Pantheon Report

Generated at 2019-02-20 18:08:34 (UTC).
Data path: GCE Iowa on ens4 (local) → GCE Tokyo on ens4 (remote).
Repeated the test of 21 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 4.15.0-1026-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 @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e694aa89e93b032143cedbdf58e5624f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cfc3cf
third_party/muses @ 5e721187ad823da20955337730c746486ca4966
third_party/pantheon-tunnel @ f866d3f58d27afdf942717625ee3a354cc2e802bd
third_party/pcc @ 1af9c958fa0d66d18b623c091a55fec872b4981e1
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 @ 77961f1a82733a86b42f1bc8143ebc978f3cfc42
third_party/scream-reproduce @ f099118d1421aa3131bf11f1964974e1da3b2b2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46a18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562539f9a494
M src/verus.hpp
M 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>
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<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>
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<td>flow 2</td>
<td>flow 3</td>
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<td>477.93</td>
<td>434.57</td>
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<td>Copa</td>
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<td>332.34</td>
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<td>431.42</td>
<td>453.74</td>
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<td>Verus</td>
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<td>145.45</td>
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<td>PCC-Vivace</td>
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<td>322.07</td>
<td>290.24</td>
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<td>WebRTC media</td>
<td>5</td>
<td>0.79</td>
<td>0.92</td>
<td>0.37</td>
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</table>
Run 1: Statistics of TCP BBR

Start at: 2019-02-20 12:14:04
End at: 2019-02-20 12:14:34
Local clock offset: -0.081 ms
Remote clock offset: -0.78 ms

# Below is generated by plot.py at 2019-02-20 15:41:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 980.92 Mbit/s
95th percentile per-packet one-way delay: 185.500 ms
Loss rate: 2.14%
-- Flow 1:
Average throughput: 510.14 Mbit/s
95th percentile per-packet one-way delay: 198.688 ms
Loss rate: 2.78%
-- Flow 2:
Average throughput: 487.81 Mbit/s
95th percentile per-packet one-way delay: 178.745 ms
Loss rate: 1.90%
-- Flow 3:
Average throughput: 438.81 Mbit/s
95th percentile per-packet one-way delay: 99.125 ms
Loss rate: 0.36%
Run 1: Report of TCP BBR — Data Link

![Graph of Throughput (Mbps) over Time (s)]

- Flow 1 ingress (mean 524.76 Mbps)
- Flow 1 egress (mean 510.14 Mbps)
- Flow 2 ingress (mean 497.27 Mbps)
- Flow 2 egress (mean 487.81 Mbps)
- Flow 3 ingress (mean 440.42 Mbps)
- Flow 3 egress (mean 438.81 Mbps)

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

- Flow 1 (95th percentile 198.69 ms)
- Flow 2 (95th percentile 178.75 ms)
- Flow 3 (95th percentile 99.12 ms)
Run 2: Statistics of TCP BBR

Start at: 2019-02-20 12:51:24
End at: 2019-02-20 12:51:54
Local clock offset: -0.074 ms
Remote clock offset: -0.844 ms

# Below is generated by plot.py at 2019-02-20 15:41:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1001.46 Mbit/s
  95th percentile per-packet one-way delay: 180.088 ms
  Loss rate: 1.54%
-- Flow 1:
  Average throughput: 527.90 Mbit/s
  95th percentile per-packet one-way delay: 181.874 ms
  Loss rate: 2.15%
-- Flow 2:
  Average throughput: 488.69 Mbit/s
  95th percentile per-packet one-way delay: 191.809 ms
  Loss rate: 1.00%
-- Flow 3:
  Average throughput: 446.02 Mbit/s
  95th percentile per-packet one-way delay: 166.318 ms
  Loss rate: 0.52%
Run 2: Report of TCP BBR — Data Link
Run 3: Statistics of TCP BBR

Start at: 2019-02-20 13:28:19
End at: 2019-02-20 13:28:49
Local clock offset: -0.151 ms
Remote clock offset: -0.175 ms

# Below is generated by plot.py at 2019-02-20 15:41:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 833.29 Mbit/s
  95th percentile per-packet one-way delay: 159.111 ms
  Loss rate: 1.14%
-- Flow 1:
  Average throughput: 414.52 Mbit/s
  95th percentile per-packet one-way delay: 186.358 ms
  Loss rate: 1.43%
-- Flow 2:
  Average throughput: 431.83 Mbit/s
  95th percentile per-packet one-way delay: 115.852 ms
  Loss rate: 1.21%
-- Flow 3:
  Average throughput: 394.64 Mbit/s
  95th percentile per-packet one-way delay: 132.793 ms
  Loss rate: 0.08%
Run 3: Report of TCP BBR — Data Link
Run 4: Statistics of TCP BBR

Start at: 2019-02-20 14:05:20
End at: 2019-02-20 14:05:51
Local clock offset: -0.079 ms
Remote clock offset: -0.02 ms

# Below is generated by plot.py at 2019-02-20 15:41:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1004.37 Mbit/s
95th percentile per-packet one-way delay: 190.008 ms
Loss rate: 2.16%
-- Flow 1:
Average throughput: 535.24 Mbit/s
95th percentile per-packet one-way delay: 177.598 ms
Loss rate: 1.68%
-- Flow 2:
Average throughput: 488.82 Mbit/s
95th percentile per-packet one-way delay: 194.348 ms
Loss rate: 2.99%
-- Flow 3:
Average throughput: 431.72 Mbit/s
95th percentile per-packet one-way delay: 198.182 ms
Loss rate: 2.08%
Run 4: Report of TCP BBR — Data Link
Run 5: Statistics of TCP BBR

Start at: 2019-02-20 14:42:13
End at: 2019-02-20 14:42:43
Local clock offset: -0.075 ms
Remote clock offset: -1.561 ms

# Below is generated by plot.py at 2019-02-20 15:42:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1014.25 Mbit/s
95th percentile per-packet one-way delay: 171.155 ms
Loss rate: 1.75%
-- Flow 1:
Average throughput: 532.74 Mbit/s
95th percentile per-packet one-way delay: 175.476 ms
Loss rate: 1.72%
-- Flow 2:
Average throughput: 492.48 Mbit/s
95th percentile per-packet one-way delay: 170.474 ms
Loss rate: 2.09%
-- Flow 3:
Average throughput: 461.66 Mbit/s
95th percentile per-packet one-way delay: 98.945 ms
Loss rate: 1.14%
Run 5: Report of TCP BBR — Data Link

![Throughput Graph]

![Delay Graph]

- Flow 1 ingress (mean 540.42 Mbit/s)
- Flow 1 egress (mean 532.74 Mbit/s)
- Flow 2 ingress (mean 500.70 Mbit/s)
- Flow 2 egress (mean 492.48 Mbit/s)
- Flow 3 ingress (mean 462.70 Mbit/s)
- Flow 3 egress (mean 461.66 Mbit/s)

- Flow 1 (95th percentile 175.48 ms)
- Flow 2 (95th percentile 170.47 ms)
- Flow 3 (95th percentile 98.94 ms)
Run 1: Statistics of Copa

Start at: 2019-02-20 12:33:26
End at: 2019-02-20 12:33:56
Local clock offset: -0.045 ms
Remote clock offset: -0.826 ms

# Below is generated by plot.py at 2019-02-20 15:43:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 587.24 Mbit/s
95th percentile per-packet one-way delay: 85.498 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 296.86 Mbit/s
95th percentile per-packet one-way delay: 76.811 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 305.33 Mbit/s
95th percentile per-packet one-way delay: 94.897 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 262.27 Mbit/s
95th percentile per-packet one-way delay: 74.639 ms
Loss rate: 0.00%
Run 1: Report of Copa — Data Link
Run 2: Statistics of Copa

Start at: 2019-02-20 13:10:41
End at: 2019-02-20 13:11:11
Local clock offset: -0.093 ms
Remote clock offset: -0.062 ms

# Below is generated by plot.py at 2019-02-20 15:43:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 499.91 Mbit/s
95th percentile per-packet one-way delay: 103.385 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 256.25 Mbit/s
95th percentile per-packet one-way delay: 73.900 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 235.04 Mbit/s
95th percentile per-packet one-way delay: 121.427 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 262.09 Mbit/s
95th percentile per-packet one-way delay: 109.230 ms
Loss rate: 0.00%
Run 2: Report of Copa — Data Link
Run 3: Statistics of Copa

Start at: 2019-02-20 13:47:24
End at: 2019-02-20 13:47:55
Local clock offset: -0.157 ms
Remote clock offset: -0.138 ms

# Below is generated by plot.py at 2019-02-20 15:43:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 480.86 Mbit/s
  95th percentile per-packet one-way delay: 102.414 ms
  Loss rate: 0.04%
-- Flow 1:
  Average throughput: 214.06 Mbit/s
  95th percentile per-packet one-way delay: 90.768 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 273.87 Mbit/s
  95th percentile per-packet one-way delay: 111.254 ms
  Loss rate: 0.10%
-- Flow 3:
  Average throughput: 254.02 Mbit/s
  95th percentile per-packet one-way delay: 107.980 ms
  Loss rate: 0.00%
Run 3: Report of Copa — Data Link

![Graph showing throughput and round-trip time for data link]

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 214.06 Mbit/s) — Flow 1 egress (mean 214.06 Mbit/s)
Flow 2 ingress (mean 274.13 Mbit/s) — Flow 2 egress (mean 273.87 Mbit/s)
Flow 3 ingress (mean 254.03 Mbit/s) — Flow 3 egress (mean 254.02 Mbit/s)

Round-trip time (ms)

Time (s)

Flow 1 (95th percentile 90.77 ms) — Flow 2 (95th percentile 111.25 ms) — Flow 3 (95th percentile 107.98 ms)
Run 4: Statistics of Copa

Start at: 2019-02-20 14:24:22
End at: 2019-02-20 14:24:52
Local clock offset: 0.008 ms
Remote clock offset: 1.046 ms

# Below is generated by plot.py at 2019-02-20 15:52:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 474.13 Mbit/s
95th percentile per-packet one-way delay: 85.706 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 250.29 Mbit/s
95th percentile per-packet one-way delay: 82.795 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 238.61 Mbit/s
95th percentile per-packet one-way delay: 89.246 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 195.48 Mbit/s
95th percentile per-packet one-way delay: 86.236 ms
Loss rate: 0.00%
Run 4: Report of Copa — Data Link
Run 5: Statistics of Copa

Start at: 2019-02-20 15:01:28
End at: 2019-02-20 15:01:58
Local clock offset: -0.065 ms
Remote clock offset: 1.14 ms

# Below is generated by plot.py at 2019-02-20 15:56:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 513.21 Mbit/s
95th percentile per-packet one-way delay: 77.454 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 280.45 Mbit/s
95th percentile per-packet one-way delay: 74.906 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 250.53 Mbit/s
95th percentile per-packet one-way delay: 80.990 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 198.49 Mbit/s
95th percentile per-packet one-way delay: 74.450 ms
Loss rate: 0.00%
Run 5: Report of Copa — Data Link
Run 1: Statistics of TCP Cubic

Start at: 2019-02-20 12:10:18
End at: 2019-02-20 12:10:48
Local clock offset: -0.131 ms
Remote clock offset: -0.871 ms

# Below is generated by plot.py at 2019-02-20 15:59:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1059.35 Mbit/s
95th percentile per-packet one-way delay: 151.751 ms
Loss rate: 0.15%

-- Flow 1:
Average throughput: 553.36 Mbit/s
95th percentile per-packet one-way delay: 167.822 ms
Loss rate: 0.17%

-- Flow 2:
Average throughput: 526.26 Mbit/s
95th percentile per-packet one-way delay: 127.810 ms
Loss rate: 0.08%

-- Flow 3:
Average throughput: 464.86 Mbit/s
95th percentile per-packet one-way delay: 105.834 ms
Loss rate: 0.24%
Run 1: Report of TCP Cubic — Data Link

![Graph of Throughput vs. Time](chart1.png)

**Throughput (Mbit/s)**

- Flow 1 ingress (mean 554.78 Mbit/s)
- Flow 1 egress (mean 553.36 Mbit/s)
- Flow 2 ingress (mean 526.68 Mbit/s)
- Flow 2 egress (mean 526.26 Mbit/s)
- Flow 3 ingress (mean 466.04 Mbit/s)
- Flow 3 egress (mean 464.86 Mbit/s)

![Graph of Per-packet one-way delay vs. Time](chart2.png)

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

- Flow 1 (95th percentile 167.52 ms)
- Flow 2 (95th percentile 127.81 ms)
- Flow 3 (95th percentile 105.83 ms)
Run 2: Statistics of TCP Cubic

Start at: 2019-02-20 12:47:51
End at: 2019-02-20 12:48:21
Local clock offset: -0.076 ms
Remote clock offset: 0.127 ms

# Below is generated by plot.py at 2019-02-20 15:59:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 840.88 Mbit/s
95th percentile per-packet one-way delay: 110.347 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 476.71 Mbit/s
95th percentile per-packet one-way delay: 115.882 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 328.01 Mbit/s
95th percentile per-packet one-way delay: 90.446 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 438.54 Mbit/s
95th percentile per-packet one-way delay: 88.212 ms
Loss rate: 0.00%
Run 2: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 476.71 Mbit/s)
- Flow 1 egress (mean 476.71 Mbit/s)
- Flow 2 ingress (mean 328.01 Mbit/s)
- Flow 2 egress (mean 328.01 Mbit/s)
- Flow 3 ingress (mean 438.56 Mbit/s)
- Flow 3 egress (mean 438.54 Mbit/s)

![Graph 2: Per-packet round-trip delay over Time](image2)

- Flow 1 (95th percentile 115.88 ms)
- Flow 2 (95th percentile 90.45 ms)
- Flow 3 (95th percentile 88.21 ms)
Run 3: Statistics of TCP Cubic

Start at: 2019-02-20 13:24:40
End at: 2019-02-20 13:25:10
Local clock offset: -0.089 ms
Remote clock offset: -0.525 ms

# Below is generated by plot.py at 2019-02-20 15:59:12
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 954.80 Mbit/s
  95th percentile per-packet one-way delay: 126.719 ms
  Loss rate: 0.15%
-- Flow 1:
  Average throughput: 540.95 Mbit/s
  95th percentile per-packet one-way delay: 130.766 ms
  Loss rate: 0.02%
-- Flow 2:
  Average throughput: 396.89 Mbit/s
  95th percentile per-packet one-way delay: 74.745 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 448.71 Mbit/s
  95th percentile per-packet one-way delay: 125.953 ms
  Loss rate: 0.92%
Run 3: Report of TCP Cubic — Data Link

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

Legend:
- Flow 1 ingress (mean 541.05 Mbit/s)
- Flow 1 egress (mean 540.95 Mbit/s)
- Flow 2 ingress (mean 396.89 Mbit/s)
- Flow 2 egress (mean 396.89 Mbit/s)
- Flow 3 ingress (mean 452.93 Mbit/s)
- Flow 3 egress (mean 448.71 Mbit/s)
Run 4: Statistics of TCP Cubic

Start at: 2019-02-20 14:01:32
End at: 2019-02-20 14:02:02
Local clock offset: -0.081 ms
Remote clock offset: -1.558 ms

# Below is generated by plot.py at 2019-02-20 16:00:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1061.97 Mbit/s
95th percentile per-packet one-way delay: 149.996 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 568.11 Mbit/s
95th percentile per-packet one-way delay: 131.605 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 509.98 Mbit/s
95th percentile per-packet one-way delay: 105.092 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 463.98 Mbit/s
95th percentile per-packet one-way delay: 183.335 ms
Loss rate: 0.18%
Run 4: Report of TCP Cubic — Data Link
Run 5: Statistics of TCP Cubic

Start at: 2019-02-20 14:38:26
End at: 2019-02-20 14:38:56
Local clock offset: -0.047 ms
Remote clock offset: -0.222 ms

# Below is generated by plot.py at 2019-02-20 16:00:38
# Datalink statistics
-- Total of 3 flows:
    Average throughput: 1045.98 Mbit/s
    95th percentile per-packet one-way delay: 167.975 ms
    Loss rate: 0.25%
-- Flow 1:
    Average throughput: 593.67 Mbit/s
    95th percentile per-packet one-way delay: 136.519 ms
    Loss rate: 0.22%
-- Flow 2:
    Average throughput: 449.58 Mbit/s
    95th percentile per-packet one-way delay: 188.493 ms
    Loss rate: 0.32%
-- Flow 3:
    Average throughput: 459.94 Mbit/s
    95th percentile per-packet one-way delay: 150.865 ms
    Loss rate: 0.21%
Run 5: Report of TCP Cubic — Data Link

![Graph showing throughput and packet one-way delay.]
Run 1: Statistics of FillP

Start at: 2019-02-20 12:01:59
End at: 2019-02-20 12:02:29
Local clock offset: -0.099 ms
Remote clock offset: -0.407 ms

# Below is generated by plot.py at 2019-02-20 16:01:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 901.40 Mbit/s
95th percentile per-packet one-way delay: 73.028 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 558.33 Mbit/s
95th percentile per-packet one-way delay: 74.107 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 396.46 Mbit/s
95th percentile per-packet one-way delay: 72.133 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 234.93 Mbit/s
95th percentile per-packet one-way delay: 64.869 ms
Loss rate: 0.00%
Run 1: Report of FillP — Data Link

Throughput (Mbps)

![Graph of Throughput over Time](image1)

- Flow 1 ingress (mean 357.54 Mbps)
- Flow 1 egress (mean 558.33 Mbps)
- Flow 2 ingress (mean 395.97 Mbps)
- Flow 2 egress (mean 396.46 Mbps)
- Flow 3 ingress (mean 234.53 Mbps)
- Flow 3 egress (mean 234.93 Mbps)

Delay (ms)

![Graph of Delay over Time](image2)

- Flow 1 (95th percentile: 74.11 ms)
- Flow 2 (95th percentile: 72.13 ms)
- Flow 3 (95th percentile: 64.87 ms)
Run 2: Statistics of FillP

Start at: 2019-02-20 12:39:22
End at: 2019-02-20 12:39:52
Local clock offset: -0.056 ms
Remote clock offset: -0.969 ms

# Below is generated by plot.py at 2019-02-20 16:14:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 961.74 Mbit/s
95th percentile per-packet one-way delay: 86.721 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 618.71 Mbit/s
95th percentile per-packet one-way delay: 91.151 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 396.01 Mbit/s
95th percentile per-packet one-way delay: 71.558 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 239.14 Mbit/s
95th percentile per-packet one-way delay: 66.038 ms
Loss rate: 0.03%
Run 2: Report of FillP — Data Link

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

- Flow 1 Ingress (mean 619.07 Mbps)
- Flow 1 Egress (mean 618.71 Mbps)
- Flow 2 Ingress (mean 396.05 Mbps)
- Flow 2 Egress (mean 396.03 Mbps)
- Flow 3 Ingress (mean 239.21 Mbps)
- Flow 3 Egress (mean 239.14 Mbps)

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

- Flow 1 (95th percentile 91.15 ms)
- Flow 2 (95th percentile 71.56 ms)
- Flow 3 (95th percentile 66.04 ms)
Run 3: Statistics of FillP

Start at: 2019-02-20 13:16:19
End at: 2019-02-20 13:16:49
Local clock offset: -0.093 ms
Remote clock offset: -0.126 ms

# Below is generated by plot.py at 2019-02-20 16:17:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 956.66 Mbit/s
95th percentile per-packet one-way delay: 90.826 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 598.05 Mbit/s
95th percentile per-packet one-way delay: 96.518 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 419.02 Mbit/s
95th percentile per-packet one-way delay: 68.934 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 238.99 Mbit/s
95th percentile per-packet one-way delay: 68.237 ms
Loss rate: 0.01%
Run 3: Report of FillP — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 598.29 Mbit/s)
Flow 1 egress (mean 598.05 Mbit/s)
Flow 2 ingress (mean 419.06 Mbit/s)
Flow 2 egress (mean 419.02 Mbit/s)
Flow 3 ingress (mean 239.01 Mbit/s)
Flow 3 egress (mean 238.99 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 96.52 ms)
Flow 2 (95th percentile 68.93 ms)
Flow 3 (95th percentile 68.24 ms)
Run 4: Statistics of FillP

End at: 2019-02-20 13:53:43
Local clock offset: -0.176 ms
Remote clock offset: -0.245 ms

# Below is generated by plot.py at 2019-02-20 16:17:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 953.76 Mbit/s
95th percentile per-packet one-way delay: 86.612 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 623.32 Mbit/s
95th percentile per-packet one-way delay: 91.721 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 368.24 Mbit/s
95th percentile per-packet one-way delay: 68.519 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 258.76 Mbit/s
95th percentile per-packet one-way delay: 67.982 ms
Loss rate: 0.00%
Run 4: Report of FillP — Data Link

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

Legend:
- Flow 1 Ingress (mean 623.97 Mb/s)
- Flow 1 Egress (mean 623.32 Mb/s)
- Flow 2 Ingress (mean 368.63 Mb/s)
- Flow 2 Egress (mean 368.24 Mb/s)
- Flow 3 Ingress (mean 258.79 Mb/s)
- Flow 3 Egress (mean 258.76 Mb/s)
Run 5: Statistics of FillP

Start at: 2019-02-20 14:30:06
End at: 2019-02-20 14:30:36
Local clock offset: -0.021 ms
Remote clock offset: -0.776 ms

# Below is generated by plot.py at 2019-02-20 16:18:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 889.43 Mbit/s
95th percentile per-packet one-way delay: 66.038 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 582.60 Mbit/s
95th percentile per-packet one-way delay: 66.123 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 341.45 Mbit/s
95th percentile per-packet one-way delay: 66.239 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 241.03 Mbit/s
95th percentile per-packet one-way delay: 64.858 ms
Loss rate: 0.00%
Run 5: Report of FillP — Data Link
Run 1: Statistics of FillP-Sheep

Start at: 2019-02-20 12:23:45
End at: 2019-02-20 12:24:15
Local clock offset: -0.082 ms
Remote clock offset: -1.448 ms

# Below is generated by plot.py at 2019-02-20 16:18:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 894.92 Mbit/s
95th percentile per-packet one-way delay: 85.890 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 571.53 Mbit/s
95th percentile per-packet one-way delay: 95.490 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 351.06 Mbit/s
95th percentile per-packet one-way delay: 69.172 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 265.24 Mbit/s
95th percentile per-packet one-way delay: 65.728 ms
Loss rate: 0.04%
Run 1: Report of FillP-Sheep — Data Link

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

- Flow 1 ingress (mean 574.93 Mbps)
- Flow 1 egress (mean 571.33 Mbps)
- Flow 2 ingress (mean 351.23 Mbps)
- Flow 2 egress (mean 353.06 Mbps)
- Flow 3 ingress (mean 265.38 Mbps)
- Flow 3 egress (mean 265.24 Mbps)

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

- Flow 1 (95th percentile 95.49 ms)
- Flow 2 (95th percentile 69.17 ms)
- Flow 3 (95th percentile 65.73 ms)
Run 2: Statistics of FillP-Sheep

Start at: 2019-02-20 13:01:09
End at: 2019-02-20 13:01:39
Local clock offset: -0.074 ms
Remote clock offset: -0.612 ms

# Below is generated by plot.py at 2019-02-20 16:18:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 838.45 Mbit/s
95th percentile per-packet one-way delay: 67.992 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 538.43 Mbit/s
95th percentile per-packet one-way delay: 68.185 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 333.62 Mbit/s
95th percentile per-packet one-way delay: 65.764 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 235.30 Mbit/s
95th percentile per-packet one-way delay: 70.473 ms
Loss rate: 0.03%
Run 2: Report of FillP-Sheep — Data Link

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

![Graph 2: Per-packet one-way delay (ms)]
Run 3: Statistics of FillP-Sheep

Start at: 2019-02-20 13:37:56
End at: 2019-02-20 13:38:26
Local clock offset: -0.135 ms
Remote clock offset: -0.069 ms

# Below is generated by plot.py at 2019-02-20 16:19:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 883.01 Mbit/s
95th percentile per-packet one-way delay: 72.823 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 566.56 Mbit/s
95th percentile per-packet one-way delay: 75.392 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 330.13 Mbit/s
95th percentile per-packet one-way delay: 67.487 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 289.63 Mbit/s
95th percentile per-packet one-way delay: 72.127 ms
Loss rate: 0.02%
Run 3: Report of FillP-Sheep — Data Link
Run 4: Statistics of FillP-Sheep

Start at: 2019-02-20 14:15:05
End at: 2019-02-20 14:15:35
Local clock offset: 0.041 ms
Remote clock offset: -0.042 ms

# Below is generated by plot.py at 2019-02-20 16:20:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 870.53 Mbit/s
95th percentile per-packet one-way delay: 94.789 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 570.61 Mbit/s
95th percentile per-packet one-way delay: 100.764 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 322.92 Mbit/s
95th percentile per-packet one-way delay: 69.108 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 257.48 Mbit/s
95th percentile per-packet one-way delay: 68.101 ms
Loss rate: 0.00%
Run 4: Report of FillP-Sheep — Data Link

![Throughput Graph]

- Flow 1 Ingress (mean 571.18 Mbps)
- Flow 1 Egress (mean 570.61 Mbps)
- Flow 2 Ingress (mean 322.95 Mbps)
- Flow 2 Egress (mean 322.92 Mbps)
- Flow 3 Ingress (mean 257.60 Mbps)
- Flow 3 Egress (mean 257.48 Mbps)

![Delay Graph]

- Flow 1 (95th percentile 100.76 ms)
- Flow 2 (95th percentile 69.11 ms)
- Flow 3 (95th percentile 68.10 ms)
Run 5: Statistics of FillP-Sheep

Start at: 2019-02-20 14:51:58  
End at: 2019-02-20 14:52:28  
Local clock offset: -0.064 ms  
Remote clock offset: 0.581 ms

# Below is generated by plot.py at 2019-02-20 16:34:11  
# Datalink statistics

-- Total of 3 flows:  
Average throughput: 864.20 Mbit/s  
95th percentile per-packet one-way delay: 84.616 ms  
Loss rate: 0.21%  

-- Flow 1:  
Average throughput: 557.08 Mbit/s  
95th percentile per-packet one-way delay: 89.535 ms  
Loss rate: 0.30%  

-- Flow 2:  
Average throughput: 323.99 Mbit/s  
95th percentile per-packet one-way delay: 69.198 ms  
Loss rate: 0.00%  

-- Flow 3:  
Average throughput: 273.24 Mbit/s  
95th percentile per-packet one-way delay: 68.479 ms  
Loss rate: 0.11%
Run 5: Report of FillP-Sheep — Data Link
Run 1: Statistics of Indigo

Start at: 2019-02-20 12:27:39
End at: 2019-02-20 12:28:09
Local clock offset: -0.107 ms
Remote clock offset: -0.179 ms

# Below is generated by plot.py at 2019-02-20 16:34:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 406.00 Mbit/s
95th percentile per-packet one-way delay: 64.786 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 220.30 Mbit/s
95th percentile per-packet one-way delay: 64.349 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 201.49 Mbit/s
95th percentile per-packet one-way delay: 65.638 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 160.28 Mbit/s
95th percentile per-packet one-way delay: 64.739 ms
Loss rate: 0.00%
Run 1: Report of Indigo — Data Link
Run 2: Statistics of Indigo

Start at: 2019-02-20 13:04:56
End at: 2019-02-20 13:05:26
Local clock offset: -0.091 ms
Remote clock offset: -0.196 ms

# Below is generated by plot.py at 2019-02-20 16:34:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 437.34 Mbit/s
95th percentile per-packet one-way delay: 64.895 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 222.16 Mbit/s
95th percentile per-packet one-way delay: 64.266 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 223.99 Mbit/s
95th percentile per-packet one-way delay: 65.106 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 206.05 Mbit/s
95th percentile per-packet one-way delay: 65.835 ms
Loss rate: 0.00%
Run 2: Report of Indigo — Data Link

![Graphs showing network performance metrics over time.](image)

- Flow 1 ingress (mean 222.16 Mbit/s)
- Flow 1 egress (mean 222.16 Mbit/s)
- Flow 2 ingress (mean 224.02 Mbit/s)
- Flow 2 egress (mean 223.99 Mbit/s)
- Flow 3 ingress (mean 206.04 Mbit/s)
- Flow 3 egress (mean 206.05 Mbit/s)

![Graphs showing ping round-trip times.](image)

- Flow 1 (95th percentile 64.27 ms)
- Flow 2 (95th percentile 65.11 ms)
- Flow 3 (95th percentile 65.83 ms)
Run 3: Statistics of Indigo

Start at: 2019-02-20 13:41:43  
Local clock offset: -0.138 ms  
Remote clock offset: -0.206 ms

# Below is generated by plot.py at 2019-02-20 16:34:11  
# Datalink statistics

-- Total of 3 flows:
Average throughput: 432.83 Mbit/s
95th percentile per-packet one-way delay: 66.162 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 227.88 Mbit/s
95th percentile per-packet one-way delay: 65.018 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 221.30 Mbit/s
95th percentile per-packet one-way delay: 67.202 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 180.48 Mbit/s
95th percentile per-packet one-way delay: 66.767 ms
Loss rate: 0.87%
Run 3: Report of Indigo — Data Link

\[ \text{Throughput (Mbit/s)} \]

\[ \text{Time (s)} \]

Flow 1 ingress (mean 227.88 Mbit/s)  
Flow 1 egress (mean 227.88 Mbit/s)  
Flow 2 ingress (mean 221.31 Mbit/s)  
Flow 2 egress (mean 221.30 Mbit/s)  
Flow 3 ingress (mean 182.67 Mbit/s)  
Flow 3 egress (mean 180.48 Mbit/s)

\[ \text{Per-packet one-way delay (ms)} \]

Flow 1 (95th percentile 65.02 ms)  
Flow 2 (95th percentile 67.20 ms)  
Flow 3 (95th percentile 66.77 ms)
Run 4: Statistics of Indigo

Start at: 2019-02-20 14:18:48
End at: 2019-02-20 14:19:18
Local clock offset: -0.024 ms
Remote clock offset: -0.299 ms

# Below is generated by plot.py at 2019-02-20 16:34:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 411.41 Mbit/s
  95th percentile per-packet one-way delay: 65.366 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 203.75 Mbit/s
  95th percentile per-packet one-way delay: 64.715 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 221.57 Mbit/s
  95th percentile per-packet one-way delay: 65.599 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 187.46 Mbit/s
  95th percentile per-packet one-way delay: 66.747 ms
  Loss rate: 0.00%
Run 4: Report of Indigo — Data Link
Run 5: Statistics of Indigo

Start at: 2019-02-20 14:55:40
End at: 2019-02-20 14:56:10
Local clock offset: -0.055 ms
Remote clock offset: 0.245 ms

# Below is generated by plot.py at 2019-02-20 16:34:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 403.62 Mbit/s
  95th percentile per-packet one-way delay: 65.624 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 194.21 Mbit/s
  95th percentile per-packet one-way delay: 64.884 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 215.86 Mbit/s
  95th percentile per-packet one-way delay: 65.658 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 205.38 Mbit/s
  95th percentile per-packet one-way delay: 66.782 ms
  Loss rate: 0.00%
Run 5: Report of Indigo — Data Link
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-02-20 11:58:49
End at: 2019-02-20 11:59:19
Local clock offset: -0.114 ms
Remote clock offset: -0.503 ms
Run 1: Report of Indigo-MusesC3 — Data Link

[Graph showing throughput over time for different flows with legends indicating Mean ingress and egress speeds for each flow.]

[Graph showing per-packet one-way delays over time for different flows with legends indicating 95th percentile delays for each flow.]
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-02-20 12:35:34
End at: 2019-02-20 12:36:04
Local clock offset: -0.082 ms
Remote clock offset: -1.447 ms

# Below is generated by plot.py at 2019-02-20 16:36:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 878.22 Mbit/s
95th percentile per-packet one-way delay: 80.256 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 523.02 Mbit/s
95th percentile per-packet one-way delay: 81.960 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 419.87 Mbit/s
95th percentile per-packet one-way delay: 78.079 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 316.18 Mbit/s
95th percentile per-packet one-way delay: 65.330 ms
Loss rate: 0.00%
Run 2: Report of Indigo-MusesC3 — Data Link
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-02-20 13:12:41
End at: 2019-02-20 13:13:11
Local clock offset: -0.087 ms
Remote clock offset: -0.078 ms

# Below is generated by plot.py at 2019-02-20 16:36:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 693.09 Mbit/s
95th percentile per-packet one-way delay: 78.376 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 457.76 Mbit/s
95th percentile per-packet one-way delay: 80.531 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 335.24 Mbit/s
95th percentile per-packet one-way delay: 70.467 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 124.61 Mbit/s
95th percentile per-packet one-way delay: 64.340 ms
Loss rate: 0.00%
Run 3: Report of Indigo-MusesC3 — Data Link
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-02-20 13:49:24
End at: 2019-02-20 13:49:54
Local clock offset: -0.138 ms
Remote clock offset: 0.612 ms

# Below is generated by plot.py at 2019-02-20 16:47:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 911.92 Mbit/s
95th percentile per-packet one-way delay: 82.835 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 541.75 Mbit/s
95th percentile per-packet one-way delay: 84.758 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 447.61 Mbit/s
95th percentile per-packet one-way delay: 82.117 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 310.63 Mbit/s
95th percentile per-packet one-way delay: 67.180 ms
Loss rate: 0.00%
Run 4: Report of Indigo-MusesC3 — Data Link

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

**Graph 1:**
- **Throughput (Mbps):**
  - Flow 1 ingress (mean 541.81 Mbps)
  - Flow 1 egress (mean 541.75 Mbps)
  - Flow 2 ingress (mean 447.60 Mbps)
  - Flow 2 egress (mean 447.61 Mbps)
  - Flow 3 ingress (mean 310.55 Mbps)
  - Flow 3 egress (mean 310.63 Mbps)

**Graph 2:**
- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 84.76 ms)
  - Flow 2 (95th percentile 82.12 ms)
  - Flow 3 (95th percentile 67.18 ms)
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-02-20 14:26:20
End at: 2019-02-20 14:26:50
Local clock offset: -0.011 ms
Remote clock offset: 1.229 ms

# Below is generated by plot.py at 2019-02-20 16:47:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 854.60 Mbit/s
95th percentile per-packet one-way delay: 83.439 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 500.78 Mbit/s
95th percentile per-packet one-way delay: 92.345 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 420.05 Mbit/s
95th percentile per-packet one-way delay: 74.465 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 294.17 Mbit/s
95th percentile per-packet one-way delay: 67.375 ms
Loss rate: 0.01%
Run 5: Report of Indigo-MusesC3 — Data Link
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-02-20 12:25:38
End at: 2019-02-20 12:26:08
Local clock offset: -0.045 ms
Remote clock offset: -0.668 ms

# Below is generated by plot.py at 2019-02-20 16:49:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 947.92 Mbit/s
95th percentile per-packet one-way delay: 89.782 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 567.30 Mbit/s
95th percentile per-packet one-way delay: 92.846 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 478.12 Mbit/s
95th percentile per-packet one-way delay: 80.001 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 252.26 Mbit/s
95th percentile per-packet one-way delay: 66.445 ms
Loss rate: 0.00%
Run 1: Report of Indigo-MusesC5 — Data Link
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-02-20 13:02:57
End at: 2019-02-20 13:03:27
Local clock offset: -0.093 ms
Remote clock offset: -1.361 ms

# Below is generated by plot.py at 2019-02-20 16:50:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 947.39 Mbit/s
95th percentile per-packet one-way delay: 145.622 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 544.66 Mbit/s
95th percentile per-packet one-way delay: 92.551 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 452.98 Mbit/s
95th percentile per-packet one-way delay: 175.339 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 386.20 Mbit/s
95th percentile per-packet one-way delay: 75.904 ms
Loss rate: 0.00%
Run 2: Report of Indigo-MusesC5 — Data Link

![Throughput Graph](image1)
![Delay Graph](image2)
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-02-20 13:39:46
End at: 2019-02-20 13:40:16
Local clock offset: -0.109 ms
Remote clock offset: -1.66 ms

# Below is generated by plot.py at 2019-02-20 16:50:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 914.13 Mbit/s
95th percentile per-packet one-way delay: 88.148 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 539.41 Mbit/s
95th percentile per-packet one-way delay: 93.377 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 436.14 Mbit/s
95th percentile per-packet one-way delay: 76.694 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 346.71 Mbit/s
95th percentile per-packet one-way delay: 69.844 ms
Loss rate: 0.01%
Run 3: Report of Indigo-MusesC5 — Data Link
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-02-20 14:16:54
End at: 2019-02-20 14:17:24
Local clock offset: -0.023 ms
Remote clock offset: 0.936 ms

# Below is generated by plot.py at 2019-02-20 16:50:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 855.87 Mbit/s
95th percentile per-packet one-way delay: 107.335 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 550.26 Mbit/s
95th percentile per-packet one-way delay: 102.298 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 433.54 Mbit/s
95th percentile per-packet one-way delay: 127.497 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 97.95 Mbit/s
95th percentile per-packet one-way delay: 64.458 ms
Loss rate: 0.00%
Run 4: Report of Indigo-MusesC5 — Data Link
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-02-20 14:53:46
End at: 2019-02-20 14:54:16
Local clock offset: -0.046 ms
Remote clock offset: -0.389 ms

# Below is generated by plot.py at 2019-02-20 16:50:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 856.71 Mbit/s
95th percentile per-packet one-way delay: 112.700 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 534.29 Mbit/s
95th percentile per-packet one-way delay: 110.936 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 457.29 Mbit/s
95th percentile per-packet one-way delay: 114.935 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 106.86 Mbit/s
95th percentile per-packet one-way delay: 63.313 ms
Loss rate: 0.00%
Run 5: Report of Indigo-MusesC5 — Data Link
Run 1: Statistics of Indigo-MusesD

Start at: 2019-02-20 12:20:38
End at: 2019-02-20 12:21:08
Local clock offset: -0.086 ms
Remote clock offset: -1.438 ms

# Below is generated by plot.py at 2019-02-20 16:50:48
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 773.40 Mbit/s
  95th percentile per-packet one-way delay: 86.122 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 445.39 Mbit/s
  95th percentile per-packet one-way delay: 92.330 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 343.83 Mbit/s
  95th percentile per-packet one-way delay: 72.979 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 371.65 Mbit/s
  95th percentile per-packet one-way delay: 64.838 ms
  Loss rate: 0.00%
Run 1: Report of Indigo-MusesD — Data Link
Run 2: Statistics of Indigo-MusesD

Start at: 2019-02-20 12:58:04
End at: 2019-02-20 12:58:34
Local clock offset: -0.07 ms
Remote clock offset: -1.586 ms

# Below is generated by plot.py at 2019-02-20 16:59:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 759.72 Mbit/s
95th percentile per-packet one-way delay: 84.722 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 439.88 Mbit/s
95th percentile per-packet one-way delay: 80.637 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 456.13 Mbit/s
95th percentile per-packet one-way delay: 91.767 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 88.92 Mbit/s
95th percentile per-packet one-way delay: 61.624 ms
Loss rate: 0.00%
Run 2: Report of Indigo-MusesD — Data Link

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

- Flow 1 ingress (mean 439.87 Mbit/s)
- Flow 1 egress (mean 439.88 Mbit/s)
- Flow 2 ingress (mean 456.17 Mbit/s)
- Flow 2 egress (mean 456.13 Mbit/s)
- Flow 3 ingress (mean 88.92 Mbit/s)
- Flow 3 egress (mean 88.92 Mbit/s)

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

- Flow 1 (95th percentile 80.64 ms)
- Flow 2 (95th percentile 91.77 ms)
- Flow 3 (95th percentile 61.62 ms)
Run 3: Statistics of Indigo-MusesD

Start at: 2019-02-20 13:34:49
End at: 2019-02-20 13:35:19
Local clock offset: -0.122 ms
Remote clock offset: -0.186 ms

# Below is generated by plot.py at 2019-02-20 17:00:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 794.77 Mbit/s
95th percentile per-packet one-way delay: 85.522 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 474.74 Mbit/s
95th percentile per-packet one-way delay: 89.155 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 364.14 Mbit/s
95th percentile per-packet one-way delay: 66.616 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 302.55 Mbit/s
95th percentile per-packet one-way delay: 66.772 ms
Loss rate: 0.00%
Run 3: Report of Indigo-MusesD — Data Link
Run 4: Statistics of Indigo-MusesD

Start at: 2019-02-20 14:11:57
End at: 2019-02-20 14:12:27
Local clock offset: -0.055 ms
Remote clock offset: -0.134 ms

# Below is generated by plot.py at 2019-02-20 17:03:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 793.27 Mbit/s
  95th percentile per-packet one-way delay: 75.809 ms
  Loss rate: 0.03%
-- Flow 1:
  Average throughput: 491.00 Mbit/s
  95th percentile per-packet one-way delay: 78.390 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 339.06 Mbit/s
  95th percentile per-packet one-way delay: 69.989 ms
  Loss rate: 0.07%
-- Flow 3:
  Average throughput: 302.91 Mbit/s
  95th percentile per-packet one-way delay: 66.536 ms
  Loss rate: 0.03%
Run 4: Report of Indigo-MusesD — Data Link

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

- Flow 1 ingress (mean 491.02 Mbit/s)
- Flow 1 egress (mean 491.00 Mbit/s)
- Flow 2 ingress (mean 339.43 Mbit/s)
- Flow 2 egress (mean 339.06 Mbit/s)
- Flow 3 ingress (mean 303.01 Mbit/s)
- Flow 3 egress (mean 302.91 Mbit/s)

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

- Flow 1 (95th percentile 78.39 ms)
- Flow 2 (95th percentile 69.99 ms)
- Flow 3 (95th percentile 66.54 ms)
Run 5: Statistics of Indigo-MusesD

Start at: 2019-02-20 14:48:51
End at: 2019-02-20 14:49:21
Local clock offset: -0.029 ms
Remote clock offset: -0.025 ms

# Below is generated by plot.py at 2019-02-20 17:03:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 793.42 Mbit/s
95th percentile per-packet one-way delay: 91.763 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 426.52 Mbit/s
95th percentile per-packet one-way delay: 98.265 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 422.44 Mbit/s
95th percentile per-packet one-way delay: 66.607 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 338.43 Mbit/s
95th percentile per-packet one-way delay: 66.743 ms
Loss rate: 0.01%
Run 5: Report of Indigo-MusesD — Data Link
Run 1: Statistics of Indigo-MusesT

Start at: 2019-02-20 12:17:26
End at: 2019-02-20 12:17:56
Local clock offset: -0.11 ms
Remote clock offset: -0.13 ms

# Below is generated by plot.py at 2019-02-20 17:06:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 971.31 Mbit/s
  95th percentile per-packet one-way delay: 124.283 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 572.71 Mbit/s
  95th percentile per-packet one-way delay: 137.427 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 466.72 Mbit/s
  95th percentile per-packet one-way delay: 86.861 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 333.78 Mbit/s
  95th percentile per-packet one-way delay: 70.705 ms
  Loss rate: 0.00%
Run 1: Report of Indigo-MusesT — Data Link
Run 2: Statistics of Indigo-MusesT

Start at: 2019-02-20 12:54:53
End at: 2019-02-20 12:55:23
Local clock offset: -0.065 ms
Remote clock offset: -0.488 ms

# Below is generated by plot.py at 2019-02-20 17:07:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 966.55 Mbit/s
95th percentile per-packet one-way delay: 111.063 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 565.06 Mbit/s
95th percentile per-packet one-way delay: 109.275 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 461.82 Mbit/s
95th percentile per-packet one-way delay: 124.742 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 378.76 Mbit/s
95th percentile per-packet one-way delay: 66.805 ms
Loss rate: 0.00%
Run 2: Report of Indigo-MusesT — Data Link

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

Legend:
- Flow 1 ingress (mean 565.05 Mbit/s)
- Flow 1 egress (mean 565.06 Mbit/s)
- Flow 2 ingress (mean 462.05 Mbit/s)
- Flow 2 egress (mean 461.82 Mbit/s)
- Flow 3 ingress (mean 376.80 Mbit/s)
- Flow 3 egress (mean 378.76 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 109.28 ms)
- Flow 2 (95th percentile 124.74 ms)
- Flow 3 (95th percentile 66.81 ms)
Run 3: Statistics of Indigo-MusesT

Start at: 2019-02-20 13:31:36  
End at: 2019-02-20 13:32:06  
Local clock offset: -0.115 ms  
Remote clock offset: 0.11 ms  

# Below is generated by plot.py at 2019-02-20 17:07:29  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 966.65 Mbit/s  
95th percentile per-packet one-way delay: 139.020 ms  
Loss rate: 0.04%  
-- Flow 1:  
Average throughput: 569.27 Mbit/s  
95th percentile per-packet one-way delay: 136.067 ms  
Loss rate: 0.04%  
-- Flow 2:  
Average throughput: 461.65 Mbit/s  
95th percentile per-packet one-way delay: 165.102 ms  
Loss rate: 0.08%  
-- Flow 3:  
Average throughput: 352.52 Mbit/s  
95th percentile per-packet one-way delay: 72.333 ms  
Loss rate: 0.00%
Run 3: Report of Indigo-MusesT — Data Link
Run 4: Statistics of Indigo-MusesT

Start at: 2019-02-20 14:08:49
End at: 2019-02-20 14:09:19
Local clock offset: -0.051 ms
Remote clock offset: -0.72 ms

# Below is generated by plot.py at 2019-02-20 17:07:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 888.59 Mbit/s
95th percentile per-packet one-way delay: 109.752 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 526.43 Mbit/s
95th percentile per-packet one-way delay: 112.925 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 421.55 Mbit/s
95th percentile per-packet one-way delay: 88.629 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 323.44 Mbit/s
95th percentile per-packet one-way delay: 66.550 ms
Loss rate: 0.00%
Run 4: Report of Indigo-MusesT — Data Link

![Graph showing network performance metrics](image)

- **Flow 1**: Ingress (mean 526.39 Mbit/s), Egress (mean 526.43 Mbit/s)
- **Flow 2**: Ingress (mean 421.61 Mbit/s), Egress (mean 421.55 Mbit/s)
- **Flow 3**: Ingress (mean 323.45 Mbit/s), Egress (mean 323.44 Mbit/s)

![Graph showing packet delay](image)

- **Flow 1**: 95th percentile 112.92 ms
- **Flow 2**: 95th percentile 88.63 ms
- **Flow 3**: 95th percentile 66.55 ms
Run 5: Statistics of Indigo-MusesT

Start at: 2019-02-20 14:45:41
End at: 2019-02-20 14:46:11
Local clock offset: -0.072 ms
Remote clock offset: -0.066 ms

# Below is generated by plot.py at 2019-02-20 17:13:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 885.69 Mbit/s
95th percentile per-packet one-way delay: 112.724 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 552.22 Mbit/s
95th percentile per-packet one-way delay: 115.799 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 456.51 Mbit/s
95th percentile per-packet one-way delay: 68.042 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 109.06 Mbit/s
95th percentile per-packet one-way delay: 63.862 ms
Loss rate: 0.00%
Run 5: Report of Indigo-MusesT — Data Link

![Graph 1: Throughput vs. Time (Mbit/s)]
- Flow 1 ingress (mean 552.58 Mbit/s)
- Flow 1 egress (mean 552.22 Mbit/s)
- Flow 2 ingress (mean 456.66 Mbit/s)
- Flow 2 egress (mean 456.51 Mbit/s)
- Flow 3 ingress (mean 108.74 Mbit/s)
- Flow 3 egress (mean 109.06 Mbit/s)

![Graph 2: Packet One-Way Delay vs. Time (ms)]
- Flow 1 (95th percentile 115.80 ms)
- Flow 2 (95th percentile 68.04 ms)
- Flow 3 (95th percentile 63.66 ms)
Run 1: Statistics of LEDBAT

End at: 2019-02-20 12:22:58
Local clock offset: -0.086 ms
Remote clock offset: -1.591 ms

# Below is generated by plot.py at 2019-02-20 17:13:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 36.35 Mbit/s
  95th percentile per-packet one-way delay: 62.541 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 23.42 Mbit/s
  95th percentile per-packet one-way delay: 62.627 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 15.58 Mbit/s
  95th percentile per-packet one-way delay: 62.424 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 7.72 Mbit/s
  95th percentile per-packet one-way delay: 62.232 ms
  Loss rate: 0.00%
Run 1: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 23.42 Mbit/s)
- Flow 1 egress (mean 23.42 Mbit/s)
- Flow 2 ingress (mean 15.58 Mbit/s)
- Flow 2 egress (mean 15.58 Mbit/s)
- Flow 3 ingress (mean 7.72 Mbit/s)
- Flow 3 egress (mean 7.72 Mbit/s)

![Graph 2: Per-packet round-trip delay](image2)

- Flow 1 (95th percentile 62.63 ms)
- Flow 2 (95th percentile 62.42 ms)
- Flow 3 (95th percentile 62.23 ms)
Run 2: Statistics of LEDBAT

Start at: 2019-02-20 12:59:53
End at: 2019-02-20 13:00:23
Local clock offset: -0.054 ms
Remote clock offset: -0.096 ms

# Below is generated by plot.py at 2019-02-20 17:13:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 36.29 Mbit/s
  95th percentile per-packet one-way delay: 64.466 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 23.37 Mbit/s
  95th percentile per-packet one-way delay: 64.644 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 15.63 Mbit/s
  95th percentile per-packet one-way delay: 63.741 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 7.72 Mbit/s
  95th percentile per-packet one-way delay: 63.648 ms
  Loss rate: 0.00%
Run 2: Report of LEDBAT — Data Link

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**Throughput (Mbps):**

- **Flow 1 Ingress** (mean 23.37 Mbps)
- **Flow 1 Egress** (mean 23.37 Mbps)
- **Flow 2 Ingress** (mean 15.63 Mbps)
- **Flow 2 Egress** (mean 15.63 Mbps)
- **Flow 3 Ingress** (mean 7.72 Mbps)
- **Flow 3 Egress** (mean 7.72 Mbps)

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

- **Flow 1** (95th percentile 64.64 ms)
- **Flow 2** (95th percentile 63.74 ms)
- **Flow 3** (95th percentile 63.65 ms)
Run 3: Statistics of LEDBAT

Start at: 2019-02-20 13:36:40
End at: 2019-02-20 13:37:10
Local clock offset: -0.13 ms
Remote clock offset: -0.132 ms

# Below is generated by plot.py at 2019-02-20 17:13:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.23 Mbit/s
95th percentile per-packet one-way delay: 64.817 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 23.29 Mbit/s
95th percentile per-packet one-way delay: 64.976 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 15.62 Mbit/s
95th percentile per-packet one-way delay: 64.439 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.72 Mbit/s
95th percentile per-packet one-way delay: 64.231 ms
Loss rate: 0.00%
Run 3: Report of LEDBAT — Data Link

![Graph 1: Throughput (Mbit/s) over time]
- Flow 1 ingress (mean 23.30 Mbit/s)
- Flow 1 egress (mean 23.29 Mbit/s)
- Flow 2 ingress (mean 15.62 Mbit/s)
- Flow 2 egress (mean 15.62 Mbit/s)
- Flow 3 ingress (mean 7.72 Mbit/s)
- Flow 3 egress (mean 7.72 Mbit/s)

![Graph 2: Per-packet end-to-end delay (ms)]
- Flow 1 (95th percentile 64.90 ms)
- Flow 2 (95th percentile 64.44 ms)
- Flow 3 (95th percentile 64.23 ms)
Run 4: Statistics of LEDBAT

Start at: 2019-02-20 14:13:49
End at: 2019-02-20 14:14:19
Local clock offset: -0.033 ms
Remote clock offset: -0.058 ms

# Below is generated by plot.py at 2019-02-20 17:13:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 36.35 Mbit/s
  95th percentile per-packet one-way delay: 64.569 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 23.47 Mbit/s
  95th percentile per-packet one-way delay: 64.773 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 15.58 Mbit/s
  95th percentile per-packet one-way delay: 64.313 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 7.69 Mbit/s
  95th percentile per-packet one-way delay: 64.143 ms
  Loss rate: 0.00%
Run 4: Report of LEDBAT — Data Link

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**Throughput (Mbps)**

- **Flow 1 ingress (mean 23.47 Mbps)**
- **Flow 1 egress (mean 23.47 Mbps)**
- **Flow 2 ingress (mean 15.58 Mbps)**
- **Flow 2 egress (mean 15.58 Mbps)**
- **Flow 3 ingress (mean 7.69 Mbps)**
- **Flow 3 egress (mean 7.69 Mbps)**

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

- **Flow 1 (95th percentile 64.77 ms)**
- **Flow 2 (95th percentile 64.31 ms)**
- **Flow 3 (95th percentile 64.14 ms)**

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Run 5: Statistics of LEDBAT

Start at: 2019-02-20 14:50:42
End at: 2019-02-20 14:51:12
Local clock offset: -0.041 ms
Remote clock offset: -0.161 ms

# Below is generated by plot.py at 2019-02-20 17:13:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.31 Mbit/s
95th percentile per-packet one-way delay: 64.082 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 23.32 Mbit/s
95th percentile per-packet one-way delay: 64.291 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 15.65 Mbit/s
95th percentile per-packet one-way delay: 63.769 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.74 Mbit/s
95th percentile per-packet one-way delay: 63.565 ms
Loss rate: 0.00%
Run 5: Report of LEDBAT — Data Link
Run 1: Statistics of PCC-AlLEGRO

Start at: 2019-02-20 12:06:14
End at: 2019-02-20 12:06:44
Local clock offset: -0.132 ms
Remote clock offset: -1.574 ms

# Below is generated by plot.py at 2019-02-20 17:30:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 744.39 Mbit/s
  95th percentile per-packet one-way delay: 207.449 ms
  Loss rate: 4.32%
-- Flow 1:
  Average throughput: 439.51 Mbit/s
  95th percentile per-packet one-way delay: 185.759 ms
  Loss rate: 4.30%
-- Flow 2:
  Average throughput: 334.87 Mbit/s
  95th percentile per-packet one-way delay: 215.849 ms
  Loss rate: 4.84%
-- Flow 3:
  Average throughput: 246.30 Mbit/s
  95th percentile per-packet one-way delay: 198.315 ms
  Loss rate: 2.96%
Run 1: Report of PCC-Allegro — Data Link
Run 2: Statistics of PCC-Allegro

Start at: 2019-02-20 12:43:42
End at: 2019-02-20 12:44:12
Local clock offset: -0.066 ms
Remote clock offset: -0.851 ms

# Below is generated by plot.py at 2019-02-20 17:31:28
# Datalink statistics
# Total of 3 flows:
Average throughput: 761.52 Mbit/s
95th percentile per-packet one-way delay: 206.967 ms
Loss rate: 7.81%
-- Flow 1:
Average throughput: 392.50 Mbit/s
95th percentile per-packet one-way delay: 208.403 ms
Loss rate: 8.18%
-- Flow 2:
Average throughput: 423.08 Mbit/s
95th percentile per-packet one-way delay: 210.306 ms
Loss rate: 9.35%
-- Flow 3:
Average throughput: 266.73 Mbit/s
95th percentile per-packet one-way delay: 135.864 ms
Loss rate: 0.62%
Run 2: Report of PCC-Allegro — Data Link

![Graph of Run 2: Report of PCC-Allegro — Data Link](image)

Legend:
- Flow 1 ingress (mean 427.50 Mbit/s)
- Flow 1 egress (mean 392.50 Mbit/s)
- Flow 2 ingress (mean 466.76 Mbit/s)
- Flow 2 egress (mean 423.08 Mbit/s)
- Flow 3 ingress (mean 266.83 Mbit/s)
- Flow 3 egress (mean 266.73 Mbit/s)

![Graph of packet delay](image)

Legend:
- Flow 1 (95th percentile 208.40 ms)
- Flow 2 (95th percentile 210.31 ms)
- Flow 3 (95th percentile 135.86 ms)
Run 3: Statistics of PCC-Allegro

Start at: 2019-02-20 13:20:37
End at: 2019-02-20 13:21:07
Local clock offset: -0.074 ms
Remote clock offset: -0.34 ms

# Below is generated by plot.py at 2019-02-20 17:31:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 675.00 Mbit/s
  95th percentile per-packet one-way delay: 183.480 ms
  Loss rate: 3.17%
-- Flow 1:
  Average throughput: 377.30 Mbit/s
  95th percentile per-packet one-way delay: 190.095 ms
  Loss rate: 5.41%
-- Flow 2:
  Average throughput: 324.47 Mbit/s
  95th percentile per-packet one-way delay: 150.764 ms
  Loss rate: 0.25%
-- Flow 3:
  Average throughput: 248.13 Mbit/s
  95th percentile per-packet one-way delay: 108.500 ms
  Loss rate: 0.00%
Run 3: Report of PCC-Allegro — Data Link

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

Legend:
- Flow 1 ingress (mean 398.89 Mbit/s)
- Flow 1 egress (mean 377.30 Mbit/s)
- Flow 2 ingress (mean 325.27 Mbit/s)
- Flow 2 egress (mean 324.47 Mbit/s)
- Flow 3 ingress (mean 248.13 Mbit/s)
- Flow 3 egress (mean 248.13 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 190.09 ms)
- Flow 2 (95th percentile 150.76 ms)
- Flow 3 (95th percentile 108.50 ms)
Run 4: Statistics of PCC-Allegro

Start at: 2019-02-20 13:57:32 
End at: 2019-02-20 13:58:02 
Local clock offset: -0.104 ms 
Remote clock offset: 0.524 ms 

# Below is generated by plot.py at 2019-02-20 17:31:28 
# Datalink statistics 
-- Total of 3 flows: 
Average throughput: 713.58 Mbit/s 
95th percentile per-packet one-way delay: 185.932 ms 
Loss rate: 3.21% 
-- Flow 1: 
Average throughput: 426.09 Mbit/s 
95th percentile per-packet one-way delay: 184.711 ms 
Loss rate: 4.09% 
-- Flow 2: 
Average throughput: 314.21 Mbit/s 
95th percentile per-packet one-way delay: 196.253 ms 
Loss rate: 1.22% 
-- Flow 3: 
Average throughput: 239.49 Mbit/s 
95th percentile per-packet one-way delay: 225.627 ms 
Loss rate: 3.56%
Run 4: Report of PCC-Allegro — Data Link

![Graph showing throughput over time for different flows, with labels for each flow's ingress and egress rates.](image1)

![Graph showing per-packet delay over time for different flows, with labels for each flow's 95th percentile delay.](image2)
Run 5: Statistics of PCC-Allegro

Start at: 2019-02-20 14:34:24
End at: 2019-02-20 14:34:54
Local clock offset: -0.02 ms
Remote clock offset: -0.013 ms

# Below is generated by plot.py at 2019-02-20 17:31:46
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 726.13 Mbit/s
  95th percentile per-packet one-way delay: 181.505 ms
  Loss rate: 1.79%
-- Flow 1:
  Average throughput: 412.13 Mbit/s
  95th percentile per-packet one-way delay: 184.166 ms
  Loss rate: 2.47%
-- Flow 2:
  Average throughput: 329.28 Mbit/s
  95th percentile per-packet one-way delay: 86.110 ms
  Loss rate: 1.13%
-- Flow 3:
  Average throughput: 290.47 Mbit/s
  95th percentile per-packet one-way delay: 139.036 ms
  Loss rate: 0.34%
Run 5: Report of PCC-Allegro — Data Link

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

- **Flow 1** (ingress mean 422.54 Mbit/s, egress mean 412.13 Mbit/s)
- **Flow 2** (ingress mean 333.05 Mbit/s, egress mean 329.28 Mbit/s)
- **Flow 3** (ingress mean 291.50 Mbit/s, egress mean 290.47 Mbit/s)

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

- **Flow 1** (95th percentile 184.17 ms)
- **Flow 2** (95th percentile 86.11 ms)
- **Flow 3** (95th percentile 139.04 ms)
Run 1: Statistics of PCC-Expr

Start at: 2019-02-20 12:08:17
End at: 2019-02-20 12:08:47
Local clock offset: -0.1 ms
Remote clock offset: -0.323 ms

# Below is generated by plot.py at 2019-02-20 17:31:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 527.05 Mbit/s
95th percentile per-packet one-way delay: 168.743 ms
Loss rate: 2.55%
-- Flow 1:
Average throughput: 316.14 Mbit/s
95th percentile per-packet one-way delay: 180.933 ms
Loss rate: 3.53%
-- Flow 2:
Average throughput: 268.66 Mbit/s
95th percentile per-packet one-way delay: 164.017 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 92.78 Mbit/s
95th percentile per-packet one-way delay: 73.031 ms
Loss rate: 0.79%
Run 1: Report of PCC-Expr — Data Link

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

- Throughput (Mbps):
  - Flow 1 ingress (mean 327.66 Mbps)
  - Flow 1 egress (mean 316.14 Mbps)
  - Flow 2 ingress (mean 271.68 Mbps)
  - Flow 2 egress (mean 268.66 Mbps)
  - Flow 3 ingress (mean 93.53 Mbps)
  - Flow 3 egress (mean 92.78 Mbps)

- Per-packet one-way delay (ms):
  - Flow 1 (95th percentile 180.93 ms)
  - Flow 2 (95th percentile 164.02 ms)
  - Flow 3 (95th percentile 73.03 ms)
Run 2: Statistics of PCC-Expr

Start at: 2019-02-20 12:45:46
End at: 2019-02-20 12:46:16
Local clock offset: -0.066 ms
Remote clock offset: -0.023 ms

# Below is generated by plot.py at 2019-02-20 17:31:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 559.96 Mbit/s
95th percentile per-packet one-way delay: 177.861 ms
Loss rate: 2.47%
-- Flow 1:
Average throughput: 297.58 Mbit/s
95th percentile per-packet one-way delay: 164.442 ms
Loss rate: 1.58%
-- Flow 2:
Average throughput: 298.53 Mbit/s
95th percentile per-packet one-way delay: 189.405 ms
Loss rate: 4.51%
-- Flow 3:
Average throughput: 193.86 Mbit/s
95th percentile per-packet one-way delay: 87.338 ms
Loss rate: 0.06%
Run 2: Report of PCC-Expr — Data Link
Run 3: Statistics of PCC-Expr

End at: 2019-02-20 13:23:05
Local clock offset: -0.088 ms
Remote clock offset: -0.208 ms

# Below is generated by plot.py at 2019-02-20 17:34:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 564.18 Mbit/s
  95th percentile per-packet one-way delay: 191.124 ms
  Loss rate: 4.59%
-- Flow 1:
  Average throughput: 304.36 Mbit/s
  95th percentile per-packet one-way delay: 193.928 ms
  Loss rate: 3.35%
-- Flow 2:
  Average throughput: 251.02 Mbit/s
  95th percentile per-packet one-way delay: 175.391 ms
  Loss rate: 7.96%
-- Flow 3:
  Average throughput: 280.66 Mbit/s
  95th percentile per-packet one-way delay: 188.843 ms
  Loss rate: 2.24%
Run 3: Report of PCC-Expr — Data Link

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

- **Flow 1** (ingress: mean 314.90 Mbit/s, egress: mean 304.36 Mbit/s)
- **Flow 2** (ingress: mean 272.72 Mbit/s, egress: mean 251.02 Mbit/s)
- **Flow 3** (ingress: mean 287.30 Mbit/s, egress: mean 280.66 Mbit/s)

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

- **Flow 1** (95th percentile: 193.93 ms)
- **Flow 2** (95th percentile: 175.39 ms)
- **Flow 3** (95th percentile: 188.84 ms)
Run 4: Statistics of PCC-Expr

Start at: 2019-02-20 13:59:33
End at: 2019-02-20 14:00:03
Local clock offset: -0.121 ms
Remote clock offset: 0.052 ms

# Below is generated by plot.py at 2019-02-20 17:40:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 493.93 Mbit/s
  95th percentile per-packet one-way delay: 152.701 ms
  Loss rate: 1.33%
-- Flow 1:
  Average throughput: 300.31 Mbit/s
  95th percentile per-packet one-way delay: 145.074 ms
  Loss rate: 0.85%
-- Flow 2:
  Average throughput: 204.13 Mbit/s
  95th percentile per-packet one-way delay: 162.058 ms
  Loss rate: 2.70%
-- Flow 3:
  Average throughput: 176.28 Mbit/s
  95th percentile per-packet one-way delay: 95.059 ms
  Loss rate: 0.60%
Run 4: Report of PCC-Expr — Data Link
Run 5: Statistics of PCC-Expr

Start at: 2019-02-20 14:36:26
End at: 2019-02-20 14:36:56
Local clock offset: -0.046 ms
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2019-02-20 17:41:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 496.35 Mbit/s
95th percentile per-packet one-way delay: 201.204 ms
Loss rate: 5.95%
-- Flow 1:
Average throughput: 270.38 Mbit/s
95th percentile per-packet one-way delay: 197.133 ms
Loss rate: 4.20%
-- Flow 2:
Average throughput: 247.76 Mbit/s
95th percentile per-packet one-way delay: 206.581 ms
Loss rate: 10.63%
-- Flow 3:
Average throughput: 185.94 Mbit/s
95th percentile per-packet one-way delay: 72.715 ms
Loss rate: 0.00%
Run 5: Report of PCC-Expr — Data Link
Run 1: Statistics of QUIC Cubic

Start at: 2019-02-20 12:16:12
End at: 2019-02-20 12:16:42
Local clock offset: -0.092 ms
Remote clock offset: -1.294 ms

# Below is generated by plot.py at 2019-02-20 17:41:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 27.95 Mbit/s
  95th percentile per-packet one-way delay: 61.918 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.01 Mbit/s
  95th percentile per-packet one-way delay: 61.706 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 32.08 Mbit/s
  95th percentile per-packet one-way delay: 61.934 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 20.30 Mbit/s
  95th percentile per-packet one-way delay: 61.693 ms
  Loss rate: 0.00%
Run 1: Report of QUIC Cubic — Data Link
Run 2: Statistics of QUIC Cubic

Start at: 2019-02-20 12:53:35
End at: 2019-02-20 12:54:05
Local clock offset: -0.118 ms
Remote clock offset: -1.437 ms

# Below is generated by plot.py at 2019-02-20 17:41:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.49 Mbit/s
95th percentile per-packet one-way delay: 61.827 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 65.38 Mbit/s
95th percentile per-packet one-way delay: 61.847 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 31.97 Mbit/s
95th percentile per-packet one-way delay: 61.674 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 24.08 Mbit/s
95th percentile per-packet one-way delay: 61.642 ms
Loss rate: 0.00%
Run 2: Report of QUIC Cubic — Data Link
Run 3: Statistics of QUIC Cubic

Start at: 2019-02-20 13:30:18
End at: 2019-02-20 13:30:48
Local clock offset: -0.12 ms
Remote clock offset: 0.608 ms

# Below is generated by plot.py at 2019-02-20 17:41:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.13 Mbit/s
95th percentile per-packet one-way delay: 63.889 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 52.84 Mbit/s
95th percentile per-packet one-way delay: 63.904 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 43.27 Mbit/s
95th percentile per-packet one-way delay: 63.875 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 26.17 Mbit/s
95th percentile per-packet one-way delay: 63.676 ms
Loss rate: 0.00%
Run 3: Report of QUIC Cubic — Data Link

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

Flow 1 ingress (mean 52.84 Mbit/s)  Flow 1 egress (mean 52.84 Mbit/s)
Flow 2 ingress (mean 43.27 Mbit/s)  Flow 2 egress (mean 43.27 Mbit/s)
Flow 3 ingress (mean 26.17 Mbit/s)  Flow 3 egress (mean 26.17 Mbit/s)

Flow 1 (95th percentile 63.90 ms)  Flow 2 (95th percentile 63.88 ms)  Flow 3 (95th percentile 63.68 ms)
Run 4: Statistics of QUIC Cubic

Start at: 2019-02-20 14:07:31
End at: 2019-02-20 14:08:01
Local clock offset: -0.045 ms
Remote clock offset: 1.307 ms

# Below is generated by plot.py at 2019-02-20 17:41:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.33 Mbit/s
95th percentile per-packet one-way delay: 64.624 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 47.33 Mbit/s
95th percentile per-packet one-way delay: 64.584 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.31 Mbit/s
95th percentile per-packet one-way delay: 64.599 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 17.15 Mbit/s
95th percentile per-packet one-way delay: 64.755 ms
Loss rate: 0.00%
Run 4: Report of QUIC Cubic — Data Link
Run 5: Statistics of QUIC Cubic

Start at: 2019-02-20 14:44:23
End at: 2019-02-20 14:44:53
Local clock offset: -0.049 ms
Remote clock offset: -1.564 ms

# Below is generated by plot.py at 2019-02-20 17:41:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.25 Mbit/s
95th percentile per-packet one-way delay: 61.920 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 57.34 Mbit/s
95th percentile per-packet one-way delay: 61.957 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 31.81 Mbit/s
95th percentile per-packet one-way delay: 61.594 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 20.74 Mbit/s
95th percentile per-packet one-way delay: 61.569 ms
Loss rate: 0.00%
Run 5: Report of QUIC Cubic — Data Link

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

Flow 1 ingress (mean 57.34 Mbit/s)
Flow 1 egress (mean 57.34 Mbit/s)
Flow 2 ingress (mean 31.81 Mbit/s)
Flow 2 egress (mean 31.81 Mbit/s)
Flow 3 ingress (mean 20.74 Mbit/s)
Flow 3 egress (mean 20.74 Mbit/s)

[Graph 2: Per-packet round-trip delay (ms) vs Time (s)]

Flow 1 (95th percentile 61.96 ms)
Flow 2 (95th percentile 61.59 ms)
Flow 3 (95th percentile 61.57 ms)
Run 1: Statistics of SCReAM

Start at: 2019-02-20 12:05:02
End at: 2019-02-20 12:05:32
Local clock offset: -0.092 ms
Remote clock offset: -0.374 ms

# Below is generated by plot.py at 2019-02-20 17:41:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 62.583 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.582 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.592 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.562 ms
Loss rate: 0.00%
Run 1: Report of SCReAM — Data Link

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

[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)

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

[Legend]

Flow 1 (95th percentile 62.58 ms)
Flow 2 (95th percentile 62.59 ms)
Flow 3 (95th percentile 62.56 ms)
Run 2: Statistics of SCReAM

Start at: 2019-02-20 12:42:30
End at: 2019-02-20 12:43:00
Local clock offset: -0.067 ms
Remote clock offset: -0.344 ms

# Below is generated by plot.py at 2019-02-20 17:41:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 63.017 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.049 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.697 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.977 ms
Loss rate: 0.00%
Run 2: Report of SCReAM — Data Link

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

- 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 3: Statistics of SCReAM

Start at: 2019-02-20 13:19:25
End at: 2019-02-20 13:19:55
Local clock offset: -0.062 ms
Remote clock offset: -0.418 ms

# Below is generated by plot.py at 2019-02-20 17:41:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 63.087 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.147 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.912 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.731 ms
Loss rate: 0.00%
Run 3: Report of SCReAM — Data Link

[Graph of Throughput vs. Time with various flow types]

[Graph of Per-packet One Way Delay vs. Time with various flow types]

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Run 4: Statistics of SCReAM

Start at: 2019-02-20 13:56:19
End at: 2019-02-20 13:56:50
Local clock offset: -0.134 ms
Remote clock offset: -0.515 ms

# Below is generated by plot.py at 2019-02-20 17:41:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 62.777 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.730 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.713 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.837 ms
Loss rate: 0.00%
Run 4: Report of SCReAM — Data Link
Run 5: Statistics of SCReAM

Start at: 2019-02-20 14:33:12
End at: 2019-02-20 14:33:42
Local clock offset: -0.006 ms
Remote clock offset: 0.021 ms

# Below is generated by plot.py at 2019-02-20 17:41:28
# Datalink statistics
-- Total of 3 flows:
95th percentile per-packet one-way delay: 63.470 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.259 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.301 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.560 ms
Loss rate: 0.00%
Run 5: Report of SCReAM — Data Link

![Graph of Throughput and Delay vs Time](image_url)
Run 1: Statistics of Sprout

Start at: 2019-02-20 12:03:48
End at: 2019-02-20 12:04:18
Local clock offset: -0.11 ms
Remote clock offset: 0.622 ms

# Below is generated by plot.py at 2019-02-20 17:41:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 13.52 Mbit/s
  95th percentile per-packet one-way delay: 64.500 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 6.78 Mbit/s
  95th percentile per-packet one-way delay: 64.568 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 6.78 Mbit/s
  95th percentile per-packet one-way delay: 64.279 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 6.49 Mbit/s
  95th percentile per-packet one-way delay: 64.300 ms
  Loss rate: 0.00%
Run 1: Report of Sprout — Data Link
Run 2: Statistics of Sprout

Start at: 2019-02-20 12:41:16
End at: 2019-02-20 12:41:46
Local clock offset: -0.094 ms
Remote clock offset: -1.564 ms

# Below is generated by plot.py at 2019-02-20 17:41:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 13.34 Mbit/s
  95th percentile per-packet one-way delay: 62.537 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 6.74 Mbit/s
  95th percentile per-packet one-way delay: 62.630 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 6.69 Mbit/s
  95th percentile per-packet one-way delay: 62.282 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 6.53 Mbit/s
  95th percentile per-packet one-way delay: 62.461 ms
  Loss rate: 0.00%
Run 2: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 6.74 Mbit/s)
- Flow 1 egress (mean 6.74 Mbit/s)
- Flow 2 ingress (mean 6.69 Mbit/s)
- Flow 2 egress (mean 6.69 Mbit/s)
- Flow 3 ingress (mean 6.53 Mbit/s)
- Flow 3 egress (mean 6.53 Mbit/s)

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

- Flow 1 (95th percentile 62.63 ms)
- Flow 2 (95th percentile 62.28 ms)
- Flow 3 (95th percentile 62.46 ms)
Run 3: Statistics of Sprout

Start at: 2019-02-20 13:18:11
End at: 2019-02-20 13:18:41
Local clock offset: -0.056 ms
Remote clock offset: 0.653 ms

# Below is generated by plot.py at 2019-02-20 17:41:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.40 Mbit/s
95th percentile per-packet one-way delay: 64.534 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.75 Mbit/s
95th percentile per-packet one-way delay: 64.331 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.75 Mbit/s
95th percentile per-packet one-way delay: 64.745 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.54 Mbit/s
95th percentile per-packet one-way delay: 64.328 ms
Loss rate: 0.00%
Run 3: Report of Sprout — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 6.75 Mbps)
- Flow 1 egress (mean 6.75 Mbps)
- Flow 2 ingress (mean 6.75 Mbps)
- Flow 2 egress (mean 6.75 Mbps)
- Flow 3 ingress (mean 6.54 Mbps)
- Flow 3 egress (mean 6.54 Mbps)

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

- Flow 1 (95th percentile 64.33 ms)
- Flow 2 (95th percentile 64.75 ms)
- Flow 3 (95th percentile 64.33 ms)
Run 4: Statistics of Sprout

End at: 2019-02-20 13:55:36
Local clock offset: -0.134 ms
Remote clock offset: -1.591 ms

# Below is generated by plot.py at 2019-02-20 17:41:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.35 Mbit/s
95th percentile per-packet one-way delay: 62.320 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.82 Mbit/s
95th percentile per-packet one-way delay: 62.356 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.63 Mbit/s
95th percentile per-packet one-way delay: 62.223 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.43 Mbit/s
95th percentile per-packet one-way delay: 62.327 ms
Loss rate: 0.00%
Run 4: Report of Sprout — Data Link

![Graph showing network performance metrics over time]

- Flow 1 ingress (mean 6.82 Mbit/s)
- Flow 1 egress (mean 6.82 Mbit/s)
- Flow 2 ingress (mean 6.63 Mbit/s)
- Flow 2 egress (mean 6.63 Mbit/s)
- Flow 3 ingress (mean 6.43 Mbit/s)
- Flow 3 egress (mean 6.43 Mbit/s)

![Graph showing per-packet delivery time]

- Flow 1 (95th percentile 62.36 ms)
- Flow 2 (95th percentile 62.22 ms)
- Flow 3 (95th percentile 62.33 ms)
Run 5: Statistics of Sprout

Start at: 2019-02-20 14:31:58
End at: 2019-02-20 14:32:28
Local clock offset: -0.023 ms
Remote clock offset: 0.568 ms

# Below is generated by plot.py at 2019-02-20 17:41:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.33 Mbit/s
95th percentile per-packet one-way delay: 64.677 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.77 Mbit/s
95th percentile per-packet one-way delay: 64.749 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.68 Mbit/s
95th percentile per-packet one-way delay: 64.333 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.45 Mbit/s
95th percentile per-packet one-way delay: 64.689 ms
Loss rate: 0.00%
Run 5: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 6.77 Mbps)
- Flow 1 egress (mean 6.77 Mbps)
- Flow 2 ingress (mean 6.68 Mbps)
- Flow 2 egress (mean 6.68 Mbps)
- Flow 3 ingress (mean 6.45 Mbps)
- Flow 3 egress (mean 6.45 Mbps)

![Graph 2: Packet Delay (ms)](image2)

- Flow 1 (95th percentile 64.75 ms)
- Flow 2 (95th percentile 64.33 ms)
- Flow 3 (95th percentile 64.69 ms)
Run 1: Statistics of TaoVA-100x

Start at: 2019-02-20 12:29:30
End at: 2019-02-20 12:30:00
Local clock offset: -0.076 ms
Remote clock offset: -0.237 ms

# Below is generated by plot.py at 2019-02-20 17:48:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 447.17 Mbit/s
95th percentile per-packet one-way delay: 64.078 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 223.76 Mbit/s
95th percentile per-packet one-way delay: 63.930 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 219.65 Mbit/s
95th percentile per-packet one-way delay: 63.409 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 230.55 Mbit/s
95th percentile per-packet one-way delay: 65.577 ms
Loss rate: 0.07%
Run 1: Report of TaoVA-100x — Data Link

![Graph of throughput and packet loss over time for different flows.](image-url)
Run 2: Statistics of TaoVA-100x

Start at: 2019-02-20 13:06:50
End at: 2019-02-20 13:07:20
Local clock offset: -0.044 ms
Remote clock offset: -0.873 ms

# Below is generated by plot.py at 2019-02-20 17:48:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 434.64 Mbit/s
  95th percentile per-packet one-way delay: 62.412 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 224.47 Mbit/s
  95th percentile per-packet one-way delay: 62.178 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 224.35 Mbit/s
  95th percentile per-packet one-way delay: 62.342 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 182.80 Mbit/s
  95th percentile per-packet one-way delay: 62.885 ms
  Loss rate: 0.01%
Run 2: Report of TaoVA-100x — Data Link
Run 3: Statistics of TaoVA-100x

Start at: 2019-02-20 13:43:36
End at: 2019-02-20 13:44:06
Local clock offset: -0.134 ms
Remote clock offset: -0.15 ms

# Below is generated by plot.py at 2019-02-20 17:48:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 439.22 Mbit/s
95th percentile per-packet one-way delay: 63.599 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 221.93 Mbit/s
95th percentile per-packet one-way delay: 63.392 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 226.83 Mbit/s
95th percentile per-packet one-way delay: 63.687 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 198.52 Mbit/s
95th percentile per-packet one-way delay: 67.109 ms
Loss rate: 0.04%
Run 3: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 221.94 Mbit/s)
- Flow 1 egress (mean 221.93 Mbit/s)
- Flow 2 ingress (mean 226.86 Mbit/s)
- Flow 2 egress (mean 226.83 Mbit/s)
- Flow 3 ingress (mean 198.59 Mbit/s)
- Flow 3 egress (mean 198.52 Mbit/s)

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

- Flow 1 (95th percentile 63.39 ms)
- Flow 2 (95th percentile 63.69 ms)
- Flow 3 (95th percentile 67.11 ms)
Run 4: Statistics of TaoVA-100x

Start at: 2019-02-20 14:20:39
End at: 2019-02-20 14:21:09
Local clock offset: 0.034 ms
Remote clock offset: 0.301 ms

# Below is generated by plot.py at 2019-02-20 17:48:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 435.41 Mbit/s
95th percentile per-packet one-way delay: 64.612 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 225.05 Mbit/s
95th percentile per-packet one-way delay: 64.486 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 216.59 Mbit/s
95th percentile per-packet one-way delay: 64.093 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 199.12 Mbit/s
95th percentile per-packet one-way delay: 66.910 ms
Loss rate: 0.00%
Run 4: Report of TaoVA-100x — Data Link

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

Throughput (Mbps)

Time (s)

0 5 10 15 20 25 30

Flow 1 ingress (mean 225.06 Mbps)  Flow 1 egress (mean 225.05 Mbps)
Flow 2 ingress (mean 216.59 Mbps)  Flow 2 egress (mean 216.59 Mbps)
Flow 3 ingress (mean 199.14 Mbps)  Flow 3 egress (mean 199.12 Mbps)

Per packet size (ms)

0 5 10 15 20 25 30

Flow 1 (95th percentile 64.49 ms)  Flow 2 (95th percentile 64.09 ms)  Flow 3 (95th percentile 66.91 ms)
Run 5: Statistics of TaoVA-100x

Start at: 2019-02-20 14:57:31
End at: 2019-02-20 14:58:01
Local clock offset: -0.06 ms
Remote clock offset: -0.147 ms

# Below is generated by plot.py at 2019-02-20 17:49:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 457.35 Mbit/s
95th percentile per-packet one-way delay: 64.684 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 232.87 Mbit/s
95th percentile per-packet one-way delay: 64.436 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 230.75 Mbit/s
95th percentile per-packet one-way delay: 65.224 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 213.24 Mbit/s
95th percentile per-packet one-way delay: 63.494 ms
Loss rate: 0.00%
Run 5: Report of TaoVA-100x — Data Link

![Graph showing data link performance with throughput and per-packet one way delay metrics.](image-url)
Run 1: Statistics of TCP Vegas

Start at: 2019-02-20 12:31:25
End at: 2019-02-20 12:31:55
Local clock offset: -0.077 ms
Remote clock offset: 0.683 ms

# Below is generated by plot.py at 2019-02-20 17:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 943.93 Mbit/s
  95th percentile per-packet one-way delay: 125.417 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 450.17 Mbit/s
  95th percentile per-packet one-way delay: 70.429 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 523.16 Mbit/s
  95th percentile per-packet one-way delay: 130.869 ms
  Loss rate: 0.13%
-- Flow 3:
  Average throughput: 436.47 Mbit/s
  95th percentile per-packet one-way delay: 92.499 ms
  Loss rate: 0.00%
Run 1: Report of TCP Vegas — Data Link
Run 2: Statistics of TCP Vegas

Start at: 2019-02-20 13:08:44
End at: 2019-02-20 13:09:14
Local clock offset: -0.076 ms
Remote clock offset: 1.306 ms

# Below is generated by plot.py at 2019-02-20 17:58:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 888.55 Mbit/s
95th percentile per-packet one-way delay: 71.917 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 456.63 Mbit/s
95th percentile per-packet one-way delay: 71.826 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 442.55 Mbit/s
95th percentile per-packet one-way delay: 71.027 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 412.86 Mbit/s
95th percentile per-packet one-way delay: 74.129 ms
Loss rate: 0.00%
Run 2: Report of TCP Vegas — Data Link
Run 3: Statistics of TCP Vegas

Start at: 2019-02-20 13:45:32
End at: 2019-02-20 13:46:02
Local clock offset: -0.122 ms
Remote clock offset: 0.583 ms

# Below is generated by plot.py at 2019-02-20 17:58:11
# Datalink statistics

-- Total of 3 flows:
Average throughput: 790.65 Mbit/s
95th percentile per-packet one-way delay: 70.462 ms
Loss rate: 0.00%

-- Flow 1:
Average throughput: 385.36 Mbit/s
95th percentile per-packet one-way delay: 67.332 ms
Loss rate: 0.00%

-- Flow 2:
Average throughput: 408.20 Mbit/s
95th percentile per-packet one-way delay: 72.764 ms
Loss rate: 0.00%

-- Flow 3:
Average throughput: 401.36 Mbit/s
95th percentile per-packet one-way delay: 69.463 ms
Loss rate: 0.00%
Run 3: Report of TCP Vegas — Data Link

Throughput (Mb/s)

Time (s)

Flow 1 ingress (mean 385.36 Mb/s)
Flow 1 egress (mean 385.36 Mb/s)
Flow 2 ingress (mean 408.20 Mb/s)
Flow 2 egress (mean 408.20 Mb/s)
Flow 3 ingress (mean 401.37 Mb/s)
Flow 3 egress (mean 401.36 Mb/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 67.33 ms)
Flow 2 (95th percentile 72.76 ms)
Flow 3 (95th percentile 69.46 ms)
Run 4: Statistics of TCP Vegas

Start at: 2019-02-20 14:22:33
End at: 2019-02-20 14:23:03
Local clock offset: -0.022 ms
Remote clock offset: -0.505 ms

# Below is generated by plot.py at 2019-02-20 18:01:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 724.25 Mbit/s
  95th percentile per-packet one-way delay: 65.805 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 413.31 Mbit/s
  95th percentile per-packet one-way delay: 65.631 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 349.38 Mbit/s
  95th percentile per-packet one-way delay: 67.505 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 236.88 Mbit/s
  95th percentile per-packet one-way delay: 63.583 ms
  Loss rate: 0.00%
Run 4: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 413.31 Mbit/s)
- Flow 1 egress (mean 413.31 Mbit/s)
- Flow 2 ingress (mean 348.26 Mbit/s)
- Flow 2 egress (mean 349.38 Mbit/s)
- Flow 3 ingress (mean 236.88 Mbit/s)
- Flow 3 egress (mean 236.88 Mbit/s)

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

- Flow 1 (95th percentile 65.63 ms)
- Flow 2 (95th percentile 67.50 ms)
- Flow 3 (95th percentile 63.58 ms)
Run 5: Statistics of TCP Vegas

Start at: 2019-02-20 14:59:27
End at: 2019-02-20 14:59:57
Local clock offset: -0.087 ms
Remote clock offset: 0.026 ms

# Below is generated by plot.py at 2019-02-20 18:05:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 948.50 Mbit/s
95th percentile per-packet one-way delay: 140.346 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 451.62 Mbit/s
95th percentile per-packet one-way delay: 69.611 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 545.41 Mbit/s
95th percentile per-packet one-way delay: 113.197 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 402.10 Mbit/s
95th percentile per-packet one-way delay: 181.100 ms
Loss rate: 0.85%
Run 5: Report of TCP Vegas — Data Link

![Graph of network throughput and packet delay over time for different traffic flows.]

Legend:
- Flow 1 ingress (mean 451.63 Mbit/s)
- Flow 1 egress (mean 451.62 Mbit/s)
- Flow 2 ingress (mean 546.52 Mbit/s)
- Flow 2 egress (mean 545.41 Mbit/s)
- Flow 3 ingress (mean 405.58 Mbit/s)
- Flow 3 egress (mean 402.10 Mbit/s)

![Graph of packet delay distribution by flow and time.]

Legend:
- Flow 1 (95th percentile 69.61 ms)
- Flow 2 (95th percentile 113.20 ms)
- Flow 3 (95th percentile 181.10 ms)
Run 1: Statistics of Verus

Start at: 2019-02-20 12:12:25
End at: 2019-02-20 12:12:55
Local clock offset: -0.133 ms
Remote clock offset: 1.245 ms

# Below is generated by plot.py at 2019-02-20 18:05:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 271.21 Mbit/s
95th percentile per-packet one-way delay: 182.158 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 161.51 Mbit/s
95th percentile per-packet one-way delay: 96.485 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 99.29 Mbit/s
95th percentile per-packet one-way delay: 96.862 ms
Loss rate: 0.96%
-- Flow 3:
Average throughput: 135.83 Mbit/s
95th percentile per-packet one-way delay: 263.234 ms
Loss rate: 4.15%
Run 1: Report of Verus — Data Link
Run 2: Statistics of Verus

Start at: 2019-02-20 12:49:47
End at: 2019-02-20 12:50:17
Local clock offset: -0.068 ms
Remote clock offset: -0.174 ms

# Below is generated by plot.py at 2019-02-20 18:05:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 259.14 Mbit/s
95th percentile per-packet one-way delay: 141.929 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 116.90 Mbit/s
95th percentile per-packet one-way delay: 105.323 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 161.99 Mbit/s
95th percentile per-packet one-way delay: 158.480 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 108.24 Mbit/s
95th percentile per-packet one-way delay: 124.049 ms
Loss rate: 1.92%
Run 2: Report of Verus — Data Link

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

- Flow 1 ingress (mean 116.91 Mbit/s)
- Flow 1 egress (mean 116.90 Mbit/s)
- Flow 2 ingress (mean 165.52 Mbit/s)
- Flow 2 egress (mean 161.99 Mbit/s)
- Flow 3 ingress (mean 110.37 Mbit/s)
- Flow 3 egress (mean 108.24 Mbit/s)

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

- Flow 1 (95th percentile 105.32 ms)
- Flow 2 (95th percentile 158.48 ms)
- Flow 3 (95th percentile 124.05 ms)
Run 3: Statistics of Verus

Start at: 2019-02-20 13:26:41
End at: 2019-02-20 13:27:11
Local clock offset: -0.075 ms
Remote clock offset: -1.443 ms

# Below is generated by plot.py at 2019-02-20 18:05:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 260.94 Mbit/s
95th percentile per-packet one-way delay: 108.392 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 117.61 Mbit/s
95th percentile per-packet one-way delay: 95.535 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 172.58 Mbit/s
95th percentile per-packet one-way delay: 117.874 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 87.56 Mbit/s
95th percentile per-packet one-way delay: 106.807 ms
Loss rate: 0.00%
Run 3: Report of Verus — Data Link

![Graph showing network throughput and delay](image-url)
Run 4: Statistics of Verus

Start at: 2019-02-20 14:03:38
End at: 2019-02-20 14:04:08
Local clock offset: -0.047 ms
Remote clock offset: -0.792 ms

# Below is generated by plot.py at 2019-02-20 18:05:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 289.58 Mbit/s
  95th percentile per-packet one-way delay: 212.175 ms
  Loss rate: 3.29%
-- Flow 1:
  Average throughput: 175.63 Mbit/s
  95th percentile per-packet one-way delay: 187.160 ms
  Loss rate: 1.36%
-- Flow 2:
  Average throughput: 90.83 Mbit/s
  95th percentile per-packet one-way delay: 114.434 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 163.09 Mbit/s
  95th percentile per-packet one-way delay: 262.294 ms
  Loss rate: 12.20%
Run 4: Report of Verus — Data Link

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

- **Throughput (Mbit/s):**
  - Flow 1 ingress (mean 178.01 Mbit/s)
  - Flow 1 egress (mean 175.63 Mbit/s)
  - Flow 2 ingress (mean 90.84 Mbit/s)
  - Flow 2 egress (mean 90.83 Mbit/s)
  - Flow 3 ingress (mean 180.81 Mbit/s)
  - Flow 3 egress (mean 163.09 Mbit/s)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 187.16 ms)
  - Flow 2 (95th percentile 114.43 ms)
  - Flow 3 (95th percentile 262.29 ms)
Run 5: Statistics of Verus

Start at: 2019-02-20 14:40:32
End at: 2019-02-20 14:41:02
Local clock offset: -0.064 ms
Remote clock offset: 0.558 ms

# Below is generated by plot.py at 2019-02-20 18:07:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 281.83 Mbit/s
95th percentile per-packet one-way delay: 160.152 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 155.59 Mbit/s
95th percentile per-packet one-way delay: 120.039 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 140.52 Mbit/s
95th percentile per-packet one-way delay: 197.792 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 100.74 Mbit/s
95th percentile per-packet one-way delay: 106.194 ms
Loss rate: 0.00%
Run 1: Statistics of PCC-Vivace

Start at: 2019-02-20 12:00:10
End at: 2019-02-20 12:00:40
Local clock offset: -0.098 ms
Remote clock offset: -0.704 ms

# Below is generated by plot.py at 2019-02-20 18:07:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 521.91 Mbit/s
  95th percentile per-packet one-way delay: 65.589 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 327.58 Mbit/s
  95th percentile per-packet one-way delay: 72.119 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 247.70 Mbit/s
  95th percentile per-packet one-way delay: 64.362 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 88.22 Mbit/s
  95th percentile per-packet one-way delay: 62.852 ms
  Loss rate: 0.00%
Run 1: Report of PCC-Vivace — Data Link
Run 2: Statistics of PCC-Vivace

Start at: 2019-02-20 12:37:29
End at: 2019-02-20 12:37:59
Local clock offset: -0.091 ms
Remote clock offset: -0.671 ms

# Below is generated by plot.py at 2019-02-20 18:08:02
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 591.66 Mbit/s
  95th percentile per-packet one-way delay: 136.915 ms
  Loss rate: 0.11%
-- Flow 1:
  Average throughput: 331.64 Mbit/s
  95th percentile per-packet one-way delay: 101.321 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 310.70 Mbit/s
  95th percentile per-packet one-way delay: 202.627 ms
  Loss rate: 0.31%
-- Flow 3:
  Average throughput: 162.28 Mbit/s
  95th percentile per-packet one-way delay: 63.716 ms
  Loss rate: 0.00%
Run 2: Report of PCC-Vivace — Data Link

![Graph 1: Throughput (Mbps)]

- **Flow 1 ingress (mean 331.64 Mbps)**
- **Flow 1 egress (mean 331.64 Mbps)**
- **Flow 2 ingress (mean 311.67 Mbps)**
- **Flow 2 egress (mean 310.70 Mbps)**
- **Flow 3 ingress (mean 162.28 Mbps)**
- **Flow 3 egress (mean 162.28 Mbps)**

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

- **Flow 1 (95th percentile 101.32 ms)**
- **Flow 2 (95th percentile 202.63 ms)**
- **Flow 3 (95th percentile 63.72 ms)**
Run 3: Statistics of PCC-Vivace

Start at: 2019-02-20 13:14:27
End at: 2019-02-20 13:14:57
Local clock offset: -0.075 ms
Remote clock offset: -0.861 ms

# Below is generated by plot.py at 2019-02-20 18:08:02
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 539.53 Mbit/s
   95th percentile per-packet one-way delay: 70.649 ms
   Loss rate: 0.00%
-- Flow 1:
   Average throughput: 316.03 Mbit/s
   95th percentile per-packet one-way delay: 94.553 ms
   Loss rate: 0.00%
-- Flow 2:
   Average throughput: 249.29 Mbit/s
   95th percentile per-packet one-way delay: 66.832 ms
   Loss rate: 0.00%
-- Flow 3:
   Average throughput: 175.33 Mbit/s
   95th percentile per-packet one-way delay: 65.866 ms
   Loss rate: 0.01%
Run 3: Report of PCC-Vivace — Data Link

![Graph showing throughput and delay for different flows over time]
Run 4: Statistics of PCC-Vivace

Start at: 2019-02-20 13:51:19
End at: 2019-02-20 13:51:49
Local clock offset: -0.123 ms
Remote clock offset: -0.114 ms

# Below is generated by plot.py at 2019-02-20 18:08:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 593.39 Mbit/s
95th percentile per-packet one-way delay: 130.511 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 298.89 Mbit/s
95th percentile per-packet one-way delay: 148.648 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 318.91 Mbit/s
95th percentile per-packet one-way delay: 93.291 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 250.50 Mbit/s
95th percentile per-packet one-way delay: 135.139 ms
Loss rate: 0.00%
Run 4: Report of PCC-Vivace — Data Link

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

- **Throughput Graph**
  - Flow 1 ingress (mean 300.53 Mbit/s)
  - Flow 1 egress (mean 298.89 Mbit/s)
  - Flow 2 ingress (mean 318.90 Mbit/s)
  - Flow 2 egress (mean 318.91 Mbit/s)
  - Flow 3 ingress (mean 250.50 Mbit/s)
  - Flow 3 egress (mean 250.50 Mbit/s)

- **Packet Delay Graph**
  - Flow 1 (95th percentile: 148.65 ms)
  - Flow 2 (95th percentile: 93.29 ms)
  - Flow 3 (95th percentile: 135.14 ms)
Run 5: Statistics of PCC-Vivace

Start at: 2019-02-20 14:28:14
End at: 2019-02-20 14:28:44
Local clock offset: 0.009 ms
Remote clock offset: -0.723 ms

# Below is generated by plot.py at 2019-02-20 18:08:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 568.22 Mbit/s
95th percentile per-packet one-way delay: 68.308 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 336.21 Mbit/s
95th percentile per-packet one-way delay: 69.919 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 324.62 Mbit/s
95th percentile per-packet one-way delay: 67.993 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 49.13 Mbit/s
95th percentile per-packet one-way delay: 62.886 ms
Loss rate: 0.00%
Run 5: Report of PCC-Vivace — Data Link
Run 1: Statistics of WebRTC media

Start at: 2019-02-20 12:19:25
End at: 2019-02-20 12:19:55
Local clock offset: -0.13 ms
Remote clock offset: -0.278 ms

# Below is generated by plot.py at 2019-02-20 18:08:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1.94 Mbit/s
  95th percentile per-packet one-way delay: 63.137 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 62.885 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.70 Mbit/s
  95th percentile per-packet one-way delay: 62.948 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.66 Mbit/s
  95th percentile per-packet one-way delay: 63.222 ms
  Loss rate: 0.00%
Run 1: Report of WebRTC media — Data Link
Run 2: Statistics of WebRTC media

Start at: 2019-02-20 12:56:51
End at: 2019-02-20 12:57:21
Local clock offset: -0.062 ms
Remote clock offset: -1.421 ms

# Below is generated by plot.py at 2019-02-20 18:08:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.14 Mbit/s
  95th percentile per-packet one-way delay: 61.733 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 61.627 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 61.725 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 61.771 ms
  Loss rate: 0.00%
Run 2: Report of WebRTC media — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 0.05 Mbps)  Flow 1 egress (mean 0.05 Mbps)
Flow 2 ingress (mean 0.05 Mbps)  Flow 2 egress (mean 0.05 Mbps)
Flow 3 ingress (mean 0.05 Mbps)  Flow 3 egress (mean 0.05 Mbps)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 61.63 ms)  Flow 2 (95th percentile 61.73 ms)  Flow 3 (95th percentile 61.77 ms)
Run 3: Statistics of WebRTC media

Start at: 2019-02-20 13:33:36  
End at: 2019-02-20 13:34:06  
Local clock offset: -0.119 ms  
Remote clock offset: 0.632 ms

# Below is generated by plot.py at 2019-02-20 18:08:30  
# Datalink statistics
-- Total of 3 flows:  
  Average throughput: 3.84 Mbit/s  
  95th percentile per-packet one-way delay: 63.917 ms  
  Loss rate: 0.00%  
-- Flow 1:  
  Average throughput: 2.11 Mbit/s  
  95th percentile per-packet one-way delay: 63.809 ms  
  Loss rate: 0.00%  
-- Flow 2:  
  Average throughput: 1.26 Mbit/s  
  95th percentile per-packet one-way delay: 63.897 ms  
  Loss rate: 0.00%  
-- Flow 3:  
  Average throughput: 0.48 Mbit/s  
  95th percentile per-packet one-way delay: 64.015 ms  
  Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link

![Graph 1: Throughput over time](image1)

![Graph 2: Packet one-way delay over time](image2)
Run 4: Statistics of WebRTC media

Start at: 2019-02-20 14:10:45
End at: 2019-02-20 14:11:15
Local clock offset: -0.039 ms
Remote clock offset: -1.449 ms

# Below is generated by plot.py at 2019-02-20 18:08:30
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 0.14 Mbit/s
   95th percentile per-packet one-way delay: 62.362 ms
   Loss rate: 0.00%
-- Flow 1:
   Average throughput: 0.05 Mbit/s
   95th percentile per-packet one-way delay: 61.727 ms
   Loss rate: 0.00%
-- Flow 2:
   Average throughput: 0.05 Mbit/s
   95th percentile per-packet one-way delay: 62.420 ms
   Loss rate: 0.00%
-- Flow 3:
   Average throughput: 0.05 Mbit/s
   95th percentile per-packet one-way delay: 62.030 ms
   Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 0.05 Mbit/s)
- Flow 1 egress (mean 0.05 Mbit/s)
- Flow 2 ingress (mean 0.05 Mbit/s)
- Flow 2 egress (mean 0.05 Mbit/s)
- Flow 3 ingress (mean 0.05 Mbit/s)
- Flow 3 egress (mean 0.05 Mbit/s)
Run 5: Statistics of WebRTC media

Start at: 2019-02-20 14:47:38
End at: 2019-02-20 14:48:08
Local clock offset: -0.037 ms
Remote clock offset: -0.347 ms

# Below is generated by plot.py at 2019-02-20 18:08:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.54 Mbit/s
  95th percentile per-packet one-way delay: 63.175 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 1.74 Mbit/s
  95th percentile per-packet one-way delay: 63.121 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.53 Mbit/s
  95th percentile per-packet one-way delay: 63.117 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.59 Mbit/s
  95th percentile per-packet one-way delay: 63.288 ms
  Loss rate: 0.00%
Run 5: Report of WebRTC media — Data Link