Pantheon Report

Data path: GCE Iowa on ens4 (remote) → GCE London on ens4 (local).
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 4.15.0-1028-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 @ d0153f8e594aa89e93b032143cedbdf658e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4d6fe0eddbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6b7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca496e
third_party/pantheon-tunnel @ f866d3f58d27af9d42717625ee3a354cc2e802bd
third_party/pcc @ 1acf958fa0d66d18b23c091a55f6ec872b4981e1
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 @ 77961f1a82733a86b42f1bc8143ebc978f3c3df4
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3b8b2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562539f9a494
M src/verus_hpp
M tools/plot.py
test from GCE Iowa to GCE London, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)
<table>
<thead>
<tr>
<th>scheme</th>
<th># runs</th>
<th>mean avg tput (Mbit/s)</th>
<th>mean 95th-%ile delay (ms)</th>
<th>mean loss rate (%)</th>
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<td>flow 2</td>
<td>flow 3</td>
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<td>445.37</td>
<td>396.50</td>
<td>357.54</td>
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<td>Copa</td>
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<td>219.51</td>
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<td>TCP Cubic</td>
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<td>323.18</td>
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<td>WebRTC media</td>
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</table>
Run 1: Statistics of TCP BBR

Start at: 2019-04-24 19:26:50
Local clock offset: 0.062 ms
Remote clock offset: -0.055 ms

# Below is generated by plot.py at 2019-04-24 22:23:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 832.05 Mbit/s
95th percentile per-packet one-way delay: 196.420 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 441.65 Mbit/s
95th percentile per-packet one-way delay: 201.993 ms
Loss rate: 1.35%
-- Flow 2:
Average throughput: 419.33 Mbit/s
95th percentile per-packet one-way delay: 132.777 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 337.76 Mbit/s
95th percentile per-packet one-way delay: 234.509 ms
Loss rate: 2.81%
Run 1: Report of TCP BBR — Data Link
Run 2: Statistics of TCP BBR

Start at: 2019-04-24 20:01:25
End at: 2019-04-24 20:01:55
Local clock offset: -0.061 ms
Remote clock offset: -0.193 ms

# Below is generated by plot.py at 2019-04-24 22:23:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 830.33 Mbit/s
95th percentile per-packet one-way delay: 222.233 ms
Loss rate: 1.75%
-- Flow 1:
Average throughput: 448.53 Mbit/s
95th percentile per-packet one-way delay: 218.315 ms
Loss rate: 1.24%
-- Flow 2:
Average throughput: 410.16 Mbit/s
95th percentile per-packet one-way delay: 223.614 ms
Loss rate: 2.13%
-- Flow 3:
Average throughput: 330.07 Mbit/s
95th percentile per-packet one-way delay: 228.192 ms
Loss rate: 2.87%
Run 2: Report of TCP BBR — Data Link
Run 3: Statistics of TCP BBR

Start at: 2019-04-24 20:36:03
End at: 2019-04-24 20:36:33
Local clock offset: -0.39 ms
Remote clock offset: 0.005 ms

# Below is generated by plot.py at 2019-04-24 22:23:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 811.16 Mbit/s
95th percentile per-packet one-way delay: 195.157 ms
Loss rate: 1.47%
-- Flow 1:
Average throughput: 440.15 Mbit/s
95th percentile per-packet one-way delay: 214.120 ms
Loss rate: 1.35%
-- Flow 2:
Average throughput: 363.82 Mbit/s
95th percentile per-packet one-way delay: 182.828 ms
Loss rate: 1.18%
-- Flow 3:
Average throughput: 390.82 Mbit/s
95th percentile per-packet one-way delay: 170.919 ms
Loss rate: 2.41%
Run 3: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 444.78 Mb/s)
- Flow 1 egress (mean 440.15 Mb/s)
- Flow 2 ingress (mean 366.41 Mb/s)
- Flow 2 egress (mean 363.82 Mb/s)
- Flow 3 ingress (mean 396.68 Mb/s)
- Flow 3 egress (mean 390.82 Mb/s)

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

- Flow 1 (95th percentile 214.12 ms)
- Flow 2 (95th percentile 182.83 ms)
- Flow 3 (95th percentile 170.92 ms)
Run 4: Statistics of TCP BBR

End at: 2019-04-24 21:11:05
Local clock offset: 0.034 ms
Remote clock offset: -0.078 ms

# Below is generated by plot.py at 2019-04-24 22:23:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 835.90 Mbit/s
  95th percentile per-packet one-way delay: 187.569 ms
  Loss rate: 1.16%
-- Flow 1:
  Average throughput: 444.14 Mbit/s
  95th percentile per-packet one-way delay: 192.101 ms
  Loss rate: 0.82%
-- Flow 2:
  Average throughput: 410.30 Mbit/s
  95th percentile per-packet one-way delay: 172.816 ms
  Loss rate: 1.11%
-- Flow 3:
  Average throughput: 360.12 Mbit/s
  95th percentile per-packet one-way delay: 221.286 ms
  Loss rate: 2.54%
Run 4: Report of TCP BBR — Data Link

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

Flow 1:
- Ingress: Mean 446.42 Mbit/s
- Egress: Mean 444.14 Mbit/s

Flow 2:
- Ingress: Mean 412.92 Mbit/s
- Egress: Mean 410.30 Mbit/s

Flow 3:
- Ingress: Mean 366.01 Mbit/s
- Egress: Mean 360.12 Mbit/s

Flow 1 (95th percentile 192.10 ms)
Flow 2 (95th percentile 172.82 ms)
Flow 3 (95th percentile 221.29 ms)
Run 5: Statistics of TCP BBR

End at: 2019-04-24 21:45:26
Local clock offset: 0.054 ms
Remote clock offset: -0.043 ms

# Below is generated by plot.py at 2019-04-24 22:23:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 826.18 Mbit/s
95th percentile per-packet one-way delay: 201.724 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 452.37 Mbit/s
95th percentile per-packet one-way delay: 193.461 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 378.87 Mbit/s
95th percentile per-packet one-way delay: 197.645 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 368.95 Mbit/s
95th percentile per-packet one-way delay: 215.401 ms
Loss rate: 2.44%
Run 5: Report of TCP BBR — Data Link
Run 1: Statistics of Copa

Start at: 2019-04-24 19:01:03
End at: 2019-04-24 19:01:33
Local clock offset: 0.016 ms
Remote clock offset: -0.052 ms

# Below is generated by plot.py at 2019-04-24 22:23:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 429.97 Mbit/s
95th percentile per-packet one-way delay: 83.967 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 225.46 Mbit/s
95th percentile per-packet one-way delay: 72.329 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 223.43 Mbit/s
95th percentile per-packet one-way delay: 79.257 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 170.08 Mbit/s
95th percentile per-packet one-way delay: 145.701 ms
Loss rate: 0.70%
Run 1: Report of Copa — Data Link

![Graph 1: Throughput (Mbps)]

- **Flow 1 ingress** (mean 225.61 Mbps)
- **Flow 1 egress** (mean 225.46 Mbps)
- **Flow 2 ingress** (mean 223.72 Mbps)
- **Flow 2 egress** (mean 223.43 Mbps)
- **Flow 3 ingress** (mean 169.66 Mbps)
- **Flow 3 egress** (mean 170.08 Mbps)

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

- **Flow 1** (95th percentile 72.33 ms)
- **Flow 2** (95th percentile 79.26 ms)
- **Flow 3** (95th percentile 145.70 ms)
Run 2: Statistics of Copa

End at: 2019-04-24 19:36:18
Local clock offset: 0.008 ms
Remote clock offset: -0.155 ms

# Below is generated by plot.py at 2019-04-24 22:23:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 429.88 Mbit/s
95th percentile per-packet one-way delay: 66.631 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 200.78 Mbit/s
95th percentile per-packet one-way delay: 69.527 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 243.88 Mbit/s
95th percentile per-packet one-way delay: 64.032 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 202.89 Mbit/s
95th percentile per-packet one-way delay: 63.491 ms
Loss rate: 1.05%
Run 2: Report of Copa — Data Link

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

Throughput (Mbps):
- Flow 1 ingress (mean 200.75 Mbps)
- Flow 1 egress (mean 200.78 Mbps)
- Flow 2 ingress (mean 243.89 Mbps)
- Flow 2 egress (mean 243.88 Mbps)
- Flow 3 ingress (mean 203.11 Mbps)
- Flow 3 egress (mean 202.89 Mbps)

Delay (ms):
- Flow 1 (95th percentile 69.53 ms)
- Flow 2 (95th percentile 64.03 ms)
- Flow 3 (95th percentile 63.49 ms)
Run 3: Statistics of Copa

End at: 2019-04-24 20:10:57
Local clock offset: -0.082 ms
Remote clock offset: -0.08 ms

# Below is generated by plot.py at 2019-04-24 22:23:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 439.03 Mbit/s
95th percentile per-packet one-way delay: 72.225 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 230.97 Mbit/s
95th percentile per-packet one-way delay: 76.734 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 194.40 Mbit/s
95th percentile per-packet one-way delay: 69.700 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 238.56 Mbit/s
95th percentile per-packet one-way delay: 64.635 ms
Loss rate: 1.10%
Run 3: Report of Copa — Data Link

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

Throughput (Mbps)

Time (s)

Packet delay (ms)

Flow 1 ingress (mean 231.05 Mbps), Flow 1 egress (mean 230.97 Mbps), Flow 2 ingress (mean 194.34 Mbps), Flow 2 egress (mean 194.40 Mbps), Flow 3 ingress (mean 238.91 Mbps), Flow 3 egress (mean 238.56 Mbps).

Flow 1 (95th percentile 76.73 ms), Flow 2 (95th percentile 69.70 ms), Flow 3 (95th percentile 64.64 ms).
Run 4: Statistics of Copa

End at: 2019-04-24 20:45:29
Local clock offset: 0.031 ms
Remote clock offset: -0.022 ms

# Below is generated by plot.py at 2019-04-24 22:39:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 458.29 Mbit/s
95th percentile per-packet one-way delay: 72.480 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 241.00 Mbit/s
95th percentile per-packet one-way delay: 70.798 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 224.83 Mbit/s
95th percentile per-packet one-way delay: 80.666 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 205.14 Mbit/s
95th percentile per-packet one-way delay: 57.058 ms
Loss rate: 1.04%
Run 4: Report of Copa — Data Link

![Throughput Graph](image1)

![Per-packet round trip delay Graph](image2)
Run 5: Statistics of Copa

End at: 2019-04-24 21:20:01
Local clock offset: 0.025 ms
Remote clock offset: -0.046 ms

# Below is generated by plot.py at 2019-04-24 22:39:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 403.05 Mbit/s
95th percentile per-packet one-way delay: 64.521 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 199.32 Mbit/s
95th percentile per-packet one-way delay: 68.462 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 219.52 Mbit/s
95th percentile per-packet one-way delay: 63.051 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 174.84 Mbit/s
95th percentile per-packet one-way delay: 60.408 ms
Loss rate: 0.99%
Run 1: Statistics of TCP Cubic

End at: 2019-04-24 19:15:52
Local clock offset: 0.049 ms
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2019-04-24 22:39:10
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 819.81 Mbit/s
   95th percentile per-packet one-way delay: 179.910 ms
   Loss rate: 0.84%
   -- Flow 1:
   Average throughput: 460.20 Mbit/s
   95th percentile per-packet one-way delay: 178.339 ms
   Loss rate: 0.46%
   -- Flow 2:
   Average throughput: 374.31 Mbit/s
   95th percentile per-packet one-way delay: 158.092 ms
   Loss rate: 0.98%
   -- Flow 3:
   Average throughput: 335.08 Mbit/s
   95th percentile per-packet one-way delay: 193.062 ms
   Loss rate: 2.09%
Run 1: Report of TCP Cubic — Data Link
Run 2: Statistics of TCP Cubic

Start at: 2019-04-24 19:50:03
End at: 2019-04-24 19:50:33
Local clock offset: -0.05 ms
Remote clock offset: -0.173 ms

# Below is generated by plot.py at 2019-04-24 22:39:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 616.83 Mbit/s
95th percentile per-packet one-way delay: 172.539 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 210.48 Mbit/s
95th percentile per-packet one-way delay: 84.936 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 424.21 Mbit/s
95th percentile per-packet one-way delay: 180.412 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 376.40 Mbit/s
95th percentile per-packet one-way delay: 174.873 ms
Loss rate: 2.39%
Run 2: Report of TCP Cubic — Data Link

![Graphs showing throughputs and delays for different flows.]

Legend:
- Flow 1 ingress (mean 210.09 Mbit/s)
- Flow 1 egress (mean 210.48 Mbit/s)
- Flow 2 ingress (mean 425.18 Mbit/s)
- Flow 2 egress (mean 424.21 Mbit/s)
- Flow 3 ingress (mean 381.96 Mbit/s)
- Flow 3 egress (mean 376.40 Mbit/s)

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

Per-packet one-way delay (ms) vs. Time (s)
Run 3: Statistics of TCP Cubic

Local clock offset: -0.003 ms
Remote clock offset: 0.021 ms

# Below is generated by plot.py at 2019-04-24 22:39:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 846.61 Mbit/s
95th percentile per-packet one-way delay: 216.866 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 487.41 Mbit/s
95th percentile per-packet one-way delay: 154.533 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 400.08 Mbit/s
95th percentile per-packet one-way delay: 216.144 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 281.61 Mbit/s
95th percentile per-packet one-way delay: 280.588 ms
Loss rate: 3.76%
Run 3: Report of TCP Cubic — Data Link

Throughput (Mb/s)

Time (s)

Flow 1 ingress (mean 488.31 Mb/s) — Flow 1 egress (mean 487.41 Mb/s)
Flow 2 ingress (mean 400.70 Mb/s) — Flow 2 egress (mean 400.08 Mb/s)
Flow 3 ingress (mean 289.81 Mb/s) — Flow 3 egress (mean 281.61 Mb/s)

Packet delay (ms)

Time (s)

Flow 1 (95th percentile 154.53 ms) — Flow 2 (95th percentile 216.14 ms) — Flow 3 (95th percentile 280.59 ms)
Run 4: Statistics of TCP Cubic

Start at: 2019-04-24 20:59:08
End at: 2019-04-24 20:59:38
Local clock offset: 0.006 ms
Remote clock offset: -0.084 ms

# Below is generated by plot.py at 2019-04-24 22:40:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 877.56 Mbit/s
95th percentile per-packet one-way delay: 150.870 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 486.77 Mbit/s
95th percentile per-packet one-way delay: 157.279 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 399.85 Mbit/s
95th percentile per-packet one-way delay: 141.563 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 378.06 Mbit/s
95th percentile per-packet one-way delay: 128.734 ms
Loss rate: 1.41%
Run 4: Report of TCP Cubic — Data Link

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

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

- Flow 1 ingress (mean 487.69 Mb/s)
- Flow 1 egress (mean 486.77 Mb/s)
- Flow 2 ingress (mean 491.13 Mb/s)
- Flow 2 egress (mean 399.65 Mb/s)
- Flow 3 ingress (mean 377.56 Mb/s)
- Flow 3 egress (mean 378.06 Mb/s)

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

Per-packet one-way delay (ms) vs. Time (s)

- Flow 1 (95th percentile 157.28 ms)
- Flow 2 (95th percentile 141.56 ms)
- Flow 3 (95th percentile 128.73 ms)
Run 5: Statistics of TCP Cubic

Local clock offset: 0.4 ms
Remote clock offset: -0.041 ms

# Below is generated by plot.py at 2019-04-24 22:40:04
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 850.50 Mbit/s
  95th percentile per-packet one-way delay: 155.492 ms
  Loss rate: 0.75%
-- Flow 1:
  Average throughput: 430.61 Mbit/s
  95th percentile per-packet one-way delay: 91.862 ms
  Loss rate: 0.42%
-- Flow 2:
  Average throughput: 451.04 Mbit/s
  95th percentile per-packet one-way delay: 167.771 ms
  Loss rate: 0.77%
-- Flow 3:
  Average throughput: 363.14 Mbit/s
  95th percentile per-packet one-way delay: 138.705 ms
  Loss rate: 1.87%
Run 5: Report of TCP Cubic — Data Link
Run 1: Statistics of FillP

End at: 2019-04-24 19:17:44
Local clock offset: 0.077 ms
Remote clock offset: -0.056 ms

# Below is generated by plot.py at 2019-04-24 22:42:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 824.23 Mbit/s
95th percentile per-packet one-way delay: 95.854 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 488.28 Mbit/s
95th percentile per-packet one-way delay: 112.603 ms
Loss rate: 1.49%
-- Flow 2:
Average throughput: 380.67 Mbit/s
95th percentile per-packet one-way delay: 52.010 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 252.92 Mbit/s
95th percentile per-packet one-way delay: 52.175 ms
Loss rate: 0.62%
Run 1: Report of FillP — Data Link

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

- **Flow 1**: Ingress (mean 494.31 Mbit/s), Egress (mean 488.28 Mbit/s)
- **Flow 2**: Ingress (mean 380.90 Mbit/s), Egress (mean 380.67 Mbit/s)
- **Flow 3**: Ingress (mean 251.11 Mbit/s), Egress (mean 252.92 Mbit/s)
Run 2: Statistics of FillP

End at: 2019-04-24 19:52:16
Local clock offset: -0.049 ms
Remote clock offset: -0.165 ms

# Below is generated by plot.py at 2019-04-24 22:56:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 889.22 Mbit/s
95th percentile per-packet one-way delay: 79.015 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 563.16 Mbit/s
95th percentile per-packet one-way delay: 95.072 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 373.22 Mbit/s
95th percentile per-packet one-way delay: 53.516 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 237.31 Mbit/s
95th percentile per-packet one-way delay: 51.244 ms
Loss rate: 1.32%
Run 2: Report of FillP — Data Link

Throughput (Mbps):

- Flow 1 ingress (mean 566.21 Mbps)
- Flow 1 egress (mean 563.16 Mbps)
- Flow 2 ingress (mean 372.37 Mbps)
- Flow 2 egress (mean 373.22 Mbps)
- Flow 3 ingress (mean 238.54 Mbps)
- Flow 3 egress (mean 237.31 Mbps)

Per-packet one-way delay (ms):

- Flow 1 (95th percentile 95.07 ms)
- Flow 2 (95th percentile 53.52 ms)
- Flow 3 (95th percentile 51.24 ms)
Run 3: Statistics of FillP

End at: 2019-04-24 20:27:02
Local clock offset: -0.017 ms
Remote clock offset: -0.04 ms

# Below is generated by plot.py at 2019-04-24 22:57:08
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 825.11 Mbit/s
  95th percentile per-packet one-way delay: 97.923 ms
  Loss rate: 1.14%
-- Flow 1:
  Average throughput: 520.14 Mbit/s
  95th percentile per-packet one-way delay: 111.004 ms
  Loss rate: 1.48%
-- Flow 2:
  Average throughput: 330.73 Mbit/s
  95th percentile per-packet one-way delay: 56.249 ms
  Loss rate: 0.30%
-- Flow 3:
  Average throughput: 258.28 Mbit/s
  95th percentile per-packet one-way delay: 51.821 ms
  Loss rate: 1.19%
Run 3: Report of FillP — Data Link
Run 4: Statistics of FillP

Start at: 2019-04-24 21:01:03
End at: 2019-04-24 21:01:33
Local clock offset: 0.011 ms
Remote clock offset: -0.054 ms

# Below is generated by plot.py at 2019-04-24 22:59:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 882.31 Mbit/s
  95th percentile per-packet one-way delay: 84.502 ms
  Loss rate: 0.47%
-- Flow 1:
  Average throughput: 553.52 Mbit/s
  95th percentile per-packet one-way delay: 95.151 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 373.35 Mbit/s
  95th percentile per-packet one-way delay: 66.088 ms
  Loss rate: 0.42%
-- Flow 3:
  Average throughput: 245.00 Mbit/s
  95th percentile per-packet one-way delay: 52.814 ms
  Loss rate: 1.17%
Run 4: Report of FillP — Data Link

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

- Flow 1 Ingress (mean 553.87 Mbps/s)
- Flow 1 Egress (mean 553.52 Mbps/s)
- Flow 2 Ingress (mean 373.05 Mbps/s)
- Flow 2 Egress (mean 373.35 Mbps/s)
- Flow 3 Ingress (mean 245.55 Mbps/s)
- Flow 3 Egress (mean 245.00 Mbps/s)

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

- Flow 1 (95th percentile 95.15 ms)
- Flow 2 (95th percentile 66.09 ms)
- Flow 3 (95th percentile 52.81 ms)
Run 5: Statistics of FillP

Start at: 2019-04-24 21:35:21
End at: 2019-04-24 21:35:51
Local clock offset: 0.041 ms
Remote clock offset: -0.01 ms

# Below is generated by plot.py at 2019-04-24 22:59:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 838.88 Mbit/s
95th percentile per-packet one-way delay: 87.745 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 518.42 Mbit/s
95th percentile per-packet one-way delay: 97.357 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 348.94 Mbit/s
95th percentile per-packet one-way delay: 58.780 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 269.86 Mbit/s
95th percentile per-packet one-way delay: 52.565 ms
Loss rate: 1.10%
Run 5: Report of FillP — Data Link

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

- Flow 1 ingress (mean 520.42 Mbit/s)
- Flow 1 egress (mean 518.42 Mbit/s)
- Flow 2 ingress (mean 348.19 Mbit/s)
- Flow 2 egress (mean 348.94 Mbit/s)
- Flow 3 ingress (mean 270.59 Mbit/s)
- Flow 3 egress (mean 269.86 Mbit/s)

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

- Flow 1 (95th percentile 97.36 ms)
- Flow 2 (95th percentile 58.78 ms)
- Flow 3 (95th percentile 52.56 ms)
Run 1: Statistics of FillP-Sheep

Start at: 2019-04-24 19:10:34
End at: 2019-04-24 19:11:04
Local clock offset: 0.047 ms
Remote clock offset: -0.058 ms

# Below is generated by plot.py at 2019-04-24 22:59:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 813.08 Mbit/s
95th percentile per-packet one-way delay: 77.776 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 508.17 Mbit/s
95th percentile per-packet one-way delay: 86.288 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 325.16 Mbit/s
95th percentile per-packet one-way delay: 54.604 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 270.05 Mbit/s
95th percentile per-packet one-way delay: 51.480 ms
Loss rate: 0.69%
Run 1: Report of FillP-Sheep — Data Link

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

- Flow 1 ingress (mean 597.45 Mbps)
- Flow 1 egress (mean 508.17 Mbps)
- Flow 2 ingress (mean 325.15 Mbps)
- Flow 2 egress (mean 325.16 Mbps)
- Flow 3 ingress (mean 269.96 Mbps)
- Flow 3 egress (mean 270.05 Mbps)

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

- Flow 1 (95th percentile 86.29 ms)
- Flow 2 (95th percentile 54.60 ms)
- Flow 3 (95th percentile 51.48 ms)
Run 2: Statistics of FillP-Sheep

Start at: 2019-04-24 19:45:17
End at: 2019-04-24 19:45:47
Local clock offset: -0.04 ms
Remote clock offset: -0.158 ms

# Below is generated by plot.py at 2019-04-24 22:59:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 775.81 Mbit/s
95th percentile per-packet one-way delay: 70.931 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 495.65 Mbit/s
95th percentile per-packet one-way delay: 78.467 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 304.00 Mbit/s
95th percentile per-packet one-way delay: 51.957 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 237.51 Mbit/s
95th percentile per-packet one-way delay: 48.809 ms
Loss rate: 1.37%
Run 2: Report of FillP-Sheep — Data Link

![Graph of Throughput and Delay](image)

**Throughput (Mbps)**

- Flow 1 Ingress (mean 495.68 Mbps)
- Flow 1 Egress (mean 495.65 Mbps)
- Flow 2 Ingress (mean 303.99 Mbps)
- Flow 2 Egress (mean 304.00 Mbps)
- Flow 3 Ingress (mean 238.17 Mbps)
- Flow 3 Egress (mean 237.51 Mbps)

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

- Flow 1 (95th percentile 78.47 ms)
- Flow 2 (95th percentile 51.96 ms)
- Flow 3 (95th percentile 48.81 ms)
Run 3: Statistics of FillP-Sheep

Local clock offset: -0.048 ms
Remote clock offset: -0.034 ms

# Below is generated by plot.py at 2019-04-24 22:59:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 776.45 Mbit/s
95th percentile per-packet one-way delay: 76.368 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 480.61 Mbit/s
95th percentile per-packet one-way delay: 83.825 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 324.32 Mbit/s
95th percentile per-packet one-way delay: 51.059 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 243.98 Mbit/s
95th percentile per-packet one-way delay: 53.622 ms
Loss rate: 1.06%
Run 3: Report of FillP-Sheep — Data Link

**Throughput Distribution**
- Flow 1 ingress (mean 481.14 Mbit/s)
- Flow 1 egress (mean 480.61 Mbit/s)
- Flow 2 ingress (mean 324.19 Mbit/s)
- Flow 2 egress (mean 324.32 Mbit/s)
- Flow 3 ingress (mean 244.71 Mbit/s)
- Flow 3 egress (mean 243.98 Mbit/s)

**Per-packet one-way delay**
- Flow 1 (95th percentile 83.83 ms)
- Flow 2 (95th percentile 51.06 ms)
- Flow 3 (95th percentile 53.62 ms)
Run 4: Statistics of FillP-Sheep

Local clock offset: 0.0 ms
Remote clock offset: -0.082 ms

# Below is generated by plot.py at 2019-04-24 22:59:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 491.87 Mbit/s
  95th percentile per-packet one-way delay: 54.455 ms
  Loss rate: 0.65%
-- Flow 1:
  Average throughput: 176.09 Mbit/s
  95th percentile per-packet one-way delay: 53.654 ms
  Loss rate: 0.52%
-- Flow 2:
  Average throughput: 340.75 Mbit/s
  95th percentile per-packet one-way delay: 52.177 ms
  Loss rate: 0.51%
-- Flow 3:
  Average throughput: 271.88 Mbit/s
  95th percentile per-packet one-way delay: 56.639 ms
  Loss rate: 1.27%
Run 4: Report of FillP-Sheep — Data Link
Run 5: Statistics of FillP-Sheep

Local clock offset: 0.028 ms
Remote clock offset: -0.015 ms

# Below is generated by plot.py at 2019-04-24 23:14:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 794.32 Mbit/s
95th percentile per-packet one-way delay: 89.499 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 492.29 Mbit/s
95th percentile per-packet one-way delay: 96.799 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 321.67 Mbit/s
95th percentile per-packet one-way delay: 53.552 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 268.42 Mbit/s
95th percentile per-packet one-way delay: 54.617 ms
Loss rate: 0.82%
Run 5: Report of FillP-Sheep — Data Link

**Graph 1:**
- Flow 1 Ingress (mean 493.70 Mb/s)
- Flow 1 Egress (mean 492.29 Mb/s)
- Flow 2 Ingress (mean 321.05 Mb/s)
- Flow 2 Egress (mean 322.67 Mb/s)
- Flow 3 Ingress (mean 268.51 Mb/s)
- Flow 3 Egress (mean 268.42 Mb/s)

**Graph 2:**
- Flow 1 (95th percentile 96.80 ms)
- Flow 2 (95th percentile 53.55 ms)
- Flow 3 (95th percentile 54.62 ms)
Run 1: Statistics of Indigo

Local clock offset: 0.075 ms
Remote clock offset: -0.111 ms

# Below is generated by plot.py at 2019-04-24 23:14:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 382.65 Mbit/s
95th percentile per-packet one-way delay: 62.816 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 198.20 Mbit/s
95th percentile per-packet one-way delay: 62.582 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 188.75 Mbit/s
95th percentile per-packet one-way delay: 62.451 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 164.19 Mbit/s
95th percentile per-packet one-way delay: 63.838 ms
Loss rate: 0.76%
Run 1: Report of Indigo — Data Link
Run 2: Statistics of Indigo

Start at: 2019-04-24 20:03:21
End at: 2019-04-24 20:03:51
Local clock offset: -0.051 ms
Remote clock offset: -0.176 ms

# Below is generated by plot.py at 2019-04-24 23:14:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 387.75 Mbit/s
95th percentile per-packet one-way delay: 58.781 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 206.76 Mbit/s
95th percentile per-packet one-way delay: 60.448 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 184.85 Mbit/s
95th percentile per-packet one-way delay: 58.952 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 181.41 Mbit/s
95th percentile per-packet one-way delay: 56.506 ms
Loss rate: 1.14%
Run 2: Report of Indigo — Data Link

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

![Graph 2: Per-packet delay vs. Time](image2)
Run 3: Statistics of Indigo

Local clock offset: -0.034 ms
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2019-04-24 23:14:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 382.52 Mbit/s
95th percentile per-packet one-way delay: 56.926 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 205.18 Mbit/s
95th percentile per-packet one-way delay: 58.500 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 187.19 Mbit/s
95th percentile per-packet one-way delay: 55.777 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 166.63 Mbit/s
95th percentile per-packet one-way delay: 55.118 ms
Loss rate: 1.03%
Run 3: Report of Indigo — Data Link
Run 4: Statistics of Indigo

Local clock offset: 0.059 ms
Remote clock offset: -0.045 ms

# Below is generated by plot.py at 2019-04-24 23:14:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 375.85 Mbit/s
95th percentile per-packet one-way delay: 57.826 ms
Loss rate: 0.52%

-- Flow 1:
Average throughput: 200.20 Mbit/s
95th percentile per-packet one-way delay: 59.909 ms
Loss rate: 0.36%

-- Flow 2:
Average throughput: 183.13 Mbit/s
95th percentile per-packet one-way delay: 54.698 ms
Loss rate: 0.53%

-- Flow 3:
Average throughput: 167.00 Mbit/s
95th percentile per-packet one-way delay: 55.522 ms
Loss rate: 1.12%
Run 4: Report of Indigo — Data Link

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

- Flow 1 ingress (mean 200.20 Mbit/s)
- Flow 1 egress (mean 200.20 Mbit/s)
- Flow 2 ingress (mean 183.24 Mbit/s)
- Flow 2 egress (mean 183.13 Mbit/s)
- Flow 3 ingress (mean 167.27 Mbit/s)
- Flow 3 egress (mean 167.00 Mbit/s)

![Graph 2: Delay Over Time](image2)

- Flow 1 (95th percentile 59.91 ms)
- Flow 2 (95th percentile 54.70 ms)
- Flow 3 (95th percentile 55.52 ms)
Run 5: Statistics of Indigo

Local clock offset: 0.022 ms
Remote clock offset: -0.047 ms

# Below is generated by plot.py at 2019-04-24 23:14:04
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 379.22 Mbit/s
  95th percentile per-packet one-way delay: 59.503 ms
  Loss rate: 0.50%
-- Flow 1:
  Average throughput: 199.63 Mbit/s
  95th percentile per-packet one-way delay: 62.290 ms
  Loss rate: 0.32%
-- Flow 2:
  Average throughput: 191.50 Mbit/s
  95th percentile per-packet one-way delay: 55.645 ms
  Loss rate: 0.50%
-- Flow 3:
  Average throughput: 165.98 Mbit/s
  95th percentile per-packet one-way delay: 57.006 ms
  Loss rate: 1.14%
Run 5: Report of Indigo — Data Link

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

- Flow 1 ingress (mean 199.63 Mbit/s)
- Flow 1 egress (mean 199.63 Mbit/s)
- Flow 2 ingress (mean 191.55 Mbit/s)
- Flow 2 egress (mean 191.55 Mbit/s)
- Flow 3 ingress (mean 166.21 Mbit/s)
- Flow 3 egress (mean 165.98 Mbit/s)

Flow 1 (95th percentile 62.29 ms), Flow 2 (95th percentile 55.65 ms), Flow 3 (95th percentile 57.01 ms)
Run 1: Statistics of Indigo-MusesC3

Local clock offset: 0.063 ms
Remote clock offset: -0.046 ms

# Below is generated by plot.py at 2019-04-24 23:14:04
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 698.53 Mbit/s
  95th percentile per-packet one-way delay: 72.636 ms
  Loss rate: 0.44%
-- Flow 1:
  Average throughput: 436.52 Mbit/s
  95th percentile per-packet one-way delay: 72.879 ms
  Loss rate: 0.21%
-- Flow 2:
  Average throughput: 329.17 Mbit/s
  95th percentile per-packet one-way delay: 75.068 ms
  Loss rate: 0.45%
-- Flow 3:
  Average throughput: 211.82 Mbit/s
  95th percentile per-packet one-way delay: 53.608 ms
  Loss rate: 2.22%
Run 1: Report of Indigo-MusesC3 — Data Link

Throughput (Mbps) vs Time (s)

- Flow 1 ingress (mean 435.97 Mbps)
- Flow 1 egress (mean 436.52 Mbps)
- Flow 2 ingress (mean 328.94 Mbps)
- Flow 2 egress (mean 329.17 Mbps)
- Flow 3 ingress (mean 213.83 Mbps)
- Flow 3 egress (mean 211.82 Mbps)

Delay (ms) vs Time (s)

- Flow 1 (95th percentile 72.88 ms)
- Flow 2 (95th percentile 75.07 ms)
- Flow 3 (95th percentile 53.61 ms)
Run 2: Statistics of Indigo-MusesC3

End at: 2019-04-24 19:54:04
Local clock offset: -0.027 ms
Remote clock offset: -0.152 ms

# Below is generated by plot.py at 2019-04-24 23:14:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 718.87 Mbit/s
95th percentile per-packet one-way delay: 68.526 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 418.29 Mbit/s
95th percentile per-packet one-way delay: 67.377 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 360.87 Mbit/s
95th percentile per-packet one-way delay: 78.840 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 257.93 Mbit/s
95th percentile per-packet one-way delay: 53.809 ms
Loss rate: 1.80%
Run 2: Report of Indigo-MusesC3 — Data Link
Run 3: Statistics of Indigo-MusesC3

Local clock offset: 0.0 ms
Remote clock offset: -0.005 ms

# Below is generated by plot.py at 2019-04-24 23:24:18
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 695.99 Mbit/s
  95th percentile per-packet one-way delay: 70.886 ms
  Loss rate: 0.42%
-- Flow 1:
  Average throughput: 413.97 Mbit/s
  95th percentile per-packet one-way delay: 64.947 ms
  Loss rate: 0.23%
-- Flow 2:
  Average throughput: 339.40 Mbit/s
  95th percentile per-packet one-way delay: 88.241 ms
  Loss rate: 0.40%
-- Flow 3:
  Average throughput: 235.08 Mbit/s
  95th percentile per-packet one-way delay: 54.920 ms
  Loss rate: 1.71%
Run 3: Report of Indigo-MusesC3 — Data Link
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-04-24 21:02:51
End at: 2019-04-24 21:03:21
Local clock offset: 0.456 ms
Remote clock offset: -0.074 ms

# Below is generated by plot.py at 2019-04-24 23:25:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 683.96 Mbit/s
95th percentile per-packet one-way delay: 77.946 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 404.93 Mbit/s
95th percentile per-packet one-way delay: 75.666 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 337.71 Mbit/s
95th percentile per-packet one-way delay: 85.340 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 237.03 Mbit/s
95th percentile per-packet one-way delay: 52.735 ms
Loss rate: 2.09%
Run 4: Report of Indigo-MusesC3 — Data Link

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

- Flow 1 ingress (mean 404.55 Mbit/s)
- Flow 1 egress (mean 404.93 Mbit/s)
- Flow 2 ingress (mean 337.43 Mbit/s)
- Flow 2 egress (mean 337.71 Mbit/s)
- Flow 3 ingress (mean 239.97 Mbit/s)
- Flow 3 egress (mean 237.03 Mbit/s)

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

- Flow 1 (95th percentile 75.67 ms)
- Flow 2 (95th percentile 85.34 ms)
- Flow 3 (95th percentile 52.73 ms)
Run 5: Statistics of Indigo-MusesC3

Local clock offset: 0.053 ms
Remote clock offset: -0.048 ms

# Below is generated by plot.py at 2019-04-24 23:25:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 712.61 Mbit/s
95th percentile per-packet one-way delay: 72.930 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 432.56 Mbit/s
95th percentile per-packet one-way delay: 71.116 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 343.77 Mbit/s
95th percentile per-packet one-way delay: 78.239 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 224.22 Mbit/s
95th percentile per-packet one-way delay: 52.100 ms
Loss rate: 2.25%
Run 5: Report of Indigo-MusesC3 — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress: mean 431.95 Mbps
  - Flow 1 egress: mean 432.56 Mbps
  - Flow 2 ingress: mean 343.51 Mbps
  - Flow 2 egress: mean 343.77 Mbps
  - Flow 3 ingress: mean 226.53 Mbps
  - Flow 3 egress: mean 224.22 Mbps

- **Packet Delay (ms):**
  - Flow 1 (95th percentile: 71.12 ms)
  - Flow 2 (95th percentile: 78.24 ms)
  - Flow 3 (95th percentile: 52.10 ms)
Run 1: Statistics of Indigo-MusesC5

Local clock offset: 0.073 ms
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2019-04-24 23:27:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 794.31 Mbit/s
  95th percentile per-packet one-way delay: 129.944 ms
  Loss rate: 0.43%
-- Flow 1:
  Average throughput: 481.77 Mbit/s
  95th percentile per-packet one-way delay: 115.056 ms
  Loss rate: 0.28%
-- Flow 2:
  Average throughput: 372.21 Mbit/s
  95th percentile per-packet one-way delay: 142.496 ms
  Loss rate: 0.16%
-- Flow 3:
  Average throughput: 273.94 Mbit/s
  95th percentile per-packet one-way delay: 119.993 ms
  Loss rate: 2.22%
Run 1: Report of Indigo-MusesC5 — Data Link
Run 2: Statistics of Indigo-MusesC5

Local clock offset: -0.034 ms
Remote clock offset: -0.201 ms

# Below is generated by plot.py at 2019-04-24 23:27:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 751.96 Mbit/s
95th percentile per-packet one-way delay: 145.052 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 450.36 Mbit/s
95th percentile per-packet one-way delay: 132.836 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 367.40 Mbit/s
95th percentile per-packet one-way delay: 168.356 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 237.17 Mbit/s
95th percentile per-packet one-way delay: 93.458 ms
Loss rate: 1.65%
Run 2: Report of Indigo-MusesC5 — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 450.89 Mbit/s)
Flow 1 egress (mean 450.36 Mbit/s)
Flow 2 ingress (mean 369.90 Mbit/s)
Flow 2 egress (mean 367.40 Mbit/s)
Flow 3 ingress (mean 238.35 Mbit/s)
Flow 3 egress (mean 237.17 Mbit/s)

Per packet one way delay (ms)

Time (s)

• Flow 1 (95th percentile 132.84 ms)
• Flow 2 (95th percentile 168.36 ms)
• Flow 3 (95th percentile 93.46 ms)
Run 3: Statistics of Indigo-MuseC5

Start at: 2019-04-24 20:33:05
End at: 2019-04-24 20:33:35
Local clock offset: -0.06 ms
Remote clock offset: 0.022 ms

# Below is generated by plot.py at 2019-04-24 23:27:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 766.46 Mbit/s
95th percentile per-packet one-way delay: 115.254 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 472.75 Mbit/s
95th percentile per-packet one-way delay: 96.072 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 415.75 Mbit/s
95th percentile per-packet one-way delay: 134.125 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 100.70 Mbit/s
95th percentile per-packet one-way delay: 49.185 ms
Loss rate: 1.29%
Run 3: Report of Indigo-MusesC5 — Data Link

![Throughput Graph]  
**Legend:**  
- Flow 1 ingress (mean 472.63 Mbit/s)  
- Flow 1 egress (mean 472.75 Mbit/s)  
- Flow 2 ingress (mean 416.49 Mbit/s)  
- Flow 2 egress (mean 415.75 Mbit/s)  
- Flow 3 ingress (mean 100.73 Mbit/s)  
- Flow 3 egress (mean 100.70 Mbit/s)

![Delay Graph]  
**Legend:**  
- Flow 1 (95th percentile 96.07 ms)  
- Flow 2 (95th percentile 134.12 ms)  
- Flow 3 (95th percentile 49.19 ms)
Run 4: Statistics of Indigo-MusesC5

End at: 2019-04-24 21:08:07
Local clock offset: 0.074 ms
Remote clock offset: -0.065 ms

# Below is generated by plot.py at 2019-04-24 23:28:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 782.02 Mbit/s
95th percentile per-packet one-way delay: 109.848 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 480.16 Mbit/s
95th percentile per-packet one-way delay: 118.055 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 429.74 Mbit/s
95th percentile per-packet one-way delay: 88.452 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 95.24 Mbit/s
95th percentile per-packet one-way delay: 48.505 ms
Loss rate: 1.41%
Run 4: Report of Indigo-MusesC5 — Data Link

Throughput vs. Time

- Flow 1 ingress (mean 480.34 Mbit/s)
- Flow 1 egress (mean 480.16 Mbit/s)
- Flow 2 ingress (mean 429.38 Mbit/s)
- Flow 2 egress (mean 429.74 Mbit/s)
- Flow 3 ingress (mean 95.47 Mbit/s)
- Flow 3 egress (mean 95.24 Mbit/s)

Packet one-way delay vs. Time

- Flow 1 (95th percentile 118.06 ms)
- Flow 2 (95th percentile 88.45 ms)
- Flow 3 (95th percentile 48.51 ms)
Run 5: Statistics of Indigo-MusesC5

Local clock offset: 0.02 ms
Remote clock offset: -0.003 ms

# Below is generated by plot.py at 2019-04-24 23:28:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 757.80 Mbit/s
95th percentile per-packet one-way delay: 106.708 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 474.29 Mbit/s
95th percentile per-packet one-way delay: 87.634 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 406.80 Mbit/s
95th percentile per-packet one-way delay: 120.554 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 84.58 Mbit/s
95th percentile per-packet one-way delay: 47.447 ms
Loss rate: 1.55%
Run 5: Report of Indigo-MusesC5 — Data Link

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

- **Flow 1 Ingress** (mean 474.21 Mbit/s)
- **Flow 1 Egress** (mean 474.29 Mbit/s)
- **Flow 2 Ingress** (mean 405.69 Mbit/s)
- **Flow 2 Egress** (mean 406.80 Mbit/s)
- **Flow 3 Ingress** (mean 84.78 Mbit/s)
- **Flow 3 Egress** (mean 84.58 Mbit/s)

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

- **Flow 1** (95th percentile 87.63 ms)
- **Flow 2** (95th percentile 120.55 ms)
- **Flow 3** (95th percentile 47.45 ms)
Run 1: Statistics of Indigo-MusesD

End at: 2019-04-24 19:08:05
Local clock offset: 0.049 ms
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2019-04-24 23:36:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 654.93 Mbit/s
95th percentile per-packet one-way delay: 74.433 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 375.53 Mbit/s
95th percentile per-packet one-way delay: 81.117 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 336.57 Mbit/s
95th percentile per-packet one-way delay: 71.467 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 236.95 Mbit/s
95th percentile per-packet one-way delay: 51.259 ms
Loss rate: 1.77%
Run 1: Report of Indigo-MusesD — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 374.61 Mbps)
Flow 1 egress (mean 375.53 Mbps)
Flow 2 ingress (mean 336.42 Mbps)
Flow 2 egress (mean 336.57 Mbps)
Flow 3 ingress (mean 236.37 Mbps)
Flow 3 egress (mean 236.95 Mbps)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 81.12 ms)
Flow 2 (95th percentile 71.47 ms)
Flow 3 (95th percentile 51.26 ms)
Run 2: Statistics of Indigo-MusesD

Local clock offset: -0.033 ms
Remote clock offset: -0.132 ms

# Below is generated by plot.py at 2019-04-24 23:37:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 678.12 Mbit/s
  95th percentile per-packet one-way delay: 81.976 ms
  Loss rate: 0.47%
-- Flow 1:
  Average throughput: 389.62 Mbit/s
  95th percentile per-packet one-way delay: 90.912 ms
  Loss rate: 0.28%
-- Flow 2:
  Average throughput: 347.25 Mbit/s
  95th percentile per-packet one-way delay: 72.535 ms
  Loss rate: 0.45%
-- Flow 3:
  Average throughput: 249.07 Mbit/s
  95th percentile per-packet one-way delay: 53.549 ms
  Loss rate: 1.69%
Run 2: Report of Indigo-MusesD — Data Link

![Graph showing network data and delays over time]

**Throughput (Mbps):**
- Flow 1 ingress (mean 389.40 Mbps)
- Flow 1 egress (mean 389.62 Mbps)
- Flow 2 ingress (mean 346.95 Mbps)
- Flow 2 egress (mean 347.23 Mbps)
- Flow 3 ingress (mean 250.16 Mbps)
- Flow 3 egress (mean 249.07 Mbps)

**Per-packet one way delay (ms):**
- Flow 1 (95th percentile 90.91 ms)
- Flow 2 (95th percentile 72.53 ms)
- Flow 3 (95th percentile 53.55 ms)
Run 3: Statistics of Indigo-MusesD

Start at: 2019-04-24 20:16:54
End at: 2019-04-24 20:17:24
Local clock offset: -0.014 ms
Remote clock offset: 0.001 ms

# Below is generated by plot.py at 2019-04-24 23:37:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 636.88 Mbit/s
  95th percentile per-packet one-way delay: 71.864 ms
  Loss rate: 0.42%
-- Flow 1:
  Average throughput: 355.80 Mbit/s
  95th percentile per-packet one-way delay: 75.942 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 331.80 Mbit/s
  95th percentile per-packet one-way delay: 55.759 ms
  Loss rate: 0.26%
-- Flow 3:
  Average throughput: 252.29 Mbit/s
  95th percentile per-packet one-way delay: 52.203 ms
  Loss rate: 1.81%
Run 3: Report of Indigo-MusesD — Data Link

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

![Graph 2: Per-packet one-way delay vs Time](image2)
Run 4: Statistics of Indigo-MusesD

End at: 2019-04-24 20:52:02
Local clock offset: -0.003 ms
Remote clock offset: -0.03 ms

# Below is generated by plot.py at 2019-04-24 23:39:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 619.28 Mbit/s
95th percentile per-packet one-way delay: 88.806 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 370.82 Mbit/s
95th percentile per-packet one-way delay: 88.137 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 264.18 Mbit/s
95th percentile per-packet one-way delay: 98.973 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 285.71 Mbit/s
95th percentile per-packet one-way delay: 53.210 ms
Loss rate: 1.54%
Run 4: Report of Indigo-MusesD — Data Link

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

- **Flow 1** (ingress: 370.56 Mbit/s, egress: 370.82 Mbit/s)
- **Flow 2** (ingress: 263.27 Mbit/s, egress: 264.18 Mbit/s)
- **Flow 3** (ingress: 286.69 Mbit/s, egress: 285.71 Mbit/s)

![Per-packet one-way delay graph.](Image)

- Flow 1 (95th percentile: 88.14 ms)
- Flow 2 (95th percentile: 98.97 ms)
- Flow 3 (95th percentile: 53.21 ms)
Run 5: Statistics of Indigo-MusesD

Local clock offset: -0.335 ms
Remote clock offset: -0.036 ms

# Below is generated by plot.py at 2019-04-24 23:39:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 437.08 Mbit/s
95th percentile per-packet one-way delay: 59.795 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 133.58 Mbit/s
95th percentile per-packet one-way delay: 49.643 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 361.66 Mbit/s
95th percentile per-packet one-way delay: 66.909 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 261.51 Mbit/s
95th percentile per-packet one-way delay: 56.582 ms
Loss rate: 1.46%
Run 5: Report of Indigo-MusesD — Data Link
Run 1: Statistics of Indigo-MusesT

Start at: 2019-04-24 19:30:30  
End at: 2019-04-24 19:31:00  
Local clock offset: 0.078 ms  
Remote clock offset: -0.128 ms

# Below is generated by plot.py at 2019-04-24 23:41:54  
# Datalink statistics
  -- Total of 3 flows:
  Average throughput: 725.04 Mbit/s  
  95th percentile per-packet one-way delay: 82.706 ms  
  Loss rate: 0.42%
-- Flow 1:
  Average throughput: 437.64 Mbit/s  
  95th percentile per-packet one-way delay: 84.643 ms  
  Loss rate: 0.33%
-- Flow 2:
  Average throughput: 399.92 Mbit/s  
  95th percentile per-packet one-way delay: 79.551 ms  
  Loss rate: 0.47%
-- Flow 3:
  Average throughput: 105.64 Mbit/s  
  95th percentile per-packet one-way delay: 48.543 ms  
  Loss rate: 1.36%
Run 1: Report of Indigo-MusesT — Data Link

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

- Flow 1 ingress (mean 437.62 Mb/s)
- Flow 1 egress (mean 437.64 Mb/s)
- Flow 2 ingress (mean 399.70 Mb/s)
- Flow 2 egress (mean 399.92 Mb/s)
- Flow 3 ingress (mean 105.78 Mb/s)
- Flow 3 egress (mean 105.64 Mb/s)

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

- Flow 1 (95th percentile 84.64 ms)
- Flow 2 (95th percentile 79.55 ms)
- Flow 3 (95th percentile 48.54 ms)
Run 2: Statistics of Indigo-MusesT

Start at: 2019-04-24 20:05:08
End at: 2019-04-24 20:05:38
Local clock offset: -0.043 ms
Remote clock offset: -0.142 ms

# Below is generated by plot.py at 2019-04-24 23:43:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 791.16 Mbit/s
95th percentile per-packet one-way delay: 101.555 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 468.03 Mbit/s
95th percentile per-packet one-way delay: 104.982 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 391.67 Mbit/s
95th percentile per-packet one-way delay: 69.291 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 265.26 Mbit/s
95th percentile per-packet one-way delay: 57.087 ms
Loss rate: 1.64%
Run 2: Report of Indigo-MusesT — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 467.90 Mbps)
  - Flow 1 egress (mean 468.03 Mbps)
  - Flow 2 ingress (mean 371.76 Mbps)
  - Flow 2 egress (mean 391.67 Mbps)
  - Flow 3 ingress (mean 366.49 Mbps)
  - Flow 3 egress (mean 265.26 Mbps)

- **Latency (ms):**
  - Flow 1 (95th percentile 104.98 ms)
  - Flow 2 (95th percentile 69.29 ms)
  - Flow 3 (95th percentile 57.09 ms)
Run 3: Statistics of Indigo-MusesT

Start at: 2019-04-24 20:39:45
End at: 2019-04-24 20:40:15
Local clock offset: -0.016 ms
Remote clock offset: -0.011 ms

# Below is generated by plot.py at 2019-04-24 23:43:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 733.91 Mbit/s
95th percentile per-packet one-way delay: 104.219 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 457.63 Mbit/s
95th percentile per-packet one-way delay: 104.807 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 389.51 Mbit/s
95th percentile per-packet one-way delay: 103.300 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 101.12 Mbit/s
95th percentile per-packet one-way delay: 47.923 ms
Loss rate: 1.51%
Run 3: Report of Indigo-MusesT — Data Link
Run 4: Statistics of Indigo-MusesT

Local clock offset: 0.051 ms
Remote clock offset: -0.049 ms

# Below is generated by plot.py at 2019-04-24 23:49:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 776.58 Mbit/s
95th percentile per-packet one-way delay: 85.431 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 454.29 Mbit/s
95th percentile per-packet one-way delay: 93.233 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 391.23 Mbit/s
95th percentile per-packet one-way delay: 73.655 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 260.99 Mbit/s
95th percentile per-packet one-way delay: 61.196 ms
Loss rate: 1.51%
Run 4: Report of Indigo-MusesT — Data Link

![Graph showing data link throughput and packet loss over time.]

- **Flow 1 ingress (mean 453.55 Mbit/s)**
- **Flow 1 egress (mean 454.29 Mbit/s)**
- **Flow 2 ingress (mean 390.66 Mbit/s)**
- **Flow 2 egress (mean 391.23 Mbit/s)**
- **Flow 3 ingress (mean 261.71 Mbit/s)**
- **Flow 3 egress (mean 260.99 Mbit/s)**

![Graph showing packet loss over time.]

- **Flow 1 (95th percentile 93.23 ms)**
- **Flow 2 (95th percentile 73.66 ms)**
- **Flow 3 (95th percentile 61.20 ms)**
Run 5: Statistics of Indigo-MusesT

Local clock offset: 0.046 ms
Remote clock offset: -0.021 ms

# Below is generated by plot.py at 2019-04-24 23:50:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 749.04 Mbit/s
  95th percentile per-packet one-way delay: 88.853 ms
  Loss rate: 0.47%
-- Flow 1:
  Average throughput: 434.62 Mbit/s
  95th percentile per-packet one-way delay: 89.012 ms
  Loss rate: 0.20%
-- Flow 2:
  Average throughput: 375.02 Mbit/s
  95th percentile per-packet one-way delay: 97.267 ms
  Loss rate: 0.51%
-- Flow 3:
  Average throughput: 265.27 Mbit/s
  95th percentile per-packet one-way delay: 60.823 ms
  Loss rate: 1.97%
Run 5: Report of Indigo-MusesT — Data Link

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

*Flow 1 ingress (mean 433.98 Mbit/s) - Flow 1 egress (mean 434.62 Mbit/s)*
*Flow 2 ingress (mean 374.96 Mbit/s) - Flow 2 egress (mean 375.02 Mbit/s)*
*Flow 3 ingress (mean 267.26 Mbit/s) - Flow 3 egress (mean 265.27 Mbit/s)*

*Flow 1 (95th percentile 89.01 ms) - Flow 2 (95th percentile 97.27 ms) - Flow 3 (95th percentile 60.82 ms)*
Run 1: Statistics of LEDBAT

End at: 2019-04-24 19:09:47
Local clock offset: 0.109 ms
Remote clock offset: -0.049 ms

# Below is generated by plot.py at 2019-04-24 23:50:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.83 Mbit/s
95th percentile per-packet one-way delay: 49.115 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 40.36 Mbit/s
95th percentile per-packet one-way delay: 49.240 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 27.14 Mbit/s
95th percentile per-packet one-way delay: 48.733 ms
Loss rate: 0.96%
-- Flow 3:
Average throughput: 13.51 Mbit/s
95th percentile per-packet one-way delay: 48.420 ms
Loss rate: 1.92%
Run 1: Report of LEDBAT — Data Link
Run 2: Statistics of LEDBAT

End at: 2019-04-24 19:44:29
Local clock offset: -0.025 ms
Remote clock offset: -0.15 ms

# Below is generated by plot.py at 2019-04-24 23:50:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.39 Mbit/s
95th percentile per-packet one-way delay: 48.784 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 40.72 Mbit/s
95th percentile per-packet one-way delay: 48.848 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 27.26 Mbit/s
95th percentile per-packet one-way delay: 48.825 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 13.80 Mbit/s
95th percentile per-packet one-way delay: 47.691 ms
Loss rate: 1.90%
Run 2: Report of LEDBAT — Data Link
Run 3: Statistics of LEDBAT

End at: 2019-04-24 20:19:06
Local clock offset: -0.026 ms
Remote clock offset: -0.049 ms

# Below is generated by plot.py at 2019-04-24 23:50:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 64.24 Mbit/s
  95th percentile per-packet one-way delay: 48.654 ms
  Loss rate: 0.81%
-- Flow 1:
  Average throughput: 40.81 Mbit/s
  95th percentile per-packet one-way delay: 48.976 ms
  Loss rate: 0.63%
-- Flow 2:
  Average throughput: 28.39 Mbit/s
  95th percentile per-packet one-way delay: 47.787 ms
  Loss rate: 0.93%
-- Flow 3:
  Average throughput: 14.04 Mbit/s
  95th percentile per-packet one-way delay: 47.267 ms
  Loss rate: 1.88%
Run 3: Report of LEDBAT — Data Link

The diagrams show the throughput and per-packet round-trip delay for different flows. The throughput is measured in Mbps and is displayed over time. The per-packet round-trip delay is also plotted over time and shows the variability in delay for each flow.

The flows are:
- Flow 1 ingress (mean 40.94 Mbps)
- Flow 1 egress (mean 40.81 Mbps)
- Flow 2 ingress (mean 28.52 Mbps)
- Flow 2 egress (mean 28.39 Mbps)
- Flow 3 ingress (mean 14.18 Mbps)
- Flow 3 egress (mean 14.04 Mbps)
Run 4: Statistics of LEDBAT

Local clock offset: 0.032 ms
Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2019-04-24 23:50:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.42 Mbit/s
95th percentile per-packet one-way delay: 48.260 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 41.41 Mbit/s
95th percentile per-packet one-way delay: 48.575 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 27.84 Mbit/s
95th percentile per-packet one-way delay: 47.738 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 13.65 Mbit/s
95th percentile per-packet one-way delay: 47.556 ms
Loss rate: 1.91%
Run 4: Report of LEDBAT — Data Link

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

![Graph 2: Per-packet end-to-end delay (ms)]
Run 5: Statistics of LEDBAT

Local clock offset: 0.036 ms
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2019-04-24 23:50:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.64 Mbit/s
95th percentile per-packet one-way delay: 50.746 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 38.97 Mbit/s
95th percentile per-packet one-way delay: 51.054 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 27.42 Mbit/s
95th percentile per-packet one-way delay: 48.899 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 13.68 Mbit/s
95th percentile per-packet one-way delay: 48.316 ms
Loss rate: 1.92%
Run 5: Report of LEDBAT — Data Link
Run 1: Statistics of PCC-Allegro

End at: 2019-04-24 18:59:43
Local clock offset: 0.021 ms
Remote clock offset: -0.063 ms

# Below is generated by plot.py at 2019-04-25 00:04:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 585.70 Mbit/s
95th percentile per-packet one-way delay: 239.059 ms
Loss rate: 5.30%
-- Flow 1:
Average throughput: 298.84 Mbit/s
95th percentile per-packet one-way delay: 256.063 ms
Loss rate: 5.76%
-- Flow 2:
Average throughput: 301.81 Mbit/s
95th percentile per-packet one-way delay: 234.642 ms
Loss rate: 6.11%
-- Flow 3:
Average throughput: 265.12 Mbit/s
95th percentile per-packet one-way delay: 157.312 ms
Loss rate: 1.66%
Run 1: Report of PCC-Allegro — Data Link

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

- Flow 1 ingress (mean 316.10 Mbit/s)
- Flow 2 ingress (mean 319.90 Mbit/s)
- Flow 3 ingress (mean 266.90 Mbit/s)
- Flow 1 egress (mean 298.84 Mbit/s)
- Flow 2 egress (mean 301.81 Mbit/s)
- Flow 3 egress (mean 265.12 Mbit/s)

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

- Flow 1 (95th percentile 256.06 ms)
- Flow 2 (95th percentile 234.64 ms)
- Flow 3 (95th percentile 157.31 ms)
Run 2: Statistics of PCC-Allegro

End at: 2019-04-24 19:34:18
Local clock offset: 0.358 ms
Remote clock offset: -0.083 ms

# Below is generated by plot.py at 2019-04-25 00:09:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 696.13 Mbit/s
95th percentile per-packet one-way delay: 209.617 ms
Loss rate: 9.64%
-- Flow 1:
Average throughput: 347.02 Mbit/s
95th percentile per-packet one-way delay: 219.861 ms
Loss rate: 6.58%
-- Flow 2:
Average throughput: 408.03 Mbit/s
95th percentile per-packet one-way delay: 205.241 ms
Loss rate: 15.30%
-- Flow 3:
Average throughput: 239.61 Mbit/s
95th percentile per-packet one-way delay: 141.042 ms
Loss rate: 1.09%
Run 2: Report of PCC-Allegro — Data Link

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

- Flow 1 ingress (mean 370.31 Mbps)
- Flow 1 egress (mean 347.02 Mbps)
- Flow 2 ingress (mean 479.42 Mbps)
- Flow 2 egress (mean 408.03 Mbps)
- Flow 3 ingress (mean 239.94 Mbps)
- Flow 3 egress (mean 239.61 Mbps)

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

- Flow 1 (95th percentile 219.96 ms)
- Flow 2 (95th percentile 205.24 ms)
- Flow 3 (95th percentile 141.04 ms)
Run 3: Statistics of PCC-Allegro

Start at: 2019-04-24 20:08:33
End at: 2019-04-24 20:09:03
Local clock offset: -0.042 ms
Remote clock offset: -0.099 ms

# Below is generated by plot.py at 2019-04-25 00:09:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 621.77 Mbit/s
95th percentile per-packet one-way delay: 200.260 ms
Loss rate: 10.39%
-- Flow 1:
Average throughput: 366.56 Mbit/s
95th percentile per-packet one-way delay: 203.219 ms
Loss rate: 15.69%
-- Flow 2:
Average throughput: 259.99 Mbit/s
95th percentile per-packet one-way delay: 67.918 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 252.41 Mbit/s
95th percentile per-packet one-way delay: 172.705 ms
Loss rate: 2.92%
Run 3: Report of PCC-Allegro — Data Link
Run 4: Statistics of PCC-Allegro

Local clock offset: -0.026 ms
Remote clock offset: -0.035 ms

# Below is generated by plot.py at 2019-04-25 00:09:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 617.46 Mbit/s
95th percentile per-packet one-way delay: 199.489 ms
Loss rate: 4.88%
-- Flow 1:
Average throughput: 364.18 Mbit/s
95th percentile per-packet one-way delay: 200.952 ms
Loss rate: 6.42%
-- Flow 2:
Average throughput: 263.91 Mbit/s
95th percentile per-packet one-way delay: 77.299 ms
Loss rate: 1.91%
-- Flow 3:
Average throughput: 239.38 Mbit/s
95th percentile per-packet one-way delay: 241.401 ms
Loss rate: 4.02%
Run 4: Report of PCC-Allegro — Data Link
Run 5: Statistics of PCC-Allegro

Local clock offset: 0.044 ms
Remote clock offset: -0.046 ms

# Below is generated by plot.py at 2019-04-25 00:09:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 562.29 Mbit/s
95th percentile per-packet one-way delay: 150.185 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 315.15 Mbit/s
95th percentile per-packet one-way delay: 161.681 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 261.47 Mbit/s
95th percentile per-packet one-way delay: 129.497 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 225.11 Mbit/s
95th percentile per-packet one-way delay: 202.736 ms
Loss rate: 3.38%
Run 5: Report of PCC-Allegro — Data Link
Run 1: Statistics of PCC-Expr

Local clock offset: 0.101 ms
Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2019-04-25 00:09:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 410.90 Mbit/s
95th percentile per-packet one-way delay: 228.169 ms
Loss rate: 15.57%
-- Flow 1:
Average throughput: 236.52 Mbit/s
95th percentile per-packet one-way delay: 226.369 ms
Loss rate: 9.74%
-- Flow 2:
Average throughput: 209.08 Mbit/s
95th percentile per-packet one-way delay: 232.494 ms
Loss rate: 26.40%
-- Flow 3:
Average throughput: 108.54 Mbit/s
95th percentile per-packet one-way delay: 52.854 ms
Loss rate: 1.14%
Run 1: Report of PCC-Expr — Data Link
Run 2: Statistics of PCC-Expr

Local clock offset: -0.034 ms
Remote clock offset: -0.157 ms

# Below is generated by plot.py at 2019-04-25 00:09:37
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 433.13 Mbit/s
  95th percentile per-packet one-way delay: 184.574 ms
  Loss rate: 2.35%
-- Flow 1:
  Average throughput: 252.15 Mbit/s
  95th percentile per-packet one-way delay: 190.835 ms
  Loss rate: 3.55%
-- Flow 2:
  Average throughput: 190.85 Mbit/s
  95th percentile per-packet one-way delay: 81.914 ms
  Loss rate: 0.41%
-- Flow 3:
  Average throughput: 165.68 Mbit/s
  95th percentile per-packet one-way delay: 169.051 ms
  Loss rate: 1.10%
Run 2: Report of PCC-Expr — Data Link
Run 3: Statistics of PCC-Expr

Start at: 2019-04-24 20:30:01
End at: 2019-04-24 20:30:31
Local clock offset: -0.02 ms
Remote clock offset: 0.009 ms

# Below is generated by plot.py at 2019-04-25 00:09:37
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 403.78 Mbit/s
  95th percentile per-packet one-way delay: 173.119 ms
  Loss rate: 2.27%
-- Flow 1:
  Average throughput: 218.77 Mbit/s
  95th percentile per-packet one-way delay: 180.659 ms
  Loss rate: 2.52%
-- Flow 2:
  Average throughput: 184.70 Mbit/s
  95th percentile per-packet one-way delay: 162.842 ms
  Loss rate: 2.59%
-- Flow 3:
  Average throughput: 190.32 Mbit/s
  95th percentile per-packet one-way delay: 97.110 ms
  Loss rate: 0.77%
Run 3: Report of PCC-Expr — Data Link

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

- **Flow 1 ingress (mean 223.70 Mbps)**
- **Flow 1 egress (mean 218.77 Mbps)**
- **Flow 2 ingress (mean 188.70 Mbps)**
- **Flow 2 egress (mean 184.70 Mbps)**
- **Flow 3 ingress (mean 189.95 Mbps)**
- **Flow 3 egress (mean 190.32 Mbps)**

- **Flow 1 (95th percentile 180.66 ms)**
- **Flow 2 (95th percentile 162.84 ms)**
- **Flow 3 (95th percentile 97.11 ms)**
Run 4: Statistics of PCC-Expr

Start at: 2019-04-24 21:04:34
End at: 2019-04-24 21:05:04
Local clock offset: 0.039 ms
Remote clock offset: -0.086 ms

# Below is generated by plot.py at 2019-04-25 00:14:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 393.43 Mbit/s
  95th percentile per-packet one-way delay: 167.482 ms
  Loss rate: 1.49%
-- Flow 1:
  Average throughput: 250.32 Mbit/s
  95th percentile per-packet one-way delay: 147.385 ms
  Loss rate: 0.98%
-- Flow 2:
  Average throughput: 171.72 Mbit/s
  95th percentile per-packet one-way delay: 178.871 ms
  Loss rate: 1.76%
-- Flow 3:
  Average throughput: 88.70 Mbit/s
  95th percentile per-packet one-way delay: 87.172 ms
  Loss rate: 4.64%
Run 4: Report of PCC-Expr — Data Link

![Throughput Graph]

![Packet Delay Graph]

Legend:
- Flow 1 ingress (mean 251.99 Mbit/s)
- Flow 1 egress (mean 250.32 Mbit/s)
- Flow 2 ingress (mean 173.97 Mbit/s)
- Flow 2 egress (mean 171.72 Mbit/s)
- Flow 3 ingress (mean 92.13 Mbit/s)
- Flow 3 egress (mean 88.70 Mbit/s)
Run 5: Statistics of PCC-Expr

Local clock offset: 0.045 ms
Remote clock offset: -0.05 ms

# Below is generated by plot.py at 2019-04-25 00:20:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 440.17 Mbit/s
  95th percentile per-packet one-way delay: 167.460 ms
  Loss rate: 3.40%
-- Flow 1:
  Average throughput: 249.91 Mbit/s
  95th percentile per-packet one-way delay: 168.309 ms
  Loss rate: 3.80%
-- Flow 2:
  Average throughput: 206.86 Mbit/s
  95th percentile per-packet one-way delay: 141.434 ms
  Loss rate: 3.59%
-- Flow 3:
  Average throughput: 161.28 Mbit/s
  95th percentile per-packet one-way delay: 170.415 ms
  Loss rate: 0.94%
Run 5: Report of PCC-Expr — Data Link

![Graph showing throughput and packet delivery delay over time for different flows.](image-url)
Run 1: Statistics of QUIC Cubic

Local clock offset: 0.044 ms
Remote clock offset: -0.09 ms

# Below is generated by plot.py at 2019-04-25 00:20:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 112.02 Mbit/s
  95th percentile per-packet one-way delay: 47.305 ms
  Loss rate: 0.63%
-- Flow 1:
  Average throughput: 74.04 Mbit/s
  95th percentile per-packet one-way delay: 47.312 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 33.18 Mbit/s
  95th percentile per-packet one-way delay: 47.283 ms
  Loss rate: 1.11%
-- Flow 3:
  Average throughput: 43.79 Mbit/s
  95th percentile per-packet one-way delay: 47.311 ms
  Loss rate: 1.15%
Run 1: Report of QUIC Cubic — Data Link
Run 2: Statistics of QUIC Cubic

Local clock offset: -0.061 ms
Remote clock offset: -0.188 ms

# Below is generated by plot.py at 2019-04-25 00:20:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.84 Mbit/s
95th percentile per-packet one-way delay: 47.323 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 71.29 Mbit/s
95th percentile per-packet one-way delay: 47.322 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 27.71 Mbit/s
95th percentile per-packet one-way delay: 47.335 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 15.81 Mbit/s
95th percentile per-packet one-way delay: 47.194 ms
Loss rate: 0.00%
Run 2: Report of QUIC Cubic — Data Link

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**Throughput vs. Time**

- Flow 1 ingress (mean 71.30 Mbit/s)
- Flow 1 egress (mean 71.29 Mbit/s)
- Flow 2 ingress (mean 27.92 Mbit/s)
- Flow 2 egress (mean 27.71 Mbit/s)
- Flow 3 ingress (mean 15.61 Mbit/s)
- Flow 3 egress (mean 15.81 Mbit/s)

**Per-packet one-way delay vs. Time**

- Flow 1 (95th percentile 47.32 ms)
- Flow 2 (95th percentile 47.34 ms)
- Flow 3 (95th percentile 47.19 ms)
Run 3: Statistics of QUIC Cubic

Local clock offset: -0.034 ms
Remote clock offset: -0.02 ms

# Below is generated by plot.py at 2019-04-25 00:20:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.45 Mbit/s
95th percentile per-packet one-way delay: 47.126 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 45.41 Mbit/s
95th percentile per-packet one-way delay: 47.144 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 23.54 Mbit/s
95th percentile per-packet one-way delay: 46.512 ms
Loss rate: 1.41%
-- Flow 3:
Average throughput: 52.85 Mbit/s
95th percentile per-packet one-way delay: 46.496 ms
Loss rate: 1.14%
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic

Start at: 2019-04-24 21:06:21
End at: 2019-04-24 21:06:51
Local clock offset: 0.054 ms
Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2019-04-25 00:20:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.51 Mbit/s
95th percentile per-packet one-way delay: 47.262 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 50.21 Mbit/s
95th percentile per-packet one-way delay: 47.275 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 28.68 Mbit/s
95th percentile per-packet one-way delay: 46.495 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 43.41 Mbit/s
95th percentile per-packet one-way delay: 46.505 ms
Loss rate: 1.39%
Run 4: Report of QUIC Cubic — Data Link

![Graph showing throughput and latency over time for different flows.][1]

[1]: Image of the graphs showing throughput and latency over time for different flows. The graphs illustrate the performance data for three different flows, with each flow marked by a distinct line color. The x-axis represents time in seconds, and the y-axis shows throughput in Mbit/s and per-packet one-way delay in ms, respectively. The graphs provide a visual representation of how the flows perform under varying conditions, with each flow having different mean values.
Run 5: Statistics of QUIC Cubic

Local clock offset: 0.027 ms
Remote clock offset: -0.056 ms

# Below is generated by plot.py at 2019-04-25 00:20:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.73 Mbit/s
95th percentile per-packet one-way delay: 47.324 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 40.41 Mbit/s
95th percentile per-packet one-way delay: 47.330 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 33.62 Mbit/s
95th percentile per-packet one-way delay: 47.317 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 16.30 Mbit/s
95th percentile per-packet one-way delay: 47.306 ms
Loss rate: 0.30%
Run 5: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

Start at: 2019-04-24 19:02:54
End at: 2019-04-24 19:03:24
Local clock offset: 0.038 ms
Remote clock offset: -0.047 ms

# Below is generated by plot.py at 2019-04-25 00:20:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 47.475 ms
  Loss rate: 0.52%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 47.483 ms
  Loss rate: 0.26%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 47.464 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 47.454 ms
  Loss rate: 1.09%
Run 2: Statistics of SCReAM

End at: 2019-04-24 19:38:08
Local clock offset: -0.019 ms
Remote clock offset: -0.119 ms

# Below is generated by plot.py at 2019-04-25 00:20:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 47.754 ms
  Loss rate: 0.52%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 47.451 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 47.780 ms
  Loss rate: 0.62%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 47.401 ms
  Loss rate: 0.74%
Run 2: Report of SCReAM — Data Link
Run 3: Statistics of SCReAM

Start at: 2019-04-24 20:12:19
End at: 2019-04-24 20:12:49
Local clock offset: -0.023 ms
Remote clock offset: -0.052 ms

# Below is generated by plot.py at 2019-04-25 00:20:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 47.459 ms
  Loss rate: 0.52%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 47.483 ms
  Loss rate: 0.26%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 47.297 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 47.385 ms
  Loss rate: 1.09%
Run 3: Report of SCReAM — Data Link

![Graph showing throughput and per-packet end-to-end delay for various flows over time.](image-url)
Run 4: Statistics of SCReAM

Local clock offset: -0.025 ms
Remote clock offset: -0.03 ms

# Below is generated by plot.py at 2019-04-25 00:20:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 47.417 ms
  Loss rate: 0.52%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 47.430 ms
  Loss rate: 0.26%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 47.416 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 46.503 ms
  Loss rate: 1.09%
Run 4: Report of SCReAM — Data Link

![Graph showing throughput and per-packet one way 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)

- Flow 1 (95th percentile 47.43 ms)
- Flow 2 (95th percentile 47.42 ms)
- Flow 3 (95th percentile 46.50 ms)
Run 5: Statistics of SCReAM

Local clock offset: 0.033 ms
Remote clock offset: -0.038 ms

# Below is generated by plot.py at 2019-04-25 00:20:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 49.570 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.588 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.414 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.417 ms
Loss rate: 1.09%
Run 1: Statistics of Sprout

Start at: 2019-04-24 19:12:18
End at: 2019-04-24 19:12:48
Local clock offset: 0.032 ms
Remote clock offset: -0.044 ms

# Below is generated by plot.py at 2019-04-25 00:20:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.84 Mbit/s
95th percentile per-packet one-way delay: 48.294 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 9.66 Mbit/s
95th percentile per-packet one-way delay: 48.260 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 9.21 Mbit/s
95th percentile per-packet one-way delay: 48.306 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 9.39 Mbit/s
95th percentile per-packet one-way delay: 48.462 ms
Loss rate: 1.09%
Run 1: Report of Sprout — Data Link

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

- **Flow 1 ingress (mean 9.66 Mbit/s)**
- **Flow 1 egress (mean 9.66 Mbit/s)**
- **Flow 2 ingress (mean 9.22 Mbit/s)**
- **Flow 2 egress (mean 9.21 Mbit/s)**
- **Flow 3 ingress (mean 9.39 Mbit/s)**
- **Flow 3 egress (mean 9.39 Mbit/s)**
Run 2: Statistics of Sprout

Start at: 2019-04-24 19:47:00
End at: 2019-04-24 19:47:30
Local clock offset: -0.045 ms
Remote clock offset: -0.166 ms

# Below is generated by plot.py at 2019-04-25 00:20:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.89 Mbit/s
95th percentile per-packet one-way delay: 47.954 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 9.65 Mbit/s
95th percentile per-packet one-way delay: 48.071 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 9.49 Mbit/s
95th percentile per-packet one-way delay: 47.763 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 8.98 Mbit/s
95th percentile per-packet one-way delay: 47.864 ms
Loss rate: 1.13%
Run 2: Report of Sprout — Data Link
Run 3: Statistics of Sprout

Local clock offset: -0.009 ms
Remote clock offset: -0.035 ms

# Below is generated by plot.py at 2019-04-25 00:20:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.88 Mbit/s
95th percentile per-packet one-way delay: 48.129 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 9.56 Mbit/s
95th percentile per-packet one-way delay: 48.258 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 9.54 Mbit/s
95th percentile per-packet one-way delay: 47.833 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 9.13 Mbit/s
95th percentile per-packet one-way delay: 47.711 ms
Loss rate: 1.17%
Run 3: Report of Sprout — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 9.55 Mbps)
Flow 1 egress (mean 9.56 Mbps)
Flow 2 ingress (mean 9.52 Mbps)
Flow 2 egress (mean 9.54 Mbps)
Flow 3 ingress (mean 9.16 Mbps)
Flow 3 egress (mean 9.13 Mbps)

Per packet round trip delay (ms)

Time (s)

Flow 1 (95th percentile 48.26 ms)
Flow 2 (95th percentile 47.83 ms)
Flow 3 (95th percentile 47.71 ms)
Run 4: Statistics of Sprout

Start at: 2019-04-24 20:56:02
End at: 2019-04-24 20:56:33
Local clock offset: 0.05 ms
Remote clock offset: -0.072 ms

# Below is generated by plot.py at 2019-04-25 00:20:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 19.00 Mbit/s
  95th percentile per-packet one-way delay: 47.606 ms
  Loss rate: 0.56%
-- Flow 1:
  Average throughput: 9.63 Mbit/s
  95th percentile per-packet one-way delay: 47.121 ms
  Loss rate: 0.34%
-- Flow 2:
  Average throughput: 9.52 Mbit/s
  95th percentile per-packet one-way delay: 47.796 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 9.35 Mbit/s
  95th percentile per-packet one-way delay: 46.860 ms
  Loss rate: 1.09%
Run 4: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 9.63 Mbit/s)
- Flow 1 egress (mean 9.63 Mbit/s)
- Flow 2 ingress (mean 9.53 Mbit/s)
- Flow 2 egress (mean 9.52 Mbit/s)
- Flow 3 ingress (mean 9.36 Mbit/s)
- Flow 3 egress (mean 9.35 Mbit/s)

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

- Flow 1 (95th percentile 47.12 ms)
- Flow 2 (95th percentile 47.80 ms)
- Flow 3 (95th percentile 46.86 ms)
Run 5: Statistics of Sprout

Start at: 2019-04-24 21:30:26
End at: 2019-04-24 21:30:56
Local clock offset: 0.023 ms
Remote clock offset: -0.018 ms

# Below is generated by plot.py at 2019-04-25 00:20:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.97 Mbit/s
95th percentile per-packet one-way delay: 47.895 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 9.65 Mbit/s
95th percentile per-packet one-way delay: 47.985 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 9.47 Mbit/s
95th percentile per-packet one-way delay: 47.673 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 9.29 Mbit/s
95th percentile per-packet one-way delay: 47.919 ms
Loss rate: 1.10%
Run 5: Report of Sprout — Data Link

![Graph 1: Throughput (Mbps)]

![Graph 2: Per packet one-way delay (ms)]
Run 1: Statistics of TaoVA-100x

Start at: 2019-04-24 19:05:44
End at: 2019-04-24 19:06:14
Local clock offset: -0.001 ms
Remote clock offset: -0.037 ms

# Below is generated by plot.py at 2019-04-25 00:25:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 434.67 Mbit/s
95th percentile per-packet one-way delay: 56.728 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 237.97 Mbit/s
95th percentile per-packet one-way delay: 53.099 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 202.74 Mbit/s
95th percentile per-packet one-way delay: 60.196 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 187.58 Mbit/s
95th percentile per-packet one-way delay: 62.504 ms
Loss rate: 1.35%
Run 1: Report of TaoVA-100x — Data Link

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**Throughput (Mbps) vs. Time (s)**
- Blue line: Flow 1 ingress (mean 238.02 Mbps)
- Orange line: Flow 1 egress (mean 237.97 Mbps)
- Green line: Flow 2 ingress (mean 202.36 Mbps)
- Purple line: Flow 2 egress (mean 202.74 Mbps)
- Red line: Flow 3 ingress (mean 198.35 Mbps)
- Black line: Flow 3 egress (mean 187.58 Mbps)

**Per-packet one way delay (ms) vs. Time (s)**
- Blue circles: Flow 1 (95th percentile 53.10 ms)
- Red circles: Flow 2 (95th percentile 60.20 ms)
- Black circles: Flow 3 (95th percentile 62.50 ms)
Run 2: Statistics of TaoVA-100x

Local clock offset: -0.03 ms
Remote clock offset: -0.088 ms

# Below is generated by plot.py at 2019-04-25 00:25:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 396.38 Mbit/s
95th percentile per-packet one-way delay: 62.061 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 220.52 Mbit/s
95th percentile per-packet one-way delay: 59.031 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 187.83 Mbit/s
95th percentile per-packet one-way delay: 63.854 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 154.33 Mbit/s
95th percentile per-packet one-way delay: 72.231 ms
Loss rate: 1.59%
Run 2: Report of TaoVA-100x — Data Link

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

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 220.59 Mbps)
  - Flow 1 egress (mean 220.52 Mbps)
  - Flow 2 ingress (mean 187.94 Mbps)
  - Flow 2 egress (mean 187.83 Mbps)
  - Flow 3 ingress (mean 155.32 Mbps)
  - Flow 3 egress (mean 154.33 Mbps)

- **Per-packet one-way delay (ms)**
  - Flow 1 (95th percentile 59.03 ms)
  - Flow 2 (95th percentile 63.85 ms)
  - Flow 3 (95th percentile 72.23 ms)
Run 3: Statistics of TaoVA-100x

Start at: 2019-04-24 20:15:09
End at: 2019-04-24 20:15:39
Local clock offset: -0.002 ms
Remote clock offset: -0.043 ms

# Below is generated by plot.py at 2019-04-25 00:25:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 362.50 Mbit/s
  95th percentile per-packet one-way delay: 63.925 ms
  Loss rate: 0.44%
-- Flow 1:
  Average throughput: 192.57 Mbit/s
  95th percentile per-packet one-way delay: 61.839 ms
  Loss rate: 0.36%
-- Flow 2:
  Average throughput: 175.70 Mbit/s
  95th percentile per-packet one-way delay: 66.033 ms
  Loss rate: 0.18%
-- Flow 3:
  Average throughput: 160.86 Mbit/s
  95th percentile per-packet one-way delay: 66.087 ms
  Loss rate: 1.28%
Run 3: Report of TaoVA-100x — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 192.66 Mbps)
- Flow 1 egress (mean 192.57 Mbps)
- Flow 2 ingress (mean 175.19 Mbps)
- Flow 2 egress (mean 175.70 Mbps)
- Flow 3 ingress (mean 161.40 Mbps)
- Flow 3 egress (mean 160.86 Mbps)

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

- Flow 1 (95th percentile 61.84 ms)
- Flow 2 (95th percentile 66.03 ms)
- Flow 3 (95th percentile 66.09 ms)
Run 4: Statistics of TaoVA-100x

End at: 2019-04-24 20:50:10
Local clock offset: 0.042 ms
Remote clock offset: -0.078 ms

# Below is generated by plot.py at 2019-04-25 00:25:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 432.62 Mbit/s
95th percentile per-packet one-way delay: 57.247 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 222.08 Mbit/s
95th percentile per-packet one-way delay: 56.781 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 219.91 Mbit/s
95th percentile per-packet one-way delay: 54.700 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 194.96 Mbit/s
95th percentile per-packet one-way delay: 61.505 ms
Loss rate: 1.13%
Run 4: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 221.84 Mbit/s)
- Flow 1 egress (mean 222.08 Mbit/s)
- Flow 2 ingress (mean 220.11 Mbit/s)
- Flow 2 egress (mean 219.91 Mbit/s)
- Flow 3 ingress (mean 196.32 Mbit/s)
- Flow 3 egress (mean 194.96 Mbit/s)

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

- Flow 1 (95th percentile 56.78 ms)
- Flow 2 (95th percentile 54.70 ms)
- Flow 3 (95th percentile 61.51 ms)
Run 5: Statistics of TaoVA-100x

Local clock offset: 0.026 ms
Remote clock offset: -0.048 ms

# Below is generated by plot.py at 2019-04-25 00:25:41
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 399.36 Mbit/s
  95th percentile per-packet one-way delay: 61.142 ms
  Loss rate: 0.43%
-- Flow 1:
  Average throughput: 219.09 Mbit/s
  95th percentile per-packet one-way delay: 58.386 ms
  Loss rate: 0.30%
-- Flow 2:
  Average throughput: 178.30 Mbit/s
  95th percentile per-packet one-way delay: 64.626 ms
  Loss rate: 0.35%
-- Flow 3:
  Average throughput: 186.76 Mbit/s
  95th percentile per-packet one-way delay: 62.562 ms
  Loss rate: 1.08%
Run 5: Report of TaoVA-100x — Data Link
Run 1: Statistics of TCP Vegas

End at: 2019-04-24 19:14:01
Local clock offset: 0.066 ms
Remote clock offset: -0.066 ms

# Below is generated by plot.py at 2019-04-25 00:25:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 801.70 Mbit/s
95th percentile per-packet one-way delay: 136.206 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 433.20 Mbit/s
95th percentile per-packet one-way delay: 99.068 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 364.87 Mbit/s
95th percentile per-packet one-way delay: 150.707 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 381.17 Mbit/s
95th percentile per-packet one-way delay: 121.777 ms
Loss rate: 0.76%
Run 1: Report of TCP Vegas — Data Link
Run 2: Statistics of TCP Vegas

Local clock offset: -0.004 ms
Remote clock offset: -0.126 ms

# Below is generated by plot.py at 2019-04-25 00:31:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 798.79 Mbit/s
95th percentile per-packet one-way delay: 118.783 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 428.72 Mbit/s
95th percentile per-packet one-way delay: 121.781 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 416.80 Mbit/s
95th percentile per-packet one-way delay: 107.478 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 280.64 Mbit/s
95th percentile per-packet one-way delay: 57.709 ms
Loss rate: 1.05%
Run 2: Report of TCP Vegas — Data Link

![Graph showing throughput and per-packet per-hop delay over time for three flows with different ingress and egress rates.](image1)

- **Flow 1 ingress (mean 429.51 Mbit/s)**
- **Flow 1 egress (mean 428.72 Mbit/s)**
- **Flow 2 ingress (mean 416.25 Mbit/s)**
- **Flow 2 egress (mean 416.80 Mbit/s)**
- **Flow 3 ingress (mean 280.96 Mbit/s)**
- **Flow 3 egress (mean 280.64 Mbit/s)**

![Graph showing per-packet per-hop delay over time.](image2)

- **Flow 1 (95th percentile 121.78 ms)**
- **Flow 2 (95th percentile 107.48 ms)**
- **Flow 3 (95th percentile 57.71 ms)**

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Run 3: Statistics of TCP Vegas

Local clock offset: -0.01 ms
Remote clock offset: -0.054 ms

# Below is generated by plot.py at 2019-04-25 00:35:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 703.79 Mbit/s
95th percentile per-packet one-way delay: 131.252 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 357.48 Mbit/s
95th percentile per-packet one-way delay: 147.593 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 325.72 Mbit/s
95th percentile per-packet one-way delay: 110.684 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 392.56 Mbit/s
95th percentile per-packet one-way delay: 91.694 ms
Loss rate: 1.33%
Run 3: Report of TCP Vegas — Data Link

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

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Flow 1 ingress (mean 356.82 Mbit/s)  
Flow 1 egress (mean 357.48 Mbit/s)  
Flow 2 ingress (mean 325.54 Mbit/s)  
Flow 2 egress (mean 325.72 Mbit/s)  
Flow 3 ingress (mean 394.11 Mbit/s)  
Flow 3 egress (mean 392.56 Mbit/s)

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Flow 1 (95th percentile 147.39 ms)  
Flow 2 (95th percentile 110.68 ms)  
Flow 3 (95th percentile 91.69 ms)
Run 4: Statistics of TCP Vegas

End at: 2019-04-24 20:57:45
Local clock offset: 0.061 ms
Remote clock offset: -0.071 ms

# Below is generated by plot.py at 2019-04-25 00:40:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 826.01 Mbit/s
95th percentile per-packet one-way delay: 97.982 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 445.70 Mbit/s
95th percentile per-packet one-way delay: 100.662 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 369.09 Mbit/s
95th percentile per-packet one-way delay: 84.568 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 408.47 Mbit/s
95th percentile per-packet one-way delay: 96.631 ms
Loss rate: 1.40%
Run 4: Report of TCP Vegas — Data Link
Run 5: Statistics of TCP Vegas

End at: 2019-04-24 21:32:08
Local clock offset: -0.329 ms
Remote clock offset: -0.039 ms

# Below is generated by plot.py at 2019-04-25 00:40:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 758.90 Mbit/s
95th percentile per-packet one-way delay: 119.055 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 426.90 Mbit/s
95th percentile per-packet one-way delay: 111.245 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 297.28 Mbit/s
95th percentile per-packet one-way delay: 48.474 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 406.41 Mbit/s
95th percentile per-packet one-way delay: 126.856 ms
Loss rate: 1.74%
Run 5: Report of TCP Vegas — Data Link

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

- **Flow 1 ingress** (mean 427.28 Mbps)
- **Flow 1 egress** (mean 426.90 Mbps)
- **Flow 2 ingress** (mean 297.37 Mbps)
- **Flow 2 egress** (mean 297.28 Mbps)
- **Flow 3 ingress** (mean 409.68 Mbps)
- **Flow 3 egress** (mean 406.41 Mbps)

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

- **Flow 1** (95th percentile 111.25 ms)
- **Flow 2** (95th percentile 48.47 ms)
- **Flow 3** (95th percentile 126.88 ms)
Run 1: Statistics of Verus

End at: 2019-04-24 19:32:45
Local clock offset: 0.003 ms
Remote clock offset: -0.118 ms

# Below is generated by plot.py at 2019-04-25 00:40:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 226.63 Mbit/s
95th percentile per-packet one-way delay: 127.199 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 133.10 Mbit/s
95th percentile per-packet one-way delay: 138.677 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 103.62 Mbit/s
95th percentile per-packet one-way delay: 82.455 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 75.72 Mbit/s
95th percentile per-packet one-way delay: 111.683 ms
Loss rate: 1.30%
Run 1: Report of Verus — Data Link

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

- Flow 1 ingress (mean 133.38 Mbit/s)
- Flow 1 egress (mean 133.10 Mbit/s)
- Flow 2 ingress (mean 104.11 Mbit/s)
- Flow 2 egress (mean 103.62 Mbit/s)
- Flow 3 ingress (mean 75.97 Mbit/s)
- Flow 3 egress (mean 75.72 Mbit/s)

- Flow 1 (95th percentile 138.68 ms)
- Flow 2 (95th percentile 82.45 ms)
- Flow 3 (95th percentile 111.68 ms)
Run 2: Statistics of Verus

Start at: 2019-04-24 20:06:57
End at: 2019-04-24 20:07:27
Local clock offset: ~0.013 ms
Remote clock offset: ~0.101 ms

# Below is generated by plot.py at 2019-04-25 00:40:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 258.25 Mbit/s
95th percentile per-packet one-way delay: 108.033 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 141.40 Mbit/s
95th percentile per-packet one-way delay: 111.321 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 129.18 Mbit/s
95th percentile per-packet one-way delay: 107.669 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 94.04 Mbit/s
95th percentile per-packet one-way delay: 68.518 ms
Loss rate: 0.02%
Run 2: Report of Verus — Data Link
Run 3: Statistics of Verus

End at: 2019-04-24 20:42:02
Local clock offset: -0.028 ms
Remote clock offset: -0.058 ms

# Below is generated by plot.py at 2019-04-25 00:40:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 246.37 Mbit/s
95th percentile per-packet one-way delay: 151.240 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 135.59 Mbit/s
95th percentile per-packet one-way delay: 166.544 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 123.37 Mbit/s
95th percentile per-packet one-way delay: 118.733 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 88.86 Mbit/s
95th percentile per-packet one-way delay: 68.558 ms
Loss rate: 2.53%
Run 3: Report of Verus — Data Link

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

Throughput (Mbps):
- Flow 1 ingress (mean 135.44 Mbps)
- Flow 1 egress (mean 135.59 Mbps)
- Flow 2 ingress (mean 123.72 Mbps)
- Flow 2 egress (mean 123.37 Mbps)
- Flow 3 ingress (mean 90.34 Mbps)
- Flow 3 egress (mean 88.86 Mbps)

Per-packet one-way delay (ms):
- Flow 1 (95th percentile 166.54 ms)
- Flow 2 (95th percentile 118.73 ms)
- Flow 3 (95th percentile 68.56 ms)
Run 4: Statistics of Verus

Local clock offset: 0.013 ms
Remote clock offset: -0.061 ms

# Below is generated by plot.py at 2019-04-25 00:40:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 269.53 Mbit/s
95th percentile per-packet one-way delay: 274.815 ms
Loss rate: 7.59%
-- Flow 1:
Average throughput: 149.29 Mbit/s
95th percentile per-packet one-way delay: 88.860 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 132.63 Mbit/s
95th percentile per-packet one-way delay: 314.276 ms
Loss rate: 19.27%
-- Flow 3:
Average throughput: 97.97 Mbit/s
95th percentile per-packet one-way delay: 86.039 ms
Loss rate: 0.76%
Run 4: Report of Verus — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 149.70 Mbps)  
Flow 1 egress (mean 149.29 Mbps)  
Flow 2 ingress (mean 163.49 Mbps)  
Flow 2 egress (mean 132.63 Mbps)  
Flow 3 ingress (mean 97.47 Mbps)  
Flow 3 egress (mean 97.97 Mbps)

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 88.86 ms)  
Flow 2 (95th percentile 314.28 ms)  
Flow 3 (95th percentile 86.04 ms)

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Run 5: Statistics of Verus

Local clock offset: -0.027 ms
Remote clock offset: -0.044 ms

# Below is generated by plot.py at 2019-04-25 00:40:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 216.24 Mbit/s
95th percentile per-packet one-way delay: 146.952 ms
Loss rate: 1.55%
-- Flow 1:
Average throughput: 126.77 Mbit/s
95th percentile per-packet one-way delay: 137.626 ms
Loss rate: 1.73%
-- Flow 2:
Average throughput: 83.11 Mbit/s
95th percentile per-packet one-way delay: 189.128 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 103.95 Mbit/s
95th percentile per-packet one-way delay: 124.233 ms
Loss rate: 2.83%
Run 5: Report of Verus — Data Link

![Graphs showing throughput and packet delay over time for different flows with mean throughput values.](image)

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The graphs above illustrate the throughput and packet delay for different flows over time. Each line represents a specific flow, with the legend indicating mean throughput values for ingress and egress for each flow.

- **Flow 1** (ingress: 129.03 Mbit/s, egress: 126.77 Mbit/s)
- **Flow 2** (ingress: 82.97 Mbit/s, egress: 83.11 Mbit/s)
- **Flow 3** (ingress: 106.14 Mbit/s, egress: 103.95 Mbit/s)

The first graph shows throughput (Mbps) over time (s), while the second graph illustrates packet delay (ms) over time (s). The 95th percentile delay values for each flow are indicated in the legend.
Run 1: Statistics of PCC-Vivace

Start at: 2019-04-24 19:04:05
End at: 2019-04-24 19:04:35
Local clock offset: -0.028 ms
Remote clock offset: -0.033 ms

# Below is generated by plot.py at 2019-04-25 00:42:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 398.27 Mbit/s
  95th percentile per-packet one-way delay: 105.647 ms
  Loss rate: 0.50%
-- Flow 1:
  Average throughput: 226.21 Mbit/s
  95th percentile per-packet one-way delay: 142.964 ms
  Loss rate: 0.42%
-- Flow 2:
  Average throughput: 229.81 Mbit/s
  95th percentile per-packet one-way delay: 71.772 ms
  Loss rate: 0.51%
-- Flow 3:
  Average throughput: 59.44 Mbit/s
  95th percentile per-packet one-way delay: 46.989 ms
  Loss rate: 1.39%
Run 1: Report of PCC-Vivace — Data Link

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

![Graph of per-packet one-way delay over time for different flows](image2)

- Flow 1 ingress (mean 226.44 Mbit/s)
- Flow 1 egress (mean 226.21 Mbit/s)
- Flow 2 ingress (mean 229.93 Mbit/s)
- Flow 2 egress (mean 229.61 Mbit/s)
- Flow 3 ingress (mean 59.70 Mbit/s)
- Flow 3 egress (mean 59.44 Mbit/s)

- Flow 1 (95th percentile 142.96 ms)
- Flow 2 (95th percentile 71.77 ms)
- Flow 3 (95th percentile 46.99 ms)
Run 2: Statistics of PCC-Vivace

Local clock offset: -0.006 ms
Remote clock offset: -0.095 ms

# Below is generated by plot.py at 2019-04-25 00:42:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 401.85 Mbit/s
95th percentile per-packet one-way delay: 71.703 ms
Loss rate: 2.00%
-- Flow 1:
Average throughput: 236.00 Mbit/s
95th percentile per-packet one-way delay: 68.120 ms
Loss rate: 3.09%
-- Flow 2:
Average throughput: 202.87 Mbit/s
95th percentile per-packet one-way delay: 64.762 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 95.01 Mbit/s
95th percentile per-packet one-way delay: 97.249 ms
Loss rate: 1.28%
Run 2: Report of PCC-Vivace — Data Link

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

- **Flow 1**: Ingress (mean 242.75 Mbit/s), Egress (mean 236.00 Mbit/s)
- **Flow 2**: Ingress (mean 202.35 Mbit/s), Egress (mean 202.87 Mbit/s)
- **Flow 3**: Ingress (mean 95.30 Mbit/s), Egress (mean 95.01 Mbit/s)

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

- **Flow 1**: 95th percentile 68.12 ms
- **Flow 2**: 95th percentile 64.76 ms
- **Flow 3**: 95th percentile 97.25 ms
Run 3: Statistics of PCC-Vivace

End at: 2019-04-24 20:14:00
Local clock offset: -0.01 ms
Remote clock offset: -0.085 ms

# Below is generated by plot.py at 2019-04-25 00:42:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 404.94 Mbit/s
95th percentile per-packet one-way delay: 116.344 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 250.46 Mbit/s
95th percentile per-packet one-way delay: 129.368 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 207.70 Mbit/s
95th percentile per-packet one-way delay: 77.904 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 50.73 Mbit/s
95th percentile per-packet one-way delay: 48.136 ms
Loss rate: 1.65%
Run 3: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 250.24 Mbps)
- Flow 1 egress (mean 250.46 Mbps)
- Flow 2 ingress (mean 207.63 Mbps)
- Flow 2 egress (mean 207.70 Mbps)
- Flow 3 ingress (mean 51.11 Mbps)
- Flow 3 egress (mean 50.73 Mbps)
Run 4: Statistics of PCC-Vivace

Local clock offset: 0.016 ms
Remote clock offset: -0.043 ms

# Below is generated by plot.py at 2019-04-25 00:42:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 382.96 Mbit/s
95th percentile per-packet one-way delay: 51.930 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 200.14 Mbit/s
95th percentile per-packet one-way delay: 46.998 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 191.05 Mbit/s
95th percentile per-packet one-way delay: 60.451 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 170.86 Mbit/s
95th percentile per-packet one-way delay: 78.294 ms
Loss rate: 1.13%
Run 4: Report of PCC-Vivace — Data Link
Run 5: Statistics of PCC-Vivace

Local clock offset: 0.042 ms
Remote clock offset: -0.045 ms

# Below is generated by plot.py at 2019-04-25 00:42:44
# Datalink statistics
-- Total of 3 flows:
  95th percentile per-packet one-way delay: 55.877 ms
  Loss rate: 0.51%
-- Flow 1:
  Average throughput: 203.57 Mbit/s
  95th percentile per-packet one-way delay: 59.843 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 103.73 Mbit/s
  95th percentile per-packet one-way delay: 48.226 ms
  Loss rate: 0.56%
-- Flow 3:
  Average throughput: 88.77 Mbit/s
  95th percentile per-packet one-way delay: 48.177 ms
  Loss rate: 1.23%
Run 5: Report of PCC-Vivace — Data Link
Run 1: Statistics of WebRTC media

End at: 2019-04-24 19:26:10
Local clock offset: 0.083 ms
Remote clock offset: -0.041 ms

# Below is generated by plot.py at 2019-04-25 00:42:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.14 Mbit/s
  95th percentile per-packet one-way delay: 47.737 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.07 Mbit/s
  95th percentile per-packet one-way delay: 47.390 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 47.275 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 47.766 ms
  Loss rate: 0.00%
Run 1: Report of WebRTC media — Data Link

![WebRTC Media Report Chart]

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Run 2: Statistics of WebRTC media

Start at: 2019-04-24 20:00:14
End at: 2019-04-24 20:00:44
Local clock offset: -0.064 ms
Remote clock offset: -0.156 ms

# Below is generated by plot.py at 2019-04-25 00:42:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 47.446 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.440 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.419 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.490 ms
Loss rate: 0.00%
Run 2: Report of WebRTC media — Data Link

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

![Graph 2: Per packet one-way delay vs Time](image2)
Run 3: Statistics of WebRTC media

Start at: 2019-04-24 20:34:53
End at: 2019-04-24 20:35:23
Local clock offset: -0.066 ms
Remote clock offset: 0.008 ms

# Below is generated by plot.py at 2019-04-25 00:42:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.14 Mbit/s
  95th percentile per-packet one-way delay: 47.422 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 47.436 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 47.434 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 46.799 ms
  Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link

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

- **Throughput** (Mbps):
  - 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)

- **Packet delay (ms)**:
  - Flow 1 (95th percentile 47.44 ms)
  - Flow 2 (95th percentile 47.43 ms)
  - Flow 3 (95th percentile 46.80 ms)
Run 4: Statistics of WebRTC media

Local clock offset: 0.058 ms
Remote clock offset: -0.096 ms

# Below is generated by plot.py at 2019-04-25 00:42:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.14 Mbit/s
  95th percentile per-packet one-way delay: 49.556 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 46.617 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 46.671 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 49.610 ms
  Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link
Run 5: Statistics of WebRTC media

End at: 2019-04-24 21:44:15
Local clock offset: 0.417 ms
Remote clock offset: 0.014 ms

# Below is generated by plot.py at 2019-04-25 00:42:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.14 Mbit/s
  95th percentile per-packet one-way delay: 49.879 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 50.140 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 47.825 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 47.840 ms
  Loss rate: 0.00%
Run 5: Report of WebRTC media — Data Link

[Graphs showing throughput and packet round-trip delay for different flows.]

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