Pantheon Report

Generated at 2020-04-17 04:08:15 (UTC).
Data path: GCE Iowa on ens4 (local) → GCE Tokyo on ens4 (remote).
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 time.google.com and have been applied to correct the timestamps in logs.

System info:
Linux 5.0.0-1031-gcp
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 @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0edcbf90cc077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/muses_dtree @ 387225f7b5f61ddeb92d708a8869ff84eb3200
third_party/pantheon-tunnel @ f666d3f58d27af942717625ee3a354cc2e802bd
third_party/pcc @ 1af9c958fa0d66d18b623c091a55fec8724981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3c4f24
third_party/scream-reproduce @ f099118d1421aa3131bf1f964974e1da3dbb2
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
tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
test from GCE Iowa to GCE Tokyo, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)
<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     flow 2     flow 3</td>
<td>flow 1     flow 2     flow 3</td>
<td>flow 1     flow 2     flow 3</td>
</tr>
<tr>
<td>TCP BBR</td>
<td>5</td>
<td>478.11     429.65     352.40</td>
<td>218.27     223.93     259.83</td>
<td>6.02      5.16      6.30</td>
</tr>
<tr>
<td>Copa</td>
<td>5</td>
<td>209.84     204.72     168.32</td>
<td>90.31      93.42      112.03</td>
<td>0.01      0.03      0.11</td>
</tr>
<tr>
<td>TCP Cubic</td>
<td>5</td>
<td>361.84     303.24     223.07</td>
<td>190.27     219.00     177.42</td>
<td>0.46      0.44      1.22</td>
</tr>
<tr>
<td>FillP</td>
<td>5</td>
<td>513.48     331.83     232.58</td>
<td>118.84     69.47      68.39</td>
<td>0.94      0.01      0.01</td>
</tr>
<tr>
<td>FillP-Sheep</td>
<td>5</td>
<td>477.74     311.76     248.37</td>
<td>99.20      68.07      70.71</td>
<td>0.27      0.00      0.07</td>
</tr>
<tr>
<td>Indigo</td>
<td>5</td>
<td>199.26     181.17     147.04</td>
<td>80.09      78.14      72.99</td>
<td>0.01      0.02      0.10</td>
</tr>
<tr>
<td>Indigo-MusesC3</td>
<td>5</td>
<td>400.39     345.54     249.01</td>
<td>97.56      92.17      79.79</td>
<td>0.01      0.07      0.10</td>
</tr>
<tr>
<td>Indigo-MusesC5</td>
<td>5</td>
<td>403.35     370.83     112.76</td>
<td>154.09     148.40     62.21</td>
<td>0.02      0.40      0.00</td>
</tr>
<tr>
<td>Indigo-MusesD</td>
<td>4</td>
<td>395.02     327.84     245.07</td>
<td>92.77      98.11      77.12</td>
<td>0.00      0.01      0.00</td>
</tr>
<tr>
<td>Indigo-MusesT</td>
<td>5</td>
<td>448.00     375.35     237.33</td>
<td>113.63     102.27     79.52</td>
<td>0.02      0.01      0.11</td>
</tr>
<tr>
<td>LEDBAT</td>
<td>5</td>
<td>24.65      16.62      8.36</td>
<td>63.80      63.31      62.39</td>
<td>0.00      0.00      0.14</td>
</tr>
<tr>
<td>Muses_DecisionTree</td>
<td>5</td>
<td>343.62     298.40     206.81</td>
<td>84.81      82.83      84.00</td>
<td>0.00      0.01      0.02</td>
</tr>
<tr>
<td>Muses_DecisionTreeH0</td>
<td>5</td>
<td>231.14     238.60     235.54</td>
<td>177.97     142.81     116.90</td>
<td>2.60      0.09      0.12</td>
</tr>
<tr>
<td>Muses_DecisionTreeR0</td>
<td>5</td>
<td>342.21     305.00     230.99</td>
<td>88.93      85.54      82.29</td>
<td>0.02      0.08      0.02</td>
</tr>
<tr>
<td>PCC-Allegro</td>
<td>5</td>
<td>284.01     267.98     222.75</td>
<td>195.55     165.16     199.00</td>
<td>2.03      1.37      3.12</td>
</tr>
<tr>
<td>PCC-Expr</td>
<td>5</td>
<td>201.07     179.31     152.66</td>
<td>159.16     159.47     122.98</td>
<td>1.20      2.14      0.15</td>
</tr>
<tr>
<td>QUIC Cubic</td>
<td>5</td>
<td>42.27      33.36      17.38</td>
<td>60.76      63.98      62.68</td>
<td>0.00      0.01      0.00</td>
</tr>
<tr>
<td>SCReAM</td>
<td>5</td>
<td>0.22       0.22       0.22</td>
<td>60.83      60.77      61.28</td>
<td>0.00      0.00      0.00</td>
</tr>
<tr>
<td>Sprout</td>
<td>5</td>
<td>6.98       6.81       6.67</td>
<td>61.38      62.12      62.01</td>
<td>0.00      0.00      0.00</td>
</tr>
<tr>
<td>TaoVA-100x</td>
<td>5</td>
<td>201.38     186.46     173.47</td>
<td>73.10      76.31      78.41</td>
<td>0.02      0.02      0.05</td>
</tr>
<tr>
<td>TCP Vegas</td>
<td>5</td>
<td>393.67     359.96     330.86</td>
<td>119.78     119.87     141.52</td>
<td>0.15      0.30      0.61</td>
</tr>
<tr>
<td>Verus</td>
<td>5</td>
<td>130.62     99.71      97.47</td>
<td>174.61     139.86     165.39</td>
<td>0.67      0.25      2.93</td>
</tr>
<tr>
<td>PCC-Vivace</td>
<td>5</td>
<td>220.01     194.70     146.57</td>
<td>91.88      100.36     89.21</td>
<td>0.02      0.27      0.04</td>
</tr>
<tr>
<td>WebRTC media</td>
<td>2</td>
<td>0.55       0.46       0.06</td>
<td>65.68      62.97      60.12</td>
<td>0.00      0.00      0.00</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

Start at: 2020-04-16 22:01:52
End at: 2020-04-16 22:02:22
Local clock offset: 0.047 ms
Remote clock offset: -0.111 ms

# Below is generated by plot.py at 2020-04-17 01:34:33
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 912.43 Mbit/s
  95th percentile per-packet one-way delay: 222.920 ms
  Loss rate: 6.33%
-- Flow 1:
  Average throughput: 491.36 Mbit/s
  95th percentile per-packet one-way delay: 209.612 ms
  Loss rate: 6.76%
-- Flow 2:
  Average throughput: 472.59 Mbit/s
  95th percentile per-packet one-way delay: 225.118 ms
  Loss rate: 7.12%
-- Flow 3:
  Average throughput: 320.04 Mbit/s
  95th percentile per-packet one-way delay: 267.849 ms
  Loss rate: 1.74%
Run 1: Report of TCP BBR — Data Link

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

- **Flow 1 ingress (mean 526.92 Mbit/s)**
- **Flow 1 egress (mean 491.36 Mbit/s)**
- **Flow 2 ingress (mean 508.78 Mbit/s)**
- **Flow 2 egress (mean 472.59 Mbit/s)**
- **Flow 3 ingress (mean 325.66 Mbit/s)**
- **Flow 3 egress (mean 320.04 Mbit/s)**
Run 2: Statistics of TCP BBR

Start at: 2020-04-16 22:41:57
End at: 2020-04-16 22:42:27
Local clock offset: -0.127 ms
Remote clock offset: 0.043 ms

# Below is generated by plot.py at 2020-04-17 01:36:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 989.89 Mbit/s
95th percentile per-packet one-way delay: 233.053 ms
Loss rate: 9.02%
-- Flow 1:
Average throughput: 572.06 Mbit/s
95th percentile per-packet one-way delay: 208.040 ms
Loss rate: 9.52%
-- Flow 2:
Average throughput: 466.47 Mbit/s
95th percentile per-packet one-way delay: 232.137 ms
Loss rate: 9.17%
-- Flow 3:
Average throughput: 322.32 Mbit/s
95th percentile per-packet one-way delay: 283.844 ms
Loss rate: 5.82%
Run 2: Report of TCP BBR — Data Link
Run 3: Statistics of TCP BBR

Start at: 2020-04-16 23:21:44
End at: 2020-04-16 23:22:14
Local clock offset: -0.024 ms
Remote clock offset: -0.093 ms

# Below is generated by plot.py at 2020-04-17 01:36:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 914.04 Mbit/s
95th percentile per-packet one-way delay: 229.142 ms
Loss rate: 7.87%
-- Flow 1:
Average throughput: 478.36 Mbit/s
95th percentile per-packet one-way delay: 231.414 ms
Loss rate: 9.23%
-- Flow 2:
Average throughput: 448.71 Mbit/s
95th percentile per-packet one-way delay: 207.339 ms
Loss rate: 2.98%
-- Flow 3:
Average throughput: 413.07 Mbit/s
95th percentile per-packet one-way delay: 245.079 ms
Loss rate: 12.92%
Run 3: Report of TCP BBR — Data Link
Run 4: Statistics of TCP BBR

Start at: 2020-04-17 00:01:23
End at: 2020-04-17 00:01:53
Local clock offset: -0.059 ms
Remote clock offset: 0.017 ms

# Below is generated by plot.py at 2020-04-17 01:36:00
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 827.35 Mbit/s
   95th percentile per-packet one-way delay: 229.005 ms
   Loss rate: 4.23%
-- Flow 1:
   Average throughput: 445.79 Mbit/s
   95th percentile per-packet one-way delay: 222.130 ms
   Loss rate: 3.40%
-- Flow 2:
   Average throughput: 397.62 Mbit/s
   95th percentile per-packet one-way delay: 233.350 ms
   Loss rate: 5.11%
-- Flow 3:
   Average throughput: 352.12 Mbit/s
   95th percentile per-packet one-way delay: 246.626 ms
   Loss rate: 5.34%
Run 4: Report of TCP BBR — Data Link

Throughput (Mb/s)

Time (s)

Flow 1 ingress (mean 461.44 Mb/s)  
Flow 1 egress (mean 445.79 Mb/s)  
Flow 2 ingress (mean 419.03 Mb/s)  
Flow 2 egress (mean 397.62 Mb/s)  
Flow 3 ingress (mean 372.83 Mb/s)  
Flow 3 egress (mean 352.12 Mb/s)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 222.13 ms)  
Flow 2 (95th percentile 233.35 ms)  
Flow 3 (95th percentile 246.63 ms)
Run 5: Statistics of TCP BBR

Start at: 2020-04-17 00:41:01
End at: 2020-04-17 00:41:31
Local clock offset: -0.134 ms
Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2020-04-17 01:36:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 762.64 Mbit/s
95th percentile per-packet one-way delay: 229.076 ms
Loss rate: 1.97%
-- Flow 1:
Average throughput: 402.99 Mbit/s
95th percentile per-packet one-way delay: 220.165 ms
Loss rate: 1.17%
-- Flow 2:
Average throughput: 362.88 Mbit/s
95th percentile per-packet one-way delay: 221.708 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 354.47 Mbit/s
95th percentile per-packet one-way delay: 255.760 ms
Loss rate: 5.66%
Run 5: Report of TCP BBR — Data Link

![Graph of Throughput and Delay]

Throughput (Mbps)

<table>
<thead>
<tr>
<th></th>
<th>Flow 1 ingress (mean 407.77 Mbps)</th>
<th>Flow 1 egress (mean 402.99 Mbps)</th>
<th>Flow 2 ingress (mean 368.14 Mbps)</th>
<th>Flow 2 egress (mean 362.88 Mbps)</th>
<th>Flow 3 ingress (mean 375.83 Mbps)</th>
<th>Flow 3 egress (mean 354.47 Mbps)</th>
</tr>
</thead>
</table>

Delay (ms)

<table>
<thead>
<tr>
<th>Flow 1 (95th percentile 220.16 ms)</th>
<th>Flow 2 (95th percentile 221.71 ms)</th>
<th>Flow 3 (95th percentile 255.76 ms)</th>
</tr>
</thead>
</table>
Run 1: Statistics of Copa

Start at: 2020-04-16 21:41:46
End at: 2020-04-16 21:42:16
Local clock offset: -0.019 ms
Remote clock offset: -0.228 ms

# Below is generated by plot.py at 2020-04-17 01:36:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 406.21 Mbit/s
95th percentile per-packet one-way delay: 90.345 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 216.49 Mbit/s
95th percentile per-packet one-way delay: 88.002 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 196.73 Mbit/s
95th percentile per-packet one-way delay: 85.519 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 176.65 Mbit/s
95th percentile per-packet one-way delay: 98.341 ms
Loss rate: 0.00%
Run 1: Report of Copa — Data Link

[Graph showing throughput and delay over time]

Legend:
- Flow 1 ingress (mean 216.49 Mbit/s)
- Flow 1 egress (mean 216.49 Mbit/s)
- Flow 2 ingress (mean 196.73 Mbit/s)
- Flow 2 egress (mean 196.73 Mbit/s)
- Flow 3 ingress (mean 176.65 Mbit/s)
- Flow 3 egress (mean 176.65 Mbit/s)

[Graph showing per-packet one-way delay over time]

Legend:
- Flow 1 (95th percentile 88.00 ms)
- Flow 2 (95th percentile 85.52 ms)
- Flow 3 (95th percentile 98.34 ms)
Run 2: Statistics of Copa

Start at: 2020-04-16 22:21:52
Local clock offset: -0.024 ms
Remote clock offset: -0.151 ms

# Below is generated by plot.py at 2020-04-17 01:36:00
# Datalink statistics

-- Total of 3 flows:
Average throughput: 387.57 Mbit/s
95th percentile per-packet one-way delay: 96.588 ms
Loss rate: 0.01%

-- Flow 1:
Average throughput: 209.38 Mbit/s
95th percentile per-packet one-way delay: 90.775 ms
Loss rate: 0.00%

-- Flow 2:
Average throughput: 191.88 Mbit/s
95th percentile per-packet one-way delay: 100.413 ms
Loss rate: 0.01%

-- Flow 3:
Average throughput: 151.91 Mbit/s
95th percentile per-packet one-way delay: 100.058 ms
Loss rate: 0.02%
Run 2: Report of Copa — Data Link

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

- Flow 1 ingress (mean 209.38 Mbit/s)
- Flow 1 egress (mean 209.38 Mbit/s)
- Flow 2 ingress (mean 191.88 Mbit/s)
- Flow 2 egress (mean 191.88 Mbit/s)
- Flow 3 ingress (mean 151.91 Mbit/s)
- Flow 3 egress (mean 151.91 Mbit/s)
Run 3: Statistics of Copa

Start at: 2020-04-16 23:01:49
End at: 2020-04-16 23:02:19
Local clock offset: -0.04 ms
Remote clock offset: -0.087 ms

# Below is generated by plot.py at 2020-04-17 01:36:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 438.41 Mbit/s
95th percentile per-packet one-way delay: 101.886 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 240.17 Mbit/s
95th percentile per-packet one-way delay: 96.887 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 220.98 Mbit/s
95th percentile per-packet one-way delay: 101.614 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 153.80 Mbit/s
95th percentile per-packet one-way delay: 119.375 ms
Loss rate: 0.17%
Run 3: Report of Copa — Data Link

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

- **Throughput (Mbps):**
  - **Flow 1 (ingress):** Mean 240.26 Mbps
  - **Flow 1 (egress):** Mean 240.17 Mbps
  - **Flow 2 (ingress):** Mean 221.09 Mbps
  - **Flow 2 (egress):** Mean 220.98 Mbps
  - **Flow 3 (ingress):** Mean 154.06 Mbps
  - **Flow 3 (egress):** Mean 153.90 Mbps

- **Delay (ms):**
  - **Flow 1 (95th percentile):** 96.89 ms
  - **Flow 2 (95th percentile):** 101.61 ms
  - **Flow 3 (95th percentile):** 119.38 ms
Run 4: Statistics of Copa

Start at: 2020-04-16 23:41:28
End at: 2020-04-16 23:41:58
Local clock offset: -0.023 ms
Remote clock offset: 0.117 ms

# Below is generated by plot.py at 2020-04-17 01:45:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 401.75 Mbit/s
95th percentile per-packet one-way delay: 99.808 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 200.09 Mbit/s
95th percentile per-packet one-way delay: 95.552 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 215.85 Mbit/s
95th percentile per-packet one-way delay: 91.614 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 174.49 Mbit/s
95th percentile per-packet one-way delay: 130.706 ms
Loss rate: 0.38%
Run 4: Report of Copa — Data Link
Run 5: Statistics of Copa

Start at: 2020-04-17 00:21:04
End at: 2020-04-17 00:21:34
Local clock offset: -0.186 ms
Remote clock offset: -0.109 ms

# Below is generated by plot.py at 2020-04-17 01:46:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 376.34 Mbit/s
95th percentile per-packet one-way delay: 86.661 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 183.05 Mbit/s
95th percentile per-packet one-way delay: 80.350 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 198.14 Mbit/s
95th percentile per-packet one-way delay: 87.954 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 184.76 Mbit/s
95th percentile per-packet one-way delay: 111.684 ms
Loss rate: 0.00%
Run 5: Report of Copa — Data Link
Run 1: Statistics of TCP Cubic

Start at: 2020-04-16 21:46:33
End at: 2020-04-16 21:47:03
Local clock offset: -0.008 ms
Remote clock offset: -0.447 ms

# Below is generated by plot.py at 2020-04-17 01:46:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 698.15 Mbit/s
95th percentile per-packet one-way delay: 163.068 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 402.42 Mbit/s
95th percentile per-packet one-way delay: 156.897 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 350.90 Mbit/s
95th percentile per-packet one-way delay: 190.712 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 184.84 Mbit/s
95th percentile per-packet one-way delay: 147.706 ms
Loss rate: 0.00%
Run 1: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 493.72 Mbit/s)
- Flow 1 egress (mean 402.42 Mbit/s)
- Flow 2 ingress (mean 335.31 Mbit/s)
- Flow 2 egress (mean 350.90 Mbit/s)
- Flow 3 ingress (mean 194.84 Mbit/s)
- Flow 3 egress (mean 184.84 Mbit/s)

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

- Flow 1 (95th percentile 156.90 ms)
- Flow 2 (95th percentile 190.71 ms)
- Flow 3 (95th percentile 147.71 ms)
Run 2: Statistics of TCP Cubic

Start at: 2020-04-16 22:26:40
End at: 2020-04-16 22:27:10
Local clock offset: -0.069 ms
Remote clock offset: -1.396 ms

# Below is generated by plot.py at 2020-04-17 01:46:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 650.55 Mbit/s
95th percentile per-packet one-way delay: 223.189 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 391.28 Mbit/s
95th percentile per-packet one-way delay: 190.473 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 303.61 Mbit/s
95th percentile per-packet one-way delay: 236.165 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 171.61 Mbit/s
95th percentile per-packet one-way delay: 157.587 ms
Loss rate: 2.44%
Run 2: Report of TCP Cubic — Data Link

---

**Throughput (Mb/s)**

- **Flow 1 ingress (mean 392.92 Mb/s)**
- **Flow 1 egress (mean 391.28 Mb/s)**
- **Flow 2 ingress (mean 305.79 Mb/s)**
- **Flow 2 egress (mean 303.61 Mb/s)**
- **Flow 3 ingress (mean 175.90 Mb/s)**
- **Flow 3 egress (mean 171.61 Mb/s)**

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

- **Flow 1 (95th percentile 190.47 ms)**
- **Flow 2 (95th percentile 236.16 ms)**
- **Flow 3 (95th percentile 157.59 ms)**
Run 3: Statistics of TCP Cubic

Start at: 2020-04-16 23:06:39
End at: 2020-04-16 23:07:09
Local clock offset: 0.002 ms
Remote clock offset: -0.142 ms

# Below is generated by plot.py at 2020-04-17 01:46:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 651.62 Mbit/s
95th percentile per-packet one-way delay: 210.098 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 369.25 Mbit/s
95th percentile per-packet one-way delay: 200.952 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 299.53 Mbit/s
95th percentile per-packet one-way delay: 209.887 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 248.14 Mbit/s
95th percentile per-packet one-way delay: 249.412 ms
Loss rate: 1.99%
Run 3: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 370.88 Mbit/s)
- Flow 1 egress (mean 369.25 Mbit/s)
- Flow 2 ingress (mean 301.09 Mbit/s)
- Flow 2 egress (mean 299.53 Mbit/s)
- Flow 3 ingress (mean 253.19 Mbit/s)
- Flow 3 egress (mean 248.14 Mbit/s)
Run 4: Statistics of TCP Cubic

Start at: 2020-04-16 23:46:16
End at: 2020-04-16 23:46:46
Local clock offset: -0.002 ms
Remote clock offset: -0.056 ms

# Below is generated by plot.py at 2020-04-17 01:47:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 620.67 Mbit/s
95th percentile per-packet one-way delay: 210.874 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 324.53 Mbit/s
95th percentile per-packet one-way delay: 207.119 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 284.14 Mbit/s
95th percentile per-packet one-way delay: 235.464 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 321.72 Mbit/s
95th percentile per-packet one-way delay: 215.087 ms
Loss rate: 1.48%
Run 4: Report of TCP Cubic — Data Link

![Graph 1: Throughput](image1)

![Graph 2: Delay](image2)
Run 5: Statistics of TCP Cubic

Start at: 2020-04-17 00:25:49
End at: 2020-04-17 00:26:19
Local clock offset: -0.214 ms
Remote clock offset: 0.463 ms

# Below is generated by plot.py at 2020-04-17 01:47:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 569.75 Mbit/s
95th percentile per-packet one-way delay: 210.182 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 321.72 Mbit/s
95th percentile per-packet one-way delay: 195.912 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 278.02 Mbit/s
95th percentile per-packet one-way delay: 222.758 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 189.06 Mbit/s
95th percentile per-packet one-way delay: 117.311 ms
Loss rate: 0.18%
Run 5: Report of TCP Cubic — Data Link

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

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 323.77 Mbps)
Flow 1 egress (mean 321.72 Mbps)
Flow 2 ingress (mean 279.76 Mbps)
Flow 2 egress (mean 278.02 Mbps)
Flow 3 ingress (mean 189.43 Mbps)
Flow 3 egress (mean 189.06 Mbps)

Packet delay (ms)

Time (s)

Flow 1 (95th percentile 195.91 ms)
Flow 2 (95th percentile 222.76 ms)
Flow 3 (95th percentile 117.31 ms)
Run 1: Statistics of FillP

Start at: 2020-04-16 22:03:49
End at: 2020-04-16 22:04:19
Local clock offset: -0.015 ms
Remote clock offset: -1.349 ms

# Below is generated by plot.py at 2020-04-17 01:54:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 801.34 Mbit/s
95th percentile per-packet one-way delay: 135.755 ms
Loss rate: 1.39%
-- Flow 1:
Average throughput: 491.37 Mbit/s
95th percentile per-packet one-way delay: 142.291 ms
Loss rate: 2.25%
-- Flow 2:
Average throughput: 348.81 Mbit/s
95th percentile per-packet one-way delay: 69.468 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 234.73 Mbit/s
95th percentile per-packet one-way delay: 70.152 ms
Loss rate: 0.00%
Run 1: Report of FillP — Data Link

![Graph 1: Throughput vs Time for different flows]

![Graph 2: Per-packet one-way delay vs Time for different flows]

- Flow 1 Ingress (mean 302.62 Mbit/s)
- Flow 1 Egress (mean 491.37 Mbit/s)
- Flow 2 Ingress (mean 348.47 Mbit/s)
- Flow 2 Egress (mean 348.83 Mbit/s)
- Flow 3 Ingress (mean 234.81 Mbit/s)
- Flow 3 Egress (mean 234.73 Mbit/s)
Run 2: Statistics of FillP

Start at: 2020-04-16 22:43:58
End at: 2020-04-16 22:44:28
Local clock offset: -0.101 ms
Remote clock offset: -0.644 ms

# Below is generated by plot.py at 2020-04-17 02:04:55
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 794.94 Mbit/s
  95th percentile per-packet one-way delay: 118.798 ms
  Loss rate: 0.42%
-- Flow 1:
  Average throughput: 482.73 Mbit/s
  95th percentile per-packet one-way delay: 126.267 ms
  Loss rate: 0.66%
-- Flow 2:
  Average throughput: 360.99 Mbit/s
  95th percentile per-packet one-way delay: 74.759 ms
  Loss rate: 0.05%
-- Flow 3:
  Average throughput: 225.73 Mbit/s
  95th percentile per-packet one-way delay: 67.241 ms
  Loss rate: 0.02%
Run 2: Report of FillP — Data Link

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

**Throughput:**
- Flow 1 ingress (mean 485.95 Mbit/s)
- Flow 1 egress (mean 482.73 Mbit/s)
- Flow 2 ingress (mean 361.09 Mbit/s)
- Flow 2 egress (mean 360.99 Mbit/s)
- Flow 3 ingress (mean 225.66 Mbit/s)
- Flow 3 egress (mean 225.73 Mbit/s)

**Per-packet one way delay (ms):**
- Flow 1 (95th percentile 126.27 ms)
- Flow 2 (95th percentile 74.76 ms)
- Flow 3 (95th percentile 67.24 ms)
Run 3: Statistics of FillP

Start at: 2020-04-16 23:23:43
End at: 2020-04-16 23:24:13
Local clock offset: -0.063 ms
Remote clock offset: -0.306 ms

# Below is generated by plot.py at 2020-04-17 02:06:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 824.43 Mbit/s
  95th percentile per-packet one-way delay: 97.697 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 538.33 Mbit/s
  95th percentile per-packet one-way delay: 104.960 ms
  Loss rate: 0.13%
-- Flow 2:
  Average throughput: 311.01 Mbit/s
  95th percentile per-packet one-way delay: 68.133 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 239.53 Mbit/s
  95th percentile per-packet one-way delay: 69.646 ms
  Loss rate: 0.00%
Run 3: Report of FillP — Data Link

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

Graph 2: Packet Delay (ms) vs. Time (s)

Legend:
- Flow 1 Ingress (mean 539.05 Mbps)
- Flow 1 Egress (mean 538.33 Mbps)
- Flow 2 Ingress (mean 311.09 Mbps)
- Flow 2 Egress (mean 312.01 Mbps)
- Flow 3 Ingress (mean 239.62 Mbps)
- Flow 3 Egress (mean 239.53 Mbps)

Flow 1 (95th percentile 104.96 ms)
Flow 2 (95th percentile 68.13 ms)
Flow 3 (95th percentile 69.65 ms)
Run 4: Statistics of FillP

Start at: 2020-04-17 00:03:17
End at: 2020-04-17 00:03:47
Local clock offset: -0.079 ms
Remote clock offset: -0.041 ms

# Below is generated by plot.py at 2020-04-17 02:06:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 808.97 Mbit/s
  95th percentile per-packet one-way delay: 113.430 ms
  Loss rate: 0.98%
-- Flow 1:
  Average throughput: 520.06 Mbit/s
  95th percentile per-packet one-way delay: 116.051 ms
  Loss rate: 1.52%
-- Flow 2:
  Average throughput: 321.97 Mbit/s
  95th percentile per-packet one-way delay: 68.276 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 227.35 Mbit/s
  95th percentile per-packet one-way delay: 66.883 ms
  Loss rate: 0.00%
Run 4: Report of FillP — Data Link

![Graph showing throughput over time for different flows]

- **Flow 1 Ingress** (mean 528.36 Mbits/s)
- **Flow 1 Egress** (mean 520.06 Mbits/s)
- **Flow 2 Ingress** (mean 321.99 Mbits/s)
- **Flow 2 Egress** (mean 321.97 Mbits/s)
- **Flow 3 Ingress** (mean 227.35 Mbits/s)
- **Flow 3 Egress** (mean 227.35 Mbits/s)

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

- **Flow 1 95th percentile** 116.05 ms
- **Flow 2 95th percentile** 68.28 ms
- **Flow 3 95th percentile** 66.88 ms
Run 5: Statistics of FillP

Start at: 2020-04-17 00:42:53
End at: 2020-04-17 00:43:23
Local clock offset: -0.092 ms
Remote clock offset: -0.094 ms

# Below is generated by plot.py at 2020-04-17 02:06:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 822.78 Mbit/s
  95th percentile per-packet one-way delay: 100.344 ms
  Loss rate: 0.11%
-- Flow 1:
  Average throughput: 534.93 Mbit/s
  95th percentile per-packet one-way delay: 104.642 ms
  Loss rate: 0.16%
-- Flow 2:
  Average throughput: 316.37 Mbit/s
  95th percentile per-packet one-way delay: 66.739 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 235.57 Mbit/s
  95th percentile per-packet one-way delay: 68.029 ms
  Loss rate: 0.03%
Run 5: Report of FillP — Data Link

[Graph showing throughput and latency for different flows over time.]

- Flow 1 ingress (mean 535.81 Mbit/s)
- Flow 1 egress (mean 534.93 Mbit/s)
- Flow 2 ingress (mean 316.55 Mbit/s)
- Flow 2 egress (mean 316.37 Mbit/s)
- Flow 3 ingress (mean 235.69 Mbit/s)
- Flow 3 egress (mean 235.57 Mbit/s)

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

- Flow 1 (95th percentile 104.64 ms)
- Flow 2 (95th percentile 66.74 ms)
- Flow 3 (95th percentile 68.03 ms)

44
Run 1: Statistics of FillP-Sheep

Start at: 2020-04-16 21:44:49
End at: 2020-04-16 21:45:19
Local clock offset: -0.019 ms
Remote clock offset: 0.517 ms

# Below is generated by plot.py at 2020-04-17 02:06:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 759.34 Mbit/s
95th percentile per-packet one-way delay: 78.440 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 471.30 Mbit/s
95th percentile per-packet one-way delay: 94.264 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 304.90 Mbit/s
95th percentile per-packet one-way delay: 68.422 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 254.83 Mbit/s
95th percentile per-packet one-way delay: 76.593 ms
Loss rate: 0.26%
Run 1: Report of FillP-Sheep — Data Link

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

- Flow 1 Ingress (mean 473.40 Mbps)
- Flow 1 Egress (mean 471.30 Mbps)
- Flow 2 Ingress (mean 304.90 Mbps)
- Flow 2 Egress (mean 304.90 Mbps)
- Flow 3 Ingress (mean 255.44 Mbps)
- Flow 3 Egress (mean 254.83 Mbps)

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

- Flow 1 (95th percentile 94.26 ms)
- Flow 2 (95th percentile 68.42 ms)
- Flow 3 (95th percentile 76.59 ms)
Run 2: Statistics of FillP-Sheep

Start at: 2020-04-16 22:24:54
End at: 2020-04-16 22:25:24
Local clock offset: 0.01 ms
Remote clock offset: -0.531 ms

# Below is generated by plot.py at 2020-04-17 02:06:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 806.41 Mbit/s
  95th percentile per-packet one-way delay: 95.753 ms
  Loss rate: 0.35%
-- Flow 1:
  Average throughput: 520.58 Mbit/s
  95th percentile per-packet one-way delay: 102.763 ms
  Loss rate: 0.53%
-- Flow 2:
  Average throughput: 311.40 Mbit/s
  95th percentile per-packet one-way delay: 68.841 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 238.34 Mbit/s
  95th percentile per-packet one-way delay: 71.030 ms
  Loss rate: 0.07%
Run 2: Report of FillP-Sheep — Data Link

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

- Flow 1 ingress (mean 523.48 Mbit/s)
- Flow 1 egress (mean 520.58 Mbit/s)
- Flow 2 ingress (mean 311.46 Mbit/s)
- Flow 2 egress (mean 311.40 Mbit/s)
- Flow 3 ingress (mean 238.45 Mbit/s)
- Flow 3 egress (mean 238.34 Mbit/s)

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

- Flow 1 (95th percentile 102.76 ms)
- Flow 2 (95th percentile 68.84 ms)
- Flow 3 (95th percentile 71.03 ms)
Run 3: Statistics of FillP-Sheep

Start at: 2020-04-16 23:04:55
End at: 2020-04-16 23:05:25
Local clock offset: -0.036 ms
Remote clock offset: 0.094 ms

# Below is generated by plot.py at 2020-04-17 02:06:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 739.96 Mbit/s
  95th percentile per-packet one-way delay: 84.788 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 452.35 Mbit/s
  95th percentile per-packet one-way delay: 89.822 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 310.65 Mbit/s
  95th percentile per-packet one-way delay: 66.146 ms
  Loss rate: 0.01%
-- Flow 3:
  Average throughput: 245.12 Mbit/s
  95th percentile per-packet one-way delay: 69.593 ms
  Loss rate: 0.00%
Run 3: Report of FillP-Sheep — Data Link

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

- **Flow 1 Ingress** (mean 452.57 Mbps/s)
- **Flow 1 Egress** (mean 452.35 Mbps/s)
- **Flow 2 Ingress** (mean 310.70 Mbps/s)
- **Flow 2 Egress** (mean 310.65 Mbps/s)
- **Flow 3 Ingress** (mean 245.18 Mbps/s)
- **Flow 3 Egress** (mean 245.12 Mbps/s)

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

- **Flow 1** (95th percentile 89.82 ms)
- **Flow 2** (95th percentile 66.15 ms)
- **Flow 3** (95th percentile 69.59 ms)
Run 4: Statistics of FillP-Sheep

Start at: 2020-04-16 23:44:31
End at: 2020-04-16 23:45:01
Local clock offset: ~0.03 ms
Remote clock offset: 0.024 ms

# Below is generated by plot.py at 2020-04-17 02:13:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 778.61 Mbit/s
95th percentile per-packet one-way delay: 93.446 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 483.60 Mbit/s
95th percentile per-packet one-way delay: 99.806 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 316.37 Mbit/s
95th percentile per-packet one-way delay: 68.645 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 256.73 Mbit/s
95th percentile per-packet one-way delay: 66.267 ms
Loss rate: 0.00%
Run 4: Report of FillP-Sheep — Data Link

---

**Throughput (Mbps):**

- **Flow 1 Ingress (mean 495.44 Mbps):**
- **Flow 1 Egress (mean 483.60 Mbps):**
- **Flow 2 Ingress (mean 316.41 Mbps):**
- **Flow 2 Egress (mean 316.37 Mbps):**
- **Flow 3 Ingress (mean 256.77 Mbps):**
- **Flow 3 Egress (mean 256.73 Mbps):**

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

- **Flow 1 (95th percentile 99.81 ms):**
- **Flow 2 (95th percentile 68.64 ms):**
- **Flow 3 (95th percentile 68.27 ms):**
Run 5: Statistics of FillP-Sheep

Start at: 2020-04-17 00:24:05
End at: 2020-04-17 00:24:35
Local clock offset: -0.208 ms
Remote clock offset: 0.137 ms

# Below is generated by plot.py at 2020-04-17 02:22:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 752.31 Mbit/s
95th percentile per-packet one-way delay: 104.518 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 460.86 Mbit/s
95th percentile per-packet one-way delay: 109.334 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 315.50 Mbit/s
95th percentile per-packet one-way delay: 68.281 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 246.82 Mbit/s
95th percentile per-packet one-way delay: 70.079 ms
Loss rate: 0.00%
Run 5: Report of FillP-Sheep — Data Link

![Graph showing network throughput](image1)

![Graph showing packet delivery delay](image2)
Run 1: Statistics of Indigo

Start at: 2020-04-16 22:05:36
End at: 2020-04-16 22:06:06
Local clock offset: 0.012 ms
Remote clock offset: 0.126 ms

# Below is generated by plot.py at 2020-04-17 02:22:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 389.53 Mbit/s
95th percentile per-packet one-way delay: 77.311 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 209.14 Mbit/s
95th percentile per-packet one-way delay: 75.060 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 193.24 Mbit/s
95th percentile per-packet one-way delay: 82.627 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 162.45 Mbit/s
95th percentile per-packet one-way delay: 76.241 ms
Loss rate: 0.09%
Run 1: Report of Indigo — Data Link
Run 2: Statistics of Indigo

Start at: 2020-04-16 22:45:45
End at: 2020-04-16 22:46:15
Local clock offset: -0.153 ms
Remote clock offset: 0.609 ms

# Below is generated by plot.py at 2020-04-17 02:22:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 370.32 Mbit/s
95th percentile per-packet one-way delay: 80.388 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 199.63 Mbit/s
95th percentile per-packet one-way delay: 81.620 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 187.82 Mbit/s
95th percentile per-packet one-way delay: 80.106 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 144.66 Mbit/s
95th percentile per-packet one-way delay: 68.036 ms
Loss rate: 0.03%
Run 2: Report of Indigo — Data Link
Run 3: Statistics of Indigo

Start at: 2020-04-16 23:25:31
End at: 2020-04-16 23:26:01
Local clock offset: -0.014 ms
Remote clock offset: 0.466 ms

# Below is generated by plot.py at 2020-04-17 02:22:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 364.27 Mbit/s
95th percentile per-packet one-way delay: 87.924 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 199.46 Mbit/s
95th percentile per-packet one-way delay: 94.119 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 177.29 Mbit/s
95th percentile per-packet one-way delay: 82.478 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 146.93 Mbit/s
95th percentile per-packet one-way delay: 73.878 ms
Loss rate: 0.00%
Run 3: Report of Indigo — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 199.46 Mbps)  Flow 1 egress (mean 199.46 Mbps)
Flow 2 ingress (mean 177.29 Mbps)  Flow 2 egress (mean 177.29 Mbps)
Flow 3 ingress (mean 146.93 Mbps)  Flow 3 egress (mean 146.93 Mbps)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 94.12 ms)  Flow 2 (95th percentile 82.48 ms)  Flow 3 (95th percentile 73.88 ms)
Run 4: Statistics of Indigo

Start at: 2020-04-17 00:05:05
End at: 2020-04-17 00:05:35
Local clock offset: -0.088 ms
Remote clock offset: -0.169 ms

# Below is generated by plot.py at 2020-04-17 02:22:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 348.49 Mbit/s
95th percentile per-packet one-way delay: 76.820 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 187.26 Mbit/s
95th percentile per-packet one-way delay: 76.258 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 177.50 Mbit/s
95th percentile per-packet one-way delay: 77.418 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 137.17 Mbit/s
95th percentile per-packet one-way delay: 77.037 ms
Loss rate: 0.14%
Run 4: Report of Indigo — Data Link
Run 5: Statistics of Indigo

Start at: 2020-04-17 00:44:42
End at: 2020-04-17 00:45:12
Local clock offset: -0.092 ms
Remote clock offset: 0.76 ms

# Below is generated by plot.py at 2020-04-17 02:22:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 359.96 Mbit/s
95th percentile per-packet one-way delay: 71.715 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 200.81 Mbit/s
95th percentile per-packet one-way delay: 73.389 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 169.99 Mbit/s
95th percentile per-packet one-way delay: 68.084 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 144.01 Mbit/s
95th percentile per-packet one-way delay: 69.737 ms
Loss rate: 0.22%
Run 5: Report of Indigo — Data Link
Run 1: Statistics of Indigo-MusesC3

Start at: 2020-04-16 22:12:14
End at: 2020-04-16 22:12:44
Local clock offset: 0.011 ms
Remote clock offset: -0.163 ms

# Below is generated by plot.py at 2020-04-17 02:22:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 724.87 Mbit/s
95th percentile per-packet one-way delay: 80.350 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 433.51 Mbit/s
95th percentile per-packet one-way delay: 76.578 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 349.37 Mbit/s
95th percentile per-packet one-way delay: 89.228 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 269.90 Mbit/s
95th percentile per-packet one-way delay: 81.763 ms
Loss rate: 0.00%
Run 1: Report of Indigo-MusesC3 — Data Link

![Graph showing throughput and packet size vs. time for different flows.]

- Flow 1 ingress (mean 433.65 Mbit/s)
- Flow 1 egress (mean 433.51 Mbit/s)
- Flow 2 ingress (mean 349.36 Mbit/s)
- Flow 2 egress (mean 349.37 Mbit/s)
- Flow 3 ingress (mean 269.90 Mbit/s)
- Flow 3 egress (mean 269.90 Mbit/s)

- Per-packet round-trip delay (ms)
- Flow 1 (95th percentile 76.58 ms)
- Flow 2 (95th percentile 89.23 ms)
- Flow 3 (95th percentile 81.76 ms)
Run 2: Statistics of Indigo-MusesC3

Start at: 2020-04-16 22:52:16
End at: 2020-04-16 22:52:46
Local clock offset: -0.158 ms
Remote clock offset: -0.388 ms

# Below is generated by plot.py at 2020-04-17 02:27:16
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 689.92 Mbit/s
  95th percentile per-packet one-way delay: 93.574 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 406.85 Mbit/s
  95th percentile per-packet one-way delay: 96.986 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 344.91 Mbit/s
  95th percentile per-packet one-way delay: 92.232 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 258.78 Mbit/s
  95th percentile per-packet one-way delay: 79.713 ms
  Loss rate: 0.04%
Run 2: Report of Indigo-MusesC3 — Data Link
Run 3: Statistics of Indigo-MusesC3

Start at: 2020-04-16 23:32:00
End at: 2020-04-16 23:32:30
Local clock offset: -0.021 ms
Remote clock offset: -0.752 ms

# Below is generated by plot.py at 2020-04-17 02:33:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 658.50 Mbit/s
95th percentile per-packet one-way delay: 98.587 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 386.66 Mbit/s
95th percentile per-packet one-way delay: 103.586 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 332.08 Mbit/s
95th percentile per-packet one-way delay: 89.751 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 236.86 Mbit/s
95th percentile per-packet one-way delay: 69.848 ms
Loss rate: 0.05%
Run 3: Report of Indigo-MusesC3 — Data Link

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

- **Flow 1**: Ingress (mean 386.63 Mbit/s), Egress (mean 386.66 Mbit/s)
- **Flow 2**: Ingress (mean 332.08 Mbit/s), Egress (mean 332.08 Mbit/s)
- **Flow 3**: Ingress (mean 237.01 Mbit/s), Egress (mean 236.66 Mbit/s)
Run 4: Statistics of Indigo-MusesC3

Start at: 2020-04-17 00:11:30
End at: 2020-04-17 00:12:00
Local clock offset: -0.155 ms
Remote clock offset: 0.668 ms

# Below is generated by plot.py at 2020-04-17 02:33:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 670.96 Mbit/s
95th percentile per-packet one-way delay: 114.303 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 382.34 Mbit/s
95th percentile per-packet one-way delay: 122.479 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 354.86 Mbit/s
95th percentile per-packet one-way delay: 98.368 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 254.88 Mbit/s
95th percentile per-packet one-way delay: 95.940 ms
Loss rate: 0.42%
Run 4: Report of Indigo-MusesC3 — Data Link

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

- Flow 1 ingress (mean 382.33 Mbit/s)
- Flow 1 egress (mean 382.34 Mbit/s)
- Flow 2 ingress (mean 354.93 Mbit/s)
- Flow 2 egress (mean 354.86 Mbit/s)
- Flow 3 ingress (mean 256.12 Mbit/s)
- Flow 3 egress (mean 254.98 Mbit/s)

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

- Flow 1 (95th percentile 122.48 ms)
- Flow 2 (95th percentile 98.37 ms)
- Flow 3 (95th percentile 95.94 ms)
Run 5: Statistics of Indigo-MusesC3

Start at: 2020-04-17 00:51:10
End at: 2020-04-17 00:51:40
Local clock offset: -0.002 ms
Remote clock offset: -1.356 ms

# Below is generated by plot.py at 2020-04-17 02:33:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 666.93 Mbit/s
  95th percentile per-packet one-way delay: 88.281 ms
  Loss rate: 0.11%
-- Flow 1:
  Average throughput: 392.57 Mbit/s
  95th percentile per-packet one-way delay: 88.194 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 346.50 Mbit/s
  95th percentile per-packet one-way delay: 91.295 ms
  Loss rate: 0.33%
-- Flow 3:
  Average throughput: 224.62 Mbit/s
  95th percentile per-packet one-way delay: 71.685 ms
  Loss rate: 0.00%
Run 5: Report of Indigo-MusesC3 — Data Link
Run 1: Statistics of Indigo-MusesC5

Start at: 2020-04-16 21:55:00
End at: 2020-04-16 21:55:30
Local clock offset: 0.039 ms
Remote clock offset: 0.07 ms

# Below is generated by plot.py at 2020-04-17 02:33:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 644.91 Mbit/s
95th percentile per-packet one-way delay: 145.584 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 375.99 Mbit/s
95th percentile per-packet one-way delay: 160.414 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 370.36 Mbit/s
95th percentile per-packet one-way delay: 123.611 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 112.86 Mbit/s
95th percentile per-packet one-way delay: 61.870 ms
Loss rate: 0.00%
Run 1: Report of Indigo-MusesC5 — Data Link
Run 2: Statistics of Indigo-MusesC5

Start at: 2020-04-16 22:35:05
End at: 2020-04-16 22:35:35
Local clock offset: -0.104 ms
Remote clock offset: -0.017 ms

# Below is generated by plot.py at 2020-04-17 02:34:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 725.15 Mbit/s
95th percentile per-packet one-way delay: 115.231 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 443.62 Mbit/s
95th percentile per-packet one-way delay: 113.065 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 395.66 Mbit/s
95th percentile per-packet one-way delay: 124.934 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 111.01 Mbit/s
95th percentile per-packet one-way delay: 61.968 ms
Loss rate: 0.00%
Run 2: Report of Indigo-MusesC5 — Data Link

![Graph of throughput and per-packet one-way delay](image)

- Flow 1 ingress (mean 443.62 Mbit/s)
- Flow 1 egress (mean 443.62 Mbit/s)
- Flow 2 ingress (mean 395.73 Mbit/s)
- Flow 2 egress (mean 395.66 Mbit/s)
- Flow 3 ingress (mean 111.00 Mbit/s)
- Flow 3 egress (mean 111.01 Mbit/s)

Per-packet one-way delay (ns):
- Flow 1 (95th percentile 113.06 ms)
- Flow 2 (95th percentile 124.93 ms)
- Flow 3 (95th percentile 61.97 ms)
Run 3: Statistics of Indigo-MusesC5

Start at: 2020-04-16 23:14:54
End at: 2020-04-16 23:15:24
Local clock offset: -0.052 ms
Remote clock offset: -0.092 ms

# Below is generated by plot.py at 2020-04-17 02:34:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 674.29 Mbit/s
95th percentile per-packet one-way delay: 179.697 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 411.79 Mbit/s
95th percentile per-packet one-way delay: 190.601 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 366.16 Mbit/s
95th percentile per-packet one-way delay: 139.032 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 117.01 Mbit/s
95th percentile per-packet one-way delay: 61.464 ms
Loss rate: 0.00%
Run 3: Report of Indigo-MusesC5 — Data Link
Run 4: Statistics of Indigo-MusesC5

Start at: 2020-04-16 23:54:27
End at: 2020-04-16 23:54:57
Local clock offset: -0.02 ms
Remote clock offset: 0.005 ms

# Below is generated by plot.py at 2020-04-17 02:35:28
# Datalink statistics
   -- Total of 3 flows:
      Average throughput: 644.83 Mbit/s
      95th percentile per-packet one-way delay: 184.851 ms
      Loss rate: 0.55%
   -- Flow 1:
      Average throughput: 393.44 Mbit/s
      95th percentile per-packet one-way delay: 134.823 ms
      Loss rate: 0.01%
   -- Flow 2:
      Average throughput: 354.17 Mbit/s
      95th percentile per-packet one-way delay: 213.242 ms
      Loss rate: 1.55%
   -- Flow 3:
      Average throughput: 101.48 Mbit/s
      95th percentile per-packet one-way delay: 64.106 ms
      Loss rate: 0.00%
Run 4: Report of Indigo-MusesC5 — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 393.45 Mbps)
  - Flow 1 egress (mean 393.44 Mbps)
  - Flow 2 ingress (mean 359.75 Mbps)
  - Flow 2 egress (mean 354.17 Mbps)
  - Flow 3 ingress (mean 101.43 Mbps)
  - Flow 3 egress (mean 101.48 Mbps)

- **Packet Round-Trip Delay (ms):**
  - Flow 1 (95th percentile 134.82 ms)
  - Flow 2 (95th percentile 213.24 ms)
  - Flow 3 (95th percentile 64.11 ms)
Run 5: Statistics of Indigo-MusesC5

Start at: 2020-04-17 00:34:07
End at: 2020-04-17 00:34:37
Local clock offset: -0.236 ms
Remote clock offset: -0.052 ms

# Below is generated by plot.py at 2020-04-17 02:40:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 659.81 Mbit/s
95th percentile per-packet one-way delay: 164.819 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 391.91 Mbit/s
95th percentile per-packet one-way delay: 171.547 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 367.78 Mbit/s
95th percentile per-packet one-way delay: 141.171 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 121.46 Mbit/s
95th percentile per-packet one-way delay: 61.653 ms
Loss rate: 0.00%
Run 1: Statistics of Indigo-MusesD

Start at: 2020-04-16 21:40:33
End at: 2020-04-16 21:41:03
Local clock offset: -0.007 ms
Remote clock offset: -0.263 ms
Run 1: Report of Indigo-MusesD — Data Link

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

![Graph 2: Per-packet round-trip delay (ms)]
Run 2: Statistics of Indigo-MusesD

Start at: 2020-04-16 22:20:06
End at: 2020-04-16 22:20:36
Local clock offset: 0.017 ms
Remote clock offset: 1.234 ms

# Below is generated by plot.py at 2020-04-17 02:47:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 696.19 Mbit/s
95th percentile per-packet one-way delay: 81.709 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 405.67 Mbit/s
95th percentile per-packet one-way delay: 81.901 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 354.10 Mbit/s
95th percentile per-packet one-way delay: 87.968 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 254.11 Mbit/s
95th percentile per-packet one-way delay: 70.769 ms
Loss rate: 0.01%
Run 2: Report of Indigo-MusesD — Data Link

[Graph showing throughput and per-packet one-way delay over time for different flows]
Run 3: Statistics of Indigo-MusesD

Start at: 2020-04-16 23:00:03
End at: 2020-04-16 23:00:33
Local clock offset: -0.086 ms
Remote clock offset: -0.38 ms

# Below is generated by plot.py at 2020-04-17 02:47:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 679.07 Mbit/s
  95th percentile per-packet one-way delay: 96.086 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 400.91 Mbit/s
  95th percentile per-packet one-way delay: 91.807 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 328.79 Mbit/s
  95th percentile per-packet one-way delay: 100.194 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 264.39 Mbit/s
  95th percentile per-packet one-way delay: 81.533 ms
  Loss rate: 0.00%
Run 3: Report of Indigo-MusesD — Data Link

![Data Link Throughput Graph](image1)

![Data Link Latency Graph](image2)
Run 4: Statistics of Indigo-MusesD

Start at: 2020-04-16 23:39:46
End at: 2020-04-16 23:40:16
Local clock offset: 0.011 ms
Remote clock offset: -1.329 ms

# Below is generated by plot.py at 2020-04-17 02:47:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 622.06 Mbit/s
95th percentile per-packet one-way delay: 94.349 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 381.52 Mbit/s
95th percentile per-packet one-way delay: 89.029 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 296.37 Mbit/s
95th percentile per-packet one-way delay: 106.692 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 194.41 Mbit/s
95th percentile per-packet one-way delay: 79.441 ms
Loss rate: 0.00%
Run 4: Report of Indigo-MusesD — Data Link

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

- Flow 1 ingress (mean 381.40 Mbit/s)
- Flow 1 egress (mean 381.52 Mbit/s)
- Flow 2 ingress (mean 296.37 Mbit/s)
- Flow 2 egress (mean 296.37 Mbit/s)
- Flow 3 ingress (mean 194.40 Mbit/s)
- Flow 3 egress (mean 194.41 Mbit/s)
Run 5: Statistics of Indigo-MusesD

Start at: 2020-04-17 00:19:18
End at: 2020-04-17 00:19:48
Local clock offset: -0.22 ms
Remote clock offset: -0.031 ms

# Below is generated by plot.py at 2020-04-17 02:47:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 675.37 Mbit/s
95th percentile per-packet one-way delay: 103.505 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 391.98 Mbit/s
95th percentile per-packet one-way delay: 108.325 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 332.11 Mbit/s
95th percentile per-packet one-way delay: 97.593 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 267.39 Mbit/s
95th percentile per-packet one-way delay: 76.739 ms
Loss rate: 0.00%
Run 5: Report of Indigo-MusesD — Data Link

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

- Flow 1 ingress (mean 391.90 Mbit/s)
- Flow 1 egress (mean 391.98 Mbit/s)
- Flow 2 ingress (mean 332.25 Mbit/s)
- Flow 2 egress (mean 332.11 Mbit/s)
- Flow 3 ingress (mean 267.39 Mbit/s)
- Flow 3 egress (mean 267.39 Mbit/s)

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

- Flow 1 (95th percentile 108.33 ms)
- Flow 2 (95th percentile 97.59 ms)
- Flow 3 (95th percentile 76.74 ms)
Run 1: Statistics of Indigo-MusesT

Start at: 2020-04-16 21:50:09
End at: 2020-04-16 21:50:39
Local clock offset: -0.012 ms
Remote clock offset: -1.445 ms

# Below is generated by plot.py at 2020-04-17 02:49:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 781.67 Mbit/s
95th percentile per-packet one-way delay: 107.325 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 476.71 Mbit/s
95th percentile per-packet one-way delay: 106.091 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 376.33 Mbit/s
95th percentile per-packet one-way delay: 112.661 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 266.80 Mbit/s
95th percentile per-packet one-way delay: 86.638 ms
Loss rate: 0.00%
Run 1: Report of Indigo-MusesT — Data Link
Run 2: Statistics of Indigo-MusesT

Start at: 2020-04-16 22:30:13
End at: 2020-04-16 22:30:43
Local clock offset: -0.066 ms
Remote clock offset: -0.904 ms

# Below is generated by plot.py at 2020-04-17 02:50:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 766.14 Mbit/s
95th percentile per-packet one-way delay: 92.109 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 445.82 Mbit/s
95th percentile per-packet one-way delay: 95.565 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 382.33 Mbit/s
95th percentile per-packet one-way delay: 86.033 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 291.07 Mbit/s
95th percentile per-packet one-way delay: 80.167 ms
Loss rate: 0.15%
Run 2: Report of Indigo-MusesT — Data Link

![Graph showing throughput and per-packet round-trip delay over time.](image)

- **Throughput**: Flow 1 ingress (mean 445.95 Mbps), Flow 1 egress (mean 445.82 Mbps), Flow 2 ingress (mean 382.44 Mbps), Flow 2 egress (mean 382.33 Mbps), Flow 3 ingress (mean 291.54 Mbps), Flow 3 egress (mean 291.07 Mbps).

- **Per-packet round-trip delay**: Flow 1 (95th percentile 95.56 ms), Flow 2 (95th percentile 86.03 ms), Flow 3 (95th percentile 80.17 ms).
Run 3: Statistics of Indigo-MusesT

Start at: 2020-04-16 23:10:05
End at: 2020-04-16 23:10:35
Local clock offset: -0.032 ms
Remote clock offset: 0.059 ms

# Below is generated by plot.py at 2020-04-17 02:50:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 694.08 Mbit/s
  95th percentile per-packet one-way delay: 118.694 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 422.25 Mbit/s
  95th percentile per-packet one-way delay: 127.123 ms
  Loss rate: 0.03%
-- Flow 2:
  Average throughput: 387.50 Mbit/s
  95th percentile per-packet one-way delay: 105.126 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 111.01 Mbit/s
  95th percentile per-packet one-way delay: 64.729 ms
  Loss rate: 0.00%
Run 3: Report of Indigo-MusesT — Data Link

Throughput (Mb/s)

Time (s)

Flow 1 ingress (mean 422.31 Mb/s)  
Flow 1 egress (mean 422.25 Mb/s)  
Flow 2 ingress (mean 387.50 Mb/s)  
Flow 2 egress (mean 387.50 Mb/s)  
Flow 3 ingress (mean 111.02 Mb/s)  
Flow 3 egress (mean 111.01 Mb/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 127.12 ms)  
Flow 2 (95th percentile 105.13 ms)  
Flow 3 (95th percentile 64.73 ms)
Run 4: Statistics of Indigo-MusesT

Start at: 2020-04-16 23:49:41
End at: 2020-04-16 23:50:11
Local clock offset: -0.017 ms
Remote clock offset: 1.279 ms

# Below is generated by plot.py at 2020-04-17 02:55:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 746.86 Mbit/s
95th percentile per-packet one-way delay: 113.042 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 444.37 Mbit/s
95th percentile per-packet one-way delay: 117.966 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 365.81 Mbit/s
95th percentile per-packet one-way delay: 104.822 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 272.93 Mbit/s
95th percentile per-packet one-way delay: 77.734 ms
Loss rate: 0.00%
Run 4: Report of Indigo-MusesT — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 444.09 Mbps)
- Flow 1 egress (mean 444.37 Mbps)
- Flow 2 ingress (mean 364.78 Mbps)
- Flow 2 egress (mean 365.61 Mbps)
- Flow 3 ingress (mean 271.66 Mbps)
- Flow 3 egress (mean 272.93 Mbps)

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

- Flow 1 (95th percentile 117.97 ms)
- Flow 2 (95th percentile 104.82 ms)
- Flow 3 (95th percentile 77.73 ms)
Run 5: Statistics of Indigo-MusesT

Start at: 2020-04-17 00:29:16  
End at: 2020-04-17 00:29:46  
Local clock offset: -0.224 ms  
Remote clock offset: -0.832 ms

# Below is generated by plot.py at 2020-04-17 03:00:32  
# Datalink statistics
-- Total of 3 flows:          
Average throughput: 734.25 Mbit/s  
95th percentile per-packet one-way delay: 115.245 ms  
Loss rate: 0.06%  
-- Flow 1:                     
Average throughput: 450.87 Mbit/s  
95th percentile per-packet one-way delay: 121.383 ms  
Loss rate: 0.04%  
-- Flow 2:                     
Average throughput: 364.77 Mbit/s  
95th percentile per-packet one-way delay: 102.718 ms  
Loss rate: 0.00%  
-- Flow 3:                     
Average throughput: 244.83 Mbit/s  
95th percentile per-packet one-way delay: 88.346 ms  
Loss rate: 0.42%
Run 5: Report of Indigo-MusesT — Data Link

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

- **Flow 1 ingress** (mean 451.09 Mbps)
- **Flow 1 egress** (mean 450.87 Mbps)
- **Flow 2 ingress** (mean 364.81 Mbps)
- **Flow 2 egress** (mean 364.77 Mbps)
- **Flow 3 ingress** (mean 245.89 Mbps)
- **Flow 3 egress** (mean 244.83 Mbps)

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

- **Flow 1** (95th percentile 121.38 ms)
- **Flow 2** (95th percentile 102.72 ms)
- **Flow 3** (95th percentile 88.35 ms)

104
Run 1: Statistics of LEDBAT

Start at: 2020-04-16 22:10:57
End at: 2020-04-16 22:11:27
Local clock offset: 0.001 ms
Remote clock offset: 0.573 ms

# Below is generated by plot.py at 2020-04-17 03:00:32
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 37.34 Mbit/s
  95th percentile per-packet one-way delay: 65.561 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 23.19 Mbit/s
  95th percentile per-packet one-way delay: 66.044 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 17.18 Mbit/s
  95th percentile per-packet one-way delay: 62.096 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 8.16 Mbit/s
  95th percentile per-packet one-way delay: 64.235 ms
  Loss rate: 0.71%
Run 1: Report of LEDBAT — Data Link
Run 2: Statistics of LEDBAT

Start at: 2020-04-16 22:50:59
End at: 2020-04-16 22:51:29
Local clock offset: -0.126 ms
Remote clock offset: -0.181 ms

# Below is generated by plot.py at 2020-04-17 03:00:32
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 40.06 Mbit/s
  95th percentile per-packet one-way delay: 62.014 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 25.83 Mbit/s
  95th percentile per-packet one-way delay: 62.202 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 17.19 Mbit/s
  95th percentile per-packet one-way delay: 61.855 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 8.50 Mbit/s
  95th percentile per-packet one-way delay: 61.848 ms
  Loss rate: 0.00%
Run 2: Report of LEDBAT — Data Link

![Graph 1: Throughput vs Time](graph1.png)

- **Flow 1 ingress (mean 25.83 Mbit/s)**
- **Flow 1 egress (mean 25.83 Mbit/s)**
- **Flow 2 ingress (mean 17.20 Mbit/s)**
- **Flow 2 egress (mean 17.19 Mbit/s)**
- **Flow 3 ingress (mean 8.50 Mbit/s)**
- **Flow 3 egress (mean 8.50 Mbit/s)**

![Graph 2: Per packet one way delay vs Time](graph2.png)

- **Flow 1 (95th percentile 62.20 ms)**
- **Flow 2 (95th percentile 61.85 ms)**
- **Flow 3 (95th percentile 61.85 ms)**

108
Run 3: Statistics of LEDBAT

Start at: 2020-04-16 23:30:43
End at: 2020-04-16 23:31:13
Local clock offset: -0.008 ms
Remote clock offset: -0.237 ms

# Below is generated by plot.py at 2020-04-17 03:00:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 38.49 Mbit/s
95th percentile per-packet one-way delay: 65.923 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 25.75 Mbit/s
95th percentile per-packet one-way delay: 61.945 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 15.00 Mbit/s
95th percentile per-packet one-way delay: 67.342 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 8.40 Mbit/s
95th percentile per-packet one-way delay: 61.002 ms
Loss rate: 0.00%
Run 3: Report of LEDBAT — Data Link
Run 4: Statistics of LEDBAT

Start at: 2020-04-17 00:10:13
End at: 2020-04-17 00:10:43
Local clock offset: -0.171 ms
Remote clock offset: -0.061 ms

# Below is generated by plot.py at 2020-04-17 03:00:32
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 37.86 Mbit/s
  95th percentile per-packet one-way delay: 63.685 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 23.76 Mbit/s
  95th percentile per-packet one-way delay: 64.054 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 17.20 Mbit/s
  95th percentile per-packet one-way delay: 61.515 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 8.25 Mbit/s
  95th percentile per-packet one-way delay: 63.372 ms
  Loss rate: 0.00%
Run 4: Report of LEDBAT — Data Link

![Graph showing throughput over time for different flows](image1)

![Graph showing per-packet one-way delay](image2)

Run 5: Statistics of LEDBAT

Start at: 2020-04-17 00:49:53
End at: 2020-04-17 00:50:23
Local clock offset: -0.047 ms
Remote clock offset: -0.089 ms

# Below is generated by plot.py at 2020-04-17 03:00:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 38.54 Mbit/s
95th percentile per-packet one-way delay: 64.257 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 24.73 Mbit/s
95th percentile per-packet one-way delay: 64.733 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 16.55 Mbit/s
95th percentile per-packet one-way delay: 63.730 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 8.51 Mbit/s
95th percentile per-packet one-way delay: 61.493 ms
Loss rate: 0.00%
Run 5: Report of LEDBAT — Data Link

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

![Graph 2: Packet Round Trip Time vs Time](image2)
Run 1: Statistics of Muses\_DecisionTree

Start at: 2020-04-16 21:48:21
End at: 2020-04-16 21:48:51
Local clock offset: 0.001 ms
Remote clock offset: -0.909 ms

# Below is generated by plot.py at 2020-04-17 03:03:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 698.21 Mbit/s
95th percentile per-packet one-way delay: 76.205 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 402.96 Mbit/s
95th percentile per-packet one-way delay: 76.016 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 322.18 Mbit/s
95th percentile per-packet one-way delay: 68.666 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 232.89 Mbit/s
95th percentile per-packet one-way delay: 136.391 ms
Loss rate: 0.00%
Run 1: Report of Muses_DocumentTree — Data Link
Run 2: Statistics of Muses\_DecisionTree

End at: 2020-04-16 22:28:57
Local clock offset: -0.084 ms
Remote clock offset: -0.066 ms

# Below is generated by plot.py at 2020-04-17 03:03:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 656.19 Mbit/s
95th percentile per-packet one-way delay: 85.573 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 368.99 Mbit/s
95th percentile per-packet one-way delay: 89.065 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 324.88 Mbit/s
95th percentile per-packet one-way delay: 86.585 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 226.07 Mbit/s
95th percentile per-packet one-way delay: 68.660 ms
Loss rate: 0.03%
Run 2: Report of Muses

DecisionTree — Data Link

Throughput (Mbit/s)

Time (s)

- Flow 1 ingress (mean 368.99 Mbit/s)
- Flow 1 egress (mean 368.99 Mbit/s)
- Flow 2 ingress (mean 324.91 Mbit/s)
- Flow 2 egress (mean 324.88 Mbit/s)
- Flow 3 ingress (mean 226.35 Mbit/s)
- Flow 3 egress (mean 226.07 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

- Flow 1 (95th percentile 89.06 ms)
- Flow 2 (95th percentile 86.58 ms)
- Flow 3 (95th percentile 68.66 ms)
Run 3: Statistics of Muses\_DecisionTree

Start at: 2020-04-16 23:08:25
End at: 2020-04-16 23:08:55
Local clock offset: -0.021 ms
Remote clock offset: -1.316 ms

# Below is generated by plot.py at 2020-04-17 03:03:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 525.30 Mbit/s
95th percentile per-packet one-way delay: 87.188 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 311.02 Mbit/s
95th percentile per-packet one-way delay: 85.020 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 271.66 Mbit/s
95th percentile per-packet one-way delay: 89.713 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 109.13 Mbit/s
95th percentile per-packet one-way delay: 63.165 ms
Loss rate: 0.06%
Run 3: Report of Muses_DecisionTree — Data Link

![Graph 1](image1)

![Graph 2](image2)
Run 4: Statistics of Muses\_DecisionTree

Start at: 2020-04-16 23:48:01
End at: 2020-04-16 23:48:31
Local clock offset: -0.015 ms
Remote clock offset: -0.269 ms

# Below is generated by plot.py at 2020-04-17 03:03:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 547.04 Mbit/s
95th percentile per-packet one-way delay: 84.317 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 288.34 Mbit/s
95th percentile per-packet one-way delay: 87.058 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 278.75 Mbit/s
95th percentile per-packet one-way delay: 75.971 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 233.49 Mbit/s
95th percentile per-packet one-way delay: 82.939 ms
Loss rate: 0.00%
Run 4: Report of Muses_DecisionTree — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 288.35 Mbps)
  - Flow 1 egress (mean 288.34 Mbps)
  - Flow 2 ingress (mean 278.71 Mbps)
  - Flow 2 egress (mean 278.75 Mbps)
  - Flow 3 ingress (mean 233.49 Mbps)
  - Flow 3 egress (mean 233.49 Mbps)

- **Packet delay (ms):**
  - Flow 1 (95th percentile 87.06 ms)
  - Flow 2 (95th percentile 75.97 ms)
  - Flow 3 (95th percentile 82.94 ms)
Run 5: Statistics of Muses\_DecisionTree

Start at: 2020-04-17 00:27:31
End at: 2020-04-17 00:28:01
Local clock offset: -0.241 ms
Remote clock offset: -0.045 ms

# Below is generated by plot.py at 2020-04-17 03:03:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 615.31 Mbit/s
  95th percentile per-packet one-way delay: 86.930 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 346.79 Mbit/s
  95th percentile per-packet one-way delay: 86.876 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 294.51 Mbit/s
  95th percentile per-packet one-way delay: 93.235 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 232.46 Mbit/s
  95th percentile per-packet one-way delay: 68.822 ms
  Loss rate: 0.00%
Run 5: Report of Muses_DecisionTree — Data Link

![Graph showing network performance metrics over time.

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 346.79 Mbps)
  - Flow 1 egress (mean 346.79 Mbps)
  - Flow 2 ingress (mean 294.52 Mbps)
  - Flow 2 egress (mean 294.51 Mbps)
  - Flow 3 ingress (mean 232.47 Mbps)
  - Flow 3 egress (mean 232.46 Mbps)

- **Per-packet end-to-end delay (μs):**
  - Flow 1 (95th percentile 86.88 μs)
  - Flow 2 (95th percentile 93.23 μs)
  - Flow 3 (95th percentile 68.82 μs)

124
Run 1: Statistics of Muses\_DecisionTreeH0

Start at: 2020-04-16 22:09:15  
End at: 2020-04-16 22:09:45  
Local clock offset: 0.011 ms  
Remote clock offset: -0.229 ms

# Below is generated by plot.py at 2020-04-17 03:03:36  
# Datalink statistics
-- Total of 3 flows:
Average throughput: 566.58 Mbit/s
95th percentile per-packet one-way delay: 142.503 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 291.74 Mbit/s
95th percentile per-packet one-way delay: 164.090 ms
Loss rate: 1.11%
-- Flow 2:
Average throughput: 291.27 Mbit/s
95th percentile per-packet one-way delay: 119.527 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 263.52 Mbit/s
95th percentile per-packet one-way delay: 112.459 ms
Loss rate: 0.00%
Run 1: Report of Muses_DecisionTreeH0 — Data Link
Run 2: Statistics of Muses\_DecisionTreeH0

Start at: 2020-04-16 22:49:24
End at: 2020-04-16 22:49:54
Local clock offset: -0.16 ms
Remote clock offset: -0.526 ms

# Below is generated by plot.py at 2020-04-17 03:05:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 468.36 Mbit/s
95th percentile per-packet one-way delay: 156.265 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 227.28 Mbit/s
95th percentile per-packet one-way delay: 170.194 ms
Loss rate: 1.27%
-- Flow 2:
Average throughput: 238.52 Mbit/s
95th percentile per-packet one-way delay: 138.848 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 220.93 Mbit/s
95th percentile per-packet one-way delay: 109.547 ms
Loss rate: 0.02%
Run 2: Report of Muses DecisionTreeH0 — Data Link
Run 3: Statistics of Muses\_DecisionTreeH0

Start at: 2020-04-16 23:29:08
End at: 2020-04-16 23:29:38
Local clock offset: -0.031 ms
Remote clock offset: -0.134 ms

# Below is generated by plot.py at 2020-04-17 03:09:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 424.78 Mbit/s
95th percentile per-packet one-way delay: 174.306 ms
Loss rate: 2.17%
-- Flow 1:
Average throughput: 201.94 Mbit/s
95th percentile per-packet one-way delay: 189.053 ms
Loss rate: 4.23%
-- Flow 2:
Average throughput: 235.97 Mbit/s
95th percentile per-packet one-way delay: 153.198 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 210.61 Mbit/s
95th percentile per-packet one-way delay: 132.044 ms
Loss rate: 0.00%
Run 3: Report of Muses_DecisionTreeH0 — Data Link
Run 4: Statistics of Muses\_DecisionTreeH0

Start at: 2020-04-17 00:08:38
End at: 2020-04-17 00:09:08
Local clock offset: -0.122 ms
Remote clock offset: 0.065 ms

# Below is generated by plot.py at 2020-04-17 03:09:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 437.49 Mbit/s
95th percentile per-packet one-way delay: 170.900 ms
Loss rate: 1.89%
-- Flow 1:
Average throughput: 220.60 Mbit/s
95th percentile per-packet one-way delay: 180.773 ms
Loss rate: 3.47%
-- Flow 2:
Average throughput: 234.02 Mbit/s
95th percentile per-packet one-way delay: 148.071 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 193.45 Mbit/s
95th percentile per-packet one-way delay: 145.304 ms
Loss rate: 0.59%
Run 4: Report of Muses_DecisionTreeH0 — Data Link

![Graph showing network performance metrics](image)

**Throughput (Mbps) vs Time (s)**
- Flow 1 ingress (mean 228.68 Mbps)
- Flow 1 egress (mean 220.60 Mbps)
- Flow 2 ingress (mean 234.24 Mbps)
- Flow 2 egress (mean 234.02 Mbps)
- Flow 3 ingress (mean 194.65 Mbps)
- Flow 3 egress (mean 193.45 Mbps)

**Per-packet one-way delay (ms)**
- Flow 1 (95th percentile 180.77 ms)
- Flow 2 (95th percentile 148.07 ms)
- Flow 3 (95th percentile 145.30 ms)
Run 5: Statistics of Muses\_DecisionTreeH0

Start at: 2020-04-17 00:48:18
End at: 2020-04-17 00:48:48
Local clock offset: -0.045 ms
Remote clock offset: -0.003 ms

# Below is generated by plot.py at 2020-04-17 03:09:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 434.57 Mbit/s
95th percentile per-packet one-way delay: 170.061 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 214.12 Mbit/s
95th percentile per-packet one-way delay: 185.733 ms
Loss rate: 2.91%
-- Flow 2:
Average throughput: 193.24 Mbit/s
95th percentile per-packet one-way delay: 154.393 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 289.17 Mbit/s
95th percentile per-packet one-way delay: 85.128 ms
Loss rate: 0.00%
Run 5: Report of Muses DecisionTreeH0 — Data Link
Run 1: Statistics of Muses\_DecisionTreeR0

Start at: 2020-04-16 22:15:18
End at: 2020-04-16 22:15:48
Local clock offset: 0.012 ms
Remote clock offset: -0.047 ms

# Below is generated by plot.py at 2020-04-17 03:16:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 663.47 Mbit/s
  95th percentile per-packet one-way delay: 89.325 ms
  Loss rate: 0.03%
-- Flow 1:
  Average throughput: 384.99 Mbit/s
  95th percentile per-packet one-way delay: 92.285 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 314.86 Mbit/s
  95th percentile per-packet one-way delay: 75.408 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 220.22 Mbit/s
  95th percentile per-packet one-way delay: 124.278 ms
  Loss rate: 0.05%
Run 1: Report of Muses DecisionTreeR0 — Data Link
Run 2: Statistics of Muses\_DecisionTreeR0

End at: 2020-04-16 22:55:49
Local clock offset: -0.101 ms
Remote clock offset: -0.361 ms

# Below is generated by plot.py at 2020-04-17 03:16:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 617.57 Mbit/s
95th percentile per-packet one-way delay: 78.605 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 334.90 Mbit/s
95th percentile per-packet one-way delay: 85.175 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 311.81 Mbit/s
95th percentile per-packet one-way delay: 72.492 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 234.57 Mbit/s
95th percentile per-packet one-way delay: 68.516 ms
Loss rate: 0.04%
Run 2: Report of Muses, DecisionTreeR0 — Data Link
Run 3: Statistics of Muses\_DecisionTreeR0

Start at: 2020-04-16 23:35:01  
End at: 2020-04-16 23:35:31  
Local clock offset: -0.024 ms  
Remote clock offset: -0.101 ms

# Below is generated by plot.py at 2020-04-17 03:16:15  
# Datalink statistics
-- Total of 3 flows:
Average throughput: 589.31 Mbit/s
95th percentile per-packet one-way delay: 87.674 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 321.87 Mbit/s
95th percentile per-packet one-way delay: 90.250 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 287.26 Mbit/s
95th percentile per-packet one-way delay: 85.983 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 244.26 Mbit/s
95th percentile per-packet one-way delay: 68.841 ms
Loss rate: 0.00%
Run 3: Report of Muses, DecisionTreeR0 — Data Link
Run 4: Statistics of Muses\_DecisionTreeR0

Start at: 2020-04-17 00:14:32
End at: 2020-04-17 00:15:02
Local clock offset: -0.159 ms
Remote clock offset: 0.221 ms

# Below is generated by plot.py at 2020-04-17 03:16:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 632.51 Mbit/s
95th percentile per-packet one-way delay: 92.016 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 337.95 Mbit/s
95th percentile per-packet one-way delay: 89.822 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 328.98 Mbit/s
95th percentile per-packet one-way delay: 95.931 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 242.29 Mbit/s
95th percentile per-packet one-way delay: 82.335 ms
Loss rate: 0.00%
Run 4: Report of Muses_DecisionTreeR0 — Data Link

![Graph of throughput vs. time for different flows.]
Run 5: Statistics of Muses\_DecisionTreeR0

Start at: 2020-04-17 00:54:12
End at: 2020-04-17 00:54:42
Local clock offset: -0.002 ms
Remote clock offset: -0.841 ms

# Below is generated by plot.py at 2020-04-17 03:17:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 584.66 Mbit/s
95th percentile per-packet one-way delay: 88.991 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 331.33 Mbit/s
95th percentile per-packet one-way delay: 87.134 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 282.07 Mbit/s
95th percentile per-packet one-way delay: 97.871 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 213.61 Mbit/s
95th percentile per-packet one-way delay: 67.491 ms
Loss rate: 0.00%
Run 5: Report of Muses_DocumentTreeR0 — Data Link

![Graph showing network traffic](image1)

![Graph showing packet delay](image2)
Run 1: Statistics of PCC-Allegro

Start at: 2020-04-16 22:07:25
End at: 2020-04-16 22:07:55
Local clock offset: 0.021 ms
Remote clock offset: -0.249 ms

# Below is generated by plot.py at 2020-04-17 03:31:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 550.03 Mbit/s
95th percentile per-packet one-way delay: 233.290 ms
Loss rate: 3.60%
-- Flow 1:
Average throughput: 301.86 Mbit/s
95th percentile per-packet one-way delay: 242.537 ms
Loss rate: 5.61%
-- Flow 2:
Average throughput: 258.13 Mbit/s
95th percentile per-packet one-way delay: 103.152 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 232.29 Mbit/s
95th percentile per-packet one-way delay: 192.970 ms
Loss rate: 2.61%
Run 2: Statistics of PCC-Allegro

Start at: 2020-04-16 22:47:34
End at: 2020-04-16 22:48:04
Local clock offset: -0.148 ms
Remote clock offset: -0.061 ms

# Below is generated by plot.py at 2020-04-17 03:32:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 556.05 Mbit/s
95th percentile per-packet one-way delay: 252.867 ms
Loss rate: 2.16%

-- Flow 1:
Average throughput: 302.66 Mbit/s
95th percentile per-packet one-way delay: 226.399 ms
Loss rate: 1.89%

-- Flow 2:
Average throughput: 268.69 Mbit/s
95th percentile per-packet one-way delay: 126.708 ms
Loss rate: 0.83%

-- Flow 3:
Average throughput: 228.06 Mbit/s
95th percentile per-packet one-way delay: 290.338 ms
Loss rate: 6.20%
Run 2: Report of PCC-Allegro — Data Link

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

- Flow 1 ingress (mean 308.46 Mbit/s)
- Flow 1 egress (mean 302.66 Mbit/s)
- Flow 2 ingress (mean 270.90 Mbit/s)
- Flow 2 egress (mean 268.69 Mbit/s)
- Flow 3 ingress (mean 243.64 Mbit/s)
- Flow 3 egress (mean 228.06 Mbit/s)

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

- Flow 1 (95th percentile 226.40 ms)
- Flow 2 (95th percentile 126.71 ms)
- Flow 3 (95th percentile 290.34 ms)
Run 3: Statistics of PCC-Allegro

Start at: 2020-04-16 23:27:19
End at: 2020-04-16 23:27:49
Local clock offset: -0.009 ms
Remote clock offset: -0.245 ms

# Below is generated by plot.py at 2020-04-17 03:32:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 537.91 Mbit/s
95th percentile per-packet one-way delay: 211.142 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 267.97 Mbit/s
95th percentile per-packet one-way delay: 161.948 ms
Loss rate: 1.15%
-- Flow 2:
Average throughput: 291.22 Mbit/s
95th percentile per-packet one-way delay: 230.338 ms
Loss rate: 1.36%
-- Flow 3:
Average throughput: 232.27 Mbit/s
95th percentile per-packet one-way delay: 227.670 ms
Loss rate: 4.41%
Run 3: Report of PCC-Allegro — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 271.13 Mbps)
- Flow 1 egress (mean 267.97 Mbps)
- Flow 2 ingress (mean 294.44 Mbps)
- Flow 2 egress (mean 291.22 Mbps)
- Flow 3 ingress (mean 242.97 Mbps)
- Flow 3 egress (mean 232.27 Mbps)

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

- Flow 1 (95th percentile 161.95 ms)
- Flow 2 (95th percentile 230.34 ms)
- Flow 3 (95th percentile 227.67 ms)
Run 4: Statistics of PCC-Allegro

Start at: 2020-04-17 00:06:52
End at: 2020-04-17 00:07:22
Local clock offset: -0.106 ms
Remote clock offset: -0.072 ms

# Below is generated by plot.py at 2020-04-17 03:35:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 498.11 Mbit/s
95th percentile per-packet one-way delay: 108.520 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 263.26 Mbit/s
95th percentile per-packet one-way delay: 105.664 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 264.98 Mbit/s
95th percentile per-packet one-way delay: 137.489 ms
Loss rate: 1.28%
-- Flow 3:
Average throughput: 179.39 Mbit/s
95th percentile per-packet one-way delay: 95.786 ms
Loss rate: 0.01%
Run 4: Report of PCC-Allegro — Data Link

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

- Flow 1 ingress (mean 264.45 Mbps)
- Flow 1 egress (mean 263.26 Mbps)
- Flow 2 ingress (mean 268.31 Mbps)
- Flow 2 egress (mean 264.98 Mbps)
- Flow 3 ingress (mean 179.47 Mbps)
- Flow 3 egress (mean 179.39 Mbps)

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

- Flow 1 (95th percentile 105.66 ms)
- Flow 2 (95th percentile 137.49 ms)
- Flow 3 (95th percentile 95.79 ms)
Run 5: Statistics of PCC-Allegro

Start at: 2020-04-17 00:46:29
End at: 2020-04-17 00:46:59
Local clock offset: -0.065 ms
Remote clock offset: -0.033 ms

# Below is generated by plot.py at 2020-04-17 03:37:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 534.90 Mbit/s
95th percentile per-packet one-way delay: 227.831 ms
Loss rate: 1.91%
-- Flow 1:
Average throughput: 284.31 Mbit/s
95th percentile per-packet one-way delay: 241.202 ms
Loss rate: 1.06%
-- Flow 2:
Average throughput: 256.88 Mbit/s
95th percentile per-packet one-way delay: 228.137 ms
Loss rate: 3.07%
-- Flow 3:
Average throughput: 241.74 Mbit/s
95th percentile per-packet one-way delay: 188.243 ms
Loss rate: 2.37%
Run 5: Report of PCC-Allegro — Data Link
Run 1: Statistics of PCC-Expr

Start at: 2020-04-16 21:51:58
End at: 2020-04-16 21:52:28
Local clock offset: ~0.003 ms
Remote clock offset: 0.512 ms

# Below is generated by plot.py at 2020-04-17 03:37:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 377.46 Mbit/s
95th percentile per-packet one-way delay: 187.604 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 205.24 Mbit/s
95th percentile per-packet one-way delay: 219.982 ms
Loss rate: 1.53%
-- Flow 2:
Average throughput: 182.47 Mbit/s
95th percentile per-packet one-way delay: 149.894 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 154.05 Mbit/s
95th percentile per-packet one-way delay: 104.930 ms
Loss rate: 0.00%
Run 1: Report of PCC-Expr — Data Link

---

**Throughput (Mbps)**

- **Flow 1 ingress** (mean 208.42 Mbps)
- **Flow 1 egress** (mean 205.24 Mbps)
- **Flow 2 ingress** (mean 183.06 Mbps)
- **Flow 2 egress** (mean 182.47 Mbps)
- **Flow 3 ingress** (mean 154.05 Mbps)
- **Flow 3 egress** (mean 154.05 Mbps)

---

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

- **Flow 1 (95th percentile 219.98 ms)**
- **Flow 2 (95th percentile 149.89 ms)**
- **Flow 3 (95th percentile 104.93 ms)**
Run 2: Statistics of PCC-Expr

Start at: 2020-04-16 22:32:03
End at: 2020-04-16 22:32:33
Local clock offset: -0.059 ms
Remote clock offset: -1.343 ms

# Below is generated by plot.py at 2020-04-17 03:37:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 384.05 Mbit/s
95th percentile per-packet one-way delay: 164.996 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 198.14 Mbit/s
95th percentile per-packet one-way delay: 167.687 ms
Loss rate: 2.69%
-- Flow 2:
Average throughput: 188.69 Mbit/s
95th percentile per-packet one-way delay: 89.784 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 183.31 Mbit/s
95th percentile per-packet one-way delay: 151.584 ms
Loss rate: 0.12%
Run 3: Statistics of PCC-Expr

Start at: 2020-04-16 23:11:51
End at: 2020-04-16 23:12:21
Local clock offset: -0.059 ms
Remote clock offset: -1.019 ms

# Below is generated by plot.py at 2020-04-17 03:37:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 386.32 Mbit/s
95th percentile per-packet one-way delay: 190.574 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 220.59 Mbit/s
95th percentile per-packet one-way delay: 212.359 ms
Loss rate: 1.69%
-- Flow 2:
Average throughput: 173.37 Mbit/s
95th percentile per-packet one-way delay: 112.808 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 153.03 Mbit/s
95th percentile per-packet one-way delay: 116.051 ms
Loss rate: 0.04%
Run 3: Report of PCC-Expr — Data Link

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

- **Flow 1 ing (mean 224.37 Mbit/s)**
- **Flow 1 egress (mean 220.59 Mbit/s)**
- **Flow 2 ing (mean 173.74 Mbit/s)**
- **Flow 2 egress (mean 173.37 Mbit/s)**
- **Flow 3 ing (mean 153.04 Mbit/s)**
- **Flow 3 egress (mean 153.03 Mbit/s)**

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

- **Flow 1 (95th percentile 212.36 ms)**
- **Flow 2 (95th percentile 112.81 ms)**
- **Flow 3 (95th percentile 116.05 ms)**
Run 4: Statistics of PCC-Expr

Start at: 2020-04-16 23:51:29
End at: 2020-04-16 23:51:59
Local clock offset: -0.02 ms
Remote clock offset: -0.037 ms

# Below is generated by plot.py at 2020-04-17 03:42:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 328.81 Mbit/s
95th percentile per-packet one-way delay: 175.757 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 191.96 Mbit/s
95th percentile per-packet one-way delay: 111.041 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 156.31 Mbit/s
95th percentile per-packet one-way delay: 229.616 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 99.73 Mbit/s
95th percentile per-packet one-way delay: 63.090 ms
Loss rate: 0.00%
Run 5: Statistics of PCC-Expr

Start at: 2020-04-17 00:31:04
End at: 2020-04-17 00:31:34
Local clock offset: -0.218 ms
Remote clock offset: -0.193 ms

# Below is generated by plot.py at 2020-04-17 03:45:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 376.65 Mbit/s
95th percentile per-packet one-way delay: 192.383 ms
Loss rate: 3.51%
-- Flow 1:
Average throughput: 189.43 Mbit/s
95th percentile per-packet one-way delay: 84.706 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 195.69 Mbit/s
95th percentile per-packet one-way delay: 215.237 ms
Loss rate: 9.22%
-- Flow 3:
Average throughput: 173.16 Mbit/s
95th percentile per-packet one-way delay: 179.269 ms
Loss rate: 0.60%
Run 5: Report of PCC-Expr — Data Link

![Graph of throughput and packet delay over time for different flows.](image)

- Flow 1 ingress (mean 189.58 Mbit/s)
- Flow 1 egress (mean 189.42 Mbit/s)
- Flow 2 ingress (mean 215.59 Mbit/s)
- Flow 2 egress (mean 195.09 Mbit/s)
- Flow 3 ingress (mean 174.11 Mbit/s)
- Flow 3 egress (mean 173.11 Mbit/s)

![Graph of packet delay over time for different flows.](image)

- Flow 1 (95th percentile 84.71 ms)
- Flow 2 (95th percentile 215.24 ms)
- Flow 3 (95th percentile 179.27 ms)
Run 1: Statistics of QUIC Cubic

Start at: 2020-04-16 22:14:02
End at: 2020-04-16 22:14:32
Local clock offset: 0.007 ms
Remote clock offset: -0.014 ms

# Below is generated by plot.py at 2020-04-17 03:45:57
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 64.43 Mbit/s
  95th percentile per-packet one-way delay: 65.648 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 33.23 Mbit/s
  95th percentile per-packet one-way delay: 60.067 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 38.76 Mbit/s
  95th percentile per-packet one-way delay: 65.690 ms
  Loss rate: 0.05%
-- Flow 3:
  Average throughput: 16.71 Mbit/s
  95th percentile per-packet one-way delay: 65.509 ms
  Loss rate: 0.01%
Run 1: Report of QUIC Cubic — Data Link

![Graphs showing throughput and per-packet one-way delay over time for different flows.](image-url)
Run 2: Statistics of QUIC Cubic

Start at: 2020-04-16 22:54:02
End at: 2020-04-16 22:54:32
Local clock offset: -0.105 ms
Remote clock offset: -0.078 ms

# Below is generated by plot.py at 2020-04-17 03:45:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.94 Mbit/s
95th percentile per-packet one-way delay: 63.337 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 42.98 Mbit/s
95th percentile per-packet one-way delay: 63.365 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 32.09 Mbit/s
95th percentile per-packet one-way delay: 63.151 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 17.32 Mbit/s
95th percentile per-packet one-way delay: 60.132 ms
Loss rate: 0.00%
Run 2: Report of QUIC Cubic — Data Link

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

- **Flow 1 ingress (mean 42.98 Mbit/s)**
- **Flow 1 egress (mean 42.98 Mbit/s)**
- **Flow 2 ingress (mean 32.08 Mbit/s)**
- **Flow 2 egress (mean 32.09 Mbit/s)**
- **Flow 3 ingress (mean 17.32 Mbit/s)**
- **Flow 3 egress (mean 17.32 Mbit/s)**

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

- **Flow 1 (95th percentile 63.37 ms)**
- **Flow 2 (95th percentile 63.15 ms)**
- **Flow 3 (95th percentile 60.13 ms)**

168
Run 3: Statistics of QUIC Cubic

Start at: 2020-04-16 23:33:44
End at: 2020-04-16 23:34:14
Local clock offset: -0.031 ms
Remote clock offset: 0.24 ms

# Below is generated by plot.py at 2020-04-17 03:45:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.79 Mbit/s
95th percentile per-packet one-way delay: 65.583 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 46.32 Mbit/s
95th percentile per-packet one-way delay: 60.350 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 31.72 Mbit/s
95th percentile per-packet one-way delay: 65.651 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 16.56 Mbit/s
95th percentile per-packet one-way delay: 62.550 ms
Loss rate: 0.00%
Run 3: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 46.32 Mbit/s)
- Flow 1 egress (mean 46.32 Mbit/s)
- Flow 2 ingress (mean 31.73 Mbit/s)
- Flow 2 egress (mean 31.72 Mbit/s)
- Flow 3 ingress (mean 16.56 Mbit/s)
- Flow 3 egress (mean 16.56 Mbit/s)
Run 4: Statistics of QUIC Cubic

Start at: 2020-04-17 00:13:15
End at: 2020-04-17 00:13:45
Local clock offset: -0.205 ms
Remote clock offset: -0.094 ms

# Below is generated by plot.py at 2020-04-17 03:45:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 71.31 Mbit/s
  95th percentile per-packet one-way delay: 62.977 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 47.70 Mbit/s
  95th percentile per-packet one-way delay: 59.976 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 27.44 Mbit/s
  95th percentile per-packet one-way delay: 63.055 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 16.51 Mbit/s
  95th percentile per-packet one-way delay: 62.156 ms
  Loss rate: 0.00%
Run 4: Report of QUIC Cubic — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 47.70 Mbps)
- Flow 1 egress (mean 47.70 Mbps)
- Flow 2 ingress (mean 27.44 Mbps)
- Flow 2 egress (mean 27.44 Mbps)
- Flow 3 ingress (mean 16.51 Mbps)
- Flow 3 egress (mean 16.51 Mbps)

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

- Flow 1 (95th percentile 59.98 ms)
- Flow 2 (95th percentile 63.05 ms)
- Flow 3 (95th percentile 62.16 ms)

172
Run 5: Statistics of QUIC Cubic

Start at: 2020-04-17 00:52:55
End at: 2020-04-17 00:53:25
Local clock offset: -0.033 ms
Remote clock offset: -0.069 ms

# Below is generated by plot.py at 2020-04-17 03:45:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 72.02 Mbit/s
  95th percentile per-packet one-way delay: 62.892 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 41.12 Mbit/s
  95th percentile per-packet one-way delay: 60.059 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 36.81 Mbit/s
  95th percentile per-packet one-way delay: 62.350 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 19.79 Mbit/s
  95th percentile per-packet one-way delay: 63.031 ms
  Loss rate: 0.00%
Run 5: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

Start at: 2020-04-16 21:39:20
End at: 2020-04-16 21:39:50
Local clock offset: -0.001 ms
Remote clock offset: -0.192 ms

# Below is generated by plot.py at 2020-04-17 03:45:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 63.112 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.128 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 62.323 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 62.418 ms
  Loss rate: 0.00%
Run 1: Report of SCReAM — Data Link

Graph 1: Throughput vs Time

Graph 2: Packet Convergence vs Time

Legend:
- Flow 1 ingress (mean 0.22 Mbit/s)
- Flow 1 egress (mean 0.22 Mbit/s)
- Flow 2 ingress (mean 0.22 Mbit/s)
- Flow 2 egress (mean 0.22 Mbit/s)
- Flow 3 ingress (mean 0.22 Mbit/s)
- Flow 3 egress (mean 0.22 Mbit/s)
Run 2: Statistics of SCReAM

Start at: 2020-04-16 22:18:54
End at: 2020-04-16 22:19:24
Local clock offset: 0.018 ms
Remote clock offset: -0.798 ms

# Below is generated by plot.py at 2020-04-17 03:45:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 62.326 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.429 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.505 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.371 ms
Loss rate: 0.00%
Run 2: Report of SCReAM — Data Link

Throughput (Mbps)

Time (s)

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)

One-packet round-trip delay (ms)

Time (s)

Flow 1 (95th percentile 59.43 ms)  
Flow 2 (95th percentile 59.51 ms)  
Flow 3 (95th percentile 62.37 ms)

178
Run 3: Statistics of SCReAM

Start at: 2020-04-16 22:58:51
End at: 2020-04-16 22:59:21
Local clock offset: -0.064 ms
Remote clock offset: 0.137 ms

# Below is generated by plot.py at 2020-04-17 03:45:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 63.183 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 60.408 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 60.331 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.227 ms
  Loss rate: 0.00%
Run 3: Report of SCReAM — Data Link
Run 4: Statistics of SCReAM

Start at: 2020-04-16 23:38:34
End at: 2020-04-16 23:39:04
Local clock offset: 0.005 ms
Remote clock offset: -0.823 ms

# Below is generated by plot.py at 2020-04-17 03:45:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 61.870 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.889 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.313 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.099 ms
Loss rate: 0.00%
Run 4: Report of SCReAM — Data Link
Run 5: Statistics of SCReAM

Start at: 2020-04-17 00:18:06  
End at: 2020-04-17 00:18:36  
Local clock offset: -0.213 ms  
Remote clock offset: -0.861 ms

# Below is generated by plot.py at 2020-04-17 03:45:58  
# Datalink statistics

-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 62.348 ms  
Loss rate: 0.00%

-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 59.311 ms  
Loss rate: 0.00%

-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 62.385 ms  
Loss rate: 0.00%

-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 59.308 ms  
Loss rate: 0.00%
Run 5: Report of SCReAM — Data Link
Run 1: Statistics of Sprout

Start at: 2020-04-16 21:53:46
End at: 2020-04-16 21:54:16
Local clock offset: 0.013 ms
Remote clock offset: -0.085 ms

# Below is generated by plot.py at 2020-04-17 03:45:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.82 Mbit/s
95th percentile per-packet one-way delay: 61.209 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.00 Mbit/s
95th percentile per-packet one-way delay: 61.107 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.85 Mbit/s
95th percentile per-packet one-way delay: 61.310 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.72 Mbit/s
95th percentile per-packet one-way delay: 61.147 ms
Loss rate: 0.00%
Run 1: Report of Sprout — Data Link
Run 2: Statistics of Sprout

Start at: 2020-04-16 22:33:51
End at: 2020-04-16 22:34:21
Local clock offset: -0.089 ms
Remote clock offset: -0.101 ms

# Below is generated by plot.py at 2020-04-17 03:45:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.62 Mbit/s
95th percentile per-packet one-way delay: 63.702 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.96 Mbit/s
95th percentile per-packet one-way delay: 61.209 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.70 Mbit/s
95th percentile per-packet one-way delay: 61.112 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.68 Mbit/s
95th percentile per-packet one-way delay: 64.236 ms
Loss rate: 0.00%
Run 2: Report of Sprout — Data Link

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

![Graph 2: Per Packet One-Way Delay vs. Time](image)
Run 3: Statistics of Sprout

Start at: 2020-04-16 23:13:40
End at: 2020-04-16 23:14:10
Local clock offset: -0.042 ms
Remote clock offset: 0.074 ms

# Below is generated by plot.py at 2020-04-17 03:45:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 13.62 Mbit/s
  95th percentile per-packet one-way delay: 63.836 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 7.05 Mbit/s
  95th percentile per-packet one-way delay: 61.247 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 6.57 Mbit/s
  95th percentile per-packet one-way delay: 64.211 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 6.71 Mbit/s
  95th percentile per-packet one-way delay: 61.431 ms
  Loss rate: 0.00%
Run 3: Report of Sprout — Data Link
Run 4: Statistics of Sprout

End at: 2020-04-16 23:53:43
Local clock offset: -0.039 ms
Remote clock offset: -0.374 ms

# Below is generated by plot.py at 2020-04-17 03:45:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 13.87 Mbit/s
  95th percentile per-packet one-way delay: 62.887 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 7.02 Mbit/s
  95th percentile per-packet one-way delay: 63.057 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 7.00 Mbit/s
  95th percentile per-packet one-way delay: 61.097 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 6.67 Mbit/s
  95th percentile per-packet one-way delay: 60.920 ms
  Loss rate: 0.00%
Run 4: Report of Sprout — Data Link

![Throughput vs Time Graph]

- **Flow 1 ingress (mean 7.02 Mbit/s)**
- **Flow 1 egress (mean 7.02 Mbit/s)**
- **Flow 2 ingress (mean 7.00 Mbit/s)**
- **Flow 2 egress (mean 7.00 Mbit/s)**
- **Flow 3 ingress (mean 6.67 Mbit/s)**
- **Flow 3 egress (mean 6.67 Mbit/s)**

![Per-packet one-way delay vs Time Graph]

- **Flow 1 (95th percentile 63.06 ms)**
- **Flow 2 (95th percentile 61.10 ms)**
- **Flow 3 (95th percentile 60.92 ms)**
Run 5: Statistics of Sprout

Start at: 2020-04-17 00:32:53
End at: 2020-04-17 00:33:23
Local clock offset: -0.242 ms
Remote clock offset: -0.79 ms

# Below is generated by plot.py at 2020-04-17 03:45:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 13.63 Mbit/s
  95th percentile per-packet one-way delay: 62.539 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 6.86 Mbit/s
  95th percentile per-packet one-way delay: 60.277 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 6.92 Mbit/s
  95th percentile per-packet one-way delay: 62.887 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 6.56 Mbit/s
  95th percentile per-packet one-way delay: 62.319 ms
  Loss rate: 0.00%
Run 5: Report of Sprout — Data Link

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

Flow 1 ingress (mean 6.86 Mbit/s)  Flow 1 egress (mean 6.86 Mbit/s)
Flow 2 ingress (mean 6.92 Mbit/s)  Flow 2 egress (mean 6.92 Mbit/s)
Flow 3 ingress (mean 6.56 Mbit/s)  Flow 3 egress (mean 6.56 Mbit/s)

Flow 1 (95th percentile 60.28 ms)  Flow 2 (95th percentile 62.89 ms)  Flow 3 (95th percentile 62.32 ms)
Run 1: Statistics of TaoVA-100x

Start at: 2020-04-16 21:37:31
End at: 2020-04-16 21:38:01
Local clock offset: -0.032 ms
Remote clock offset: -0.375 ms

# Below is generated by plot.py at 2020-04-17 03:50:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 392.60 Mbit/s
95th percentile per-packet one-way delay: 73.285 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 203.53 Mbit/s
95th percentile per-packet one-way delay: 70.680 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 187.93 Mbit/s
95th percentile per-packet one-way delay: 73.670 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 185.99 Mbit/s
95th percentile per-packet one-way delay: 78.877 ms
Loss rate: 0.00%
Run 1: Report of TaoVA-100x — Data Link

![Graph of throughput and round-trip delay over time]

Legend:
- Flow 1 ingress (mean 203.53 Mbit/s)
- Flow 1 egress (mean 203.53 Mbit/s)
- Flow 2 ingress (mean 187.93 Mbit/s)
- Flow 2 egress (mean 187.93 Mbit/s)
- Flow 3 ingress (mean 185.99 Mbit/s)
- Flow 3 egress (mean 185.99 Mbit/s)

Legend:
- Flow 1 (95th percentile 70.68 ms)
- Flow 2 (95th percentile 73.67 ms)
- Flow 3 (95th percentile 78.88 ms)

196
Run 2: Statistics of TaoVA-100x

Start at: 2020-04-16 22:17:04
End at: 2020-04-16 22:17:34
Local clock offset: 0.035 ms
Remote clock offset: -0.159 ms

# Below is generated by plot.py at 2020-04-17 03:50:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 389.02 Mbit/s
  95th percentile per-packet one-way delay: 75.020 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 207.11 Mbit/s
  95th percentile per-packet one-way delay: 74.402 ms
  Loss rate: 0.10%
-- Flow 2:
  Average throughput: 189.57 Mbit/s
  95th percentile per-packet one-way delay: 74.848 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 167.65 Mbit/s
  95th percentile per-packet one-way delay: 79.396 ms
  Loss rate: 0.19%
Run 2: Report of TaoVA-100x — Data Link

![Graph of Throughput vs. Time](image)

- **Flow 1 ingress (mean 207.27 Mbit/s)**
- **Flow 1 egress (mean 207.11 Mbit/s)**
- **Flow 2 ingress (mean 189.56 Mbit/s)**
- **Flow 2 egress (mean 189.57 Mbit/s)**
- **Flow 3 ingress (mean 167.91 Mbit/s)**
- **Flow 3 egress (mean 167.65 Mbit/s)**

![Graph of Per-packet one way delay vs. Time](image)

- **Flow 1 (95th percentile 74.40 ms)**
- **Flow 2 (95th percentile 74.85 ms)**
- **Flow 3 (95th percentile 79.40 ms)**
Run 3: Statistics of TaoVA-100x

Start at: 2020-04-16 22:57:03
End at: 2020-04-16 22:57:33
Local clock offset: -0.065 ms
Remote clock offset: -0.041 ms

# Below is generated by plot.py at 2020-04-17 03:50:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 376.51 Mbit/s
95th percentile per-packet one-way delay: 76.675 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 201.32 Mbit/s
95th percentile per-packet one-way delay: 73.108 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 180.30 Mbit/s
95th percentile per-packet one-way delay: 78.618 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 165.39 Mbit/s
95th percentile per-packet one-way delay: 81.090 ms
Loss rate: 0.04%
Run 3: Report of TaoVA-100x — Data Link
Run 4: Statistics of TaoVA-100x

Start at: 2020-04-16 23:36:44
End at: 2020-04-16 23:37:14
Local clock offset: -0.025 ms
Remote clock offset: -0.293 ms

# Below is generated by plot.py at 2020-04-17 03:50:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 387.55 Mbit/s
95th percentile per-packet one-way delay: 74.701 ms
Loss rate: 0.00%

-- Flow 1:
Average throughput: 200.46 Mbit/s
95th percentile per-packet one-way delay: 74.611 ms
Loss rate: 0.00%

-- Flow 2:
Average throughput: 189.17 Mbit/s
95th percentile per-packet one-way delay: 76.715 ms
Loss rate: 0.00%

-- Flow 3:
Average throughput: 184.17 Mbit/s
95th percentile per-packet one-way delay: 72.480 ms
Loss rate: 0.02%
Run 4: Report of TaoVA-100x — Data Link
Run 5: Statistics of TaoVA-100x

Start at: 2020-04-17 00:16:18
End at: 2020-04-17 00:16:48
Local clock offset: -0.168 ms
Remote clock offset: -0.19 ms

# Below is generated by plot.py at 2020-04-17 03:50:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 372.43 Mbit/s
  95th percentile per-packet one-way delay: 75.614 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 194.50 Mbit/s
  95th percentile per-packet one-way delay: 72.689 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 185.34 Mbit/s
  95th percentile per-packet one-way delay: 77.723 ms
  Loss rate: 0.02%
-- Flow 3:
  Average throughput: 164.15 Mbit/s
  95th percentile per-packet one-way delay: 80.230 ms
  Loss rate: 0.00%
Run 5: Report of TaoVA-100x — Data Link
Run 1: Statistics of TCP Vegas

Start at: 2020-04-16 21:58:17
End at: 2020-04-16 21:58:47
Local clock offset: 0.02 ms
Remote clock offset: -0.132 ms

# Below is generated by plot.py at 2020-04-17 03:53:22
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 782.62 Mbit/s
  95th percentile per-packet one-way delay: 152.130 ms
  Loss rate: 0.17%
-- Flow 1:
  Average throughput: 436.33 Mbit/s
  95th percentile per-packet one-way delay: 157.653 ms
  Loss rate: 0.13%
-- Flow 2:
  Average throughput: 354.72 Mbit/s
  95th percentile per-packet one-way delay: 121.874 ms
  Loss rate: 0.14%
-- Flow 3:
  Average throughput: 331.58 Mbit/s
  95th percentile per-packet one-way delay: 121.385 ms
  Loss rate: 0.41%
Run 2: Statistics of TCP Vegas

Start at: 2020-04-16 22:38:26
End at: 2020-04-16 22:38:56
Local clock offset: -0.073 ms
Remote clock offset: -0.174 ms

# Below is generated by plot.py at 2020-04-17 03:58:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 721.57 Mbit/s
95th percentile per-packet one-way delay: 124.562 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 381.95 Mbit/s
95th percentile per-packet one-way delay: 125.994 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 343.50 Mbit/s
95th percentile per-packet one-way delay: 106.060 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 333.54 Mbit/s
95th percentile per-packet one-way delay: 138.767 ms
Loss rate: 0.55%
Run 2: Report of TCP Vegas — Data Link
Run 3: Statistics of TCP Vegas

Start at: 2020-04-16 23:18:13
End at: 2020-04-16 23:18:43
Local clock offset: -0.036 ms
Remote clock offset: 0.011 ms

# Below is generated by plot.py at 2020-04-17 04:01:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 726.50 Mbit/s
95th percentile per-packet one-way delay: 113.628 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 371.85 Mbit/s
95th percentile per-packet one-way delay: 88.694 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 354.90 Mbit/s
95th percentile per-packet one-way delay: 131.658 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 355.52 Mbit/s
95th percentile per-packet one-way delay: 147.885 ms
Loss rate: 0.73%
Run 3: Report of TCP Vegas — Data Link
Run 4: Statistics of TCP Vegas

Start at: 2020-04-16 23:57:51
End at: 2020-04-16 23:58:21
Local clock offset: -0.026 ms
Remote clock offset: 0.042 ms

# Below is generated by plot.py at 2020-04-17 04:06:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 760.09 Mbit/s
95th percentile per-packet one-way delay: 117.982 ms
Loss rate: 0.28%

-- Flow 1:
Average throughput: 398.75 Mbit/s
95th percentile per-packet one-way delay: 106.043 ms
Loss rate: 0.12%

-- Flow 2:
Average throughput: 387.35 Mbit/s
95th percentile per-packet one-way delay: 118.473 ms
Loss rate: 0.19%

-- Flow 3:
Average throughput: 311.02 Mbit/s
95th percentile per-packet one-way delay: 165.250 ms
Loss rate: 1.10%
Run 4: Report of TCP Vegas — Data Link
Run 5: Statistics of TCP Vegas

Start at: 2020-04-17 00:37:29
End at: 2020-04-17 00:37:59
Local clock offset: -0.152 ms
Remote clock offset: -1.018 ms

# Below is generated by plot.py at 2020-04-17 04:06:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 725.99 Mbit/s
95th percentile per-packet one-way delay: 122.763 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 379.45 Mbit/s
95th percentile per-packet one-way delay: 120.512 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 359.33 Mbit/s
95th percentile per-packet one-way delay: 121.270 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 322.66 Mbit/s
95th percentile per-packet one-way delay: 134.303 ms
Loss rate: 0.26%
Run 5: Report of TCP Vegas — Data Link

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

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 380.27 Mbps)
  - Flow 1 egress (mean 379.45 Mbps)
  - Flow 2 ingress (mean 360.39 Mbps)
  - Flow 2 egress (mean 359.33 Mbps)
  - Flow 3 ingress (mean 323.40 Mbps)
  - Flow 3 egress (mean 322.66 Mbps)

- **Packet One Way Delay (ms)**
  - Flow 1 (95th percentile 120.51 ms)
  - Flow 2 (95th percentile 121.27 ms)
  - Flow 3 (95th percentile 134.30 ms)
Run 1: Statistics of Verus

Start at: 2020-04-16 21:56:44
End at: 2020-04-16 21:57:14
Local clock offset: 0.016 ms
Remote clock offset: -0.282 ms

# Below is generated by plot.py at 2020-04-17 04:06:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 211.25 Mbit/s
  95th percentile per-packet one-way delay: 147.498 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 119.69 Mbit/s
  95th percentile per-packet one-way delay: 101.747 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 115.16 Mbit/s
  95th percentile per-packet one-way delay: 178.632 ms
  Loss rate: 0.13%
-- Flow 3:
  Average throughput: 46.85 Mbit/s
  95th percentile per-packet one-way delay: 117.233 ms
  Loss rate: 0.00%
Run 1: Report of Verus — Data Link
Run 2: Statistics of Verus

Start at: 2020-04-16 22:36:53
End at: 2020-04-16 22:37:23
Local clock offset: -0.1 ms
Remote clock offset: -1.33 ms

# Below is generated by plot.py at 2020-04-17 04:06:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 207.21 Mbit/s
  95th percentile per-packet one-way delay: 276.532 ms
  Loss rate: 3.09%
-- Flow 1:
  Average throughput: 112.18 Mbit/s
  95th percentile per-packet one-way delay: 157.294 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 68.34 Mbit/s
  95th percentile per-packet one-way delay: 95.933 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 151.60 Mbit/s
  95th percentile per-packet one-way delay: 295.471 ms
  Loss rate: 11.72%
Run 3: Statistics of Verus

Start at: 2020-04-16 23:16:40
End at: 2020-04-16 23:17:10
Local clock offset: -0.025 ms
Remote clock offset: -0.094 ms

# Below is generated by plot.py at 2020-04-17 04:06:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 200.52 Mbit/s
95th percentile per-packet one-way delay: 148.202 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 111.19 Mbit/s
95th percentile per-packet one-way delay: 153.237 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 99.23 Mbit/s
95th percentile per-packet one-way delay: 141.914 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 71.09 Mbit/s
95th percentile per-packet one-way delay: 86.830 ms
Loss rate: 0.00%
Run 3: Report of Verus — Data Link

![Graphs showing network performance metrics](image-url)
Run 4: Statistics of Verus

Start at: 2020-04-16 23:56:11
End at: 2020-04-16 23:56:41
Local clock offset: -0.048 ms
Remote clock offset: -0.176 ms

# Below is generated by plot.py at 2020-04-17 04:06:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 274.76 Mbit/s
95th percentile per-packet one-way delay: 233.525 ms
Loss rate: 1.59%
-- Flow 1:
Average throughput: 165.19 Mbit/s
95th percentile per-packet one-way delay: 253.164 ms
Loss rate: 1.98%
-- Flow 2:
Average throughput: 111.36 Mbit/s
95th percentile per-packet one-way delay: 113.811 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 113.34 Mbit/s
95th percentile per-packet one-way delay: 226.047 ms
Loss rate: 2.92%
Run 4: Report of Verus — Data Link
Run 5: Statistics of Verus

Start at: 2020-04-17 00:35:52
End at: 2020-04-17 00:36:22
Local clock offset: -0.233 ms
Remote clock offset: -0.869 ms

# Below is generated by plot.py at 2020-04-17 04:07:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 248.41 Mbit/s
  95th percentile per-packet one-way delay: 191.434 ms
  Loss rate: 0.85%
-- Flow 1:
  Average throughput: 144.86 Mbit/s
  95th percentile per-packet one-way delay: 207.607 ms
  Loss rate: 1.39%
-- Flow 2:
  Average throughput: 104.46 Mbit/s
  95th percentile per-packet one-way delay: 169.025 ms
  Loss rate: 0.14%
-- Flow 3:
  Average throughput: 104.46 Mbit/s
  95th percentile per-packet one-way delay: 101.386 ms
  Loss rate: 0.00%
Run 5: Report of Verus — Data Link
Run 1: Statistics of PCC-Vivace

Start at: 2020-04-16 22:00:11
End at: 2020-04-16 22:00:41
Local clock offset: 0.023 ms
Remote clock offset: 0.585 ms

# Below is generated by plot.py at 2020-04-17 04:07:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 394.20 Mbit/s
95th percentile per-packet one-way delay: 78.584 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 234.87 Mbit/s
95th percentile per-packet one-way delay: 72.289 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 192.94 Mbit/s
95th percentile per-packet one-way delay: 137.623 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 91.02 Mbit/s
95th percentile per-packet one-way delay: 65.256 ms
Loss rate: 0.03%
Run 1: Report of PCC-Vivace — Data Link
Run 2: Statistics of PCC-Vivace

Start at: 2020-04-16 22:40:16
End at: 2020-04-16 22:40:46
Local clock offset: -0.129 ms
Remote clock offset: 0.007 ms

# Below is generated by plot.py at 2020-04-17 04:07:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 404.49 Mbit/s
95th percentile per-packet one-way delay: 118.315 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 217.92 Mbit/s
95th percentile per-packet one-way delay: 73.795 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 195.92 Mbit/s
95th percentile per-packet one-way delay: 136.350 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 170.82 Mbit/s
95th percentile per-packet one-way delay: 100.879 ms
Loss rate: 0.03%
Run 2: Report of PCC-Vivace — Data Link

Throughput (Mbps)

- Flow 1 ingress (mean 217.94 Mbps)
- Flow 1 egress (mean 217.92 Mbps)
- Flow 2 ingress (mean 195.92 Mbps)
- Flow 2 egress (mean 195.92 Mbps)
- Flow 3 ingress (mean 170.85 Mbps)
- Flow 3 egress (mean 170.82 Mbps)

Round-trip time (ms)

- Flow 1 (95th percentile 73.80 ms)
- Flow 2 (95th percentile 136.35 ms)
- Flow 3 (95th percentile 100.88 ms)
Run 3: Statistics of PCC-Vivace

Start at: 2020-04-16 23:20:04
End at: 2020-04-16 23:20:34
Local clock offset: -0.059 ms
Remote clock offset: 0.186 ms

# Below is generated by plot.py at 2020-04-17 04:07:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 380.62 Mbit/s
95th percentile per-packet one-way delay: 75.554 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 200.96 Mbit/s
95th percentile per-packet one-way delay: 68.953 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 192.99 Mbit/s
95th percentile per-packet one-way delay: 79.985 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 155.93 Mbit/s
95th percentile per-packet one-way delay: 91.630 ms
Loss rate: 0.00%
Run 3: Report of PCC-Vivace — Data Link
Run 4: Statistics of PCC-Vivace

Start at: 2020-04-16 23:59:42
End at: 2020-04-17 00:00:12
Local clock offset: -0.014 ms
Remote clock offset: 0.025 ms

# Below is generated by plot.py at 2020-04-17 04:07:55
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 402.97 Mbit/s
  95th percentile per-packet one-way delay: 144.793 ms
  Loss rate: 0.45%
-- Flow 1:
  Average throughput: 221.78 Mbit/s
  95th percentile per-packet one-way delay: 176.287 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 192.83 Mbit/s
  95th percentile per-packet one-way delay: 82.439 ms
  Loss rate: 1.32%
-- Flow 3:
  Average throughput: 160.64 Mbit/s
  95th percentile per-packet one-way delay: 80.491 ms
  Loss rate: 0.12%
Run 4: Report of PCC-Vivace — Data Link

![Graph showing network performance metrics for different flows over time.](image-url)
Run 5: Statistics of PCC-Vivace

Start at: 2020-04-17 00:39:19
End at: 2020-04-17 00:39:49
Local clock offset: -0.141 ms
Remote clock offset: -0.1 ms

# Below is generated by plot.py at 2020-04-17 04:08:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 407.86 Mbit/s
95th percentile per-packet one-way delay: 68.281 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 224.50 Mbit/s
95th percentile per-packet one-way delay: 68.088 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 198.83 Mbit/s
95th percentile per-packet one-way delay: 65.415 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 154.43 Mbit/s
95th percentile per-packet one-way delay: 107.814 ms
Loss rate: 0.00%
Run 5: Report of PCC-Vivace — Data Link

Throughput (Mbit/s)

<table>
<thead>
<tr>
<th>Flow</th>
<th>Ingress (mean)</th>
<th>Egress (mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow 1</td>
<td>224.51 Mbit/s</td>
<td>224.50 Mbit/s</td>
</tr>
<tr>
<td>Flow 2</td>
<td>198.82 Mbit/s</td>
<td>198.83 Mbit/s</td>
</tr>
<tr>
<td>Flow 3</td>
<td>154.42 Mbit/s</td>
<td>154.43 Mbit/s</td>
</tr>
</tbody>
</table>

Per-packet one-way delay (ms)

<table>
<thead>
<tr>
<th>Flow</th>
<th>95th percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow 1</td>
<td>68.09 ms</td>
</tr>
<tr>
<td>Flow 2</td>
<td>65.42 ms</td>
</tr>
<tr>
<td>Flow 3</td>
<td>107.81 ms</td>
</tr>
</tbody>
</table>
Run 1: Statistics of WebRTC media

Start at: 2020-04-16 21:43:37
End at: 2020-04-16 21:44:07
Local clock offset: -0.013 ms
Remote clock offset: -0.925 ms
Run 1: Report of WebRTC media — Data Link

![Diagram of throughput and delay over time]

Throughput (Mbit/s)

Time (s)

- Flow 1 ingress (mean 29.66 Mbit/s)
- Flow 1 egress (mean 7.95 Mbit/s)
- Flow 2 ingress (mean 0.76 Mbit/s)
- Flow 2 egress (mean 0.76 Mbit/s)
- Flow 3 ingress (mean 0.77 Mbit/s)
- Flow 3 egress (mean 0.77 Mbit/s)

Per packet one way delay [ms]

Time (s)

- Flow 1 (95th percentile 59.90 ms)
- Flow 2 (95th percentile 59.37 ms)
- Flow 3 (95th percentile 62.70 ms)
Run 2: Statistics of WebRTC media

Start at: 2020-04-16 22:23:42
End at: 2020-04-16 22:24:12
Local clock offset: 0.041 ms
Remote clock offset: -0.009 ms

# Below is generated by plot.py at 2020-04-17 04:08:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 65.713 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.31 Mbit/s
  95th percentile per-packet one-way delay: 65.844 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.11 Mbit/s
  95th percentile per-packet one-way delay: 60.196 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 60.226 ms
  Loss rate: 0.00%
Run 2: Report of WebRTC media — Data Link

![Throughput and Delay Chart]

- Flow 1 ingress (mean 0.31 Mbit/s)
- Flow 1 egress (mean 0.31 Mbit/s)
- Flow 2 ingress (mean 0.11 Mbit/s)
- Flow 2 egress (mean 0.11 Mbit/s)
- Flow 3 ingress (mean 0.06 Mbit/s)
- Flow 3 egress (mean 0.06 Mbit/s)
Run 3: Statistics of WebRTC media

Start at: 2020-04-16 23:03:43
End at: 2020-04-16 23:04:13
Local clock offset: -0.082 ms
Remote clock offset: -0.841 ms
Run 3: Report of WebRTC media — Data Link

**Graph 1:**
- Flow 1 ingress (mean 0.81 Mb/s)
- Flow 1 egress (mean 0.81 Mb/s)
- Flow 2 ingress (mean 0.79 Mb/s)
- Flow 2 egress (mean 0.79 Mb/s)
- Flow 3 ingress (mean 0.78 Mb/s)
- Flow 3 egress (mean 0.78 Mb/s)

**Graph 2:**
- Flow 1 (95th percentile 59.48 ms)
- Flow 2 (95th percentile 61.66 ms)
- Flow 3 (95th percentile 59.36 ms)
Run 4: Statistics of WebRTC media

Start at: 2020-04-16 23:43:19
End at: 2020-04-16 23:43:49
Local clock offset: -0.008 ms
Remote clock offset: -0.806 ms
Run 4: Report of WebRTC media — Data Link

![Graph 1: Throughput (Mbps)]

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

Start at: 2020-04-17 00:22:53
End at: 2020-04-17 00:23:23
Local clock offset: -0.214 ms
Remote clock offset: -0.045 ms

# Below is generated by plot.py at 2020-04-17 04:08:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 65.704 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.79 Mbit/s
  95th percentile per-packet one-way delay: 65.509 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.80 Mbit/s
  95th percentile per-packet one-way delay: 65.746 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 60.019 ms
  Loss rate: 0.00%
Run 5: Report of WebRTC media — Data Link

Graph 1: Throughput (Mbps) over time (s)
- Flow 1 ingress (mean 0.79 Mbps)
- Flow 1 egress (mean 0.79 Mbps)
- Flow 2 ingress (mean 0.80 Mbps)
- Flow 2 egress (mean 0.80 Mbps)
- Flow 3 ingress (mean 0.06 Mbps)
- Flow 3 egress (mean 0.06 Mbps)

Graph 2: Per-packet one-way delay (ms) over time (s)
- Flow 1 (95th percentile 65.51 ms)
- Flow 2 (95th percentile 65.75 ms)
- Flow 3 (95th percentile 66.02 ms)