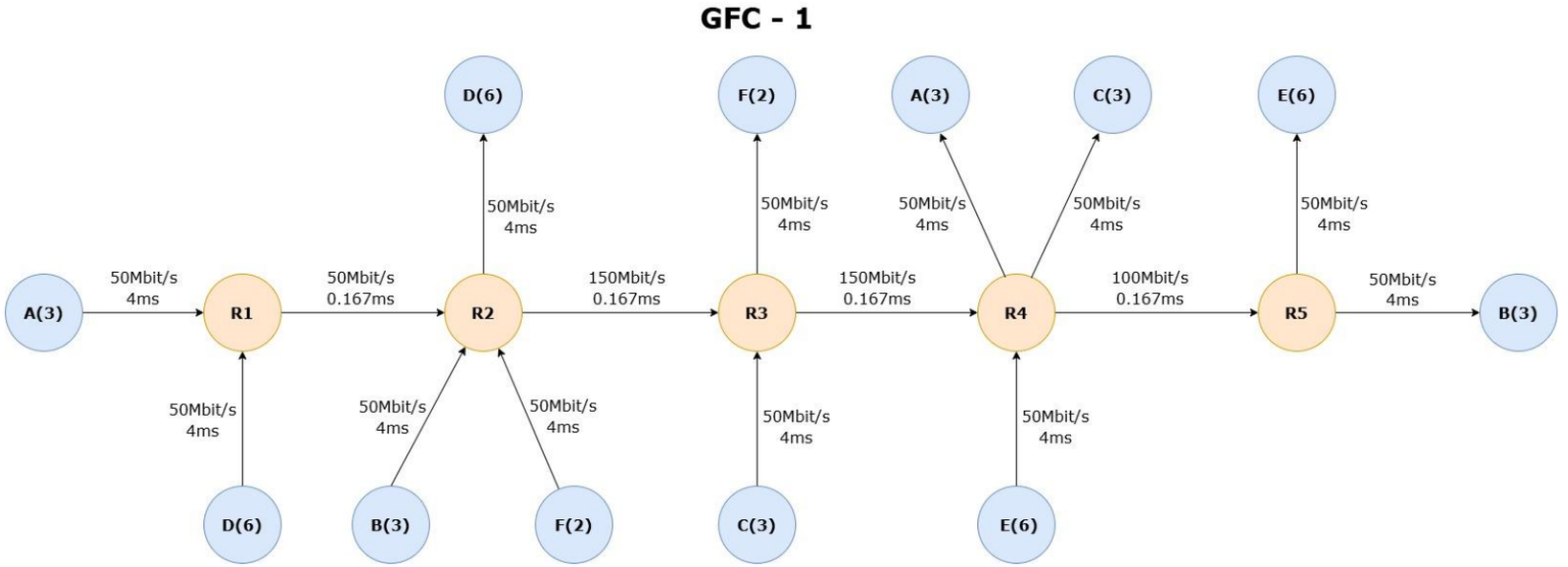
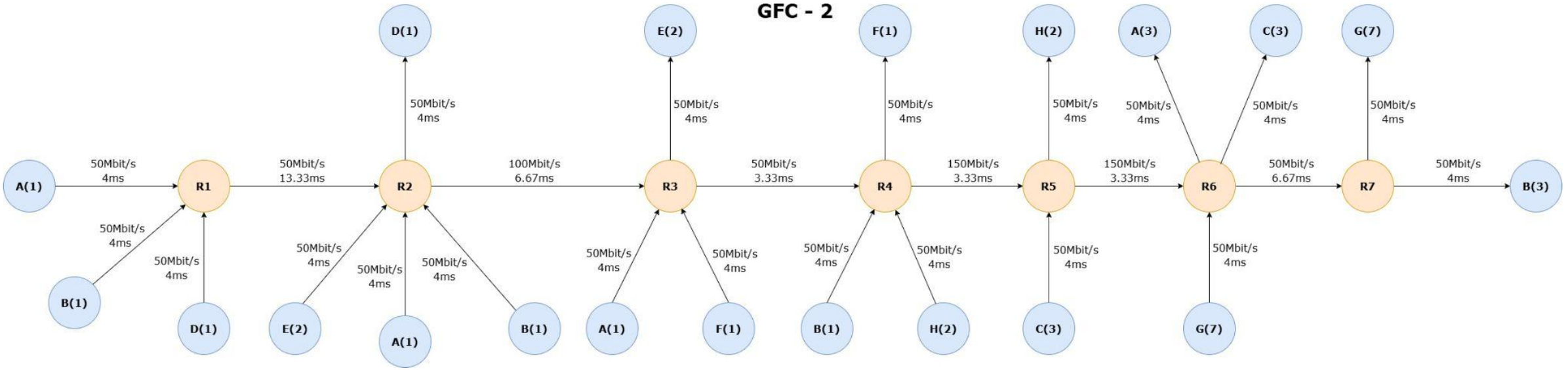
Multi-bottleneck topologies for AQM: GFC-1 and GFC-2





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Question 1:

What are the recommended/standard topologies to evaluate Multipath transport protocols?

Question 2:

What are the recommended performance parameters that should be benchmarked for Multipath transport protocols?

Question 3:

How to go about comprehensively testing congestion control and queue management in multipath multi-bottleneck scenarios?

Congestion Control Evaluation Suite

- NeST- a python package that uses linux network namespaces to handle testbed setup, configuration, data collection and visualization
- Extend NeST to include a CC Evaluation Suite compliant with RFC 9743.
- Prepared a design document for the evaluation Suite (QR and link below)
- Looking for feedback and suggestions on what the suite should include.

Link to design document: https://github.com/S0urTamarind/Congestion-Control-Evaluation-Suite

Looking forward to getting doubts cleared.

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Thank you!