Pantheon Report

Data path: Colombia on p4p1 (remote) → AWS Brazil 2 on ens5 (local).
Repeated the test of 24 congestion control schemes 5 times.
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.
NTP offsets were measured against gps.ntp.br and have been applied to correct the timestamps in logs.

System info:
Linux 4.15.0-1050-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

Git summary:
branch: muses @ de42328552b3776a75a932a94dfafdf722537b0ec
third_party/fillp @ d6a1459332fcee569638855d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbde58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6b7cfc3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/muses-dtree @ 387225f7b5f61ddeb92d708a8869fffbb94eb3200
third_party/pantheon-tunnel @ f866d3f58d27af9d42717625ee3a354cc2e802bd
third_party/pcc @ 1af9c958fa0d66d18b23c091a55fecn872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8adc08fab92c4eb24f974ab
third_party/proto-quic @ 77961fa1a2733a86b42f1bc8143e978f3cf4f2
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3db2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
test from Colombia to AWS Brazil 2, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

Average throughput (Mbit/s)

95th percentile one-way delay (ms)

FillP-Sheep
Indigo
Sprout
Indigo-MusesD
Indigo-MusesT
Muses_DecisionTree
Verus
PCC-Allegro
WebRTC media
LEDBAT
PCC-Expr
Copa
QUIC Cubic
TCP Cubic
PCC-Vivace
TCP Vegas
TaoVA-100x
Muses_DecisionTreeR0
FillP
TCP BBR
Indigo-MusesC5
Muses_DecisionTreeH0
SCReAM
Indigo-MusesC3
<table>
<thead>
<tr>
<th>scheme</th>
<th># runs</th>
<th>mean avg tput (Mbit/s)</th>
<th>mean 95th-%ile delay (ms)</th>
<th>mean loss rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>flow 1</td>
<td>flow 2</td>
<td>flow 3</td>
</tr>
<tr>
<td>TCP BBR</td>
<td>5</td>
<td>55.59</td>
<td>38.98</td>
<td>30.09</td>
</tr>
<tr>
<td>Copa</td>
<td>5</td>
<td>8.49</td>
<td>13.87</td>
<td>32.29</td>
</tr>
<tr>
<td>TCP Cubic</td>
<td>5</td>
<td>43.40</td>
<td>36.41</td>
<td>35.37</td>
</tr>
<tr>
<td>FillP</td>
<td>5</td>
<td>57.51</td>
<td>39.34</td>
<td>29.55</td>
</tr>
<tr>
<td>FillP-Sheep</td>
<td>5</td>
<td>57.16</td>
<td>39.20</td>
<td>30.20</td>
</tr>
<tr>
<td>Indigo</td>
<td>5</td>
<td>58.65</td>
<td>38.84</td>
<td>29.25</td>
</tr>
<tr>
<td>Indigo-MusesC3</td>
<td>5</td>
<td>60.64</td>
<td>40.28</td>
<td>29.80</td>
</tr>
<tr>
<td>Indigo-MusesC5</td>
<td>5</td>
<td>57.47</td>
<td>42.59</td>
<td>29.78</td>
</tr>
<tr>
<td>Indigo-MusesD</td>
<td>5</td>
<td>61.25</td>
<td>38.39</td>
<td>29.57</td>
</tr>
<tr>
<td>Indigo-MusesT</td>
<td>5</td>
<td>59.90</td>
<td>40.06</td>
<td>28.60</td>
</tr>
<tr>
<td>LEDBAT</td>
<td>5</td>
<td>13.36</td>
<td>8.68</td>
<td>4.25</td>
</tr>
<tr>
<td>Muses.DecisionTree</td>
<td>5</td>
<td>55.49</td>
<td>38.75</td>
<td>30.36</td>
</tr>
<tr>
<td>Muses.DecisionTreeH0</td>
<td>5</td>
<td>33.25</td>
<td>29.47</td>
<td>22.71</td>
</tr>
<tr>
<td>Muses_DecisionTreeR0</td>
<td>5</td>
<td>55.77</td>
<td>38.75</td>
<td>30.05</td>
</tr>
<tr>
<td>PCC-Allegro</td>
<td>5</td>
<td>56.37</td>
<td>34.28</td>
<td>29.57</td>
</tr>
<tr>
<td>PCC-Expr</td>
<td>5</td>
<td>56.76</td>
<td>39.04</td>
<td>25.86</td>
</tr>
<tr>
<td>QUIC Cubic</td>
<td>5</td>
<td>31.72</td>
<td>25.24</td>
<td>15.77</td>
</tr>
<tr>
<td>SCReAM</td>
<td>5</td>
<td>0.22</td>
<td>0.22</td>
<td>0.22</td>
</tr>
<tr>
<td>Sprout</td>
<td>5</td>
<td>4.44</td>
<td>3.93</td>
<td>3.76</td>
</tr>
<tr>
<td>TaoVA-100x</td>
<td>5</td>
<td>44.04</td>
<td>26.38</td>
<td>64.46</td>
</tr>
<tr>
<td>TCP Vegas</td>
<td>5</td>
<td>33.72</td>
<td>23.49</td>
<td>21.15</td>
</tr>
<tr>
<td>Verus</td>
<td>5</td>
<td>43.26</td>
<td>33.19</td>
<td>22.83</td>
</tr>
<tr>
<td>PCC-Vivace</td>
<td>5</td>
<td>51.82</td>
<td>30.72</td>
<td>23.00</td>
</tr>
<tr>
<td>WebRTC media</td>
<td>5</td>
<td>1.70</td>
<td>0.93</td>
<td>0.34</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

Start at: 2019-10-03 11:06:22
End at: 2019-10-03 11:06:52
Local clock offset: -5.748 ms
Remote clock offset: -1073.934 ms

# Below is generated by plot.py at 2019-10-03 13:37:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.48 Mbit/s
95th percentile per-packet one-way delay: 473.122 ms
Loss rate: 3.21%
-- Flow 1:
Average throughput: 56.43 Mbit/s
95th percentile per-packet one-way delay: 472.555 ms
Loss rate: 2.83%
-- Flow 2:
Average throughput: 39.81 Mbit/s
95th percentile per-packet one-way delay: 668.446 ms
Loss rate: 4.05%
-- Flow 3:
Average throughput: 29.23 Mbit/s
95th percentile per-packet one-way delay: 394.363 ms
Loss rate: 3.15%
Run 1: Report of TCP BBR — Data Link
Run 2: Statistics of TCP BBR

Start at: 2019-10-03 11:37:11
End at: 2019-10-03 11:37:41
Local clock offset: -6.404 ms
Remote clock offset: -1250.814 ms

# Below is generated by plot.py at 2019-10-03 13:37:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.10 Mbit/s
95th percentile per-packet one-way delay: 443.858 ms
Loss rate: 4.11%
-- Flow 1:
Average throughput: 56.20 Mbit/s
95th percentile per-packet one-way delay: 436.783 ms
Loss rate: 2.88%
-- Flow 2:
Average throughput: 38.62 Mbit/s
95th percentile per-packet one-way delay: 706.585 ms
Loss rate: 6.08%
-- Flow 3:
Average throughput: 31.16 Mbit/s
95th percentile per-packet one-way delay: 374.368 ms
Loss rate: 5.72%
Run 2: Report of TCP BBR — Data Link
Run 3: Statistics of TCP BBR

Start at: 2019-10-03 12:07:49
End at: 2019-10-03 12:08:19
Local clock offset: -6.647 ms
Remote clock offset: -1426.98 ms

# Below is generated by plot.py at 2019-10-03 13:37:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.14 Mbit/s
95th percentile per-packet one-way delay: 439.807 ms
Loss rate: 3.08%
-- Flow 1:
Average throughput: 53.77 Mbit/s
95th percentile per-packet one-way delay: 440.461 ms
Loss rate: 1.71%
-- Flow 2:
Average throughput: 38.65 Mbit/s
95th percentile per-packet one-way delay: 461.818 ms
Loss rate: 4.59%
-- Flow 3:
Average throughput: 29.53 Mbit/s
95th percentile per-packet one-way delay: 404.299 ms
Loss rate: 6.35%
Run 3: Report of TCP BBR — Data Link
Run 4: Statistics of TCP BBR

Start at: 2019-10-03 12:38:27
End at: 2019-10-03 12:38:57
Local clock offset: -6.565 ms
Remote clock offset: -165.557 ms

# Below is generated by plot.py at 2019-10-03 13:37:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 91.81 Mbit/s
  95th percentile per-packet one-way delay: 405.760 ms
  Loss rate: 3.09%
-- Flow 1:
  Average throughput: 55.62 Mbit/s
  95th percentile per-packet one-way delay: 390.541 ms
  Loss rate: 2.24%
-- Flow 2:
  Average throughput: 39.99 Mbit/s
  95th percentile per-packet one-way delay: 441.797 ms
  Loss rate: 4.87%
-- Flow 3:
  Average throughput: 29.29 Mbit/s
  95th percentile per-packet one-way delay: 394.559 ms
  Loss rate: 3.01%
Run 4: Report of TCP BBR — Data Link
Run 5: Statistics of TCP BBR

Start at: 2019-10-03 13:09:05
End at: 2019-10-03 13:09:35
Local clock offset: -5.896 ms
Remote clock offset: 2.858 ms

# Below is generated by plot.py at 2019-10-03 13:37:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.29 Mbit/s
95th percentile per-packet one-way delay: 521.298 ms
Loss rate: 4.22%
-- Flow 1:
Average throughput: 55.92 Mbit/s
95th percentile per-packet one-way delay: 428.159 ms
Loss rate: 2.99%
-- Flow 2:
Average throughput: 37.81 Mbit/s
95th percentile per-packet one-way delay: 722.761 ms
Loss rate: 5.48%
-- Flow 3:
Average throughput: 31.24 Mbit/s
95th percentile per-packet one-way delay: 390.653 ms
Loss rate: 7.53%
Run 5: Report of TCP BBR — Data Link
Run 1: Statistics of Copa

Start at: 2019-10-03 11:11:34
End at: 2019-10-03 11:12:04
Local clock offset: -5.638 ms
Remote clock offset: -1103.087 ms

# Below is generated by plot.py at 2019-10-03 13:37:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 27.23 Mbit/s
  95th percentile per-packet one-way delay: 224.088 ms
  Loss rate: 0.28%
  -- Flow 1:
  Average throughput: 8.77 Mbit/s
  95th percentile per-packet one-way delay: 224.400 ms
  Loss rate: 0.20%
  -- Flow 2:
  Average throughput: 14.40 Mbit/s
  95th percentile per-packet one-way delay: 224.894 ms
  Loss rate: 0.28%
  -- Flow 3:
  Average throughput: 31.98 Mbit/s
  95th percentile per-packet one-way delay: 211.328 ms
  Loss rate: 0.37%
Run 1: Report of Copa — Data Link

---

Graph 1: Throughput (Mbps)
- Flow 1 ingress (mean 8.10 Mbps)
- Flow 1 egress (mean 8.77 Mbps)
- Flow 2 ingress (mean 16.44 Mbps)
- Flow 2 egress (mean 14.40 Mbps)
- Flow 3 ingress (mean 32.10 Mbps)
- Flow 3 egress (mean 31.98 Mbps)

Graph 2: Per packet one way delay (ms)
- Flow 1 (95th percentile 224.40 ms)
- Flow 2 (95th percentile 224.89 ms)
- Flow 3 (95th percentile 211.33 ms)
Run 2: Statistics of Copa

Start at: 2019-10-03 11:42:25
End at: 2019-10-03 11:42:55
Local clock offset: -6.627 ms
Remote clock offset: -1278.605 ms

# Below is generated by plot.py at 2019-10-03 13:37:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 25.54 Mbit/s
95th percentile per-packet one-way delay: 224.853 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 9.41 Mbit/s
95th percentile per-packet one-way delay: 225.434 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 11.58 Mbit/s
95th percentile per-packet one-way delay: 223.905 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 32.46 Mbit/s
95th percentile per-packet one-way delay: 222.598 ms
Loss rate: 0.34%
Run 2: Report of Copa — Data Link

![Graph of throughput and delay for different flows over time. The graph shows multiple lines representing the throughput (Mbps) and per-packet one-way delay (ms) for three different flows. The legend indicates mean throughputs for each flow: Flow 1 ingress (9.43 Mbps) and egress (9.41 Mbps), Flow 2 ingress (11.60 Mbps) and egress (11.58 Mbps), and Flow 3 ingress (32.57 Mbps) and egress (32.46 Mbps).]
Run 3: Statistics of Copa

Start at: 2019-10-03 12:13:01
End at: 2019-10-03 12:13:31
Local clock offset: -6.584 ms
Remote clock offset: -20.988 ms

# Below is generated by plot.py at 2019-10-03 13:37:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 24.95 Mbit/s
95th percentile per-packet one-way delay: 225.171 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 7.18 Mbit/s
95th percentile per-packet one-way delay: 225.714 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 14.48 Mbit/s
95th percentile per-packet one-way delay: 224.441 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 31.64 Mbit/s
95th percentile per-packet one-way delay: 210.963 ms
Loss rate: 0.29%
Run 3: Report of Copa — Data Link

![Graph showing throughput and packet delay over time for different flows.]

- Flow 1 ingress (mean 7.21 Mbit/s)
- Flow 1 egress (mean 7.18 Mbit/s)
- Flow 2 ingress (mean 14.52 Mbit/s)
- Flow 2 egress (mean 14.45 Mbit/s)
- Flow 3 ingress (mean 31.74 Mbit/s)
- Flow 3 egress (mean 31.64 Mbit/s)

![Graph showing packet delay over time for different flows.]

- Flow 1 (95th percentile 225.71 ms)
- Flow 2 (95th percentile 224.44 ms)
- Flow 3 (95th percentile 210.96 ms)
Run 4: Statistics of Copa

Start at: 2019-10-03 12:43:40
End at: 2019-10-03 12:44:10
Local clock offset: -6.58 ms
Remote clock offset: -197.281 ms

# Below is generated by plot.py at 2019-10-03 13:37:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 25.67 Mbit/s
95th percentile per-packet one-way delay: 226.632 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 7.74 Mbit/s
95th percentile per-packet one-way delay: 227.204 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 14.49 Mbit/s
95th percentile per-packet one-way delay: 225.635 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 32.94 Mbit/s
95th percentile per-packet one-way delay: 223.176 ms
Loss rate: 0.40%
Run 4: Report of Copa — Data Link

Throughput (Mbps)

Flow 1 ingress (mean 7.77 Mbps)  Flow 2 ingress (mean 14.54 Mbps)  Flow 3 ingress (mean 33.07 Mbps)
Flow 1 egress (mean 7.74 Mbps)  Flow 2 egress (mean 14.49 Mbps)  Flow 3 egress (mean 32.94 Mbps)

Packet one-way delay (ms)

Flow 1 (95th percentile 227.20 ms)  Flow 2 (95th percentile 225.63 ms)  Flow 3 (95th percentile 223.18 ms)
Run 5: Statistics of Copa

Start at: 2019-10-03 13:14:18
End at: 2019-10-03 13:14:48
Local clock offset: -5.783 ms
Remote clock offset: 5.388 ms

# Below is generated by plot.py at 2019-10-03 13:37:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 27.93 Mbit/s
95th percentile per-packet one-way delay: 226.206 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 9.35 Mbit/s
95th percentile per-packet one-way delay: 224.798 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 14.38 Mbit/s
95th percentile per-packet one-way delay: 226.136 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 32.43 Mbit/s
95th percentile per-packet one-way delay: 228.454 ms
Loss rate: 0.31%
Run 5: Report of Copa — Data Link

[Graph showing throughput and per-packet one-way delay over time]
Run 1: Statistics of TCP Cubic

Start at: 2019-10-03 11:14:07
End at: 2019-10-03 11:14:37
Local clock offset: -5.505 ms
Remote clock offset: -1116.877 ms

# Below is generated by plot.py at 2019-10-03 13:37:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.46 Mbit/s
95th percentile per-packet one-way delay: 155.470 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 43.61 Mbit/s
95th percentile per-packet one-way delay: 174.570 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 34.01 Mbit/s
95th percentile per-packet one-way delay: 144.931 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 37.30 Mbit/s
95th percentile per-packet one-way delay: 157.999 ms
Loss rate: 1.99%
Run 1: Report of TCP Cubic — Data Link

![Graph showing throughput and per-packet one-way delay for flows 1, 2, and 3.]

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 43.53 Mbps), egress (mean 43.61 Mbps)
  - Flow 2 ingress (mean 33.95 Mbps), egress (mean 34.01 Mbps)
  - Flow 3 ingress (mean 37.44 Mbps), egress (mean 37.30 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 174.57 ms)
  - Flow 2 (95th percentile 144.93 ms)
  - Flow 3 (95th percentile 150.00 ms)
Run 2: Statistics of TCP Cubic

Start at: 2019-10-03 11:44:57
End at: 2019-10-03 11:45:27
Local clock offset: -6.605 ms
Remote clock offset: -1293.771 ms

# Below is generated by plot.py at 2019-10-03 13:38:09
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 80.41 Mbit/s
  95th percentile per-packet one-way delay: 152.739 ms
  Loss rate: 0.72%
-- Flow 1:
  Average throughput: 44.05 Mbit/s
  95th percentile per-packet one-way delay: 174.894 ms
  Loss rate: 0.37%
-- Flow 2:
  Average throughput: 36.67 Mbit/s
  95th percentile per-packet one-way delay: 138.357 ms
  Loss rate: 0.72%
-- Flow 3:
  Average throughput: 36.53 Mbit/s
  95th percentile per-packet one-way delay: 126.823 ms
  Loss rate: 1.96%
Run 2: Report of TCP Cubic — Data Link

Throughput (Mb/s)

Time (s)

Flow 1 ingress (mean 43.97 Mb/s)  
Flow 1 egress (mean 44.05 Mb/s)  
Flow 2 ingress (mean 36.63 Mb/s)  
Flow 2 egress (mean 36.67 Mb/s)  
Flow 3 ingress (mean 36.64 Mb/s)  
Flow 3 egress (mean 36.53 Mb/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 174.99 ms)  
Flow 2 (95th percentile 138.36 ms)  
Flow 3 (95th percentile 126.82 ms)
Run 3: Statistics of TCP Cubic

Start at: 2019-10-03 12:15:34  
End at: 2019-10-03 12:16:04  
Local clock offset: -6.592 ms  
Remote clock offset: -36.585 ms  

# Below is generated by plot.py at 2019-10-03 13:38:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 76.05 Mbit/s  
95th percentile per-packet one-way delay: 154.851 ms  
Loss rate: 0.72%  
-- Flow 1:  
Average throughput: 41.53 Mbit/s  
95th percentile per-packet one-way delay: 192.816 ms  
Loss rate: 0.47%  
-- Flow 2:  
Average throughput: 36.96 Mbit/s  
95th percentile per-packet one-way delay: 139.179 ms  
Loss rate: 0.82%  
-- Flow 3:  
Average throughput: 30.34 Mbit/s  
95th percentile per-packet one-way delay: 164.518 ms  
Loss rate: 1.52%
Run 3: Report of TCP Cubic — Data Link
Run 4: Statistics of TCP Cubic

Start at: 2019-10-03 12:46:13
End at: 2019-10-03 12:46:43
Local clock offset: -6.557 ms
Remote clock offset: -210.6 ms

# Below is generated by plot.py at 2019-10-03 13:38:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.42 Mbit/s
95th percentile per-packet one-way delay: 152.294 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 43.44 Mbit/s
95th percentile per-packet one-way delay: 180.998 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 37.67 Mbit/s
95th percentile per-packet one-way delay: 133.484 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 36.41 Mbit/s
95th percentile per-packet one-way delay: 125.073 ms
Loss rate: 1.95%
Run 4: Report of TCP Cubic — Data Link

[Graph showing throughput and packet delay for different flows over time]

Throughput (Mbps)

0 5 10 15 20 25 30

Time (s)

Flow 1 ingress (mean 43.37 Mbps)  Flow 1 egress (mean 43.44 Mbps)
Flow 2 ingress (mean 37.64 Mbps)  Flow 2 egress (mean 37.67 Mbps)
Flow 3 ingress (mean 36.51 Mbps)  Flow 3 egress (mean 36.41 Mbps)

Packet oneway delay (ms)

0 100 200 300

Time (s)

Flow 1 (95th percentile 181.00 ms)  Flow 2 (95th percentile 133.48 ms)  Flow 3 (95th percentile 125.07 ms)
Run 5: Statistics of TCP Cubic

Start at: 2019-10-03 13:16:51
End at: 2019-10-03 13:17:21
Local clock offset: -5.749 ms
Remote clock offset: 4.773 ms

# Below is generated by plot.py at 2019-10-03 13:38:12
# Datalink statistics
   -- Total of 3 flows:
      Average throughput: 80.71 Mbit/s
      95th percentile per-packet one-way delay: 152.529 ms
      Loss rate: 0.79%
   -- Flow 1:
      Average throughput: 44.38 Mbit/s
      95th percentile per-packet one-way delay: 169.086 ms
      Loss rate: 0.37%
   -- Flow 2:
      Average throughput: 36.75 Mbit/s
      95th percentile per-packet one-way delay: 136.090 ms
      Loss rate: 0.96%
   -- Flow 3:
      Average throughput: 36.29 Mbit/s
      95th percentile per-packet one-way delay: 132.082 ms
      Loss rate: 1.95%
Run 5: Report of TCP Cubic — Data Link

![Graph showing throughput and per-packet one-way delay for different flows.]

Legend:
- Flow 1 ingress (mean 44.30 Mbit/s)
- Flow 1 egress (mean 44.38 Mbit/s)
- Flow 2 ingress (mean 36.60 Mbit/s)
- Flow 2 egress (mean 36.75 Mbit/s)
- Flow 3 ingress (mean 36.50 Mbit/s)
- Flow 3 egress (mean 36.29 Mbit/s)
Run 1: Statistics of FillP

Start at: 2019-10-03 11:05:05
End at: 2019-10-03 11:05:35
Local clock offset: -5.893 ms
Remote clock offset: -1066.712 ms

# Below is generated by plot.py at 2019-10-03 13:38:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.22 Mbit/s
95th percentile per-packet one-way delay: 260.237 ms
Loss rate: 1.96%
-- Flow 1:
Average throughput: 57.10 Mbit/s
95th percentile per-packet one-way delay: 272.710 ms
Loss rate: 0.95%
-- Flow 2:
Average throughput: 39.64 Mbit/s
95th percentile per-packet one-way delay: 259.911 ms
Loss rate: 3.89%
-- Flow 3:
Average throughput: 29.73 Mbit/s
95th percentile per-packet one-way delay: 172.783 ms
Loss rate: 2.52%
Run 1: Report of FillP — Data Link

![Graph 1: Throughput (Mbps)]

![Graph 2: Per-packet one-way delay (ms)]
Run 2: Statistics of FillP

Start at: 2019-10-03 11:35:54
End at: 2019-10-03 11:36:24
Local clock offset: -6.334 ms
Remote clock offset: -1243.723 ms

# Below is generated by plot.py at 2019-10-03 13:38:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.15 Mbit/s
95th percentile per-packet one-way delay: 277.455 ms
Loss rate: 1.81%
-- Flow 1:
Average throughput: 57.56 Mbit/s
95th percentile per-packet one-way delay: 294.948 ms
Loss rate: 1.40%
-- Flow 2:
Average throughput: 38.89 Mbit/s
95th percentile per-packet one-way delay: 239.104 ms
Loss rate: 2.15%
-- Flow 3:
Average throughput: 29.72 Mbit/s
95th percentile per-packet one-way delay: 365.137 ms
Loss rate: 3.31%
Run 2: Report of FillP — Data Link

![Graph of Throughput and Delay](image)

- Flow 1 ingress (mean 58.06 Mbit/s)
- Flow 1 egress (mean 57.56 Mbit/s)
- Flow 2 ingress (mean 39.42 Mbit/s)
- Flow 2 egress (mean 38.89 Mbit/s)
- Flow 3 ingress (mean 30.27 Mbit/s)
- Flow 3 egress (mean 29.72 Mbit/s)

- Flow 1 (95th percentile 294.95 ms)
- Flow 2 (95th percentile 239.10 ms)
- Flow 3 (95th percentile 365.14 ms)
Run 3: Statistics of FillP

Start at: 2019-10-03 12:06:32
End at: 2019-10-03 12:07:02
Local clock offset: -6.673 ms
Remote clock offset: -1418.029 ms

# Below is generated by plot.py at 2019-10-03 13:38:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 93.60 Mbit/s
  95th percentile per-packet one-way delay: 260.042 ms
  Loss rate: 2.49%
-- Flow 1:
  Average throughput: 57.50 Mbit/s
  95th percentile per-packet one-way delay: 262.873 ms
  Loss rate: 1.21%
-- Flow 2:
  Average throughput: 39.88 Mbit/s
  95th percentile per-packet one-way delay: 255.210 ms
  Loss rate: 5.16%
-- Flow 3:
  Average throughput: 29.29 Mbit/s
  95th percentile per-packet one-way delay: 309.004 ms
  Loss rate: 2.49%
Run 3: Report of FillP — Data Link
Run 4: Statistics of FillP

Start at: 2019-10-03 12:37:10
End at: 2019-10-03 12:37:40
Local clock offset: -6.576 ms
Remote clock offset: -159.503 ms

# Below is generated by plot.py at 2019-10-03 13:39:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.40 Mbit/s
95th percentile per-packet one-way delay: 249.580 ms
Loss rate: 1.93%
-- Flow 1:
Average throughput: 57.76 Mbit/s
95th percentile per-packet one-way delay: 255.947 ms
Loss rate: 1.05%
-- Flow 2:
Average throughput: 39.07 Mbit/s
95th percentile per-packet one-way delay: 243.915 ms
Loss rate: 3.28%
-- Flow 3:
Average throughput: 29.52 Mbit/s
95th percentile per-packet one-way delay: 200.239 ms
Loss rate: 3.43%
Run 5: Statistics of FillP

Start at: 2019-10-03 13:07:49
End at: 2019-10-03 13:08:19
Local clock offset: -5.92 ms
Remote clock offset: 2.313 ms

# Below is generated by plot.py at 2019-10-03 13:39:22
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 93.36 Mbit/s
  95th percentile per-packet one-way delay: 243.552 ms
  Loss rate: 1.86%
-- Flow 1:
  Average throughput: 57.63 Mbit/s
  95th percentile per-packet one-way delay: 258.149 ms
  Loss rate: 1.10%
-- Flow 2:
  Average throughput: 39.20 Mbit/s
  95th percentile per-packet one-way delay: 221.604 ms
  Loss rate: 2.99%
-- Flow 3:
  Average throughput: 29.51 Mbit/s
  95th percentile per-packet one-way delay: 324.608 ms
  Loss rate: 3.27%
Run 5: Report of FillP — Data Link
Run 1: Statistics of FillP-Sheep

Start at: 2019-10-03 11:30:55
End at: 2019-10-03 11:31:25
Local clock offset: -6.024 ms
Remote clock offset: -1214.588 ms

# Below is generated by plot.py at 2019-10-03 13:39:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 93.28 Mbit/s
  95th percentile per-packet one-way delay: 260.891 ms
  Loss rate: 1.52%
-- Flow 1:
  Average throughput: 57.38 Mbit/s
  95th percentile per-packet one-way delay: 283.186 ms
  Loss rate: 0.82%
-- Flow 2:
  Average throughput: 39.07 Mbit/s
  95th percentile per-packet one-way delay: 213.911 ms
  Loss rate: 1.64%
-- Flow 3:
  Average throughput: 30.35 Mbit/s
  95th percentile per-packet one-way delay: 230.034 ms
  Loss rate: 5.09%
Run 1: Report of FillP-Sheep — Data Link
Run 2: Statistics of FillP-Sheep

Start at: 2019-10-03 12:01:34
End at: 2019-10-03 12:02:04
Local clock offset: -6.632 ms
Remote clock offset: -1391.142 ms

# Below is generated by plot.py at 2019-10-03 13:39:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.14 Mbit/s
95th percentile per-packet one-way delay: 238.558 ms
Loss rate: 1.64%
-- Flow 1:
Average throughput: 57.49 Mbit/s
95th percentile per-packet one-way delay: 244.779 ms
Loss rate: 0.99%
-- Flow 2:
Average throughput: 38.48 Mbit/s
95th percentile per-packet one-way delay: 210.786 ms
Loss rate: 1.77%
-- Flow 3:
Average throughput: 30.71 Mbit/s
95th percentile per-packet one-way delay: 306.261 ms
Loss rate: 4.93%
Run 2: Report of FillP-Sheep — Data Link
Run 3: Statistics of FillP-Sheep

Start at: 2019-10-03 12:32:11
End at: 2019-10-03 12:32:41
Local clock offset: -6.574 ms
Remote clock offset: -130.977 ms

# Below is generated by plot.py at 2019-10-03 13:39:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.17 Mbit/s
95th percentile per-packet one-way delay: 260.278 ms
Loss rate: 1.58%
-- Flow 1:
Average throughput: 57.08 Mbit/s
95th percentile per-packet one-way delay: 291.508 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 39.56 Mbit/s
95th percentile per-packet one-way delay: 206.651 ms
Loss rate: 2.63%
-- Flow 3:
Average throughput: 29.87 Mbit/s
95th percentile per-packet one-way delay: 250.817 ms
Loss rate: 3.52%
Run 3: Report of FillP-Sheep — Data Link

![Graph showing throughput and packet one-way delay over time for different flows.]
Run 4: Statistics of FillP-Sheep

Start at: 2019-10-03 13:02:50
End at: 2019-10-03 13:03:20
Local clock offset: -6.091 ms
Remote clock offset: -1.671 ms

# Below is generated by plot.py at 2019-10-03 13:39:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.94 Mbit/s
95th percentile per-packet one-way delay: 269.493 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 57.18 Mbit/s
95th percentile per-packet one-way delay: 267.690 ms
Loss rate: 0.99%
-- Flow 2:
Average throughput: 39.06 Mbit/s
95th percentile per-packet one-way delay: 270.084 ms
Loss rate: 2.35%
-- Flow 3:
Average throughput: 29.84 Mbit/s
95th percentile per-packet one-way delay: 283.990 ms
Loss rate: 2.43%
Run 4: Report of FillP-Sheep — Data Link
Run 5: Statistics of FillP-Sheep

Start at: 2019-10-03 13:33:32
End at: 2019-10-03 13:34:02
Local clock offset: -6.257 ms
Remote clock offset: 14.267 ms

# Below is generated by plot.py at 2019-10-03 13:39:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.03 Mbit/s
95th percentile per-packet one-way delay: 271.652 ms
Loss rate: 1.33%

-- Flow 1:
Average throughput: 56.68 Mbit/s
95th percentile per-packet one-way delay: 270.721 ms
Loss rate: 0.54%

-- Flow 2:
Average throughput: 39.81 Mbit/s
95th percentile per-packet one-way delay: 269.618 ms
Loss rate: 2.42%

-- Flow 3:
Average throughput: 30.23 Mbit/s
95th percentile per-packet one-way delay: 319.148 ms
Loss rate: 2.88%
Run 5: Report of FillP-Sheep — Data Link
Run 1: Statistics of Indigo

Start at: 2019-10-03 11:20:38
End at: 2019-10-03 11:21:08
Local clock offset: -5.384 ms
Remote clock offset: -1155.094 ms

# Below is generated by plot.py at 2019-10-03 13:39:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.62 Mbit/s
95th percentile per-packet one-way delay: 287.984 ms
Loss rate: 3.66%
-- Flow 1:
Average throughput: 58.55 Mbit/s
95th percentile per-packet one-way delay: 325.936 ms
Loss rate: 4.83%
-- Flow 2:
Average throughput: 38.71 Mbit/s
95th percentile per-packet one-way delay: 149.896 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 28.95 Mbit/s
95th percentile per-packet one-way delay: 139.120 ms
Loss rate: 2.88%
Run 1: Report of Indigo — Data Link
Run 2: Statistics of Indigo

Start at: 2019-10-03 11:51:19
End at: 2019-10-03 11:51:49
Local clock offset: -6.714 ms
Remote clock offset: -1330.384 ms

# Below is generated by plot.py at 2019-10-03 13:40:09
# Datalink statistics
--- Total of 3 flows:
Average throughput: 93.90 Mbit/s
95th percentile per-packet one-way delay: 302.822 ms
Loss rate: 2.38%
--- Flow 1:
Average throughput: 58.55 Mbit/s
95th percentile per-packet one-way delay: 321.219 ms
Loss rate: 2.84%
--- Flow 2:
Average throughput: 38.92 Mbit/s
95th percentile per-packet one-way delay: 144.806 ms
Loss rate: 1.15%
--- Flow 3:
Average throughput: 29.32 Mbit/s
95th percentile per-packet one-way delay: 139.496 ms
Loss rate: 2.77%
Run 2: Report of Indigo — Data Link

![Graph of Throughput and Delay](image-url)

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 59.92 Mbps)
  - Flow 1 egress (mean 58.55 Mbps)
  - Flow 2 ingress (mean 39.04 Mbps)
  - Flow 2 egress (mean 38.92 Mbps)
  - Flow 3 ingress (mean 29.64 Mbps)
  - Flow 3 egress (mean 29.32 Mbps)

- **Delay (ms):**
  - Flow 1 (95th percentile 321.22 ms)
  - Flow 2 (95th percentile 144.81 ms)
  - Flow 3 (95th percentile 139.50 ms)
Run 3: Statistics of Indigo

Start at: 2019-10-03 12:21:57
End at: 2019-10-03 12:22:27
Local clock offset: -6.607 ms
Remote clock offset: -73.122 ms

# Below is generated by plot.py at 2019-10-03 13:40:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.04 Mbit/s
95th percentile per-packet one-way delay: 372.699 ms
Loss rate: 9.09%
-- Flow 1:
Average throughput: 58.74 Mbit/s
95th percentile per-packet one-way delay: 411.255 ms
Loss rate: 13.16%
-- Flow 2:
Average throughput: 39.00 Mbit/s
95th percentile per-packet one-way delay: 140.325 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 29.12 Mbit/s
95th percentile per-packet one-way delay: 113.162 ms
Loss rate: 2.11%
Run 3: Report of Indigo — Data Link

![Graph of Throughput and Per-packet one-way delay](image-url)
Run 4: Statistics of Indigo

Start at: 2019-10-03 12:52:35
End at: 2019-10-03 12:53:05
Local clock offset: -6.602 ms
Remote clock offset: -10.411 ms

# Below is generated by plot.py at 2019-10-03 13:40:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.92 Mbit/s
95th percentile per-packet one-way delay: 404.724 ms
Loss rate: 5.39%
-- Flow 1:
Average throughput: 58.74 Mbit/s
95th percentile per-packet one-way delay: 439.729 ms
Loss rate: 6.99%
-- Flow 2:
Average throughput: 38.80 Mbit/s
95th percentile per-packet one-way delay: 216.151 ms
Loss rate: 2.55%
-- Flow 3:
Average throughput: 29.27 Mbit/s
95th percentile per-packet one-way delay: 149.927 ms
Loss rate: 2.71%
Run 4: Report of Indigo — Data Link

![Graph 1: Throughput (Mbps)](image1)

![Graph 2: Per-packet one-way delay (ms)](image2)
Run 5: Statistics of Indigo

End at: 2019-10-03 13:23:43
Local clock offset: -5.662 ms
Remote clock offset: 9.523 ms

# Below is generated by plot.py at 2019-10-03 13:40:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.91 Mbit/s
95th percentile per-packet one-way delay: 399.429 ms
Loss rate: 6.77%
-- Flow 1:
Average throughput: 58.67 Mbit/s
95th percentile per-packet one-way delay: 427.773 ms
Loss rate: 9.65%
-- Flow 2:
Average throughput: 38.78 Mbit/s
95th percentile per-packet one-way delay: 146.305 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 29.60 Mbit/s
95th percentile per-packet one-way delay: 136.325 ms
Loss rate: 2.35%
Run 5: Report of Indigo — Data Link

![Graph showing throughput over time for different flows]

![Graph showing per-packet one-way delay over time for different flows]

Legend:
- Flow 1 ingress (mean 64.58 Mbit/s)
- Flow 1 egress (mean 58.67 Mbit/s)
- Flow 2 ingress (mean 38.95 Mbit/s)
- Flow 2 egress (mean 38.78 Mbit/s)
- Flow 3 ingress (mean 29.81 Mbit/s)
- Flow 3 egress (mean 29.60 Mbit/s)

Legend for per-packet one-way delay:
- Flow 1 (95th percentile 427.77 ms)
- Flow 2 (95th percentile 146.31 ms)
- Flow 3 (95th percentile 136.32 ms)
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-10-03 11:24:30
End at: 2019-10-03 11:25:00
Local clock offset: -5.337 ms
Remote clock offset: -1175.519 ms

# Below is generated by plot.py at 2019-10-03 13:40:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.83 Mbit/s
95th percentile per-packet one-way delay: 145.546 ms
Loss rate: 3.24%
-- Flow 1:
Average throughput: 60.78 Mbit/s
95th percentile per-packet one-way delay: 143.339 ms
Loss rate: 2.38%
-- Flow 2:
Average throughput: 40.17 Mbit/s
95th percentile per-packet one-way delay: 151.365 ms
Loss rate: 5.21%
-- Flow 3:
Average throughput: 29.85 Mbit/s
95th percentile per-packet one-way delay: 146.248 ms
Loss rate: 3.21%
Run 1: Report of Indigo-MusesC3 — Data Link
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-10-03 11:55:09
End at: 2019-10-03 11:55:39
Local clock offset: -6.733 ms
Remote clock offset: -1351.737 ms

# Below is generated by plot.py at 2019-10-03 13:40:47
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 94.67 Mbit/s
  95th percentile per-packet one-way delay: 179.776 ms
  Loss rate: 2.08%
-- Flow 1:
  Average throughput: 60.47 Mbit/s
  95th percentile per-packet one-way delay: 138.808 ms
  Loss rate: 2.08%
-- Flow 2:
  Average throughput: 40.49 Mbit/s
  95th percentile per-packet one-way delay: 291.381 ms
  Loss rate: 1.71%
-- Flow 3:
  Average throughput: 29.56 Mbit/s
  95th percentile per-packet one-way delay: 162.285 ms
  Loss rate: 3.23%
Run 2: Report of Indigo-MusesC3 — Data Link

![Graphs showing throughput and packet delay over time for different flows.]

- Flow 1 ingress (mean 61.41 Mbit/s)
- Flow 1 egress (mean 60.47 Mbit/s)
- Flow 2 ingress (mean 40.82 Mbit/s)
- Flow 2 egress (mean 40.49 Mbit/s)
- Flow 3 ingress (mean 29.91 Mbit/s)
- Flow 3 egress (mean 29.56 Mbit/s)
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-10-03 12:25:47
End at: 2019-10-03 12:26:17
Local clock offset: -6.653 ms
Remote clock offset: -94.181 ms

# Below is generated by plot.py at 2019-10-03 13:40:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.65 Mbit/s
95th percentile per-packet one-way delay: 152.323 ms
Loss rate: 2.80%
-- Flow 1:
Average throughput: 60.64 Mbit/s
95th percentile per-packet one-way delay: 136.471 ms
Loss rate: 2.06%
-- Flow 2:
Average throughput: 40.48 Mbit/s
95th percentile per-packet one-way delay: 212.165 ms
Loss rate: 4.51%
-- Flow 3:
Average throughput: 29.20 Mbit/s
95th percentile per-packet one-way delay: 144.282 ms
Loss rate: 2.70%
Run 3: Report of Indigo-MusesC3 — Data Link
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-10-03 12:56:25
End at: 2019-10-03 12:56:55
Local clock offset: -6.433 ms
Remote clock offset: -4.706 ms

# Below is generated by plot.py at 2019-10-03 13:40:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.74 Mbit/s
95th percentile per-packet one-way delay: 165.520 ms
Loss rate: 2.62%
-- Flow 1:
Average throughput: 60.81 Mbit/s
95th percentile per-packet one-way delay: 133.924 ms
Loss rate: 2.10%
-- Flow 2:
Average throughput: 40.13 Mbit/s
95th percentile per-packet one-way delay: 196.330 ms
Loss rate: 3.53%
-- Flow 3:
Average throughput: 30.33 Mbit/s
95th percentile per-packet one-way delay: 385.412 ms
Loss rate: 3.64%
Run 4: Report of Indigo-MusesC3 — Data Link

**Graph 1:**
- Y-axis: Throughput (Mbps)
- X-axis: Time (s)
- Legend:
  - Flow 1 ingress (mean 61.76 Mbps)
  - Flow 1 egress (mean 60.81 Mbps)
  - Flow 2 ingress (mean 41.23 Mbps)
  - Flow 2 egress (mean 40.13 Mbps)
  - Flow 3 ingress (mean 30.84 Mbps)
  - Flow 3 egress (mean 30.33 Mbps)

**Graph 2:**
- Y-axis: Per-packet one-way delay (ms)
- X-axis: Time (s)
- Legend:
  - Flow 1 (95th percentile 133.92 ms)
  - Flow 2 (95th percentile 196.33 ms)
  - Flow 3 (95th percentile 385.41 ms)
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-10-03 13:27:04
End at: 2019-10-03 13:27:34
Local clock offset: -5.844 ms
Remote clock offset: 9.346 ms

# Below is generated by plot.py at 2019-10-03 13:41:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.60 Mbit/s
95th percentile per-packet one-way delay: 166.019 ms
Loss rate: 2.40%
-- Flow 1:
Average throughput: 60.49 Mbit/s
95th percentile per-packet one-way delay: 143.909 ms
Loss rate: 2.36%
-- Flow 2:
Average throughput: 40.11 Mbit/s
95th percentile per-packet one-way delay: 202.429 ms
Loss rate: 2.30%
-- Flow 3:
Average throughput: 30.06 Mbit/s
95th percentile per-packet one-way delay: 177.569 ms
Loss rate: 3.02%
Run 5: Report of Indigo-MusesC3 — Data Link

![Graph 1: Throughput (Mbps)

![Graph 2: One-way delay (ms)]
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-10-03 11:10:17  
End at: 2019-10-03 11:10:47  
Local clock offset: -5.681 ms  
Remote clock offset: -1093.558 ms

# Below is generated by plot.py at 2019-10-03 13:41:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.14 Mbit/s  
95th percentile per-packet one-way delay: 268.721 ms  
Loss rate: 3.18%
-- Flow 1:
Average throughput: 57.90 Mbit/s  
95th percentile per-packet one-way delay: 248.575 ms  
Loss rate: 2.43%
-- Flow 2:
Average throughput: 42.40 Mbit/s  
95th percentile per-packet one-way delay: 317.636 ms  
Loss rate: 4.15%
-- Flow 3:
Average throughput: 29.43 Mbit/s  
95th percentile per-packet one-way delay: 281.597 ms  
Loss rate: 5.21%
Run 1: Report of Indigo-MusesC5 — Data Link
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-10-03 11:41:08
End at: 2019-10-03 11:41:38
Local clock offset: -6.57 ms
Remote clock offset: -1270.552 ms

# Below is generated by plot.py at 2019-10-03 13:41:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 93.38 Mbit/s
  95th percentile per-packet one-way delay: 257.734 ms
  Loss rate: 3.24%
-- Flow 1:
  Average throughput: 58.12 Mbit/s
  95th percentile per-packet one-way delay: 248.852 ms
  Loss rate: 2.09%
-- Flow 2:
  Average throughput: 42.01 Mbit/s
  95th percentile per-packet one-way delay: 243.000 ms
  Loss rate: 4.63%
-- Flow 3:
  Average throughput: 29.42 Mbit/s
  95th percentile per-packet one-way delay: 323.322 ms
  Loss rate: 6.53%
Run 2: Report of Indigo-MusesC5 — Data Link
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-10-03 12:11:44
End at: 2019-10-03 12:12:14
Local clock offset: -6.652 ms
Remote clock offset: -12.772 ms

# Below is generated by plot.py at 2019-10-03 13:41:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 93.18 Mbit/s
  95th percentile per-packet one-way delay: 258.333 ms
  Loss rate: 3.21%
-- Flow 1:
  Average throughput: 56.73 Mbit/s
  95th percentile per-packet one-way delay: 244.117 ms
  Loss rate: 2.04%
-- Flow 2:
  Average throughput: 43.21 Mbit/s
  95th percentile per-packet one-way delay: 275.419 ms
  Loss rate: 3.10%
-- Flow 3:
  Average throughput: 30.43 Mbit/s
  95th percentile per-packet one-way delay: 297.777 ms
  Loss rate: 10.57%
Run 3: Report of Indigo-MusesC5 — Data Link
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-10-03 12:42:23
End at: 2019-10-03 12:42:53
Local clock offset: -6.636 ms
Remote clock offset: -187.184 ms

# Below is generated by plot.py at 2019-10-03 13:41:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.38 Mbit/s
95th percentile per-packet one-way delay: 271.918 ms
Loss rate: 3.99%
-- Flow 1:
Average throughput: 57.40 Mbit/s
95th percentile per-packet one-way delay: 242.144 ms
Loss rate: 3.58%
-- Flow 2:
Average throughput: 43.51 Mbit/s
95th percentile per-packet one-way delay: 274.434 ms
Loss rate: 3.88%
-- Flow 3:
Average throughput: 28.48 Mbit/s
95th percentile per-packet one-way delay: 314.624 ms
Loss rate: 7.14%
Run 4: Report of Indigo-MusesC5 — Data Link

![Graph showing throughput and per-packet one-way delay over time for different flows.]
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-10-03 13:13:01
End at: 2019-10-03 13:13:31
Local clock offset: -5.868 ms
Remote clock offset: 4.608 ms

# Below is generated by plot.py at 2019-10-03 13:41:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 92.75 Mbit/s
  95th percentile per-packet one-way delay: 244.477 ms
  Loss rate: 2.85%
-- Flow 1:
  Average throughput: 57.22 Mbit/s
  95th percentile per-packet one-way delay: 233.416 ms
  Loss rate: 2.07%
-- Flow 2:
  Average throughput: 41.84 Mbit/s
  95th percentile per-packet one-way delay: 307.889 ms
  Loss rate: 3.25%
-- Flow 3:
  Average throughput: 31.13 Mbit/s
  95th percentile per-packet one-way delay: 235.891 ms
  Loss rate: 6.57%
Run 5: Report of Indigo-MusesC5 — Data Link
Run 1: Statistics of Indigo-MusesD

Start at: 2019-10-03 11:03:48
End at: 2019-10-03 11:04:18
Local clock offset: -5.897 ms
Remote clock offset: -1056.707 ms

# Below is generated by plot.py at 2019-10-03 13:41:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.26 Mbit/s
95th percentile per-packet one-way delay: 204.195 ms
Loss rate: 6.17%
-- Flow 1:
Average throughput: 61.57 Mbit/s
95th percentile per-packet one-way delay: 207.332 ms
Loss rate: 7.07%
-- Flow 2:
Average throughput: 38.76 Mbit/s
95th percentile per-packet one-way delay: 179.369 ms
Loss rate: 3.82%
-- Flow 3:
Average throughput: 28.32 Mbit/s
95th percentile per-packet one-way delay: 167.457 ms
Loss rate: 6.27%
Run 1: Report of Indigo-MusesD — Data Link

![Graph showing throughput and delay over time for different flows. The legend indicates that Flow 1 has a mean ingress of 65.87 Mbit/s and a mean egress of 61.57 Mbit/s. Flow 2 has a mean ingress of 39.93 Mbit/s and a mean egress of 38.76 Mbit/s. Flow 3 has a mean ingress of 29.61 Mbit/s and a mean egress of 28.32 Mbit/s. The delay graphs show the 95th percentile delay for each flow, with Flow 1 at 207.33 ms, Flow 2 at 179.33 ms, and Flow 3 at 167.46 ms.]
Run 2: Statistics of Indigo-MusesD

Start at: 2019-10-03 11:34:37
End at: 2019-10-03 11:35:07
Local clock offset: -6.27 ms
Remote clock offset: -1236.402 ms

# Below is generated by plot.py at 2019-10-03 13:42:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 93.89 Mbit/s
  95th percentile per-packet one-way delay: 208.238 ms
  Loss rate: 4.93%
-- Flow 1:
  Average throughput: 61.56 Mbit/s
  95th percentile per-packet one-way delay: 214.705 ms
  Loss rate: 6.02%
-- Flow 2:
  Average throughput: 37.56 Mbit/s
  95th percentile per-packet one-way delay: 152.882 ms
  Loss rate: 2.46%
-- Flow 3:
  Average throughput: 29.72 Mbit/s
  95th percentile per-packet one-way delay: 140.913 ms
  Loss rate: 3.65%
Run 2: Report of Indigo-MusesD — Data Link
Run 3: Statistics of Indigo-MusesD

Start at: 2019-10-03 12:05:15
End at: 2019-10-03 12:05:45
Local clock offset: -6.598 ms
Remote clock offset: -1410.622 ms

# Below is generated by plot.py at 2019-10-03 13:42:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.20 Mbit/s
95th percentile per-packet one-way delay: 206.398 ms
Loss rate: 7.41%
-- Flow 1:
Average throughput: 60.31 Mbit/s
95th percentile per-packet one-way delay: 206.275 ms
Loss rate: 5.73%
-- Flow 2:
Average throughput: 40.26 Mbit/s
95th percentile per-packet one-way delay: 214.517 ms
Loss rate: 11.81%
-- Flow 3:
Average throughput: 28.64 Mbit/s
95th percentile per-packet one-way delay: 172.527 ms
Loss rate: 4.91%
Run 3: Report of Indigo-MusesD — Data Link

![Graph showing throughput and delay over time](image_url)

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 63.60 Mbps)
  - Flow 1 egress (mean 60.31 Mbps)
  - Flow 2 ingress (mean 45.25 Mbps)
  - Flow 2 egress (mean 40.26 Mbps)
  - Flow 3 ingress (mean 29.50 Mbps)
  - Flow 3 egress (mean 28.64 Mbps)

- **Delay (ms):**
  - Flow 1 (95th percentile 206.28 ms)
  - Flow 2 (95th percentile 214.52 ms)
  - Flow 3 (95th percentile 172.53 ms)
Run 4: Statistics of Indigo-MusesD

Start at: 2019-10-03 12:35:53
End at: 2019-10-03 12:36:23
Local clock offset: -6.579 ms
Remote clock offset: -151.245 ms

# Below is generated by plot.py at 2019-10-03 13:42:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 93.71 Mbit/s
  95th percentile per-packet one-way delay: 205.815 ms
  Loss rate: 4.68%
-- Flow 1:
  Average throughput: 61.34 Mbit/s
  95th percentile per-packet one-way delay: 218.311 ms
  Loss rate: 5.64%
-- Flow 2:
  Average throughput: 36.82 Mbit/s
  95th percentile per-packet one-way delay: 120.039 ms
  Loss rate: 2.34%
-- Flow 3:
  Average throughput: 31.19 Mbit/s
  95th percentile per-packet one-way delay: 149.838 ms
  Loss rate: 4.03%
Run 4: Report of Indigo-MusesD — Data Link

![Graph 1: Throughput vs. Time](image1)

- **Flow 1 ingress (mean 64.63 Mbit/s)**
- **Flow 1 egress (mean 61.34 Mbit/s)**
- **Flow 2 ingress (mean 37.37 Mbit/s)**
- **Flow 2 egress (mean 36.82 Mbit/s)**
- **Flow 3 ingress (mean 31.82 Mbit/s)**
- **Flow 3 egress (mean 31.19 Mbit/s)**

![Graph 2: Per-packet one-way delay vs. Time](image2)

- **Flow 1 (95th percentile 218.31 ms)**
- **Flow 2 (95th percentile 120.04 ms)**
- **Flow 3 (95th percentile 149.84 ms)**
Run 5: Statistics of Indigo-MusesD

Start at: 2019-10-03 13:06:31
End at: 2019-10-03 13:07:01
Local clock offset: -5.955 ms
Remote clock offset: 1.862 ms

# Below is generated by plot.py at 2019-10-03 13:42:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 94.44 Mbit/s
  95th percentile per-packet one-way delay: 206.853 ms
  Loss rate: 4.69%
-- Flow 1:
  Average throughput: 61.49 Mbit/s
  95th percentile per-packet one-way delay: 217.114 ms
  Loss rate: 5.73%
-- Flow 2:
  Average throughput: 38.57 Mbit/s
  95th percentile per-packet one-way delay: 145.223 ms
  Loss rate: 2.20%
-- Flow 3:
  Average throughput: 30.00 Mbit/s
  95th percentile per-packet one-way delay: 171.463 ms
  Loss rate: 4.08%
Run 5: Report of Indigo-MusesD — Data Link

![Graph showing throughput and packet delay over time for different flows.]

**Throughput (Mbps):**
- Flow 1 ingress (mean 64.88 Mbps)
- Flow 1 egress (mean 61.49 Mbps)
- Flow 2 ingress (mean 39.68 Mbps)
- Flow 2 egress (mean 38.57 Mbps)
- Flow 3 ingress (mean 30.64 Mbps)
- Flow 3 egress (mean 30.00 Mbps)

**Packet Delay (ms):**
- Flow 1 (95th percentile 217.11 ms)
- Flow 2 (95th percentile 145.22 ms)
- Flow 3 (95th percentile 171.46 ms)
Run 1: Statistics of Indigo-MusesT

Start at: 2019-10-03 11:07:40  
End at: 2019-10-03 11:08:10  
Local clock offset: -5.68 ms  
Remote clock offset: -1079.308 ms

# Below is generated by plot.py at 2019-10-03 13:42:32
# Datalink statistics
-- Total of 3 flows:  
  Average throughput: 95.03 Mbit/s  
  95th percentile per-packet one-way delay: 390.422 ms  
  Loss rate: 6.12%
-- Flow 1:  
  Average throughput: 60.05 Mbit/s  
  95th percentile per-packet one-way delay: 319.696 ms  
  Loss rate: 5.29%
-- Flow 2:  
  Average throughput: 42.74 Mbit/s  
  95th percentile per-packet one-way delay: 351.269 ms  
  Loss rate: 8.35%
-- Flow 3:  
  Average throughput: 27.10 Mbit/s  
  95th percentile per-packet one-way delay: 602.757 ms  
  Loss rate: 4.35%
Run 1: Report of Indigo-MuseST — Data Link

---

---

---
Run 2: Statistics of Indigo-MusesT

Start at: 2019-10-03 11:38:30
End at: 2019-10-03 11:39:00
Local clock offset: -6.46 ms
Remote clock offset: -1257.227 ms

# Below is generated by plot.py at 2019-10-03 13:42:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 94.29 Mbit/s
  95th percentile per-packet one-way delay: 385.739 ms
  Loss rate: 5.06%
-- Flow 1:
  Average throughput: 59.04 Mbit/s
  95th percentile per-packet one-way delay: 381.469 ms
  Loss rate: 4.43%
-- Flow 2:
  Average throughput: 44.82 Mbit/s
  95th percentile per-packet one-way delay: 224.041 ms
  Loss rate: 5.96%
-- Flow 3:
  Average throughput: 23.90 Mbit/s
  95th percentile per-packet one-way delay: 753.185 ms
  Loss rate: 6.66%
Run 2: Report of Indigo-MusesT — Data Link

![Graph 1](image1.png)

Flow 1 ingress (mean 61.41 Mb/s)  Flow 1 egress (mean 59.04 Mb/s)
Flow 2 ingress (mean 47.25 Mb/s)  Flow 2 egress (mean 44.82 Mb/s)
Flow 3 ingress (mean 25.09 Mb/s)  Flow 3 egress (mean 23.90 Mb/s)

![Graph 2](image2.png)

Flow 1 (95th percentile 381.47 ms)  Flow 2 (95th percentile 224.04 ms)  Flow 3 (95th percentile 753.18 ms)
Run 3: Statistics of Indigo-MusesT

Start at: 2019-10-03 12:09:07
End at: 2019-10-03 12:09:37
Local clock offset: -6.642 ms
Remote clock offset: -1434.531 ms

# Below is generated by plot.py at 2019-10-03 13:42:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.35 Mbit/s
95th percentile per-packet one-way delay: 946.649 ms
Loss rate: 3.42%
-- Flow 1:
Average throughput: 61.57 Mbit/s
95th percentile per-packet one-way delay: 485.914 ms
Loss rate: 2.48%
-- Flow 2:
Average throughput: 33.36 Mbit/s
95th percentile per-packet one-way delay: 1584.663 ms
Loss rate: 5.23%
-- Flow 3:
Average throughput: 29.77 Mbit/s
95th percentile per-packet one-way delay: 471.538 ms
Loss rate: 5.53%
Run 3: Report of Indigo-MusesT — Data Link
Run 4: Statistics of Indigo-MusesT

Start at: 2019-10-03 12:39:45
End at: 2019-10-03 12:40:15
Local clock offset: -6.579 ms
Remote clock offset: -173.018 ms

# Below is generated by plot.py at 2019-10-03 13:43:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.77 Mbit/s
95th percentile per-packet one-way delay: 384.227 ms
Loss rate: 6.81%
-- Flow 1:
Average throughput: 60.24 Mbit/s
95th percentile per-packet one-way delay: 308.776 ms
Loss rate: 6.00%
-- Flow 2:
Average throughput: 40.42 Mbit/s
95th percentile per-packet one-way delay: 390.882 ms
Loss rate: 7.25%
-- Flow 3:
Average throughput: 31.01 Mbit/s
95th percentile per-packet one-way delay: 419.677 ms
Loss rate: 10.89%
Run 4: Report of Indigo-MusesT — Data Link

[Graph of network performance metrics over time, showing throughput and per-packet one-way delay for different flows.]
Run 5: Statistics of Indigo-MusesT

Start at: 2019-10-03 13:10:24
End at: 2019-10-03 13:10:54
Local clock offset: -5.857 ms
Remote clock offset: 1.669 ms

# Below is generated by plot.py at 2019-10-03 13:43:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.21 Mbit/s
95th percentile per-packet one-way delay: 491.056 ms
Loss rate: 6.81%
-- Flow 1:
Average throughput: 58.60 Mbit/s
95th percentile per-packet one-way delay: 500.469 ms
Loss rate: 7.23%
-- Flow 2:
Average throughput: 38.94 Mbit/s
95th percentile per-packet one-way delay: 324.087 ms
Loss rate: 5.17%
-- Flow 3:
Average throughput: 31.22 Mbit/s
95th percentile per-packet one-way delay: 500.016 ms
Loss rate: 8.53%
Run 5: Report of Indigo-MusesT — Data Link

---

**Throughput (Mbit/s)**

- **Flow 1 ingress (mean 62.82 Mbit/s)**
- **Flow 1 egress (mean 58.60 Mbit/s)**
- **Flow 2 ingress (mean 40.69 Mbit/s)**
- **Flow 2 egress (mean 38.94 Mbit/s)**
- **Flow 3 ingress (mean 33.44 Mbit/s)**
- **Flow 3 egress (mean 31.22 Mbit/s)**

**Per-packet one-way delay (ms)**

- **Flow 1 95th percentile 500.47 ms**
- **Flow 2 95th percentile 324.09 ms**
- **Flow 3 95th percentile 500.02 ms**

104
Run 1: Statistics of LEDBAT

Start at: 2019-10-03 11:23:16
End at: 2019-10-03 11:23:46
Local clock offset: -5.36 ms
Remote clock offset: -1170.713 ms

# Below is generated by plot.py at 2019-10-03 13:43:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.86 Mbit/s
95th percentile per-packet one-way delay: 90.143 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 13.67 Mbit/s
95th percentile per-packet one-way delay: 88.651 ms
Loss rate: 1.08%
-- Flow 2:
Average throughput: 8.68 Mbit/s
95th percentile per-packet one-way delay: 90.626 ms
Loss rate: 1.66%
-- Flow 3:
Average throughput: 4.38 Mbit/s
95th percentile per-packet one-way delay: 88.164 ms
Loss rate: 3.32%
Run 1: Report of LEDBAT — Data Link

![Graph showing throughput and per-packet round-trip delay over time for different flows.]

- Flow 1 ingress (mean 13.74 Mbit/s)
- Flow 1 egress (mean 13.67 Mbit/s)
- Flow 2 ingress (mean 8.76 Mbit/s)
- Flow 2 egress (mean 8.66 Mbit/s)
- Flow 3 ingress (mean 4.45 Mbit/s)
- Flow 3 egress (mean 4.36 Mbit/s)
Run 2: Statistics of LEDBAT

Start at: 2019-10-03 11:53:55
End at: 2019-10-03 11:54:25
Local clock offset: -6.82 ms
Remote clock offset: -1345.346 ms

# Below is generated by plot.py at 2019-10-03 13:43:07
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 20.30 Mbit/s
   95th percentile per-packet one-way delay: 91.003 ms
   Loss rate: 1.41%
-- Flow 1:
   Average throughput: 13.10 Mbit/s
   95th percentile per-packet one-way delay: 91.155 ms
   Loss rate: 1.10%
-- Flow 2:
   Average throughput: 8.77 Mbit/s
   95th percentile per-packet one-way delay: 87.789 ms
   Loss rate: 1.64%
-- Flow 3:
   Average throughput: 4.21 Mbit/s
   95th percentile per-packet one-way delay: 88.040 ms
   Loss rate: 3.36%
Run 2: Report of LEDBAT — Data Link

![Graph showing throughput and packet delay over time for three flows.]

- **Throughput (Mbps)** vs **Time (s)**
- **Flow 1 ingress** (mean 13.17 Mbps/s) vs **Flow 1 egress** (mean 13.10 Mbps/s)
- **Flow 2 ingress** (mean 8.84 Mbps/s) vs **Flow 2 egress** (mean 8.77 Mbps/s)
- **Flow 3 ingress** (mean 4.28 Mbps/s) vs **Flow 3 egress** (mean 4.21 Mbps/s)

![Graph showing packet delay over time for three flows.]

- **Per packet one-way delay (ms)** vs **Time (s)**
- **Flow 1** (95th percentile 91.16 ms) vs **Flow 2** (95th percentile 87.79 ms) vs **Flow 3** (95th percentile 88.04 ms)
Run 3: Statistics of LEDBAT

Start at: 2019-10-03 12:24:33
End at: 2019-10-03 12:25:03
Local clock offset: -6.676 ms
Remote clock offset: -86.643 ms

# Below is generated by plot.py at 2019-10-03 13:43:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 20.52 Mbit/s
  95th percentile per-packet one-way delay: 90.100 ms
  Loss rate: 1.41%
-- Flow 1:
  Average throughput: 13.25 Mbit/s
  95th percentile per-packet one-way delay: 88.871 ms
  Loss rate: 1.10%
-- Flow 2:
  Average throughput: 8.90 Mbit/s
  95th percentile per-packet one-way delay: 88.686 ms
  Loss rate: 1.64%
-- Flow 3:
  Average throughput: 4.19 Mbit/s
  95th percentile per-packet one-way delay: 91.105 ms
  Loss rate: 3.37%
Run 3: Report of LEDBAT — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 13.32 Mbit/s)
Flow 1 egress (mean 13.25 Mbit/s)
Flow 2 ingress (mean 8.97 Mbit/s)
Flow 2 egress (mean 8.90 Mbit/s)
Flow 3 ingress (mean 4.27 Mbit/s)
Flow 3 egress (mean 4.19 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 88.87 ms)
Flow 2 (95th percentile 88.69 ms)
Flow 3 (95th percentile 91.11 ms)
Run 4: Statistics of LEDBAT

Start at: 2019-10-03 12:55:11
End at: 2019-10-03 12:55:41
Local clock offset: -6.532 ms
Remote clock offset: -3.426 ms

# Below is generated by plot.py at 2019-10-03 13:43:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.46 Mbit/s
95th percentile per-packet one-way delay: 93.598 ms
Loss rate: 1.41%
-- Flow 1:
Average throughput: 13.39 Mbit/s
95th percentile per-packet one-way delay: 91.539 ms
Loss rate: 1.09%
-- Flow 2:
Average throughput: 8.58 Mbit/s
95th percentile per-packet one-way delay: 93.979 ms
Loss rate: 1.67%
-- Flow 3:
Average throughput: 4.25 Mbit/s
95th percentile per-packet one-way delay: 90.086 ms
Loss rate: 3.32%
Run 5: Statistics of LEDBAT

Start at: 2019-10-03 13:25:49
End at: 2019-10-03 13:26:19
Local clock offset: -5.837 ms
Remote clock offset: 8.9 ms

# Below is generated by plot.py at 2019-10-03 13:43:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.39 Mbit/s
95th percentile per-packet one-way delay: 95.377 ms
Loss rate: 1.41%
-- Flow 1:
Average throughput: 13.40 Mbit/s
95th percentile per-packet one-way delay: 94.655 ms
Loss rate: 1.09%
-- Flow 2:
Average throughput: 8.47 Mbit/s
95th percentile per-packet one-way delay: 96.497 ms
Loss rate: 1.69%
-- Flow 3:
Average throughput: 4.23 Mbit/s
95th percentile per-packet one-way delay: 93.539 ms
Loss rate: 3.35%
Run 5: Report of LEDBAT — Data Link

![Graph of throughput over time for different flows.]

- Flow 1 ingress (mean 13.47 Mbit/s)
- Flow 1 egress (mean 13.40 Mbit/s)
- Flow 2 ingress (mean 8.54 Mbit/s)
- Flow 2 egress (mean 8.47 Mbit/s)
- Flow 3 ingress (mean 4.30 Mbit/s)
- Flow 3 egress (mean 4.23 Mbit/s)

![Graph of per-packet one-way delay over time for different flows.]

- Flow 1 (95th percentile 94.66 ms)
- Flow 2 (95th percentile 96.50 ms)
- Flow 3 (95th percentile 93.54 ms)
Run 1: Statistics of Muses\_DecisionTree

Start at: 2019-10-03 11:21:59
End at: 2019-10-03 11:22:29
Local clock offset: -5.362 ms
Remote clock offset: -1162.351 ms

# Below is generated by plot.py at 2019-10-03 13:43:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.37 Mbit/s
95th percentile per-packet one-way delay: 137.913 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 56.22 Mbit/s
95th percentile per-packet one-way delay: 140.814 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 39.07 Mbit/s
95th percentile per-packet one-way delay: 131.879 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 29.46 Mbit/s
95th percentile per-packet one-way delay: 139.924 ms
Loss rate: 2.43%
Run 1: Report of Muses_DecisionTree — Data Link
Run 2: Statistics of Muses\_DecisionTree

Start at: 2019-10-03 11:52:38
End at: 2019-10-03 11:53:08
Local clock offset: -6.732 ms
Remote clock offset: -1339.955 ms

# Below is generated by plot.py at 2019-10-03 13:43:51
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 91.23 Mbit/s
  95th percentile per-packet one-way delay: 157.252 ms
  Loss rate: 0.80%
-- Flow 1:
  Average throughput: 55.27 Mbit/s
  95th percentile per-packet one-way delay: 145.536 ms
  Loss rate: 0.47%
-- Flow 2:
  Average throughput: 38.81 Mbit/s
  95th percentile per-packet one-way delay: 166.007 ms
  Loss rate: 0.95%
-- Flow 3:
  Average throughput: 32.32 Mbit/s
  95th percentile per-packet one-way delay: 259.669 ms
  Loss rate: 2.23%
Run 2: Report of Muses_DecisionTree — Data Link
Run 3: Statistics of Muses\_DecisionTree

Start at: 2019-10-03 12:23:15
End at: 2019-10-03 12:23:45
Local clock offset: -6.593 ms
Remote clock offset: -77.944 ms

# Below is generated by plot.py at 2019-10-03 13:43:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.03 Mbit/s
95th percentile per-packet one-way delay: 140.366 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 55.99 Mbit/s
95th percentile per-packet one-way delay: 136.598 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 38.74 Mbit/s
95th percentile per-packet one-way delay: 132.530 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 29.69 Mbit/s
95th percentile per-packet one-way delay: 220.288 ms
Loss rate: 2.43%
Run 3: Report of Muses_DecisionTree — Data Link

Throughput (Mb/s)

Time (s)

Per-packet one-way delay (ms)

Time (s)
Run 4: Statistics of Muses\_DecisionTree

Start at: 2019-10-03 12:53:54
End at: 2019-10-03 12:54:24
Local clock offset: -6.594 ms
Remote clock offset: -5.88 ms

# Below is generated by plot.py at 2019-10-03 13:43:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.11 Mbit/s
95th percentile per-packet one-way delay: 158.219 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 55.47 Mbit/s
95th percentile per-packet one-way delay: 149.002 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 38.09 Mbit/s
95th percentile per-packet one-way delay: 205.574 ms
Loss rate: 0.96%
-- Flow 3:
Average throughput: 29.74 Mbit/s
95th percentile per-packet one-way delay: 181.867 ms
Loss rate: 2.11%
Run 4: Report of Muses_DecisionTree — Data Link

[Graphs showing throughput and per-packet one-way delay over time for different flows]
Run 5: Statistics of Muses\_DecisionTree

Start at: 2019-10-03 13:24:32
End at: 2019-10-03 13:25:02
Local clock offset: -5.628 ms
Remote clock offset: 8.499 ms

# Below is generated by plot.py at 2019-10-03 13:43:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.12 Mbit/s
95th percentile per-packet one-way delay: 161.862 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 54.50 Mbit/s
95th percentile per-packet one-way delay: 163.668 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 39.04 Mbit/s
95th percentile per-packet one-way delay: 138.489 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 30.57 Mbit/s
95th percentile per-packet one-way delay: 224.901 ms
Loss rate: 2.35%
Run 5: Report of Muses

DecisionTree — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 54.50 Mbit/s)
Flow 1 egress (mean 54.50 Mbit/s)
Flow 2 ingress (mean 39.69 Mbit/s)
Flow 2 egress (mean 39.04 Mbit/s)
Flow 3 ingress (mean 30.77 Mbit/s)
Flow 3 egress (mean 30.57 Mbit/s)

Packet delay (ms)

Time (s)

Flow 1 (95th percentile 163.67 ms)
Flow 2 (95th percentile 138.49 ms)
Flow 3 (95th percentile 224.90 ms)

124
Run 1: Statistics of Muses\_DecisionTreeH0

Start at: 2019-10-03 11:16:41
End at: 2019-10-03 11:17:11
Local clock offset: -5.53 ms
Remote clock offset: -1132.894 ms

# Below is generated by plot.py at 2019-10-03 13:43:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.84 Mbit/s
95th percentile per-packet one-way delay: 1299.275 ms
Loss rate: 28.64%
-- Flow 1:
Average throughput: 34.55 Mbit/s
95th percentile per-packet one-way delay: 1238.039 ms
Loss rate: 28.27%
-- Flow 2:
Average throughput: 30.87 Mbit/s
95th percentile per-packet one-way delay: 1441.110 ms
Loss rate: 26.13%
-- Flow 3:
Average throughput: 30.73 Mbit/s
95th percentile per-packet one-way delay: 986.224 ms
Loss rate: 34.43%
Run 1: Report of Muses, Decision Tree H0 — Data Link
Run 2: Statistics of Muses\_DecisionTreeH0

Start at: 2019-10-03 11:47:31
End at: 2019-10-03 11:48:01
Local clock offset: -6.657 ms
Remote clock offset: -1308.084 ms

# Below is generated by plot.py at 2019-10-03 13:43:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 58.99 Mbit/s
95th percentile per-packet one-way delay: 1285.673 ms
Loss rate: 18.33%
-- Flow 1:
Average throughput: 33.18 Mbit/s
95th percentile per-packet one-way delay: 1224.959 ms
Loss rate: 18.21%
-- Flow 2:
Average throughput: 29.41 Mbit/s
95th percentile per-packet one-way delay: 1433.600 ms
Loss rate: 16.29%
-- Flow 3:
Average throughput: 19.93 Mbit/s
95th percentile per-packet one-way delay: 1578.575 ms
Loss rate: 24.44%
Run 2: Report of Muses DecisionTreeH0 — Data Link

Throughput (Mbit/s) vs. Time (s)

- Flow 1 ingress (mean 40.35 Mbit/s)
- Flow 1 egress (mean 33.18 Mbit/s)
- Flow 2 ingress (mean 34.84 Mbit/s)
- Flow 2 egress (mean 29.41 Mbit/s)
- Flow 3 ingress (mean 25.93 Mbit/s)
- Flow 3 egress (mean 19.93 Mbit/s)

Packet per second vs. Time (s)

- Flow 1 (95th percentile 1224.96 ms)
- Flow 2 (95th percentile 1433.60 ms)
- Flow 3 (95th percentile 1578.58 ms)
Run 3: Statistics of Muses\_DecisionTreeH0

Start at: 2019-10-03 12:18:08
End at: 2019-10-03 12:18:38
Local clock offset: -6.648 ms
Remote clock offset: -50.258 ms

# Below is generated by plot.py at 2019-10-03 13:43:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 58.08 Mbit/s
95th percentile per-packet one-way delay: 1276.134 ms
Loss rate: 28.19%
-- Flow 1:
Average throughput: 32.56 Mbit/s
95th percentile per-packet one-way delay: 1231.929 ms
Loss rate: 30.12%
-- Flow 2:
Average throughput: 28.93 Mbit/s
95th percentile per-packet one-way delay: 1441.332 ms
Loss rate: 20.38%
-- Flow 3:
Average throughput: 20.23 Mbit/s
95th percentile per-packet one-way delay: 1199.185 ms
Loss rate: 37.58%
Run 3: Report of Muses.DecisionTreeH0 — Data Link

![Graphs showing throughput and packet one-way delay over time for different flows.](image-url)
Run 4: Statistics of Muses\_DecisionTreeH0

Start at: 2019-10-03 12:48:47
End at: 2019-10-03 12:49:17
Local clock offset: -6.599 ms
Remote clock offset: -225.283 ms

# Below is generated by plot.py at 2019-10-03 13:44:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 57.21 Mbit/s
  95th percentile per-packet one-way delay: 1433.284 ms
  Loss rate: 28.71%
-- Flow 1:
  Average throughput: 31.96 Mbit/s
  95th percentile per-packet one-way delay: 1429.616 ms
  Loss rate: 26.71%
-- Flow 2:
  Average throughput: 27.24 Mbit/s
  95th percentile per-packet one-way delay: 1519.438 ms
  Loss rate: 26.42%
-- Flow 3:
  Average throughput: 22.53 Mbit/s
  95th percentile per-packet one-way delay: 1140.760 ms
  Loss rate: 40.45%
Run 4: Report of Muses

DecisionTreeH0 — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 44.93 Mbit/s)
Flow 2 ingress (mean 39.13 Mbit/s)
Flow 3 ingress (mean 42.48 Mbit/s)
Flow 1 egress (mean 31.96 Mbit/s)
Flow 2 egress (mean 27.24 Mbit/s)
Flow 3 egress (mean 22.53 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 1429.62 ms)
Flow 2 (95th percentile 1519.44 ms)
Flow 3 (95th percentile 1140.76 ms)
Run 5: Statistics of Muses\_DecisionTreeHO

Start at: 2019-10-03 13:19:25
End at: 2019-10-03 13:19:55
Local clock offset: -5.69 ms
Remote clock offset: 7.708 ms

# Below is generated by plot.py at 2019-10-03 13:44:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.64 Mbit/s
95th percentile per-packet one-way delay: 1286.015 ms
Loss rate: 23.86%
-- Flow 1:
Average throughput: 34.02 Mbit/s
95th percentile per-packet one-way delay: 1216.482 ms
Loss rate: 19.34%
-- Flow 2:
Average throughput: 30.91 Mbit/s
95th percentile per-packet one-way delay: 1353.888 ms
Loss rate: 23.32%
-- Flow 3:
Average throughput: 20.11 Mbit/s
95th percentile per-packet one-way delay: 1512.040 ms
Loss rate: 42.10%
Run 5: Report of Muses_DecisionTreeH0 — Data Link
Run 1: Statistics of Muses\_DecisionTreeRO

Start at: 2019-10-03 11:15:24
End at: 2019-10-03 11:15:54
Local clock offset: -5.481 ms
Remote clock offset: -1123.214 ms

# Below is generated by plot.py at 2019-10-03 13:44:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.93 Mbit/s
95th percentile per-packet one-way delay: 147.642 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 55.75 Mbit/s
95th percentile per-packet one-way delay: 142.306 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 38.43 Mbit/s
95th percentile per-packet one-way delay: 140.758 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 30.47 Mbit/s
95th percentile per-packet one-way delay: 237.520 ms
Loss rate: 2.46%
Run 1: Report of Muses_DecisionTreeR0 — Data Link
Run 2: Statistics of Muses\_DecisionTreeR0

Start at: 2019-10-03 11:46:14
End at: 2019-10-03 11:46:44
Local clock offset: -6.62 ms
Remote clock offset: -1300.988 ms

# Below is generated by plot.py at 2019-10-03 13:44:51
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 90.98 Mbit/s
  95th percentile per-packet one-way delay: 139.394 ms
  Loss rate: 0.83%
-- Flow 1:
  Average throughput: 56.30 Mbit/s
  95th percentile per-packet one-way delay: 139.686 ms
  Loss rate: 0.51%
-- Flow 2:
  Average throughput: 38.80 Mbit/s
  95th percentile per-packet one-way delay: 137.208 ms
  Loss rate: 1.03%
-- Flow 3:
  Average throughput: 28.51 Mbit/s
  95th percentile per-packet one-way delay: 159.879 ms
  Loss rate: 2.24%
Run 2: Report of Muses_DecisionTreeR0 — Data Link

![Graph of Throughput](image1)

![Graph of Delay](image2)
Run 3: Statistics of Muses\_DecisionTreeR0

Start at: 2019-10-03 12:16:51  
End at: 2019-10-03 12:17:21  
Local clock offset: -6.588 ms  
Remote clock offset: -42.953 ms

# Below is generated by plot.py at 2019-10-03 13:44:53  
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.09 Mbit/s  
95th percentile per-packet one-way delay: 154.104 ms  
Loss rate: 0.93%  
-- Flow 1:
Average throughput: 56.03 Mbit/s  
95th percentile per-packet one-way delay: 152.196 ms  
Loss rate: 0.61%  
-- Flow 2:
Average throughput: 38.63 Mbit/s  
95th percentile per-packet one-way delay: 134.155 ms  
Loss rate: 0.82%  
-- Flow 3:
Average throughput: 30.05 Mbit/s  
95th percentile per-packet one-way delay: 207.446 ms  
Loss rate: 3.00%
Run 3: Report of Muses_DecisionTreeR0 — Data Link

![Graph 1: Throughput (Mbps)](image1.png)

- **Flow 1 ingress (mean 36.03 Mbps)**
- **Flow 1 egress (mean 56.03 Mbps)**
- **Flow 2 ingress (mean 38.61 Mbps)**
- **Flow 2 egress (mean 38.63 Mbps)**
- **Flow 3 ingress (mean 30.44 Mbps)**
- **Flow 3 egress (mean 30.05 Mbps)**

![Graph 2: Per-packet one-way delay (ms)](image2.png)

- **Flow 1 (95th percentile 152.20 ms)**
- **Flow 2 (95th percentile 134.16 ms)**
- **Flow 3 (95th percentile 207.45 ms)**
Run 4: Statistics of Muses\_DecisionTreeR0

Start at: 2019-10-03 12:47:29
End at: 2019-10-03 12:47:59
Local clock offset: -6.584 ms
Remote clock offset: -219.19 ms

# Below is generated by plot.py at 2019-10-03 13:44:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.02 Mbit/s
95th percentile per-packet one-way delay: 145.261 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 55.69 Mbit/s
95th percentile per-packet one-way delay: 146.133 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 38.71 Mbit/s
95th percentile per-packet one-way delay: 135.070 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 30.56 Mbit/s
95th percentile per-packet one-way delay: 166.953 ms
Loss rate: 2.63%
Run 4: Report of Muses Decision Tree R0 — Data Link
Run 5: Statistics of Muses\_DecisionTreeR0

Start at: 2019-10-03 13:18:07  
End at: 2019-10-03 13:18:38  
Local clock offset: -5.722 ms  
Remote clock offset: 5.183 ms  

# Below is generated by plot.py at 2019-10-03 13:44:55  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.78 Mbit/s  
95th percentile per-packet one-way delay: 154.098 ms  
Loss rate: 0.77%  
-- Flow 1:  
Average throughput: 55.07 Mbit/s  
95th percentile per-packet one-way delay: 149.920 ms  
Loss rate: 0.42%  
-- Flow 2:  
Average throughput: 39.16 Mbit/s  
95th percentile per-packet one-way delay: 147.132 ms  
Loss rate: 0.88%  
-- Flow 3:  
Average throughput: 30.65 Mbit/s  
95th percentile per-packet one-way delay: 183.776 ms  
Loss rate: 2.43%
Run 5: Report of Muses_DecisionTreeR0 — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 54.99 Mbps)
- Flow 1 egress (mean 55.07 Mbps)
- Flow 2 ingress (mean 39.18 Mbps)
- Flow 2 egress (mean 39.16 Mbps)
- Flow 3 ingress (mean 30.87 Mbps)
- Flow 3 egress (mean 30.65 Mbps)

![Graph 2: Per-packet end-to-end delay (ms)]

- Flow 1 (95th percentile 149.92 ms)
- Flow 2 (95th percentile 147.13 ms)
- Flow 3 (95th percentile 183.78 ms)
Run 1: Statistics of PCC-Allegro

Start at: 2019-10-03 11:17:58
End at: 2019-10-03 11:18:28
Local clock offset: -5.514 ms
Remote clock offset: -1139.574 ms

# Below is generated by plot.py at 2019-10-03 13:44:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 87.30 Mbit/s
  95th percentile per-packet one-way delay: 1537.536 ms
  Loss rate: 22.34%
-- Flow 1:
  Average throughput: 55.41 Mbit/s
  95th percentile per-packet one-way delay: 1435.448 ms
  Loss rate: 27.41%
-- Flow 2:
  Average throughput: 33.55 Mbit/s
  95th percentile per-packet one-way delay: 724.058 ms
  Loss rate: 7.55%
-- Flow 3:
  Average throughput: 29.53 Mbit/s
  95th percentile per-packet one-way delay: 1738.781 ms
  Loss rate: 19.80%
Run 1: Report of PCC-Allegro — Data Link

![Graph showing throughput and packet delay over time]

**Throughput (Mbps):**
- **Flow 1 ingress** (mean 75.90 Mbps)
- **Flow 1 egress** (mean 55.41 Mbps)
- **Flow 2 ingress** (mean 35.99 Mbps)
- **Flow 2 egress** (mean 33.55 Mbps)
- **Flow 3 ingress** (mean 36.21 Mbps)
- **Flow 3 egress** (mean 29.53 Mbps)

**Packet Delay (ms):**
- **Flow 1** (95th percentile 1435.45 ms)
- **Flow 2** (95th percentile 724.06 ms)
- **Flow 3** (95th percentile 1738.78 ms)
Run 2: Statistics of PCC-Allegro

Start at: 2019-10-03 11:48:47
End at: 2019-10-03 11:49:17
Local clock offset: -6.664 ms
Remote clock offset: -1317.764 ms

# Below is generated by plot.py at 2019-10-03 13:45:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 89.34 Mbit/s
  95th percentile per-packet one-way delay: 1551.602 ms
  Loss rate: 22.73%
-- Flow 1:
  Average throughput: 56.22 Mbit/s
  95th percentile per-packet one-way delay: 1656.034 ms
  Loss rate: 26.54%
-- Flow 2:
  Average throughput: 35.38 Mbit/s
  95th percentile per-packet one-way delay: 1153.320 ms
  Loss rate: 13.60%
-- Flow 3:
  Average throughput: 29.63 Mbit/s
  95th percentile per-packet one-way delay: 1498.130 ms
  Loss rate: 19.13%
Run 2: Report of PCC-Allegro — Data Link
Run 3: Statistics of PCC-Allegro

Start at: 2019-10-03 12:19:24
End at: 2019-10-03 12:19:54
Local clock offset: -6.665 ms
Remote clock offset: -55.989 ms

# Below is generated by plot.py at 2019-10-03 13:45:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.29 Mbit/s
95th percentile per-packet one-way delay: 1422.735 ms
Loss rate: 22.72%
-- Flow 1:
Average throughput: 57.42 Mbit/s
95th percentile per-packet one-way delay: 1415.690 ms
Loss rate: 26.57%
-- Flow 2:
Average throughput: 33.52 Mbit/s
95th percentile per-packet one-way delay: 1135.695 ms
Loss rate: 12.44%
-- Flow 3:
Average throughput: 29.56 Mbit/s
95th percentile per-packet one-way delay: 1541.613 ms
Loss rate: 19.36%
Run 3: Report of PCC-Allegro — Data Link

[Graph showing throughput and packet delay over time for different flows]

Flow 1 ingress (mean 77.76 Mbit/s)  Flow 1 egress (mean 57.42 Mbit/s)
Flow 2 ingress (mean 37.96 Mbit/s)  Flow 2 egress (mean 33.52 Mbit/s)
Flow 3 ingress (mean 36.09 Mbit/s)  Flow 3 egress (mean 29.56 Mbit/s)

[Graph showing packet delay over time for different flows]

Flow 1 (95th percentile 1415.69 ms)  Flow 2 (95th percentile 1135.69 ms)  Flow 3 (95th percentile 1541.61 ms)
Run 4: Statistics of PCC-Allegro

Start at: 2019-10-03 12:50:03
End at: 2019-10-03 12:50:33
Local clock offset: -6.598 ms
Remote clock offset: -35.93 ms

# Below is generated by plot.py at 2019-10-03 13:45:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.60 Mbit/s
95th percentile per-packet one-way delay: 1474.736 ms
Loss rate: 23.66%
-- Flow 1:
Average throughput: 57.19 Mbit/s
95th percentile per-packet one-way delay: 1546.428 ms
Loss rate: 26.45%
-- Flow 2:
Average throughput: 34.36 Mbit/s
95th percentile per-packet one-way delay: 1113.152 ms
Loss rate: 17.07%
-- Flow 3:
Average throughput: 29.49 Mbit/s
95th percentile per-packet one-way delay: 1421.762 ms
Loss rate: 20.72%
Run 4: Report of PCC-Allegro — Data Link

![Throughput Graph]

![Packet Delay Graph]

Legend:
- Flow 1 ingress (mean 77.33 Mbit/s)
- Flow 1 egress (mean 57.19 Mbit/s)
- Flow 2 ingress (mean 41.69 Mbit/s)
- Flow 2 egress (mean 34.36 Mbit/s)
- Flow 3 ingress (mean 36.59 Mbit/s)
- Flow 3 egress (mean 29.49 Mbit/s)

Legend:
- Flow 1 (95th percentile 1546.43 ms)
- Flow 2 (95th percentile 1113.15 ms)
- Flow 3 (95th percentile 1421.76 ms)
Run 5: Statistics of PCC-Allegro

Start at: 2019-10-03 13:20:41
End at: 2019-10-03 13:21:11
Local clock offset: -5.681 ms
Remote clock offset: 8.441 ms

# Below is generated by plot.py at 2019-10-03 13:45:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.22 Mbit/s
95th percentile per-packet one-way delay: 1450.467 ms
Loss rate: 23.09%
-- Flow 1:
Average throughput: 55.63 Mbit/s
95th percentile per-packet one-way delay: 1529.392 ms
Loss rate: 26.06%
-- Flow 2:
Average throughput: 34.58 Mbit/s
95th percentile per-packet one-way delay: 1110.768 ms
Loss rate: 16.12%
-- Flow 3:
Average throughput: 29.63 Mbit/s
95th percentile per-packet one-way delay: 1399.088 ms
Loss rate: 20.42%
Run 5: Report of PCC-Allegro — Data Link
Run 1: Statistics of PCC-Expr

Start at: 2019-10-03 11:08:58
End at: 2019-10-03 11:09:28
Local clock offset: -5.642 ms
Remote clock offset: -1088.598 ms

# Below is generated by plot.py at 2019-10-03 13:46:52
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 91.15 Mbit/s
  95th percentile per-packet one-way delay: 770.099 ms
  Loss rate: 24.29%
-- Flow 1:
  Average throughput: 56.72 Mbit/s
  95th percentile per-packet one-way delay: 798.475 ms
  Loss rate: 28.56%
-- Flow 2:
  Average throughput: 38.95 Mbit/s
  95th percentile per-packet one-way delay: 729.018 ms
  Loss rate: 19.43%
-- Flow 3:
  Average throughput: 26.28 Mbit/s
  95th percentile per-packet one-way delay: 216.251 ms
  Loss rate: 3.78%
Run 1: Report of PCC-Expr — Data Link

![Graph 1: Throughput (Mbps)](image1)

---

![Graph 2: Per-packet one-way delay (ms)](image2)

---

156
Run 2: Statistics of PCC-Expr

Start at: 2019-10-03 11:39:47
End at: 2019-10-03 11:40:17
Local clock offset: -6.479 ms
Remote clock offset: -1263.79 ms

# Below is generated by plot.py at 2019-10-03 13:46:57
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 91.10 Mbit/s
  95th percentile per-packet one-way delay: 740.871 ms
  Loss rate: 29.51%
-- Flow 1:
  Average throughput: 56.69 Mbit/s
  95th percentile per-packet one-way delay: 718.186 ms
  Loss rate: 36.51%
-- Flow 2:
  Average throughput: 39.03 Mbit/s
  95th percentile per-packet one-way delay: 773.274 ms
  Loss rate: 16.80%
-- Flow 3:
  Average throughput: 26.05 Mbit/s
  95th percentile per-packet one-way delay: 238.157 ms
  Loss rate: 3.36%
Run 2: Report of PCC-Expr — Data Link
Run 3: Statistics of PCC-Expr

Start at: 2019-10-03 12:10:24
End at: 2019-10-03 12:10:54
Local clock offset: -6.589 ms
Remote clock offset: -4.114 ms

# Below is generated by plot.py at 2019-10-03 13:47:04
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 91.06 Mbit/s
  95th percentile per-packet one-way delay: 710.013 ms
  Loss rate: 32.58%
-- Flow 1:
  Average throughput: 56.96 Mbit/s
  95th percentile per-packet one-way delay: 694.095 ms
  Loss rate: 40.01%
-- Flow 2:
  Average throughput: 39.34 Mbit/s
  95th percentile per-packet one-way delay: 732.349 ms
  Loss rate: 18.00%
-- Flow 3:
  Average throughput: 24.53 Mbit/s
  95th percentile per-packet one-way delay: 231.505 ms
  Loss rate: 3.42%
Run 3: Report of PCC-Expr — Data Link

![Graphs showing throughput and delay over time for different flows.](image-url)

- **Throughput** (Mbps):
  - Flow 1 ingress (mean 94.43 Mbps)
  - Flow 1 egress (mean 56.96 Mbps)
  - Flow 2 ingress (mean 47.57 Mbps)
  - Flow 2 egress (mean 39.34 Mbps)
  - Flow 3 ingress (mean 24.97 Mbps)
  - Flow 3 egress (mean 24.53 Mbps)

- **Delay** (ms):
  - Flow 1 (95th percentile 694.10 ms)
  - Flow 2 (95th percentile 732.35 ms)
  - Flow 3 (95th percentile 231.50 ms)
Run 4: Statistics of PCC-Expr

Start at: 2019-10-03 12:41:02
End at: 2019-10-03 12:41:32
Local clock offset: -6.571 ms
Remote clock offset: -182.587 ms

# Below is generated by plot.py at 2019-10-03 13:47:06
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 91.15 Mbit/s
  95th percentile per-packet one-way delay: 765.841 ms
  Loss rate: 30.19%
-- Flow 1:
  Average throughput: 56.71 Mbit/s
  95th percentile per-packet one-way delay: 727.531 ms
  Loss rate: 37.60%
-- Flow 2:
  Average throughput: 38.98 Mbit/s
  95th percentile per-packet one-way delay: 783.689 ms
  Loss rate: 16.02%
-- Flow 3:
  Average throughput: 26.24 Mbit/s
  95th percentile per-packet one-way delay: 218.134 ms
  Loss rate: 3.67%
Run 4: Report of PCC-Expr — Data Link

![Graph 1: Throughput (Mbps)](image1)

![Graph 2: Per-packet one-way (delay) ms](image2)
Run 5: Statistics of PCC-Expr

Start at: 2019-10-03 13:11:41
End at: 2019-10-03 13:12:11
Local clock offset: -5.829 ms
Remote clock offset: 2.415 ms

# Below is generated by plot.py at 2019-10-03 13:47:41
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 91.08 Mbit/s
  95th percentile per-packet one-way delay: 788.821 ms
  Loss rate: 28.50%
-- Flow 1:
  Average throughput: 56.70 Mbit/s
  95th percentile per-packet one-way delay: 785.180 ms
  Loss rate: 35.77%
-- Flow 2:
  Average throughput: 38.92 Mbit/s
  95th percentile per-packet one-way delay: 798.989 ms
  Loss rate: 14.66%
-- Flow 3:
  Average throughput: 26.21 Mbit/s
  95th percentile per-packet one-way delay: 233.145 ms
  Loss rate: 3.36%
Run 5: Report of PCC-Expr — Data Link

![Graph 1: Throughput vs. Time](image1)

![Graph 2: Delay vs. Time](image2)
Run 1: Statistics of QUIC Cubic

Start at: 2019-10-03 11:27:06
End at: 2019-10-03 11:27:36
Local clock offset: -5.728 ms
Remote clock offset: -1190.522 ms

# Below is generated by plot.py at 2019-10-03 13:47:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.39 Mbit/s
95th percentile per-packet one-way delay: 150.023 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 32.43 Mbit/s
95th percentile per-packet one-way delay: 135.096 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 24.12 Mbit/s
95th percentile per-packet one-way delay: 221.072 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 24.33 Mbit/s
95th percentile per-packet one-way delay: 168.220 ms
Loss rate: 2.23%
Run 1: Report of QUIC Cubic — Data Link
Run 2: Statistics of QUIC Cubic

Start at: 2019-10-03 11:57:45
End at: 2019-10-03 11:58:15
Local clock offset: -6.749 ms
Remote clock offset: -1367.288 ms

# Below is generated by plot.py at 2019-10-03 13:47:41
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 50.38 Mbit/s
  95th percentile per-packet one-way delay: 171.421 ms
  Loss rate: 0.90%
-- Flow 1:
  Average throughput: 28.94 Mbit/s
  95th percentile per-packet one-way delay: 139.443 ms
  Loss rate: 0.66%
-- Flow 2:
  Average throughput: 25.51 Mbit/s
  95th percentile per-packet one-way delay: 155.283 ms
  Loss rate: 1.14%
-- Flow 3:
  Average throughput: 13.79 Mbit/s
  95th percentile per-packet one-way delay: 386.028 ms
  Loss rate: 1.50%
Run 2: Report of QUIC Cubic — Data Link
Run 3: Statistics of QUIC Cubic

Start at: 2019-10-03 12:28:22
End at: 2019-10-03 12:28:52
Local clock offset: -6.584 ms
Remote clock offset: -108.192 ms

# Below is generated by plot.py at 2019-10-03 13:47:41
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 57.35 Mbit/s
  95th percentile per-packet one-way delay: 175.069 ms
  Loss rate: 1.38%
-- Flow 1:
  Average throughput: 36.10 Mbit/s
  95th percentile per-packet one-way delay: 133.620 ms
  Loss rate: 0.53%
-- Flow 2:
  Average throughput: 26.04 Mbit/s
  95th percentile per-packet one-way delay: 210.883 ms
  Loss rate: 1.01%
-- Flow 3:
  Average throughput: 12.13 Mbit/s
  95th percentile per-packet one-way delay: 376.223 ms
  Loss rate: 9.80%
Run 3: Report of QUIC Cubic — Data Link

---

Throughput (Mbps)

Time (s)

0 5 10 15 20 25 30

Flow 1 ingress (mean 36.09 Mbps)
Flow 2 ingress (mean 26.09 Mbps)
Flow 3 ingress (mean 13.23 Mbps)
Flow 1 egress (mean 36.10 Mbps)
Flow 2 egress (mean 26.04 Mbps)
Flow 3 egress (mean 12.13 Mbps)

---

Per-packet one-way delay (ms)

Time (s)

0 5 10 15 20 25 30

Flow 1 (95th percentile 133.62 ms)
Flow 2 (95th percentile 210.88 ms)
Flow 3 (95th percentile 376.22 ms)

---

170
Run 4: Statistics of QUIC Cubic

Start at: 2019-10-03 12:59:01
End at: 2019-10-03 12:59:31
Local clock offset: -6.331 ms
Remote clock offset: -1.649 ms

# Below is generated by plot.py at 2019-10-03 13:47:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.81 Mbit/s
95th percentile per-packet one-way delay: 189.265 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 32.06 Mbit/s
95th percentile per-packet one-way delay: 138.584 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 25.44 Mbit/s
95th percentile per-packet one-way delay: 187.651 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 14.88 Mbit/s
95th percentile per-packet one-way delay: 439.142 ms
Loss rate: 1.58%
Run 4: Report of QUIC Cubic — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 32.06 Mbit/s)
Flow 1 egress (mean 32.06 Mbit/s)
Flow 2 ingress (mean 25.49 Mbit/s)
Flow 2 egress (mean 25.44 Mbit/s)
Flow 3 ingress (mean 14.86 Mbit/s)
Flow 3 egress (mean 14.88 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 138.58 ms)
Flow 2 (95th percentile 187.65 ms)
Flow 3 (95th percentile 439.14 ms)
Run 5: Statistics of QUIC Cubic

Start at: 2019-10-03 13:29:39
End at: 2019-10-03 13:30:09
Local clock offset: -6.016 ms
Remote clock offset: 10.815 ms

# Below is generated by plot.py at 2019-10-03 13:47:41
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 50.23 Mbit/s
  95th percentile per-packet one-way delay: 174.231 ms
  Loss rate: 1.56%
-- Flow 1:
  Average throughput: 29.09 Mbit/s
  95th percentile per-packet one-way delay: 141.129 ms
  Loss rate: 0.66%
-- Flow 2:
  Average throughput: 25.09 Mbit/s
  95th percentile per-packet one-way delay: 162.067 ms
  Loss rate: 1.14%
-- Flow 3:
  Average throughput: 13.74 Mbit/s
  95th percentile per-packet one-way delay: 388.470 ms
  Loss rate: 8.34%
Run 5: Report of QUIC Cubic — Data Link

![Graph of Throughput (Mbps)](image1)

![Graph of Per-packet one-way delay (ms)](image2)
Run 1: Statistics of SCReAM

Start at: 2019-10-03 11:02:36
End at: 2019-10-03 11:03:06
Local clock offset: -5.953 ms
Remote clock offset: -1052.001 ms

# Below is generated by plot.py at 2019-10-03 13:47:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 92.127 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 89.775 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 92.316 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 91.017 ms
Loss rate: 1.84%
Run 1: Report of SCReAM — Data Link

---

**Graph 1:**
- **Throughput (Mbps):**
- **X-axis:** Time (s)
- **Y-axis:** Throughput (Mbps)
- **Legend:**
  - Flow 1 ingress (mean 0.22 Mbps)
  - Flow 1 egress (mean 0.22 Mbps)
  - Flow 2 ingress (mean 0.22 Mbps)
  - Flow 2 egress (mean 0.22 Mbps)
  - Flow 3 ingress (mean 0.22 Mbps)
  - Flow 3 egress (mean 0.22 Mbps)

**Graph 2:**
- **Per-packet one way delay (ms):**
- **X-axis:** Time (s)
- **Y-axis:** Per-packet one way delay (ms)
- **Legend:**
  - Flow 1 (95th percentile 89.78 ms)
  - Flow 2 (95th percentile 92.32 ms)
  - Flow 3 (95th percentile 91.02 ms)
Run 2: Statistics of SCReAM

Start at: 2019-10-03 11:33:25
End at: 2019-10-03 11:33:55
Local clock offset: -6.27 ms
Remote clock offset: -1229.463 ms

# Below is generated by plot.py at 2019-10-03 13:47:41
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 92.635 ms
  Loss rate: 0.84%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 89.925 ms
  Loss rate: 0.51%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 92.806 ms
  Loss rate: 0.82%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 88.459 ms
  Loss rate: 1.84%
Run 2: Report of SCReAM — Data Link

![Graph showing throughput and per-packet one-way delay trends over time for different flows.]

**Throughput (Mbps)**
- Flow 1 ingress (mean 0.22 Mbps)
- Flow 1 egress (mean 0.22 Mbps)
- Flow 2 ingress (mean 0.22 Mbps)
- Flow 2 egress (mean 0.22 Mbps)
- Flow 3 ingress (mean 0.22 Mbps)
- Flow 3 egress (mean 0.22 Mbps)

**Per-packet one-way delay (ms)**
- Flow 1 (95th percentile 89.92 ms)
- Flow 2 (95th percentile 92.81 ms)
- Flow 3 (95th percentile 88.46 ms)
Run 3: Statistics of SCReAM

Start at: 2019-10-03 12:04:03
End at: 2019-10-03 12:04:33
Local clock offset: -6.628 ms
Remote clock offset: -1403.698 ms

# Below is generated by plot.py at 2019-10-03 13:47:41
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 91.423 ms
  Loss rate: 0.77%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 91.566 ms
  Loss rate: 0.51%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 87.435 ms
  Loss rate: 0.82%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 86.948 ms
  Loss rate: 1.45%
Run 3: Report of SCReAM — Data Link
Run 4: Statistics of SCReAM

Start at: 2019-10-03 12:34:40
End at: 2019-10-03 12:35:10
Local clock offset: -6.571 ms
Remote clock offset: -145.685 ms

# Below is generated by plot.py at 2019-10-03 13:47:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 92.226 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 89.876 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 92.416 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 88.036 ms
Loss rate: 1.45%
Run 5: Statistics of SCReAM

Start at: 2019-10-03 13:05:19
End at: 2019-10-03 13:05:49
Local clock offset: -5.997 ms
Remote clock offset: 1.124 ms

# Below is generated by plot.py at 2019-10-03 13:47:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 92.985 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 92.995 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 92.971 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 89.514 ms
Loss rate: 1.45%
Run 5: Report of SCReAM — Data Link
Run 1: Statistics of Sprout

Start at: 2019-10-03 11:28:22
End at: 2019-10-03 11:28:52
Local clock offset: -5.894 ms
Remote clock offset: -1197.771 ms

# Below is generated by plot.py at 2019-10-03 13:47:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.75 Mbit/s
95th percentile per-packet one-way delay: 95.755 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 4.31 Mbit/s
95th percentile per-packet one-way delay: 96.703 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 4.44 Mbit/s
95th percentile per-packet one-way delay: 93.216 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 4.55 Mbit/s
95th percentile per-packet one-way delay: 92.741 ms
Loss rate: 0.54%
Run 1: Report of Sprout — Data Link
Run 2: Statistics of Sprout

Start at: 2019-10-03 11:59:01
End at: 2019-10-03 11:59:31
Local clock offset: -6.733 ms
Remote clock offset: -1376.2 ms

# Below is generated by plot.py at 2019-10-03 13:47:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.26 Mbit/s
95th percentile per-packet one-way delay: 97.532 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 4.47 Mbit/s
95th percentile per-packet one-way delay: 96.120 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 4.05 Mbit/s
95th percentile per-packet one-way delay: 98.502 ms
Loss rate: 1.28%
-- Flow 3:
Average throughput: 3.40 Mbit/s
95th percentile per-packet one-way delay: 97.885 ms
Loss rate: 2.70%
Run 2: Report of Sprout — Data Link

![Graph showing throughput and packet delay over time for different flows.]

Flow 1 ingress (mean 4.47 Mbit/s)  Flow 1 egress (mean 4.47 Mbit/s)
Flow 2 ingress (mean 4.06 Mbit/s)  Flow 2 egress (mean 4.05 Mbit/s)
Flow 3 ingress (mean 3.44 Mbit/s)  Flow 3 egress (mean 3.40 Mbit/s)
Run 3: Statistics of Sprout

Start at: 2019-10-03 12:29:38
End at: 2019-10-03 12:30:08
Local clock offset: -6.573 ms
Remote clock offset: -115.449 ms

# Below is generated by plot.py at 2019-10-03 13:47:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.81 Mbit/s
95th percentile per-packet one-way delay: 96.198 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 4.71 Mbit/s
95th percentile per-packet one-way delay: 94.753 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 4.30 Mbit/s
95th percentile per-packet one-way delay: 97.523 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 3.84 Mbit/s
95th percentile per-packet one-way delay: 94.830 ms
Loss rate: 2.47%
Run 3: Report of Sprout — Data Link
Run 4: Statistics of Sprout

Start at: 2019-10-03 13:00:17  
End at: 2019-10-03 13:00:47  
Local clock offset: -6.204 ms  
Remote clock offset: -1.469 ms

# Below is generated by plot.py at 2019-10-03 13:47:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.00 Mbit/s
95th percentile per-packet one-way delay: 99.026 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 4.26 Mbit/s
95th percentile per-packet one-way delay: 97.270 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 3.87 Mbit/s
95th percentile per-packet one-way delay: 100.373 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 3.59 Mbit/s
95th percentile per-packet one-way delay: 99.369 ms
Loss rate: 2.00%
Run 4: Report of Sprout — Data Link

![Graph 1: Throughput (Mbps)](image1)

- Flow 1 ingress (mean 4.25 Mbit/s)
- Flow 2 ingress (mean 3.87 Mbit/s)
- Flow 3 ingress (mean 3.60 Mbit/s)
- Flow 1 egress (mean 4.26 Mbit/s)
- Flow 2 egress (mean 3.87 Mbit/s)
- Flow 3 egress (mean 3.59 Mbit/s)

![Graph 2: Per-packet one-way delay (ms)](image2)

- Flow 1 (95th percentile 97.27 ms)
- Flow 2 (95th percentile 100.37 ms)
- Flow 3 (95th percentile 99.37 ms)
Run 5: Statistics of Sprout

Start at: 2019-10-03 13:30:55
End at: 2019-10-03 13:31:25
Local clock offset: -6.152 ms
Remote clock offset: 11.286 ms

# Below is generated by plot.py at 2019-10-03 13:47:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.53 Mbit/s
95th percentile per-packet one-way delay: 99.787 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 4.43 Mbit/s
95th percentile per-packet one-way delay: 98.589 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 2.98 Mbit/s
95th percentile per-packet one-way delay: 100.763 ms
Loss rate: 1.37%
-- Flow 3:
Average throughput: 3.44 Mbit/s
95th percentile per-packet one-way delay: 101.473 ms
Loss rate: 2.40%
Run 5: Report of Sprout — Data Link

![Graph 1: Throughput]

- **Flow 1 ingress (mean 4.43 Mbit/s)**
- **Flow 1 egress (mean 4.43 Mbit/s)**
- **Flow 2 ingress (mean 3.00 Mbit/s)**
- **Flow 2 egress (mean 2.98 Mbit/s)**
- **Flow 3 ingress (mean 3.47 Mbit/s)**
- **Flow 3 egress (mean 3.44 Mbit/s)**

![Graph 2: Packet Delay]

- **Flow 1 (95th percentile 98.59 ms)**
- **Flow 2 (95th percentile 100.76 ms)**
- **Flow 3 (95th percentile 101.47 ms)**
Run 1: Statistics of TaoVA-100x

Start at: 2019-10-03 11:29:35
End at: 2019-10-03 11:30:05
Local clock offset: -5.965 ms
Remote clock offset: -1205.966 ms

# Below is generated by plot.py at 2019-10-03 13:48:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.99 Mbit/s
95th percentile per-packet one-way delay: 160.274 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 50.87 Mbit/s
95th percentile per-packet one-way delay: 148.231 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 19.44 Mbit/s
95th percentile per-packet one-way delay: 211.048 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 61.73 Mbit/s
95th percentile per-packet one-way delay: 131.533 ms
Loss rate: 1.93%
Run 1: Report of TaoVA-100x — Data Link

![Graph of throughput over time for different flows]

- **Flow 1 ingress (mean 50.88 Mbit/s)**
- **Flow 1 egress (mean 50.87 Mbit/s)**
- **Flow 2 ingress (mean 19.45 Mbit/s)**
- **Flow 2 egress (mean 19.44 Mbit/s)**
- **Flow 3 ingress (mean 61.89 Mbit/s)**
- **Flow 3 egress (mean 61.73 Mbit/s)**

![Graph of per-packet one-way delay over time for different flows]

- **Flow 1 (95th percentile 148.23 ms)**
- **Flow 2 (95th percentile 211.05 ms)**
- **Flow 3 (95th percentile 131.53 ms)**
Run 2: Statistics of TaoVA-100x

Start at: 2019-10-03 12:00:14
End at: 2019-10-03 12:00:44
Local clock offset: -6.641 ms
Remote clock offset: -1381.571 ms

# Below is generated by plot.py at 2019-10-03 13:48:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.55 Mbit/s
95th percentile per-packet one-way delay: 157.505 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 41.51 Mbit/s
95th percentile per-packet one-way delay: 157.129 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 26.79 Mbit/s
95th percentile per-packet one-way delay: 177.282 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 66.03 Mbit/s
95th percentile per-packet one-way delay: 116.939 ms
Loss rate: 2.17%
Run 2: Report of TaoVA-100x — Data Link

![Graph 1: Throughout (Mbit/s)]

- Flow 1 ingress (mean 41.52 Mbit/s)
- Flow 2 ingress (mean 26.81 Mbit/s)
- Flow 3 ingress (mean 66.36 Mbit/s)
- Flow 1 egress (mean 41.51 Mbit/s)
- Flow 2 egress (mean 26.79 Mbit/s)
- Flow 3 egress (mean 66.03 Mbit/s)

![Graph 2: Per-packet one-way delay (ms)]

- Flow 1 (95th percentile 157.13 ms)
- Flow 2 (95th percentile 177.28 ms)
- Flow 3 (95th percentile 116.94 ms)
Run 3: Statistics of TaoVA-100x

Start at: 2019-10-03 12:30:51
End at: 2019-10-03 12:31:21
Local clock offset: -6.571 ms
Remote clock offset: -122.716 ms

# Below is generated by plot.py at 2019-10-03 13:48:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.66 Mbit/s
95th percentile per-packet one-way delay: 163.314 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 42.40 Mbit/s
95th percentile per-packet one-way delay: 162.308 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 30.21 Mbit/s
95th percentile per-packet one-way delay: 170.580 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 63.88 Mbit/s
95th percentile per-packet one-way delay: 127.247 ms
Loss rate: 2.61%
Run 3: Report of TaoVA-100x — Data Link

![Graph 1: Throughput (Mbps/s) vs. Time (s)]

- Flow 1 ingress (mean 42.41 Mbps/s)
- Flow 1 egress (mean 42.40 Mbps/s)
- Flow 2 ingress (mean 30.23 Mbps/s)
- Flow 2 egress (mean 30.21 Mbps/s)
- Flow 3 ingress (mean 64.43 Mbps/s)
- Flow 3 egress (mean 63.68 Mbps/s)

![Graph 2: Per-packet one-way delay (ms) vs. Time (s)]

- Flow 1 (95th percentile 162.31 ms)
- Flow 2 (95th percentile 170.58 ms)
- Flow 3 (95th percentile 127.25 ms)
Run 4: Statistics of TaoVA-100x

Start at: 2019-10-03 13:01:30
End at: 2019-10-03 13:02:00
Local clock offset: -6.155 ms
Remote clock offset: -2.28 ms

# Below is generated by plot.py at 2019-10-03 13:48:48
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 80.53 Mbit/s
  95th percentile per-packet one-way delay: 164.804 ms
  Loss rate: 0.56%
  -- Flow 1:
  Average throughput: 45.37 Mbit/s
  95th percentile per-packet one-way delay: 164.246 ms
  Loss rate: 0.04%
  -- Flow 2:
  Average throughput: 25.37 Mbit/s
  95th percentile per-packet one-way delay: 178.390 ms
  Loss rate: 0.08%
  -- Flow 3:
  Average throughput: 63.68 Mbit/s
  95th percentile per-packet one-way delay: 129.923 ms
  Loss rate: 1.99%
Run 4: Report of TaoVA-100x — Data Link

![Graph showing throughput and delay for different flows over time.](image-url)
Run 5: Statistics of TaoVA-100x

Start at: 2019-10-03 13:32:12
End at: 2019-10-03 13:32:42
Local clock offset: -6.136 ms
Remote clock offset: 13.412 ms

# Below is generated by plot.py at 2019-10-03 13:48:48
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 79.86 Mbit/s
  95th percentile per-packet one-way delay: 162.949 ms
  Loss rate: 0.70%
-- Flow 1:
  Average throughput: 40.03 Mbit/s
  95th percentile per-packet one-way delay: 161.252 ms
  Loss rate: 0.04%
-- Flow 2:
  Average throughput: 30.07 Mbit/s
  95th percentile per-packet one-way delay: 177.012 ms
  Loss rate: 0.06%
-- Flow 3:
  Average throughput: 66.96 Mbit/s
  95th percentile per-packet one-way delay: 120.948 ms
  Loss rate: 2.37%
Run 5: Report of TaoVA-100x — Data Link

**Throughput (Mbit/s)**

- **Flow 1 ingress** (mean 40.05 Mbit/s)
- **Flow 1 egress** (mean 40.03 Mbit/s)
- **Flow 2 ingress** (mean 30.08 Mbit/s)
- **Flow 2 egress** (mean 30.07 Mbit/s)
- **Flow 3 ingress** (mean 67.60 Mbit/s)
- **Flow 3 egress** (mean 66.96 Mbit/s)

**Packet Error Rate**

- **Flow 1 (95th percentile 161.25 ms)**
- **Flow 2 (95th percentile 177.01 ms)**
- **Flow 3 (95th percentile 120.95 ms)**
Run 1: Statistics of TCP Vegas

Start at: 2019-10-03 11:19:16
End at: 2019-10-03 11:19:46
Local clock offset: -5.414 ms
Remote clock offset: -1145.523 ms

# Below is generated by plot.py at 2019-10-03 13:48:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.20 Mbit/s
95th percentile per-packet one-way delay: 183.344 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 33.93 Mbit/s
95th percentile per-packet one-way delay: 185.235 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 22.92 Mbit/s
95th percentile per-packet one-way delay: 189.511 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 21.46 Mbit/s
95th percentile per-packet one-way delay: 159.764 ms
Loss rate: 1.86%
Run 1: Report of TCP Vegas — Data Link
Run 2: Statistics of TCP Vegas

Start at: 2019-10-03 11:50:04
End at: 2019-10-03 11:50:34
Local clock offset: -6.688 ms
Remote clock offset: -1322.431 ms

# Below is generated by plot.py at 2019-10-03 13:48:48
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 56.15 Mbit/s
  95th percentile per-packet one-way delay: 183.687 ms
  Loss rate: 0.75%
-- Flow 1:
  Average throughput: 33.48 Mbit/s
  95th percentile per-packet one-way delay: 192.355 ms
  Loss rate: 0.42%
-- Flow 2:
  Average throughput: 23.71 Mbit/s
  95th percentile per-packet one-way delay: 183.667 ms
  Loss rate: 0.95%
-- Flow 3:
  Average throughput: 21.08 Mbit/s
  95th percentile per-packet one-way delay: 161.078 ms
  Loss rate: 1.84%
Run 2: Report of TCP Vegas — Data Link

![Graphs showing throughput and packet one-way delay]
Run 3: Statistics of TCP Vegas

Start at: 2019-10-03 12:20:41
End at: 2019-10-03 12:21:11
Local clock offset: -6.6 ms
Remote clock offset: -65.863 ms

# Below is generated by plot.py at 2019-10-03 13:48:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 55.20 Mbit/s
95th percentile per-packet one-way delay: 183.937 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 30.77 Mbit/s
95th percentile per-packet one-way delay: 208.450 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 27.02 Mbit/s
95th percentile per-packet one-way delay: 164.246 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 19.75 Mbit/s
95th percentile per-packet one-way delay: 173.503 ms
Loss rate: 1.86%
Run 3: Report of TCP Vegas — Data Link

![Graph 1: Throughput (Mbps)]

- **Flow 1 ingress (mean 30.68 Mbps)**
- **Flow 2 ingress (mean 26.97 Mbps)**
- **Flow 3 ingress (mean 19.79 Mbps)**
- **Flow 1 egress (mean 30.77 Mbps)**
- **Flow 2 egress (mean 27.02 Mbps)**
- **Flow 3 egress (mean 19.75 Mbps)**

![Graph 2: Per-packet one-way delay (ms)]

- **Flow 1 (95th percentile 208.45 ms)**
- **Flow 2 (95th percentile 164.25 ms)**
- **Flow 3 (95th percentile 173.50 ms)**
Run 4: Statistics of TCP Vegas

Start at: 2019-10-03 12:51:20
End at: 2019-10-03 12:51:50
Local clock offset: -6.665 ms
Remote clock offset: -12.177 ms

# Below is generated by plot.py at 2019-10-03 13:48:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 55.95 Mbit/s
95th percentile per-packet one-way delay: 184.549 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 33.58 Mbit/s
95th percentile per-packet one-way delay: 190.725 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 22.66 Mbit/s
95th percentile per-packet one-way delay: 185.529 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 22.27 Mbit/s
95th percentile per-packet one-way delay: 163.100 ms
Loss rate: 1.83%
Run 4: Report of TCP Vegas — Data Link
Run 5: Statistics of TCP Vegas

Local clock offset: -5.724 ms
Remote clock offset: 9.033 ms

# Below is generated by plot.py at 2019-10-03 13:48:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 57.85 Mbit/s
95th percentile per-packet one-way delay: 107.649 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 36.83 Mbit/s
95th percentile per-packet one-way delay: 94.479 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 21.16 Mbit/s
95th percentile per-packet one-way delay: 155.702 ms
Loss rate: 2.30%
-- Flow 3:
Average throughput: 21.18 Mbit/s
95th percentile per-packet one-way delay: 158.102 ms
Loss rate: 1.83%
Run 5: Report of TCP Vegas — Data Link

![Graph](image)

- Flow 1 ingress (mean 35.72 Mbit/s)
- Flow 1 egress (mean 36.83 Mbit/s)
- Flow 2 ingress (mean 21.47 Mbit/s)
- Flow 2 egress (mean 21.16 Mbit/s)
- Flow 3 ingress (mean 21.23 Mbit/s)
- Flow 3 egress (mean 21.18 Mbit/s)

![Graph](image)

- Flow 1 (95th percentile 94.48 ms)
- Flow 2 (95th percentile 155.70 ms)
- Flow 3 (95th percentile 158.10 ms)
Run 1: Statistics of Verus

Start at: 2019-10-03 11:12:50
End at: 2019-10-03 11:13:20
Local clock offset: -5.594 ms
Remote clock offset: -1110.314 ms

# Below is generated by plot.py at 2019-10-03 13:49:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.47 Mbit/s
95th percentile per-packet one-way delay: 332.095 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 53.77 Mbit/s
95th percentile per-packet one-way delay: 335.593 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 25.64 Mbit/s
95th percentile per-packet one-way delay: 194.465 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 23.78 Mbit/s
95th percentile per-packet one-way delay: 444.607 ms
Loss rate: 4.25%
Run 1: Report of Verus — Data Link

![Graph showing throughput and per-packet one-way delay for flows 1, 2, and 3.]

- Flow 1 ingress (mean 54.62 Mbit/s)
- Flow 1 egress (mean 53.77 Mbit/s)
- Flow 2 ingress (mean 25.72 Mbit/s)
- Flow 2 egress (mean 25.64 Mbit/s)
- Flow 3 ingress (mean 24.09 Mbit/s)
- Flow 3 egress (mean 23.76 Mbit/s)

- Flow 1 (95th percentile 335.59 ms)
- Flow 2 (95th percentile 194.47 ms)
- Flow 3 (95th percentile 444.61 ms)
Run 2: Statistics of Verus

Start at: 2019-10-03 11:43:40
End at: 2019-10-03 11:44:10
Local clock offset: -6.595 ms
Remote clock offset: -1286.741 ms

# Below is generated by plot.py at 2019-10-03 13:49:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.99 Mbit/s
95th percentile per-packet one-way delay: 360.151 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 38.08 Mbit/s
95th percentile per-packet one-way delay: 420.148 ms
Loss rate: 1.13%
-- Flow 2:
Average throughput: 35.67 Mbit/s
95th percentile per-packet one-way delay: 304.820 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 18.93 Mbit/s
95th percentile per-packet one-way delay: 369.488 ms
Loss rate: 3.46%
Run 2: Report of Verus — Data Link

![Graph of data link throughput and per-packet one-way delay](image-url)
Run 3: Statistics of Verus

Start at: 2019-10-03 12:14:17
End at: 2019-10-03 12:14:47
Local clock offset: -6.575 ms
Remote clock offset: -27.438 ms

# Below is generated by plot.py at 2019-10-03 13:49:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 77.86 Mbit/s
  95th percentile per-packet one-way delay: 293.484 ms
  Loss rate: 0.77%
-- Flow 1:
  Average throughput: 48.94 Mbit/s
  95th percentile per-packet one-way delay: 283.697 ms
  Loss rate: 0.26%
-- Flow 2:
  Average throughput: 30.26 Mbit/s
  95th percentile per-packet one-way delay: 352.977 ms
  Loss rate: 1.25%
-- Flow 3:
  Average throughput: 26.83 Mbit/s
  95th percentile per-packet one-way delay: 294.019 ms
  Loss rate: 2.47%
Run 3: Report of Verus — Data Link

![Graph showing throughput and per-packet one-way delay over time for different flows.]
Run 4: Statistics of Verus

Start at: 2019-10-03 12:44:55
End at: 2019-10-03 12:45:25
Local clock offset: -6.656 ms
Remote clock offset: -202.715 ms

# Below is generated by plot.py at 2019-10-03 13:49:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.55 Mbit/s
95th percentile per-packet one-way delay: 551.512 ms
Loss rate: 1.63%
-- Flow 1:
Average throughput: 43.01 Mbit/s
95th percentile per-packet one-way delay: 522.087 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 32.03 Mbit/s
95th percentile per-packet one-way delay: 720.901 ms
Loss rate: 2.66%
-- Flow 3:
Average throughput: 25.22 Mbit/s
95th percentile per-packet one-way delay: 423.240 ms
Loss rate: 2.85%
Run 4: Report of Verus — Data Link

![Graph 1: Throughput (Mbps)](image)

![Graph 2: Per-packet one-way delay (ms)](image)
Run 5: Statistics of Verus

Start at: 2019-10-03 13:15:34
End at: 2019-10-03 13:16:04
Local clock offset: -5.763 ms
Remote clock offset: 4.291 ms

# Below is generated by plot.py at 2019-10-03 13:49:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.93 Mbit/s
95th percentile per-packet one-way delay: 359.216 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 32.49 Mbit/s
95th percentile per-packet one-way delay: 401.412 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 42.34 Mbit/s
95th percentile per-packet one-way delay: 303.849 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 19.37 Mbit/s
95th percentile per-packet one-way delay: 377.021 ms
Loss rate: 3.13%
Run 5: Report of Verus — Data Link
Run 1: Statistics of PCC-Vivace

Start at: 2019-10-03 11:25:48
End at: 2019-10-03 11:26:18
Local clock offset: -5.517 ms
Remote clock offset: -1185.249 ms

# Below is generated by plot.py at 2019-10-03 13:49:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.31 Mbit/s
95th percentile per-packet one-way delay: 1814.139 ms
Loss rate: 4.26%
-- Flow 1:
Average throughput: 50.45 Mbit/s
95th percentile per-packet one-way delay: 1946.443 ms
Loss rate: 5.34%
-- Flow 2:
Average throughput: 32.06 Mbit/s
95th percentile per-packet one-way delay: 194.404 ms
Loss rate: 2.08%
-- Flow 3:
Average throughput: 23.23 Mbit/s
95th percentile per-packet one-way delay: 373.461 ms
Loss rate: 2.93%
Run 1: Report of PCC-Vivace — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 52.09 Mbps)
Flow 1 egress (mean 50.45 Mbps)
Flow 2 ingress (mean 32.47 Mbps)
Flow 2 egress (mean 32.06 Mbps)
Flow 3 ingress (mean 23.53 Mbps)
Flow 3 egress (mean 23.23 Mbps)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 1946.44 ms)
Flow 2 (95th percentile 194.40 ms)
Flow 3 (95th percentile 373.46 ms)
Run 2: Statistics of PCC-Vivace

Start at: 2019-10-03 11:56:27
End at: 2019-10-03 11:56:57
Local clock offset: -6.718 ms
Remote clock offset: -1360.281 ms

# Below is generated by plot.py at 2019-10-03 13:49:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.32 Mbit/s
95th percentile per-packet one-way delay: 1976.494 ms
Loss rate: 8.22%
-- Flow 1:
Average throughput: 52.95 Mbit/s
95th percentile per-packet one-way delay: 2037.302 ms
Loss rate: 10.71%
-- Flow 2:
Average throughput: 29.72 Mbit/s
95th percentile per-packet one-way delay: 596.997 ms
Loss rate: 3.07%
-- Flow 3:
Average throughput: 23.45 Mbit/s
95th percentile per-packet one-way delay: 339.494 ms
Loss rate: 2.74%
Run 2: Report of PCC-Vivace — Data Link

The graph shows the throughput (Mbps) over time for different flows:

- Flow 1 ingress (mean 58.96 Mbps)
- Flow 1 egress (mean 52.95 Mbps)
- Flow 2 ingress (mean 30.41 Mbps)
- Flow 2 egress (mean 29.72 Mbps)
- Flow 3 ingress (mean 23.70 Mbps)
- Flow 3 egress (mean 23.45 Mbps)

The second graph illustrates the per-packet one-way delay (ms) over time for the same flows:

- Flow 1 (95th percentile 2037.30 ms)
- Flow 2 (95th percentile 597.00 ms)
- Flow 3 (95th percentile 339.49 ms)
Run 3: Statistics of PCC-Vivace

Start at: 2019-10-03 12:27:04
End at: 2019-10-03 12:27:34
Local clock offset: -6.641 ms
Remote clock offset: -101.085 ms

# Below is generated by plot.py at 2019-10-03 13:49:46
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 78.83 Mbit/s
  95th percentile per-packet one-way delay: 1909.870 ms
  Loss rate: 4.51%
-- Flow 1:
  Average throughput: 51.57 Mbit/s
  95th percentile per-packet one-way delay: 2039.171 ms
  Loss rate: 5.29%
-- Flow 2:
  Average throughput: 29.88 Mbit/s
  95th percentile per-packet one-way delay: 598.758 ms
  Loss rate: 3.08%
-- Flow 3:
  Average throughput: 22.75 Mbit/s
  95th percentile per-packet one-way delay: 337.987 ms
  Loss rate: 2.80%
Run 3: Report of PCC-Vivace — Data Link
Run 4: Statistics of PCC-Vivace

Start at: 2019-10-03 12:57:43
End at: 2019-10-03 12:58:13
Local clock offset: -6.42 ms
Remote clock offset: -2.541 ms

# Below is generated by plot.py at 2019-10-03 13:49:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.65 Mbit/s
95th percentile per-packet one-way delay: 1834.055 ms
Loss rate: 7.69%
-- Flow 1:
Average throughput: 52.09 Mbit/s
95th percentile per-packet one-way delay: 1972.857 ms
Loss rate: 10.24%
-- Flow 2:
Average throughput: 31.94 Mbit/s
95th percentile per-packet one-way delay: 166.252 ms
Loss rate: 2.55%
-- Flow 3:
Average throughput: 22.62 Mbit/s
95th percentile per-packet one-way delay: 332.690 ms
Loss rate: 2.94%
Run 4: Report of PCC-Vivace — Data Link

![Graph showing throughput in Mbps over time for different flows.]

![Graph showing per-packet one-way delay in ms over time for different flows.]

Flow 1 ingress (mean 57.72 Mbit/s), Flow 1 egress (mean 52.09 Mbit/s), Flow 2 ingress (mean 32.51 Mbit/s), Flow 2 egress (mean 31.94 Mbit/s), Flow 3 ingress (mean 22.92 Mbit/s), Flow 3 egress (mean 22.62 Mbit/s), Flow 1 (95th percentile 1972.86 ms), Flow 2 (95th percentile 186.25 ms), Flow 3 (95th percentile 332.69 ms)
Run 5: Statistics of PCC-Vivace

Start at: 2019-10-03 13:28:21
End at: 2019-10-03 13:28:51
Local clock offset: -5.94 ms
Remote clock offset: 10.247 ms

# Below is generated by plot.py at 2019-10-03 13:49:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 79.46 Mbit/s
  95th percentile per-packet one-way delay: 1763.051 ms
  Loss rate: 7.98%
-- Flow 1:
  Average throughput: 52.06 Mbit/s
  95th percentile per-packet one-way delay: 1856.729 ms
  Loss rate: 10.67%
-- Flow 2:
  Average throughput: 29.98 Mbit/s
  95th percentile per-packet one-way delay: 192.428 ms
  Loss rate: 2.45%
-- Flow 3:
  Average throughput: 22.95 Mbit/s
  95th percentile per-packet one-way delay: 274.366 ms
  Loss rate: 2.33%
Run 5: Report of PCC-Vivace — Data Link

![Graph 1: Throughput vs Time](image)

- **Flow 1 ingress** (mean 57.95 Mbit/s)
- **Flow 1 egress** (mean 52.06 Mbit/s)
- **Flow 2 ingress** (mean 30.48 Mbit/s)
- **Flow 2 egress** (mean 29.93 Mbit/s)
- **Flow 3 ingress** (mean 23.10 Mbit/s)
- **Flow 3 egress** (mean 22.95 Mbit/s)

![Graph 2: Per-packet one-way delay vs Time](image)

- **Flow 1** (95th percentile 1856.73 ms)
- **Flow 2** (95th percentile 192.43 ms)
- **Flow 3** (95th percentile 274.37 ms)
Run 1: Statistics of WebRTC media

Start at: 2019-10-03 11:01:23
End at: 2019-10-03 11:01:53
Local clock offset: -6.064 ms
Remote clock offset: -1045.552 ms

# Below is generated by plot.py at 2019-10-03 13:49:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 2.99 Mbit/s
  95th percentile per-packet one-way delay: 91.615 ms
  Loss rate: 0.59%
-- Flow 1:
  Average throughput: 1.70 Mbit/s
  95th percentile per-packet one-way delay: 89.761 ms
  Loss rate: 0.23%
-- Flow 2:
  Average throughput: 0.94 Mbit/s
  95th percentile per-packet one-way delay: 89.433 ms
  Loss rate: 0.73%
-- Flow 3:
  Average throughput: 0.36 Mbit/s
  95th percentile per-packet one-way delay: 92.342 ms
  Loss rate: 1.92%
Run 1: Report of WebRTC media — Data Link

![Graph showing throughput and per-packet one-way delay over time for different flows.]

Legend:
- Flow 1 ingress (mean 1.70 Mbit/s)
- Flow 1 egress (mean 1.70 Mbit/s)
- Flow 2 ingress (mean 0.94 Mbit/s)
- Flow 2 egress (mean 0.94 Mbit/s)
- Flow 3 ingress (mean 0.37 Mbit/s)
- Flow 3 egress (mean 0.36 Mbit/s)

Throughput (Mbit/s) vs Time (s)

Per-packet one-way delay (ms) vs Time (s)
Run 2: Statistics of WebRTC media

Start at: 2019-10-03 11:32:12
End at: 2019-10-03 11:32:42
Local clock offset: -6.142 ms
Remote clock offset: -1219.735 ms

# Below is generated by plot.py at 2019-10-03 13:49:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.95 Mbit/s
95th percentile per-packet one-way delay: 86.999 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 1.72 Mbit/s
95th percentile per-packet one-way delay: 87.067 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 0.92 Mbit/s
95th percentile per-packet one-way delay: 86.019 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 86.183 ms
Loss rate: 1.71%
Run 2: Report of WebRTC media — Data Link

![Graph of WebRTC media data link with throughput and delay metrics for different flows.]

Flow 1 ingress (mean 1.71 Mbit/s)  
Flow 1 egress (mean 1.72 Mbit/s)  
Flow 2 ingress (mean 0.92 Mbit/s)  
Flow 2 egress (mean 0.92 Mbit/s)  
Flow 3 ingress (mean 0.33 Mbit/s)  
Flow 3 egress (mean 0.33 Mbit/s)

Per-packet one-way delay [ms]

Flow 1 (95th percentile 87.07 ms)  
Flow 2 (95th percentile 86.02 ms)  
Flow 3 (95th percentile 86.18 ms)

238
Run 3: Statistics of WebRTC media

Start at: 2019-10-03 12:02:50
End at: 2019-10-03 12:03:20
Local clock offset: -6.62 ms
Remote clock offset: -1398.198 ms

# Below is generated by plot.py at 2019-10-03 13:49:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 2.83 Mbit/s
  95th percentile per-packet one-way delay: 90.720 ms
  Loss rate: 0.46%
  -- Flow 1:
    Average throughput: 1.67 Mbit/s
    95th percentile per-packet one-way delay: 89.468 ms
    Loss rate: 0.31%
  -- Flow 2:
    Average throughput: 0.92 Mbit/s
    95th percentile per-packet one-way delay: 88.710 ms
    Loss rate: 0.37%
  -- Flow 3:
    Average throughput: 0.25 Mbit/s
    95th percentile per-packet one-way delay: 91.762 ms
    Loss rate: 1.79%
Run 3: Report of WebRTC media — Data Link

![Graph showing throughput and per-packet end-to-end delay over time for different flows.](image)

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 1.67 Mbps)
  - Flow 1 egress (mean 1.67 Mbps)
  - Flow 2 ingress (mean 0.92 Mbps)
  - Flow 2 egress (mean 0.92 Mbps)
  - Flow 3 ingress (mean 0.25 Mbps)
  - Flow 3 egress (mean 0.25 Mbps)

- **Per-packet end-to-end delay (ms):**
  - Flow 1 (95th percentile 89.47 ms)
  - Flow 2 (95th percentile 88.71 ms)
  - Flow 3 (95th percentile 91.76 ms)
Run 4: Statistics of WebRTC media

Start at: 2019-10-03 12:33:28
End at: 2019-10-03 12:33:58
Local clock offset: -6.564 ms
Remote clock offset: -137.705 ms

# Below is generated by plot.py at 2019-10-03 13:49:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.00 Mbit/s
95th percentile per-packet one-way delay: 90.519 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 1.70 Mbit/s
95th percentile per-packet one-way delay: 88.373 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 0.93 Mbit/s
95th percentile per-packet one-way delay: 90.774 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 86.736 ms
Loss rate: 0.93%
Run 4: Report of WebRTC media — Data Link

![Chart showing throughput and delay over time for different flows.]

- Flow 1 ingress (mean 1.70 Mbit/s)
- Flow 1 egress (mean 1.70 Mbit/s)
- Flow 2 ingress (mean 0.93 Mbit/s)
- Flow 2 egress (mean 0.93 Mbit/s)
- Flow 3 ingress (mean 0.39 Mbit/s)
- Flow 3 egress (mean 0.36 Mbit/s)
Run 5: Statistics of WebRTC media

Start at: 2019-10-03 13:04:06
End at: 2019-10-03 13:04:36
Local clock offset: -6.037 ms
Remote clock offset: -1.07 ms

# Below is generated by plot.py at 2019-10-03 13:49:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.01 Mbit/s
95th percentile per-packet one-way delay: 94.308 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 1.70 Mbit/s
95th percentile per-packet one-way delay: 90.894 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 0.94 Mbit/s
95th percentile per-packet one-way delay: 94.516 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 91.292 ms
Loss rate: 1.86%
Run 5: Report of WebRTC media — Data Link

![Graph 1: Throughput vs Time (Mbps)]

- Blue dashed line: Flow 1 ingress (mean 1.70 Mbps)
- Blue solid line: Flow 1 egress (mean 1.70 Mbps)
- Green dashed line: Flow 2 ingress (mean 0.95 Mbps)
- Green solid line: Flow 2 egress (mean 0.94 Mbps)
- Red dashed line: Flow 3 ingress (mean 0.39 Mbps)
- Red solid line: Flow 3 egress (mean 0.38 Mbps)

![Graph 2: Packet Delay vs Time (ms)]

- Blue line: Flow 1 (95th percentile 90.89 ms)
- Red line: Flow 2 (95th percentile 94.52 ms)
- Green line: Flow 3 (95th percentile 91.29 ms)