Pantheon Report

Data path: GCE London on ens4 (local) → GCE Iowa on ens4 (remote).
Repeated the test of 21 congestion control schemes 5 times.
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.
NTP offsets were measured against time.google.com and have been applied to correct the timestamps in logs.

System info:
Linux 4.15.0-1026-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

Git summary:
branch: muses @ 7a686f7c2ed0a33082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e694aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0edbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955377730c746486ca4966
third_party/pantheon-tunnel @ f866d3f58d27af942717625ee3a354cc2e802bd
third_party/pcc @ lafc958fa0d66d18b623c091a55feco872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8ac0d08f92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1b98143fcb78f3f4f2
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webRTC @ 3f0cc2a9061a41b6f9d2e4735770d143a1fa2851
test from GCE London to GCE Iowa, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)
<table>
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<th># runs</th>
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<th>mean 95th-%ile delay (ms)</th>
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<td>PCC-Vivace</td>
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<td>WebRTC media</td>
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<td>0.87</td>
<td>0.57</td>
<td>0.24</td>
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</table>
Run 1: Statistics of TCP BBR

Start at: 2019-02-21 00:07:19
End at: 2019-02-21 00:07:49
Local clock offset: -0.098 ms
Remote clock offset: 0.163 ms

# Below is generated by plot.py at 2019-02-21 03:44:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1049.62 Mbit/s
95th percentile per-packet one-way delay: 162.584 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 531.92 Mbit/s
95th percentile per-packet one-way delay: 153.285 ms
Loss rate: 0.97%
-- Flow 2:
Average throughput: 538.56 Mbit/s
95th percentile per-packet one-way delay: 165.198 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 473.88 Mbit/s
95th percentile per-packet one-way delay: 167.320 ms
Loss rate: 1.90%
Run 1: Report of TCP BBR — Data Link

![Throughput Graph](image)

- Flow 1 ingress (mean 537.11 Mbit/s)
- Flow 1 egress (mean 531.92 Mbit/s)
- Flow 2 ingress (mean 544.61 Mbit/s)
- Flow 2 egress (mean 538.56 Mbit/s)
- Flow 3 ingress (mean 483.10 Mbit/s)
- Flow 3 egress (mean 473.88 Mbit/s)

![Delay Graph](image)

- Flow 1 (95th percentile 153.28 ms)
- Flow 2 (95th percentile 165.20 ms)
- Flow 3 (95th percentile 167.32 ms)
Run 2: Statistics of TCP BBR

Start at: 2019-02-21 00:44:14
End at: 2019-02-21 00:44:44
Local clock offset: -0.089 ms
Remote clock offset: 0.082 ms

# Below is generated by plot.py at 2019-02-21 03:44:02
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1014.23 Mbit/s
  95th percentile per-packet one-way delay: 167.068 ms
  Loss rate: 0.64%
-- Flow 1:
  Average throughput: 522.77 Mbit/s
  95th percentile per-packet one-way delay: 167.160 ms
  Loss rate: 0.67%
-- Flow 2:
  Average throughput: 517.34 Mbit/s
  95th percentile per-packet one-way delay: 170.975 ms
  Loss rate: 0.77%
-- Flow 3:
  Average throughput: 441.67 Mbit/s
  95th percentile per-packet one-way delay: 123.432 ms
  Loss rate: 0.20%
Run 2: Report of TCP BBR — Data Link

![Graph showing throughput and per-packet delay over time for Flow 1, Flow 2, and Flow 3.]

- Flow 1 ingress (mean 526.26 Mbit/s)
- Flow 1 egress (mean 522.77 Mbit/s)
- Flow 2 ingress (mean 523.37 Mbit/s)
- Flow 2 egress (mean 517.34 Mbit/s)
- Flow 3 ingress (mean 442.55 Mbit/s)
- Flow 3 egress (mean 441.67 Mbit/s)
Run 3: Statistics of TCP BBR

Start at: 2019-02-21 01:21:01
End at: 2019-02-21 01:21:31
Local clock offset: -0.029 ms
Remote clock offset: 0.016 ms

# Below is generated by plot.py at 2019-02-21 03:44:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1038.49 Mbit/s
95th percentile per-packet one-way delay: 168.033 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 543.54 Mbit/s
95th percentile per-packet one-way delay: 144.518 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 510.16 Mbit/s
95th percentile per-packet one-way delay: 173.889 ms
Loss rate: 2.25%
-- Flow 3:
Average throughput: 465.93 Mbit/s
95th percentile per-packet one-way delay: 185.668 ms
Loss rate: 1.00%
Run 3: Report of TCP BBR — Data Link

![Throughput Graph]

- Flow 1 ingress (mean 544.83 Mbit/s)
- Flow 2 ingress (mean 521.90 Mbit/s)
- Flow 3 ingress (mean 470.73 Mbit/s)
- Flow 1 egress (mean 543.54 Mbit/s)
- Flow 2 egress (mean 510.16 Mbit/s)
- Flow 3 egress (mean 465.93 Mbit/s)

![Per-packet one-way delay Graph]

- Flow 1 (95th percentile 144.52 ms)
- Flow 2 (95th percentile 173.89 ms)
- Flow 3 (95th percentile 185.67 ms)
Run 4: Statistics of TCP BBR

Start at: 2019-02-21 01:57:48
End at: 2019-02-21 01:58:18
Local clock offset: -0.094 ms
Remote clock offset: -0.128 ms

# Below is generated by plot.py at 2019-02-21 03:44:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1047.77 Mbit/s
95th percentile per-packet one-way delay: 159.366 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 541.08 Mbit/s
95th percentile per-packet one-way delay: 161.997 ms
Loss rate: 0.97%
-- Flow 2:
Average throughput: 517.72 Mbit/s
95th percentile per-packet one-way delay: 133.153 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 486.97 Mbit/s
95th percentile per-packet one-way delay: 158.421 ms
Loss rate: 1.48%
Run 4: Report of TCP BBR — Data Link

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The first graph shows the throughput over time with three flows: Flow 1 ingress (mean 546.37 Mbit/s), Flow 2 ingress (mean 521.06 Mbit/s), and Flow 3 ingress (mean 494.30 Mbit/s). The throughput varies significantly over time, with peaks and dips indicating fluctuations in network capacity.

The second graph illustrates the per-packet one-way delay for the same flows. Flow 1 has a 95th percentile delay of 162.00 ms, Flow 2 has 133.15 ms, and Flow 3 has 158.42 ms. The delays fluctuate significantly, which could indicate network congestion or other transient issues affecting packet transmission times.
Run 5: Statistics of TCP BBR

Start at: 2019-02-21 02:34:18
End at: 2019-02-21 02:34:48
Local clock offset: -0.403 ms
Remote clock offset: -0.011 ms

# Below is generated by plot.py at 2019-02-21 03:44:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1054.50 Mbit/s
  95th percentile per-packet one-way delay: 160.849 ms
  Loss rate: 0.78%
-- Flow 1:
  Average throughput: 546.08 Mbit/s
  95th percentile per-packet one-way delay: 161.106 ms
  Loss rate: 0.85%
-- Flow 2:
  Average throughput: 528.31 Mbit/s
  95th percentile per-packet one-way delay: 136.812 ms
  Loss rate: 0.27%
-- Flow 3:
  Average throughput: 470.22 Mbit/s
  95th percentile per-packet one-way delay: 180.466 ms
  Loss rate: 1.68%
Run 5: Report of TCP BBR — Data Link
Run 1: Statistics of Copa

Start at: 2019-02-21 00:30:11
End at: 2019-02-21 00:30:41
Local clock offset: -0.088 ms
Remote clock offset: 0.045 ms

# Below is generated by plot.py at 2019-02-21 03:46:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 626.23 Mbit/s
95th percentile per-packet one-way delay: 65.923 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 310.11 Mbit/s
95th percentile per-packet one-way delay: 64.515 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 336.21 Mbit/s
95th percentile per-packet one-way delay: 66.370 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 277.35 Mbit/s
95th percentile per-packet one-way delay: 65.553 ms
Loss rate: 0.02%
Run 1: Report of Copa — Data Link
Run 2: Statistics of Copa

Start at: 2019-02-21 01:07:00
End at: 2019-02-21 01:07:30
Local clock offset: -0.084 ms
Remote clock offset: 0.043 ms

# Below is generated by plot.py at 2019-02-21 03:46:01
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 589.15 Mbit/s
   95th percentile per-packet one-way delay: 67.667 ms
   Loss rate: 0.01%
-- Flow 1:
   Average throughput: 309.62 Mbit/s
   95th percentile per-packet one-way delay: 61.418 ms
   Loss rate: 0.00%
-- Flow 2:
   Average throughput: 292.66 Mbit/s
   95th percentile per-packet one-way delay: 67.869 ms
   Loss rate: 0.00%
-- Flow 3:
   Average throughput: 254.54 Mbit/s
   95th percentile per-packet one-way delay: 82.336 ms
   Loss rate: 0.04%
Run 2: Report of Copa — Data Link

![Graph 1: Throughput (Mbps)]

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

Start at: 2019-02-21 01:43:45
End at: 2019-02-21 01:44:15
Local clock offset: -0.098 ms
Remote clock offset: -0.142 ms

# Below is generated by plot.py at 2019-02-21 03:46:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 575.92 Mbit/s
  95th percentile per-packet one-way delay: 65.037 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 308.06 Mbit/s
  95th percentile per-packet one-way delay: 59.257 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 276.14 Mbit/s
  95th percentile per-packet one-way delay: 67.102 ms
  Loss rate: 0.01%
-- Flow 3:
  Average throughput: 252.58 Mbit/s
  95th percentile per-packet one-way delay: 98.916 ms
  Loss rate: 0.02%
Run 3: Report of Copa — Data Link
Run 4: Statistics of Copa

Start at: 2019-02-21 02:20:16
End at: 2019-02-21 02:20:46
Local clock offset: -0.055 ms
Remote clock offset: -0.037 ms

# Below is generated by plot.py at 2019-02-21 04:02:37
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 573.04 Mbit/s
  95th percentile per-packet one-way delay: 60.187 ms
  Loss rate: 0.03%
-- Flow 1:
  Average throughput: 320.81 Mbit/s
  95th percentile per-packet one-way delay: 55.678 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 259.93 Mbit/s
  95th percentile per-packet one-way delay: 59.998 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 238.15 Mbit/s
  95th percentile per-packet one-way delay: 70.378 ms
  Loss rate: 0.17%
Run 4: Report of Copa — Data Link

![Graph showing throughput and packet delivery delay](image)

**Legend**
- Flow 1 ingress (mean 320.84 Mbit/s)
- Flow 2 ingress (mean 259.93 Mbit/s)
- Flow 3 ingress (mean 238.56 Mbit/s)
- Flow 1 egress (mean 320.81 Mbit/s)
- Flow 2 egress (mean 259.93 Mbit/s)
- Flow 3 egress (mean 238.15 Mbit/s)

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

- Flow 1 (95th percentile 55.68 ms)
- Flow 2 (95th percentile 60.00 ms)
- Flow 3 (95th percentile 70.38 ms)
Run 5: Statistics of Copa

Start at: 2019-02-21 02:57:03
End at: 2019-02-21 02:57:33
Local clock offset: 0.31 ms
Remote clock offset: -0.056 ms

# Below is generated by plot.py at 2019-02-21 04:05:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 639.98 Mbit/s
95th percentile per-packet one-way delay: 65.432 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 338.34 Mbit/s
95th percentile per-packet one-way delay: 66.170 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 308.75 Mbit/s
95th percentile per-packet one-way delay: 62.924 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 288.99 Mbit/s
95th percentile per-packet one-way delay: 67.260 ms
Loss rate: 0.02%
Run 5: Report of Copa — Data Link
Run 1: Statistics of TCP Cubic

Start at: 2019-02-21 00:24:05
End at: 2019-02-21 00:24:35
Local clock offset: -0.118 ms
Remote clock offset: 0.039 ms

# Below is generated by plot.py at 2019-02-21 04:05:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1129.73 Mbit/s
95th percentile per-packet one-way delay: 128.453 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 597.24 Mbit/s
95th percentile per-packet one-way delay: 132.405 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 575.44 Mbit/s
95th percentile per-packet one-way delay: 97.786 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 448.42 Mbit/s
95th percentile per-packet one-way delay: 105.574 ms
Loss rate: 0.16%
Run 1: Report of TCP Cubic — Data Link
Run 2: Statistics of TCP Cubic

Start at: 2019-02-21 01:00:55
End at: 2019-02-21 01:01:25
Local clock offset: -0.046 ms
Remote clock offset: 0.037 ms

# Below is generated by plot.py at 2019-02-21 04:05:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1159.36 Mbit/s
95th percentile per-packet one-way delay: 142.838 ms
Loss rate: 0.31%

-- Flow 1:
Average throughput: 662.80 Mbit/s
95th percentile per-packet one-way delay: 101.725 ms
Loss rate: 0.15%

-- Flow 2:
Average throughput: 512.53 Mbit/s
95th percentile per-packet one-way delay: 104.373 ms
Loss rate: 0.25%

-- Flow 3:
Average throughput: 467.90 Mbit/s
95th percentile per-packet one-way delay: 164.781 ms
Loss rate: 1.11%
Run 2: Report of TCP Cubic — Data Link

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

Legend:
- Flow 1 ingress (mean 663.82 Mbps)
- Flow 1 egress (mean 662.80 Mbps)
- Flow 2 ingress (mean 513.80 Mbps)
- Flow 2 egress (mean 512.53 Mbps)
- Flow 3 ingress (mean 471.19 Mbps)
- Flow 3 egress (mean 467.99 Mbps)
Run 3: Statistics of TCP Cubic

Start at: 2019-02-21 01:37:48
End at: 2019-02-21 01:38:18
Local clock offset: ~0.099 ms
Remote clock offset: ~0.127 ms

# Below is generated by plot.py at 2019-02-21 04:05:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1020.54 Mbit/s
95th percentile per-packet one-way delay: 81.621 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 520.96 Mbit/s
95th percentile per-packet one-way delay: 84.186 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 485.08 Mbit/s
95th percentile per-packet one-way delay: 71.437 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 531.65 Mbit/s
95th percentile per-packet one-way delay: 87.737 ms
Loss rate: 0.26%
Run 3: Report of TCP Cubic — Data Link
Run 4: Statistics of TCP Cubic

Start at: 2019-02-21 02:14:22
End at: 2019-02-21 02:14:52
Local clock offset: -0.051 ms
Remote clock offset: -0.039 ms

# Below is generated by plot.py at 2019-02-21 04:05:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1102.92 Mbit/s
95th percentile per-packet one-way delay: 137.423 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 595.50 Mbit/s
95th percentile per-packet one-way delay: 125.732 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 556.59 Mbit/s
95th percentile per-packet one-way delay: 147.991 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 411.76 Mbit/s
95th percentile per-packet one-way delay: 77.995 ms
Loss rate: 0.15%
Run 4: Report of TCP Cubic — Data Link

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

Flow 1 ingress (mean 596.01 Mbit/s)  Flow 1 egress (mean 595.50 Mbit/s)
Flow 2 ingress (mean 558.29 Mbit/s)  Flow 2 egress (mean 556.59 Mbit/s)
Flow 3 ingress (mean 412.41 Mbit/s)  Flow 3 egress (mean 411.76 Mbit/s)

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

- Flow 1 (95th percentile 125.73 ms)
- Flow 2 (95th percentile 147.99 ms)
- Flow 3 (95th percentile 78.00 ms)
Run 5: Statistics of TCP Cubic

Start at: 2019-02-21 02:50:58
End at: 2019-02-21 02:51:28
Local clock offset: -0.138 ms
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2019-02-21 04:05:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1095.51 Mbit/s
95th percentile per-packet one-way delay: 127.898 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 572.64 Mbit/s
95th percentile per-packet one-way delay: 132.332 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 560.51 Mbit/s
95th percentile per-packet one-way delay: 115.366 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 450.84 Mbit/s
95th percentile per-packet one-way delay: 65.223 ms
Loss rate: 0.19%
Run 5: Report of TCP Cubic — Data Link

- Flow 1 ingress (mean 573.74 Mbit/s)
- Flow 2 ingress (mean 562.20 Mbit/s)
- Flow 3 ingress (mean 451.68 Mbit/s)
- Flow 1 egress (mean 572.64 Mbit/s)
- Flow 2 egress (mean 560.51 Mbit/s)
- Flow 3 egress (mean 450.64 Mbit/s)

Per-packet one-way delay (ms)

- Flow 1 (95th percentile 132.33 ms)
- Flow 2 (95th percentile 115.37 ms)
- Flow 3 (95th percentile 65.22 ms)
Run 1: Statistics of FillP

Start at: 2019-02-21 00:09:28
End at: 2019-02-21 00:09:58
Local clock offset: -0.07 ms
Remote clock offset: 0.131 ms

# Below is generated by plot.py at 2019-02-21 04:06:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 941.37 Mbit/s
95th percentile per-packet one-way delay: 55.071 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 600.73 Mbit/s
95th percentile per-packet one-way delay: 55.629 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 373.20 Mbit/s
95th percentile per-packet one-way delay: 53.302 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 275.46 Mbit/s
95th percentile per-packet one-way delay: 52.734 ms
Loss rate: 0.17%
Run 1: Report of FillP — Data Link

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

- Flow 1 ingress (mean 601.05 Mbit/s)
- Flow 1 egress (mean 600.73 Mbit/s)
- Flow 2 ingress (mean 373.34 Mbit/s)
- Flow 2 egress (mean 373.26 Mbit/s)
- Flow 3 ingress (mean 275.97 Mbit/s)
- Flow 3 egress (mean 275.46 Mbit/s)

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

- Flow 1 (95th percentile 55.63 ms)
- Flow 2 (95th percentile 53.30 ms)
- Flow 3 (95th percentile 52.73 ms)
Run 2: Statistics of FillP

Start at: 2019-02-21 00:46:19
End at: 2019-02-21 00:46:49
Local clock offset: -0.167 ms
Remote clock offset: 0.078 ms

# Below is generated by plot.py at 2019-02-21 04:22:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 930.64 Mbit/s
95th percentile per-packet one-way delay: 61.276 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 608.02 Mbit/s
95th percentile per-packet one-way delay: 63.206 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 366.76 Mbit/s
95th percentile per-packet one-way delay: 59.810 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 236.79 Mbit/s
95th percentile per-packet one-way delay: 52.347 ms
Loss rate: 0.00%
Run 2: Report of FillP — Data Link

![Graph showing network traffic over time for different flows]

- Flow 1 ingress (mean 608.31 Mb/s)
- Flow 1 egress (mean 608.02 Mb/s)
- Flow 2 ingress (mean 366.80 Mb/s)
- Flow 2 egress (mean 366.76 Mb/s)
- Flow 3 ingress (mean 236.84 Mb/s)
- Flow 3 egress (mean 236.79 Mb/s)

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

- Flow 1 (95th percentile 63.21 ms)
- Flow 2 (95th percentile 59.81 ms)
- Flow 3 (95th percentile 52.35 ms)
Run 3: Statistics of FillP

Start at: 2019-02-21 01:23:07
End at: 2019-02-21 01:23:37
Local clock offset: -0.07 ms
Remote clock offset: -0.03 ms

# Below is generated by plot.py at 2019-02-21 04:24:45
# Datalink statistics

-- Total of 3 flows:
Average throughput: 990.40 Mbit/s
95th percentile per-packet one-way delay: 56.618 ms
Loss rate: 0.00%

-- Flow 1:
Average throughput: 615.64 Mbit/s
95th percentile per-packet one-way delay: 59.256 ms
Loss rate: 0.00%

-- Flow 2:
Average throughput: 420.45 Mbit/s
95th percentile per-packet one-way delay: 48.901 ms
Loss rate: 0.00%

-- Flow 3:
Average throughput: 285.75 Mbit/s
95th percentile per-packet one-way delay: 52.177 ms
Loss rate: 0.00%
Run 3: Report of FillP — Data Link

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

- Flow 1 ingress (mean 615.64 Mb/s)
- Flow 1 egress (mean 615.64 Mb/s)
- Flow 2 ingress (mean 420.46 Mb/s)
- Flow 2 egress (mean 420.45 Mb/s)
- Flow 3 ingress (mean 285.78 Mb/s)
- Flow 3 egress (mean 285.75 Mb/s)
Run 4: Statistics of FillP

Start at: 2019-02-21 01:59:53
End at: 2019-02-21 02:00:23
Local clock offset: -0.086 ms
Remote clock offset: -0.149 ms

# Below is generated by plot.py at 2019-02-21 04:24:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 895.96 Mbit/s
95th percentile per-packet one-way delay: 54.609 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 554.75 Mbit/s
95th percentile per-packet one-way delay: 52.744 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 374.73 Mbit/s
95th percentile per-packet one-way delay: 57.204 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 277.91 Mbit/s
95th percentile per-packet one-way delay: 50.237 ms
Loss rate: 0.00%
Run 4: Report of FillP — Data Link

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

- Flow 1 ingress (mean 554.75 MB/s)
- Flow 1 egress (mean 554.75 MB/s)
- Flow 2 ingress (mean 374.77 MB/s)
- Flow 2 egress (mean 374.73 MB/s)
- Flow 3 ingress (mean 277.90 MB/s)
- Flow 3 egress (mean 277.91 MB/s)

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

- Flow 1 (95th percentile 52.74 ms)
- Flow 2 (95th percentile 57.20 ms)
- Flow 3 (95th percentile 50.24 ms)
Run 5: Statistics of FillP

Start at: 2019-02-21 02:36:23
End at: 2019-02-21 02:36:53
Local clock offset: -0.047 ms
Remote clock offset: -0.041 ms

# Below is generated by plot.py at 2019-02-21 04:24:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 882.72 Mbit/s
  95th percentile per-packet one-way delay: 63.369 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 573.42 Mbit/s
  95th percentile per-packet one-way delay: 66.898 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 338.52 Mbit/s
  95th percentile per-packet one-way delay: 51.386 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 254.16 Mbit/s
  95th percentile per-packet one-way delay: 54.901 ms
  Loss rate: 0.00%
Run 5: Report of FillP — Data Link

![Throughput vs Time Graph]

- Flow 1 ingress (mean 573.42 Mbit/s)
- Flow 1 egress (mean 573.42 Mbit/s)
- Flow 2 ingress (mean 338.52 Mbit/s)
- Flow 2 egress (mean 338.52 Mbit/s)
- Flow 3 ingress (mean 254.16 Mbit/s)
- Flow 3 egress (mean 254.16 Mbit/s)

![Packet Loss Rate Graph]

- Flow 1 (95th percentile 66.90 ms)
- Flow 2 (95th percentile 51.39 ms)
- Flow 3 (95th percentile 54.90 ms)
Run 1: Statistics of FillP-Sheep

Start at: 2019-02-21 00:16:55
End at: 2019-02-21 00:17:25
Local clock offset: -0.078 ms
Remote clock offset: 0.062 ms

# Below is generated by plot.py at 2019-02-21 04:24:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 850.49 Mbit/s
  95th percentile per-packet one-way delay: 49.290 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 548.17 Mbit/s
  95th percentile per-packet one-way delay: 49.272 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 334.25 Mbit/s
  95th percentile per-packet one-way delay: 49.182 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 238.28 Mbit/s
  95th percentile per-packet one-way delay: 49.595 ms
  Loss rate: 0.08%
Run 1: Report of FillP-Sheep — Data Link

![Graphs showing throughput and per-packet one-way delay](image)

Flow 1 ingress (mean 548.18 Mbit/s) — Flow 1 egress (mean 548.17 Mbit/s)
Flow 2 ingress (mean 334.25 Mbit/s) — Flow 2 egress (mean 334.25 Mbit/s)
Flow 3 ingress (mean 238.46 Mbit/s) — Flow 3 egress (mean 238.28 Mbit/s)

Per-packet one-way delay (ms):
- Flow 1 (95th percentile 49.27 ms)
- Flow 2 (95th percentile 49.18 ms)
- Flow 3 (95th percentile 49.59 ms)
Run 2: Statistics of FillP-Sheep

Start at: 2019-02-21 00:53:48
End at: 2019-02-21 00:54:18
Local clock offset: -0.012 ms
Remote clock offset: 0.032 ms

# Below is generated by plot.py at 2019-02-21 04:24:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 860.58 Mbit/s
95th percentile per-packet one-way delay: 50.313 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 563.56 Mbit/s
95th percentile per-packet one-way delay: 50.940 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 328.31 Mbit/s
95th percentile per-packet one-way delay: 48.911 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 237.38 Mbit/s
95th percentile per-packet one-way delay: 50.060 ms
Loss rate: 0.00%
Run 2: Report of FillP-Sheep — Data Link

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

- Flow 1 Ingress (mean 563.56 Mbps)
- Flow 1 Egress (mean 563.56 Mbps)
- Flow 2 Ingress (mean 328.31 Mbps)
- Flow 2 Egress (mean 328.31 Mbps)
- Flow 3 Ingress (mean 237.38 Mbps)
- Flow 3 Egress (mean 237.38 Mbps)

*Flow 1 (95th percentile 50.94 ms)  Flow 2 (95th percentile 48.91 ms)  Flow 3 (95th percentile 50.06 ms)*
Run 3: Statistics of FillP-Sheep

Start at: 2019-02-21 01:30:44
End at: 2019-02-21 01:31:14
Local clock offset: -0.089 ms
Remote clock offset: -0.115 ms

# Below is generated by plot.py at 2019-02-21 04:24:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 877.16 Mbit/s
95th percentile per-packet one-way delay: 51.139 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 573.12 Mbit/s
95th percentile per-packet one-way delay: 50.820 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 330.51 Mbit/s
95th percentile per-packet one-way delay: 51.562 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 253.00 Mbit/s
95th percentile per-packet one-way delay: 50.984 ms
Loss rate: 0.00%
Run 3: Report of FillP-Sheep — Data Link

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

- Flow 1 ingress (mean 573.11 Mbit/s)
- Flow 1 egress (mean 573.12 Mbit/s)
- Flow 2 ingress (mean 330.56 Mbit/s)
- Flow 2 egress (mean 330.51 Mbit/s)
- Flow 3 ingress (mean 252.99 Mbit/s)
- Flow 3 egress (mean 253.00 Mbit/s)

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

- Flow 1 (95th percentile 50.82 ms)
- Flow 2 (95th percentile 51.56 ms)
- Flow 3 (95th percentile 50.98 ms)
Run 4: Statistics of FillP-Sheep

Start at: 2019-02-21 02:07:16
End at: 2019-02-21 02:07:46
Local clock offset: -0.101 ms
Remote clock offset: -0.047 ms

# Below is generated by plot.py at 2019-02-21 04:25:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 853.78 Mbit/s
95th percentile per-packet one-way delay: 51.411 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 565.73 Mbit/s
95th percentile per-packet one-way delay: 52.412 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 311.76 Mbit/s
95th percentile per-packet one-way delay: 50.560 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 244.49 Mbit/s
95th percentile per-packet one-way delay: 49.077 ms
Loss rate: 0.00%
Run 4: Report of FillP-Sheep — Data Link
Run 5: Statistics of FillP-Sheep

Start at: 2019-02-21 02:43:51
End at: 2019-02-21 02:44:21
Local clock offset: -0.094 ms
Remote clock offset: -0.025 ms

# Below is generated by plot.py at 2019-02-21 04:41:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 834.32 Mbit/s
  95th percentile per-packet one-way delay: 53.162 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 536.54 Mbit/s
  95th percentile per-packet one-way delay: 53.915 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 316.34 Mbit/s
  95th percentile per-packet one-way delay: 51.942 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 264.25 Mbit/s
  95th percentile per-packet one-way delay: 51.501 ms
  Loss rate: 0.04%
Run 5: Report of FillP-Sheep — Data Link

Throughput (Mbps):
- Flow 1 ingress (mean 536.53 Mbps)
- Flow 1 egress (mean 536.54 Mbps)
- Flow 2 ingress (mean 316.39 Mbps)
- Flow 2 egress (mean 316.34 Mbps)
- Flow 3 ingress (mean 264.38 Mbps)
- Flow 3 egress (mean 264.25 Mbps)

Per-packet one-way delay (ms):
- Flow 1 (95th percentile 53.91 ms)
- Flow 2 (95th percentile 51.94 ms)
- Flow 3 (95th percentile 51.50 ms)
Run 1: Statistics of Indigo

Start at: 2019-02-21 00:22:16
End at: 2019-02-21 00:22:46
Local clock offset: -0.471 ms
Remote clock offset: 0.039 ms

# Below is generated by plot.py at 2019-02-21 04:41:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 420.17 Mbit/s
95th percentile per-packet one-way delay: 49.110 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 226.09 Mbit/s
95th percentile per-packet one-way delay: 49.018 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 206.30 Mbit/s
95th percentile per-packet one-way delay: 49.284 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 179.40 Mbit/s
95th percentile per-packet one-way delay: 49.030 ms
Loss rate: 0.00%
Run 1: Report of Indigo — Data Link
Run 2: Statistics of Indigo

Start at: 2019-02-21 00:59:04
End at: 2019-02-21 00:59:34
Local clock offset: -0.081 ms
Remote clock offset: 0.09 ms

# Below is generated by plot.py at 2019-02-21 04:41:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 435.36 Mbit/s
95th percentile per-packet one-way delay: 48.971 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 227.93 Mbit/s
95th percentile per-packet one-way delay: 48.974 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 222.56 Mbit/s
95th percentile per-packet one-way delay: 49.044 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 183.03 Mbit/s
95th percentile per-packet one-way delay: 48.767 ms
Loss rate: 0.00%
Run 2: Report of Indigo — Data Link
Run 3: Statistics of Indigo

Start at: 2019-02-21 01:36:02
End at: 2019-02-21 01:36:32
Local clock offset: -0.089 ms
Remote clock offset: -0.134 ms

# Below is generated by plot.py at 2019-02-21 04:41:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 389.06 Mbit/s
95th percentile per-packet one-way delay: 48.578 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 207.88 Mbit/s
95th percentile per-packet one-way delay: 48.725 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 182.69 Mbit/s
95th percentile per-packet one-way delay: 48.234 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 184.33 Mbit/s
95th percentile per-packet one-way delay: 48.779 ms
Loss rate: 0.00%
Run 3: Report of Indigo — Data Link
Run 4: Statistics of Indigo

Start at: 2019-02-21 02:12:31
End at: 2019-02-21 02:13:01
Local clock offset: -0.046 ms
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2019-02-21 04:41:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 435.62 Mbit/s
95th percentile per-packet one-way delay: 48.727 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 227.48 Mbit/s
95th percentile per-packet one-way delay: 48.357 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 216.94 Mbit/s
95th percentile per-packet one-way delay: 48.262 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 198.42 Mbit/s
95th percentile per-packet one-way delay: 49.932 ms
Loss rate: 0.00%
Run 4: Report of Indigo — Data Link

![Throughput Graph]

- Flow 1 ingress (mean 227.48 Mbit/s)
- Flow 1 egress (mean 227.48 Mbit/s)
- Flow 2 ingress (mean 216.94 Mbit/s)
- Flow 2 egress (mean 216.94 Mbit/s)
- Flow 3 ingress (mean 196.40 Mbit/s)
- Flow 3 egress (mean 196.42 Mbit/s)

![Per-packet round-trip delay graph]

- Flow 1 (95th percentile 48.36 ms)
- Flow 2 (95th percentile 48.26 ms)
- Flow 3 (95th percentile 49.93 ms)
Run 5: Statistics of Indigo

Start at: 2019-02-21 02:49:09
End at: 2019-02-21 02:49:39
Local clock offset: -0.087 ms
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2019-02-21 04:41:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 425.63 Mbit/s
  95th percentile per-packet one-way delay: 50.590 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 223.85 Mbit/s
  95th percentile per-packet one-way delay: 49.499 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 216.14 Mbit/s
  95th percentile per-packet one-way delay: 52.011 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 180.57 Mbit/s
  95th percentile per-packet one-way delay: 50.375 ms
  Loss rate: 0.00%
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-02-21 00:04:25
End at: 2019-02-21 00:04:55
Local clock offset: -0.071 ms
Remote clock offset: 0.092 ms
Run 1: Report of Indigo-MusesC3 — Data Link
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-02-21 00:41:10
End at: 2019-02-21 00:41:40
Local clock offset: -0.166 ms
Remote clock offset: 0.042 ms

# Below is generated by plot.py at 2019-02-21 04:41:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 904.85 Mbit/s
  95th percentile per-packet one-way delay: 61.836 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 537.39 Mbit/s
  95th percentile per-packet one-way delay: 65.403 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 429.18 Mbit/s
  95th percentile per-packet one-way delay: 51.667 ms
  Loss rate: 0.02%
-- Flow 3:
  Average throughput: 327.99 Mbit/s
  95th percentile per-packet one-way delay: 50.128 ms
  Loss rate: 0.00%
Run 2: Report of Indigo-MusesC3 — Data Link

![Graph showing throughput over time for different flows]

Flow 1 ingress (mean 537.34 Mbit/s)
Flow 1 egress (mean 537.39 Mbit/s)
Flow 2 ingress (mean 429.24 Mbit/s)
Flow 2 egress (mean 429.18 Mbit/s)
Flow 3 ingress (mean 326.00 Mbit/s)
Flow 3 egress (mean 327.99 Mbit/s)

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

Flow 1 (95th percentile 65.40 ms)
Flow 2 (95th percentile 51.67 ms)
Flow 3 (95th percentile 50.13 ms)
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-02-21 01:17:59
End at: 2019-02-21 01:18:29
Local clock offset: -0.079 ms
Remote clock offset: 0.063 ms

# Below is generated by plot.py at 2019-02-21 04:51:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 879.91 Mbit/s
95th percentile per-packet one-way delay: 59.501 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 504.81 Mbit/s
95th percentile per-packet one-way delay: 64.457 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 431.83 Mbit/s
95th percentile per-packet one-way delay: 56.960 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 340.83 Mbit/s
95th percentile per-packet one-way delay: 49.746 ms
Loss rate: 0.00%
Run 3: Report of Indigo-MusesC3 — Data Link

![Graph showing throughput over time for different flows]

- Flow 1 ingress (mean 594.73 Mbps)
- Flow 1 egress (mean 504.81 Mbps)
- Flow 2 ingress (mean 431.83 Mbps)
- Flow 2 egress (mean 431.83 Mbps)
- Flow 3 ingress (mean 340.82 Mbps)
- Flow 3 egress (mean 340.83 Mbps)

![Graph showing per-packet one-way delay]

- Flow 1 (95th percentile 64.46 ms)
- Flow 2 (95th percentile 56.96 ms)
- Flow 3 (95th percentile 49.75 ms)
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-02-21 01:54:43
End at: 2019-02-21 01:55:13
Local clock offset: -0.061 ms
Remote clock offset: -0.162 ms

# Below is generated by plot.py at 2019-02-21 04:52:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 913.47 Mbit/s
95th percentile per-packet one-way delay: 61.583 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 527.72 Mbit/s
95th percentile per-packet one-way delay: 63.168 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 453.61 Mbit/s
95th percentile per-packet one-way delay: 58.300 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 336.48 Mbit/s
95th percentile per-packet one-way delay: 50.377 ms
Loss rate: 0.04%
Run 4: Report of Indigo-MusesC3 — Data Link

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

Flow 1 ingress (mean 527.74 Mbit/s)  Flow 2 ingress (mean 453.62 Mbit/s)  Flow 3 ingress (mean 336.54 Mbit/s)
Flow 1 egress (mean 527.72 Mbit/s)  Flow 2 egress (mean 453.61 Mbit/s)  Flow 3 egress (mean 336.48 Mbit/s)

Flow 1 (95th percentile 63.17 ms)  Flow 2 (95th percentile 58.30 ms)  Flow 3 (95th percentile 50.38 ms)
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-02-21 02:31:16  
End at: 2019-02-21 02:31:46  
Local clock offset: -0.078 ms  
Remote clock offset: 0.001 ms

# Below is generated by plot.py at 2019-02-21 04:52:39  
# Datalink statistics  
-- Total of 3 flows:  
  Average throughput: 849.93 Mbit/s  
  95th percentile per-packet one-way delay: 60.507 ms  
    Loss rate: 0.01%  
-- Flow 1:  
  Average throughput: 512.33 Mbit/s  
  95th percentile per-packet one-way delay: 59.931 ms  
    Loss rate: 0.00%  
-- Flow 2:  
  Average throughput: 406.92 Mbit/s  
  95th percentile per-packet one-way delay: 68.185 ms  
    Loss rate: 0.02%  
-- Flow 3:  
  Average throughput: 276.74 Mbit/s  
  95th percentile per-packet one-way delay: 52.387 ms  
    Loss rate: 0.08%
Run 5: Report of Indigo-MusesC3 — Data Link
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-02-21 00:34:44
End at: 2019-02-21 00:35:14
Local clock offset: -0.087 ms
Remote clock offset: 0.046 ms

# Below is generated by plot.py at 2019-02-21 04:55:37
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 955.08 Mbit/s
  95th percentile per-packet one-way delay: 73.453 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 532.64 Mbit/s
  95th percentile per-packet one-way delay: 77.125 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 486.92 Mbit/s
  95th percentile per-packet one-way delay: 73.771 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 382.00 Mbit/s
  95th percentile per-packet one-way delay: 53.914 ms
  Loss rate: 0.00%
Run 1: Report of Indigo-MusesC5 — Data Link

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

- Flow 1 ingress (mean 532.69 Mbit/s)
- Flow 2 ingress (mean 486.91 Mbit/s)
- Flow 3 ingress (mean 381.99 Mbit/s)
- Flow 1 egress (mean 532.64 Mbit/s)
- Flow 2 egress (mean 486.92 Mbit/s)
- Flow 3 egress (mean 382.00 Mbit/s)

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

- Flow 1 (95th percentile 77.12 ms)
- Flow 2 (95th percentile 73.77 ms)
- Flow 3 (95th percentile 53.91 ms)
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-02-21 01:11:34
End at: 2019-02-21 01:12:04
Local clock offset: -0.042 ms
Remote clock offset: 0.011 ms

# Below is generated by plot.py at 2019-02-21 04:56:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1000.51 Mbit/s
95th percentile per-packet one-way delay: 62.217 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 566.72 Mbit/s
95th percentile per-packet one-way delay: 62.302 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 487.66 Mbit/s
95th percentile per-packet one-way delay: 62.029 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 389.30 Mbit/s
95th percentile per-packet one-way delay: 61.924 ms
Loss rate: 0.00%
Run 2: Report of Indigo-MusesC5 — Data Link

[Graph showing throughput and per-packet one-way delay over time for different flows with specified mean rates]
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-02-21 01:48:18
End at: 2019-02-21 01:48:48
Local clock offset: -0.134 ms
Remote clock offset: -0.159 ms

# Below is generated by plot.py at 2019-02-21 04:56:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 978.57 Mbit/s
95th percentile per-packet one-way delay: 63.362 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 588.62 Mbit/s
95th percentile per-packet one-way delay: 61.712 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 452.03 Mbit/s
95th percentile per-packet one-way delay: 71.520 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 358.27 Mbit/s
95th percentile per-packet one-way delay: 54.737 ms
Loss rate: 0.00%
Run 3: Report of Indigo-MusesC5 — Data Link

![Graph 1: Throughput vs Time]

![Graph 2: Per packet one way delay vs Time]

Legend:
- Flow 1 ingress (mean 588.54 Mbit/s)
- Flow 1 egress (mean 588.62 Mbit/s)
- Flow 2 ingress (mean 452.06 Mbit/s)
- Flow 2 egress (mean 452.03 Mbit/s)
- Flow 3 ingress (mean 358.31 Mbit/s)
- Flow 3 egress (mean 358.27 Mbit/s)

Flow 1 (95th percentile 61.71 ms)
Flow 2 (95th percentile 71.52 ms)
Flow 3 (95th percentile 54.74 ms)
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-02-21 02:24:51
End at: 2019-02-21 02:25:21
Local clock offset: -0.101 ms
Remote clock offset: -0.029 ms

# Below is generated by plot.py at 2019-02-21 04:58:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 958.90 Mbit/s
  95th percentile per-packet one-way delay: 66.889 ms
  Loss rate: 0.03%
-- Flow 1:
  Average throughput: 556.21 Mbit/s
  95th percentile per-packet one-way delay: 70.741 ms
  Loss rate: 0.02%
-- Flow 2:
  Average throughput: 491.01 Mbit/s
  95th percentile per-packet one-way delay: 62.494 ms
  Loss rate: 0.05%
-- Flow 3:
  Average throughput: 315.96 Mbit/s
  95th percentile per-packet one-way delay: 52.981 ms
  Loss rate: 0.00%
Run 4: Report of Indigo-MusesC5 — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 556.33 Mbps)  Flow 1 egress (mean 556.21 Mbps)
Flow 2 ingress (mean 491.19 Mbps)  Flow 2 egress (mean 491.01 Mbps)
Flow 3 ingress (mean 315.26 Mbps)  Flow 3 egress (mean 315.96 Mbps)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 70.74 ms)  Flow 2 (95th percentile 62.49 ms)  Flow 3 (95th percentile 52.98 ms)
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-02-21 03:01:42
End at: 2019-02-21 03:02:12
Local clock offset: -0.483 ms
Remote clock offset: -0.031 ms

# Below is generated by plot.py at 2019-02-21 04:58:13
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 947.80 Mbit/s
  95th percentile per-packet one-way delay: 70.214 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 541.69 Mbit/s
  95th percentile per-packet one-way delay: 70.609 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 469.39 Mbit/s
  95th percentile per-packet one-way delay: 71.442 ms
  Loss rate: 0.01%
-- Flow 3:
  Average throughput: 365.37 Mbit/s
  95th percentile per-packet one-way delay: 56.642 ms
  Loss rate: 0.11%
Run 5: Report of Indigo-MusesC5 — Data Link

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

- Flow 1 ingress (mean 541.69 Mbit/s)
- Flow 1 egress (mean 541.69 Mbit/s)
- Flow 2 ingress (mean 459.45 Mbit/s)
- Flow 2 egress (mean 469.39 Mbit/s)
- Flow 3 ingress (mean 365.68 Mbit/s)
- Flow 3 egress (mean 365.37 Mbit/s)

Flow 1 (95th percentile 70.61 ms)  Flow 2 (95th percentile 71.44 ms)  Flow 3 (95th percentile 56.64 ms)
Run 1: Statistics of Indigo-MusesD

Start at: 2019-02-21 00:15:07
End at: 2019-02-21 00:15:37
Local clock offset: -0.066 ms
Remote clock offset: 0.039 ms

# Below is generated by plot.py at 2019-02-21 05:06:18
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 800.30 Mbit/s
  95th percentile per-packet one-way delay: 61.504 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 447.90 Mbit/s
  95th percentile per-packet one-way delay: 73.153 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 416.34 Mbit/s
  95th percentile per-packet one-way delay: 49.490 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 299.01 Mbit/s
  95th percentile per-packet one-way delay: 50.992 ms
  Loss rate: 0.00%
Run 1: Report of Indigo-MusesD — Data Link
Run 2: Statistics of Indigo-MusesD

Start at: 2019-02-21 00:52:00
End at: 2019-02-21 00:52:30
Local clock offset: 0.305 ms
Remote clock offset: 0.033 ms

# Below is generated by plot.py at 2019-02-21 05:06:40
# Datalink statistics

-- Total of 3 flows:
Average throughput: 794.39 Mbit/s
95th percentile per-packet one-way delay: 55.110 ms
Loss rate: 0.01%

-- Flow 1:
Average throughput: 443.23 Mbit/s
95th percentile per-packet one-way delay: 60.181 ms
Loss rate: 0.00%

-- Flow 2:
Average throughput: 409.50 Mbit/s
95th percentile per-packet one-way delay: 50.521 ms
Loss rate: 0.03%

-- Flow 3:
Average throughput: 305.81 Mbit/s
95th percentile per-packet one-way delay: 48.930 ms
Loss rate: 0.05%
Run 3: Statistics of Indigo-MusesD

Start at: 2019-02-21 01:28:54
End at: 2019-02-21 01:29:24
Local clock offset: -0.04 ms
Remote clock offset: -0.045 ms

# Below is generated by plot.py at 2019-02-21 05:07:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 828.87 Mbit/s
  95th percentile per-packet one-way delay: 56.749 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 480.01 Mbit/s
  95th percentile per-packet one-way delay: 69.147 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 400.14 Mbit/s
  95th percentile per-packet one-way delay: 50.244 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 328.02 Mbit/s
  95th percentile per-packet one-way delay: 48.912 ms
  Loss rate: 0.00%
Run 3: Report of Indigo-MusesD — Data Link

![Throughput Graph]

- Flow 1 ingress (mean 480.00 Mbit/s)
- Flow 1 egress (mean 480.01 Mbit/s)
- Flow 2 ingress (mean 400.14 Mbit/s)
- Flow 2 egress (mean 400.14 Mbit/s)
- Flow 3 ingress (mean 326.01 Mbit/s)
- Flow 3 egress (mean 326.02 Mbit/s)

![Delay Graph]

- Flow 1 (95th percentile 69.15 ms)
- Flow 2 (95th percentile 50.24 ms)
- Flow 3 (95th percentile 48.91 ms)
Run 4: Statistics of Indigo-MusesD

Start at: 2019-02-21 02:05:32
End at: 2019-02-21 02:06:02
Local clock offset: 0.286 ms
Remote clock offset: -0.08 ms

# Below is generated by plot.py at 2019-02-21 05:07:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 701.23 Mbit/s
  95th percentile per-packet one-way delay: 61.249 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 436.03 Mbit/s
  95th percentile per-packet one-way delay: 69.872 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 349.32 Mbit/s
  95th percentile per-packet one-way delay: 52.348 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 141.84 Mbit/s
  95th percentile per-packet one-way delay: 49.144 ms
  Loss rate: 0.00%
Run 4: Report of Indigo-MusesD — Data Link
Run 5: Statistics of Indigo-MusesD

Start at: 2019-02-21 02:42:05
End at: 2019-02-21 02:42:35
Local clock offset: -0.064 ms
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2019-02-21 05:10:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 760.77 Mbit/s
95th percentile per-packet one-way delay: 58.029 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 415.94 Mbit/s
95th percentile per-packet one-way delay: 62.625 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 410.65 Mbit/s
95th percentile per-packet one-way delay: 50.972 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 297.45 Mbit/s
95th percentile per-packet one-way delay: 49.141 ms
Loss rate: 0.03%
Run 5: Report of Indigo-MusesD — Data Link

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

Flow 1 ingress (mean 415.85 Mbit/s)  Flow 1 egress (mean 415.94 Mbit/s)
Flow 2 ingress (mean 410.68 Mbit/s)  Flow 2 egress (mean 410.55 Mbit/s)
Flow 3 ingress (mean 297.47 Mbit/s)  Flow 3 egress (mean 297.45 Mbit/s)

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

Flow 1 (95th percentile 62.62 ms)  Flow 2 (95th percentile 50.97 ms)  Flow 3 (95th percentile 49.14 ms)
Run 1: Statistics of Indigo-MusesT

Start at: 2019-02-21 00:18:40  
End at: 2019-02-21 00:19:10  
Local clock offset: -0.087 ms  
Remote clock offset: 0.07 ms  

# Below is generated by plot.py at 2019-02-21 05:14:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 991.02 Mbit/s  
95th percentile per-packet one-way delay: 88.002 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 584.08 Mbit/s  
95th percentile per-packet one-way delay: 85.313 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 480.39 Mbit/s  
95th percentile per-packet one-way delay: 114.783 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 355.38 Mbit/s  
95th percentile per-packet one-way delay: 51.284 ms  
Loss rate: 0.00%
Run 1: Report of Indigo-MusT — Data Link

- Flow 1 ingress (mean 584.09 Mbit/s)
- Flow 1 egress (mean 584.08 Mbit/s)
- Flow 2 ingress (mean 480.38 Mbit/s)
- Flow 2 egress (mean 480.39 Mbit/s)
- Flow 3 ingress (mean 355.02 Mbit/s)
- Flow 3 egress (mean 355.38 Mbit/s)
Run 2: Statistics of Indigo-MusesT

Start at: 2019-02-21 00:55:34
End at: 2019-02-21 00:56:04
Local clock offset: -0.077 ms
Remote clock offset: 0.048 ms

# Below is generated by plot.py at 2019-02-21 05:14:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 870.26 Mbit/s
95th percentile per-packet one-way delay: 84.114 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 540.43 Mbit/s
95th percentile per-packet one-way delay: 85.920 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 418.32 Mbit/s
95th percentile per-packet one-way delay: 74.853 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 223.21 Mbit/s
95th percentile per-packet one-way delay: 51.104 ms
Loss rate: 0.00%
Run 2: Report of Indigo-MusesT — Data Link

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

Stream 1 ingress (mean 540.43 Mb/s)
Stream 2 ingress (mean 418.33 Mb/s)
Stream 3 ingress (mean 223.20 Mb/s)
Stream 1 egress (mean 540.43 Mb/s)
Stream 2 egress (mean 418.32 Mb/s)
Stream 3 egress (mean 223.21 Mb/s)

![Graph showing packet per packet rate over time for different streams.]

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Run 3: Statistics of Indigo-MusesT

Start at: 2019-02-21 01:32:30
End at: 2019-02-21 01:33:00
Local clock offset: -0.052 ms
Remote clock offset: -0.097 ms

# Below is generated by plot.py at 2019-02-21 05:15:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 995.27 Mbit/s
95th percentile per-packet one-way delay: 77.891 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 586.70 Mbit/s
95th percentile per-packet one-way delay: 77.088 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 492.32 Mbit/s
95th percentile per-packet one-way delay: 85.953 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 343.03 Mbit/s
95th percentile per-packet one-way delay: 50.636 ms
Loss rate: 0.02%
Run 3: Report of Indigo-MusesT — Data Link

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

- **Flow 1** (ingress: 586.58 Mbit/s, egress: 586.70 Mbit/s)
- **Flow 2** (ingress: 492.42 Mbit/s)
- **Flow 3** (ingress: 343.06 Mbit/s, egress: 343.03 Mbit/s)

Per-packet round trip delay (ms):
- **Flow 1**: 95th percentile 77.09 ms
- **Flow 2**: 95th percentile 85.95 ms
- **Flow 3**: 95th percentile 50.64 ms
Run 4: Statistics of Indigo-MusesT

Start at: 2019-02-21 02:09:01
End at: 2019-02-21 02:09:31
Local clock offset: -0.414 ms
Remote clock offset: -0.054 ms

# Below is generated by plot.py at 2019-02-21 05:22:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 931.61 Mbit/s
  95th percentile per-packet one-way delay: 83.952 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 551.33 Mbit/s
  95th percentile per-packet one-way delay: 89.614 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 443.75 Mbit/s
  95th percentile per-packet one-way delay: 54.045 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 348.71 Mbit/s
  95th percentile per-packet one-way delay: 53.392 ms
  Loss rate: 0.00%
Run 4: Report of Indigo-MusesT — Data Link

Throughput (Mb/s)

0  5  10  15  20  25  30

Flow 1 ingress (mean 551.32 Mb/s)  
Flow 1 egress (mean 551.33 Mb/s)  
Flow 2 ingress (mean 443.75 Mb/s)  
Flow 2 egress (mean 443.75 Mb/s)  
Flow 3 ingress (mean 348.81 Mb/s)  
Flow 3 egress (mean 348.71 Mb/s)

Per-packet one way delay (ms)

0  5  10  15  20  25

Flow 1 (95th percentile 89.61 ms)  
Flow 2 (95th percentile 54.05 ms)  
Flow 3 (95th percentile 53.39 ms)
Run 5: Statistics of Indigo-MusesT

Start at: 2019-02-21 02:45:36
End at: 2019-02-21 02:46:06
Local clock offset: -0.117 ms
Remote clock offset: -0.061 ms

# Below is generated by plot.py at 2019-02-21 05:22:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 940.08 Mbit/s
95th percentile per-packet one-way delay: 85.535 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 558.53 Mbit/s
95th percentile per-packet one-way delay: 91.819 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 452.95 Mbit/s
95th percentile per-packet one-way delay: 53.486 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 341.99 Mbit/s
95th percentile per-packet one-way delay: 53.166 ms
Loss rate: 0.00%
Run 5: Report of Indigo-MusesT — Data Link
Run 1: Statistics of LEDBAT

Start at: 2019-02-21 00:03:07
End at: 2019-02-21 00:03:37
Local clock offset: 0.252 ms
Remote clock offset: 0.03 ms

# Below is generated by plot.py at 2019-02-21 05:22:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.37 Mbit/s
95th percentile per-packet one-way delay: 47.806 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 41.12 Mbit/s
95th percentile per-packet one-way delay: 47.826 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 28.11 Mbit/s
95th percentile per-packet one-way delay: 47.786 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.72 Mbit/s
95th percentile per-packet one-way delay: 47.739 ms
Loss rate: 0.00%
Run 2: Statistics of LEDBAT

Start at: 2019-02-21 00:39:52
End at: 2019-02-21 00:40:22
Local clock offset: -0.074 ms
Remote clock offset: 0.066 ms

# Below is generated by plot.py at 2019-02-21 05:22:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 65.29 Mbit/s
  95th percentile per-packet one-way delay: 48.388 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 42.09 Mbit/s
  95th percentile per-packet one-way delay: 48.545 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 27.80 Mbit/s
  95th percentile per-packet one-way delay: 48.224 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 14.24 Mbit/s
  95th percentile per-packet one-way delay: 47.202 ms
  Loss rate: 0.00%
Run 2: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 42.09 Mbit/s)
- Flow 1 egress (mean 42.09 Mbit/s)
- Flow 2 ingress (mean 27.80 Mbit/s)
- Flow 2 egress (mean 27.80 Mbit/s)
- Flow 3 ingress (mean 14.24 Mbit/s)
- Flow 3 egress (mean 14.24 Mbit/s)
Run 3: Statistics of LEDBAT

Start at: 2019-02-21 01:16:41
End at: 2019-02-21 01:17:11
Local clock offset: -0.084 ms
Remote clock offset: 0.038 ms

# Below is generated by plot.py at 2019-02-21 05:22:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.83 Mbit/s
95th percentile per-packet one-way delay: 48.401 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 41.88 Mbit/s
95th percentile per-packet one-way delay: 48.471 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 27.58 Mbit/s
95th percentile per-packet one-way delay: 48.411 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.95 Mbit/s
95th percentile per-packet one-way delay: 47.941 ms
Loss rate: 0.00%
Run 3: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 41.88 Mbps)
- Flow 2 ingress (mean 27.58 Mbps)
- Flow 3 ingress (mean 13.95 Mbps)

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

- Flow 1 (95th percentile 48.47 ms)
- Flow 2 (95th percentile 48.41 ms)
- Flow 3 (95th percentile 47.94 ms)
Run 4: Statistics of LEDBAT

Start at: 2019-02-21 01:53:26
End at: 2019-02-21 01:53:56
Local clock offset: -0.109 ms
Remote clock offset: -0.163 ms

# Below is generated by plot.py at 2019-02-21 05:22:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.37 Mbit/s
95th percentile per-packet one-way delay: 48.645 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 41.39 Mbit/s
95th percentile per-packet one-way delay: 48.799 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 27.59 Mbit/s
95th percentile per-packet one-way delay: 48.370 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 14.01 Mbit/s
95th percentile per-packet one-way delay: 47.686 ms
Loss rate: 0.00%
Run 4: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 41.39 Mbit/s)
- Flow 1 egress (mean 41.39 Mbit/s)
- Flow 2 ingress (mean 27.59 Mbit/s)
- Flow 2 egress (mean 27.59 Mbit/s)
- Flow 3 ingress (mean 14.01 Mbit/s)
- Flow 3 egress (mean 14.01 Mbit/s)

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

- Flow 1 (95th percentile 48.80 ms)
- Flow 2 (95th percentile 48.37 ms)
- Flow 3 (95th percentile 47.69 ms)
Run 5: Statistics of LEDBAT

Start at: 2019-02-21 02:29:59
End at: 2019-02-21 02:30:29
Local clock offset: -0.102 ms
Remote clock offset: -0.036 ms

# Below is generated by plot.py at 2019-02-21 05:22:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.03 Mbit/s
95th percentile per-packet one-way delay: 48.213 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 41.90 Mbit/s
95th percentile per-packet one-way delay: 48.333 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 27.82 Mbit/s
95th percentile per-packet one-way delay: 48.209 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.97 Mbit/s
95th percentile per-packet one-way delay: 47.192 ms
Loss rate: 0.00%
Run 5: Report of LEDBAT — Data Link

![Graph showing throughput and packet loss over time]

Legend:
- Flow 1 ingress (mean 41.90 Mbit/s)
- Flow 1 egress (mean 41.90 Mbit/s)
- Flow 2 ingress (mean 27.82 Mbit/s)
- Flow 2 egress (mean 27.82 Mbit/s)
- Flow 3 ingress (mean 13.97 Mbit/s)
- Flow 3 egress (mean 13.97 Mbit/s)

Packet loss and latency data are also presented, indicating variability over time for each flow.
Run 1: Statistics of PCC-Allegro

Start at: 2019-02-21 00:01:04
End at: 2019-02-21 00:01:34
Local clock offset: -0.041 ms
Remote clock offset: 0.03 ms

# Below is generated by plot.py at 2019-02-21 05:40:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 797.59 Mbit/s
95th percentile per-packet one-way delay: 161.178 ms
Loss rate: 2.66%
-- Flow 1:
Average throughput: 484.05 Mbit/s
95th percentile per-packet one-way delay: 162.401 ms
Loss rate: 4.11%
-- Flow 2:
Average throughput: 320.61 Mbit/s
95th percentile per-packet one-way delay: 122.458 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 303.69 Mbit/s
95th percentile per-packet one-way delay: 104.420 ms
Loss rate: 0.00%
Run 1: Report of PCC-Allegro — Data Link
# Below is generated by plot.py at 2019-02-21 05:41:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 781.82 Mbit/s
  95th percentile per-packet one-way delay: 183.370 ms
  Loss rate: 7.69%
-- Flow 1:
  Average throughput: 421.08 Mbit/s
  95th percentile per-packet one-way delay: 190.582 ms
  Loss rate: 6.27%
-- Flow 2:
  Average throughput: 408.87 Mbit/s
  95th percentile per-packet one-way delay: 184.596 ms
  Loss rate: 11.90%
-- Flow 3:
  Average throughput: 275.58 Mbit/s
  95th percentile per-packet one-way delay: 94.957 ms
  Loss rate: 0.37%
Run 2: Report of PCC-Allegro — Data Link

![Throughput Graph](image)

- Flow 1 ingress (mean 449.23 Mbit/s)
- Flow 2 ingress (mean 464.12 Mbit/s)
- Flow 3 ingress (mean 276.61 Mbit/s)
- Flow 1 egress (mean 421.08 Mbit/s)
- Flow 2 egress (mean 408.87 Mbit/s)
- Flow 3 egress (mean 275.58 Mbit/s)

![Latency Graph](image)

- Flow 1 (95th percentile 190.58 ms)
- Flow 2 (95th percentile 184.68 ms)
- Flow 3 (95th percentile 94.96 ms)
Run 3: Statistics of PCC-Allegro

Start at: 2019-02-21 01:14:41
End at: 2019-02-21 01:15:11
Local clock offset: -0.036 ms
Remote clock offset: 0.075 ms

# Below is generated by plot.py at 2019-02-21 05:41:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 759.21 Mbit/s
95th percentile per-packet one-way delay: 176.838 ms
Loss rate: 3.67%
-- Flow 1:
Average throughput: 448.58 Mbit/s
95th percentile per-packet one-way delay: 191.872 ms
Loss rate: 5.84%
-- Flow 2:
Average throughput: 325.50 Mbit/s
95th percentile per-packet one-way delay: 63.249 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 285.51 Mbit/s
95th percentile per-packet one-way delay: 91.603 ms
Loss rate: 0.80%
Run 3: Report of PCC-Allegro — Data Link

![Throughput vs Time Graph]

- **Flow 1 ingress (mean 476.42 Mbit/s)**
- **Flow 1 egress (mean 448.58 Mbit/s)**
- **Flow 2 ingress (mean 326.00 Mbit/s)**
- **Flow 2 egress (mean 325.56 Mbit/s)**
- **Flow 3 ingress (mean 287.81 Mbit/s)**
- **Flow 3 egress (mean 285.51 Mbit/s)**

![Per-Packet One-Way Delay Graph]

- **Flow 1 (95th percentile 191.87 ms)**
- **Flow 2 (95th percentile 63.25 ms)**
- **Flow 3 (95th percentile 91.60 ms)**
Run 4: Statistics of PCC-Allegro

Start at: 2019-02-21 01:51:28
End at: 2019-02-21 01:51:58
Local clock offset: 0.281 ms
Remote clock offset: -0.178 ms

# Below is generated by plot.py at 2019-02-21 05:41:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 712.65 Mbit/s
95th percentile per-packet one-way delay: 197.482 ms
Loss rate: 4.96%
-- Flow 1:
  Average throughput: 326.00 Mbit/s
  95th percentile per-packet one-way delay: 204.167 ms
  Loss rate: 8.68%
-- Flow 2:
  Average throughput: 450.27 Mbit/s
  95th percentile per-packet one-way delay: 157.851 ms
  Loss rate: 1.77%
-- Flow 3:
  Average throughput: 264.80 Mbit/s
  95th percentile per-packet one-way delay: 146.350 ms
  Loss rate: 0.90%
Run 4: Report of PCC-Allegro — Data Link
Run 5: Statistics of PCC-Allegro

Start at: 2019-02-21 02:27:57
End at: 2019-02-21 02:28:27
Local clock offset: -0.04 ms
Remote clock offset: -0.01 ms

# Below is generated by plot.py at 2019-02-21 05:41:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 775.05 Mbit/s
95th percentile per-packet one-way delay: 195.757 ms
Loss rate: 4.58%
-- Flow 1:
Average throughput: 393.59 Mbit/s
95th percentile per-packet one-way delay: 193.952 ms
Loss rate: 3.93%
-- Flow 2:
Average throughput: 436.48 Mbit/s
95th percentile per-packet one-way delay: 199.189 ms
Loss rate: 6.55%
-- Flow 3:
Average throughput: 276.14 Mbit/s
95th percentile per-packet one-way delay: 115.992 ms
Loss rate: 0.84%
Run 5: Report of PCC-Allegro — Data Link
Run 1: Statistics of PCC-Expr

Start at: 2019-02-21 00:13:09
End at: 2019-02-21 00:13:39
Local clock offset: -0.089 ms
Remote clock offset: 0.093 ms

# Below is generated by plot.py at 2019-02-21 05:41:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 530.95 Mbit/s
95th percentile per-packet one-way delay: 125.981 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 325.71 Mbit/s
95th percentile per-packet one-way delay: 130.827 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 261.03 Mbit/s
95th percentile per-packet one-way delay: 117.382 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 94.37 Mbit/s
95th percentile per-packet one-way delay: 48.009 ms
Loss rate: 0.00%
Run 1: Report of PCC-Expr — Data Link

Throughput (Mbps)

<table>
<thead>
<tr>
<th>Flow</th>
<th>Type</th>
<th>Throughput (Mbps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ingress</td>
<td>328.29</td>
</tr>
<tr>
<td>1</td>
<td>egress</td>
<td>325.71</td>
</tr>
<tr>
<td>2</td>
<td>ingress</td>
<td>261.84</td>
</tr>
<tr>
<td>2</td>
<td>egress</td>
<td>261.03</td>
</tr>
<tr>
<td>3</td>
<td>ingress</td>
<td>94.38</td>
</tr>
<tr>
<td>3</td>
<td>egress</td>
<td>94.37</td>
</tr>
</tbody>
</table>

Packet delay (ms)

Flow 1 (95th percentile 130.83 ms)  Flow 2 (95th percentile 117.38 ms)  Flow 3 (95th percentile 48.01 ms)
Run 2: Statistics of PCC-Expr

Start at: 2019-02-21 00:49:57
End at: 2019-02-21 00:50:27
Local clock offset: -0.085 ms
Remote clock offset: 0.04 ms

# Below is generated by plot.py at 2019-02-21 05:43:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 573.60 Mbit/s
95th percentile per-packet one-way delay: 163.902 ms
Loss rate: 3.57%
-- Flow 1:
Average throughput: 307.38 Mbit/s
95th percentile per-packet one-way delay: 161.816 ms
Loss rate: 4.19%
-- Flow 2:
Average throughput: 303.29 Mbit/s
95th percentile per-packet one-way delay: 173.831 ms
Loss rate: 3.73%
-- Flow 3:
Average throughput: 196.06 Mbit/s
95th percentile per-packet one-way delay: 68.394 ms
Loss rate: 0.03%
Run 2: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 320.81 Mbit/s)
- Flow 1 egress (mean 307.38 Mbit/s)
- Flow 2 ingress (mean 315.01 Mbit/s)
- Flow 2 egress (mean 303.29 Mbit/s)
- Flow 3 ingress (mean 196.19 Mbit/s)
- Flow 3 egress (mean 196.06 Mbit/s)
Run 3: Statistics of PCC-Expr

Start at: 2019-02-21 01:26:48
End at: 2019-02-21 01:27:19
Local clock offset: -0.097 ms
Remote clock offset: -0.037 ms

# Below is generated by plot.py at 2019-02-21 05:44:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 594.08 Mbit/s
95th percentile per-packet one-way delay: 148.524 ms
Loss rate: 5.23%
-- Flow 1:
Average throughput: 379.41 Mbit/s
95th percentile per-packet one-way delay: 150.783 ms
Loss rate: 7.81%
-- Flow 2:
Average throughput: 223.90 Mbit/s
95th percentile per-packet one-way delay: 111.457 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 199.23 Mbit/s
95th percentile per-packet one-way delay: 69.029 ms
Loss rate: 1.04%
Run 3: Report of PCC-Expr — Data Link

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

![Graph 2: Per-packet one-way delay vs Time](image)
Run 4: Statistics of PCC-Expr

Start at: 2019-02-21 02:03:31
End at: 2019-02-21 02:04:01
Local clock offset: -0.402 ms
Remote clock offset: -0.079 ms

# Below is generated by plot.py at 2019-02-21 05:50:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 538.72 Mbit/s
95th percentile per-packet one-way delay: 163.417 ms
Loss rate: 3.06%
-- Flow 1:
Average throughput: 328.05 Mbit/s
95th percentile per-packet one-way delay: 167.941 ms
Loss rate: 4.41%
-- Flow 2:
Average throughput: 265.75 Mbit/s
95th percentile per-packet one-way delay: 140.868 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 103.02 Mbit/s
95th percentile per-packet one-way delay: 48.824 ms
Loss rate: 0.02%
Run 4: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 343.18 Mb/s)
- Flow 2 ingress (mean 268.50 Mb/s)
- Flow 3 ingress (mean 103.01 Mb/s)
- Flow 1 egress (mean 328.05 Mb/s)
- Flow 2 egress (mean 265.75 Mb/s)
- Flow 3 egress (mean 103.02 Mb/s)

Flow 1 (95th percentile 167.94 ms)
Flow 2 (95th percentile 140.87 ms)
Flow 3 (95th percentile 48.82 ms)
Run 5: Statistics of PCC-Expr

Start at: 2019-02-21 02:40:04
End at: 2019-02-21 02:40:34
Local clock offset: -0.105 ms
Remote clock offset: -0.043 ms

# Below is generated by plot.py at 2019-02-21 05:57:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 544.43 Mbit/s
95th percentile per-packet one-way delay: 163.327 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 294.68 Mbit/s
95th percentile per-packet one-way delay: 154.863 ms
Loss rate: 1.36%
-- Flow 2:
Average throughput: 282.28 Mbit/s
95th percentile per-packet one-way delay: 177.303 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 188.15 Mbit/s
95th percentile per-packet one-way delay: 71.010 ms
Loss rate: 0.03%
Run 5: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 298.73 Mbit/s)
- Flow 1 egress (mean 294.68 Mbit/s)
- Flow 2 ingress (mean 285.88 Mbit/s)
- Flow 2 egress (mean 282.28 Mbit/s)
- Flow 3 ingress (mean 198.19 Mbit/s)
- Flow 3 egress (mean 188.15 Mbit/s)

- Flow 1 (95th percentile 154.86 ms)
- Flow 2 (95th percentile 177.30 ms)
- Flow 3 (95th percentile 71.01 ms)
Run 1: Statistics of QUIC Cubic

Start at: 2019-02-21 00:32:18
End at: 2019-02-21 00:32:48
Local clock offset: -0.123 ms
Remote clock offset: 0.023 ms

# Below is generated by plot.py at 2019-02-21 05:57:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.81 Mbit/s
95th percentile per-packet one-way delay: 46.488 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 47.449 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 39.05 Mbit/s
95th percentile per-packet one-way delay: 46.484 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 33.05 Mbit/s
95th percentile per-packet one-way delay: 46.494 ms
Loss rate: 0.00%
Run 1: Report of QUIC Cubic — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 0.01 Mbit/s)
Flow 2 ingress (mean 39.05 Mbit/s)
Flow 3 ingress (mean 33.05 Mbit/s)
Flow 1 egress (mean 0.01 Mbit/s)
Flow 2 egress (mean 39.05 Mbit/s)
Flow 3 egress (mean 33.05 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 47.45 ms)
Flow 2 (95th percentile 46.48 ms)
Flow 3 (95th percentile 46.49 ms)
Run 2: Statistics of QUIC Cubic

Start at: 2019-02-21 01:09:05
End at: 2019-02-21 01:09:35
Local clock offset: 0.001 ms
Remote clock offset: 0.044 ms

# Below is generated by plot.py at 2019-02-21 05:57:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.44 Mbit/s
95th percentile per-packet one-way delay: 47.306 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 42.09 Mbit/s
95th percentile per-packet one-way delay: 47.290 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 45.54 Mbit/s
95th percentile per-packet one-way delay: 47.323 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 61.88 Mbit/s
95th percentile per-packet one-way delay: 47.290 ms
Loss rate: 0.00%
Run 2: Report of QUIC Cubic — Data Link

![Graph showing throughput over time for different flows]

- Flow 1 ingress (mean 42.09 Mbit/s)
- Flow 1 egress (mean 42.09 Mbit/s)
- Flow 2 ingress (mean 45.54 Mbit/s)
- Flow 2 egress (mean 45.54 Mbit/s)
- Flow 3 ingress (mean 61.88 Mbit/s)
- Flow 3 egress (mean 61.88 Mbit/s)

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

- Flow 1 (95th percentile 47.29 ms)
- Flow 2 (95th percentile 47.32 ms)
- Flow 3 (95th percentile 47.29 ms)
Run 3: Statistics of QUIC Cubic

Start at: 2019-02-21 01:45:50
End at: 2019-02-21 01:46:20
Local clock offset: -0.099 ms
Remote clock offset: -0.155 ms

# Below is generated by plot.py at 2019-02-21 05:57:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 82.08 Mbit/s
  95th percentile per-packet one-way delay: 47.289 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 41.67 Mbit/s
  95th percentile per-packet one-way delay: 47.213 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 31.53 Mbit/s
  95th percentile per-packet one-way delay: 46.556 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 59.28 Mbit/s
  95th percentile per-packet one-way delay: 47.325 ms
  Loss rate: 0.00%
Run 4: Statistics of QUIC Cubic

Start at: 2019-02-21 02:22:21
End at: 2019-02-21 02:22:51
Local clock offset: 0.28 ms
Remote clock offset: -0.009 ms

# Below is generated by plot.py at 2019-02-21 05:57:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 99.62 Mbit/s
  95th percentile per-packet one-way delay: 47.166 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 55.62 Mbit/s
  95th percentile per-packet one-way delay: 46.985 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 41.45 Mbit/s
  95th percentile per-packet one-way delay: 47.196 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 50.36 Mbit/s
  95th percentile per-packet one-way delay: 47.275 ms
  Loss rate: 0.00%
Run 4: Report of QUIC Cubic — Data Link
Run 5: Statistics of QUIC Cubic

Start at: 2019-02-21 02:59:13  
End at: 2019-02-21 02:59:43  
Local clock offset: -0.089 ms  
Remote clock offset: -0.061 ms

# Below is generated by plot.py at 2019-02-21 05:57:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 92.66 Mbit/s
  95th percentile per-packet one-way delay: 47.278 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 49.52 Mbit/s
  95th percentile per-packet one-way delay: 47.136 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 54.09 Mbit/s
  95th percentile per-packet one-way delay: 47.310 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 21.88 Mbit/s
  95th percentile per-packet one-way delay: 47.207 ms
  Loss rate: 0.00%
Run 5: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

Start at: 2019-02-21 00:06:08
End at: 2019-02-21 00:06:38
Local clock offset: -0.096 ms
Remote clock offset: 0.055 ms

# Below is generated by plot.py at 2019-02-21 05:57:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 47.397 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 47.293 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 47.429 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 47.332 ms
  Loss rate: 0.00%
Run 1: Report of SCReAM — Data Link
Run 2: Statistics of SCReAM

Start at: 2019-02-21 00:43:03
End at: 2019-02-21 00:43:33
Local clock offset: -0.104 ms
Remote clock offset: 0.051 ms

# Below is generated by plot.py at 2019-02-21 05:57:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 47.432 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 47.444 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 47.425 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 46.607 ms
  Loss rate: 0.00%
Run 2: Report of SCReAM — Data Link

Throughput (Mbps)

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

Latency (ms)

- Flow 1 (95th percentile 47.44 ms)
- Flow 2 (95th percentile 47.42 ms)
- Flow 3 (95th percentile 46.61 ms)
Run 3: Statistics of SCReAM

Start at: 2019-02-21 01:19:51
End at: 2019-02-21 01:20:21
Local clock offset: -0.008 ms
Remote clock offset: 0.056 ms

# Below is generated by plot.py at 2019-02-21 05:57:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 47.482 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.497 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.276 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.443 ms
Loss rate: 0.00%
Run 3: Report of SCReAM — Data Link
Run 4: Statistics of SCReAM

Start at: 2019-02-21 01:56:37
End at: 2019-02-21 01:57:07
Local clock offset: -0.075 ms
Remote clock offset: -0.146 ms

# Below is generated by plot.py at 2019-02-21 05:57:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 46.643 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 46.629 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 46.662 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 46.619 ms
Loss rate: 0.00%
Run 4: Report of SCReAM — Data Link

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

Per packet one way delay [ms]:
- Flow 1 (95th percentile 46.63 ms)
- Flow 2 (95th percentile 46.66 ms)
- Flow 3 (95th percentile 46.62 ms)
Run 5: Statistics of SCReAM

Start at: 2019-02-21 02:33:07
End at: 2019-02-21 02:33:37
Local clock offset: 0.3 ms
Remote clock offset: -0.008 ms

# Below is generated by plot.py at 2019-02-21 05:57:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 47.327 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 46.297 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 46.594 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 47.492 ms
  Loss rate: 0.00%
Run 5: Report of SCReAM — Data Link

![Graph showing throughput over time for different flows]
Run 1: Statistics of Sprout

Start at: 2019-02-21 00:33:31
End at: 2019-02-21 00:34:01
Local clock offset: -0.116 ms
Remote clock offset: 0.041 ms

# Below is generated by plot.py at 2019-02-21 05:57:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.10 Mbit/s
95th percentile per-packet one-way delay: 47.651 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.64 Mbit/s
95th percentile per-packet one-way delay: 47.745 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 9.64 Mbit/s
95th percentile per-packet one-way delay: 47.155 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.20 Mbit/s
95th percentile per-packet one-way delay: 47.689 ms
Loss rate: 0.00%
Run 1: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 9.64 Mbit/s)
- Flow 1 egress (mean 9.64 Mbit/s)
- Flow 2 ingress (mean 9.64 Mbit/s)
- Flow 2 egress (mean 9.64 Mbit/s)
- Flow 3 ingress (mean 9.20 Mbit/s)
- Flow 3 egress (mean 9.20 Mbit/s)
Run 2: Statistics of Sprout

Start at: 2019-02-21 01:10:22
End at: 2019-02-21 01:10:52
Local clock offset: -0.026 ms
Remote clock offset: 0.054 ms

# Below is generated by plot.py at 2019-02-21 05:57:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 19.14 Mbit/s
  95th percentile per-packet one-way delay: 47.638 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 9.68 Mbit/s
  95th percentile per-packet one-way delay: 47.688 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 9.61 Mbit/s
  95th percentile per-packet one-way delay: 46.828 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 9.30 Mbit/s
  95th percentile per-packet one-way delay: 47.681 ms
  Loss rate: 0.00%
Run 2: Report of Sprout — Data Link

![Throughput Graph]

Flow 1 ingress (mean 9.66 Mbit/s)
Flow 2 ingress (mean 9.61 Mbit/s)
Flow 3 ingress (mean 9.30 Mbit/s)
Flow 1 egress (mean 9.68 Mbit/s)
Flow 2 egress (mean 9.61 Mbit/s)
Flow 3 egress (mean 9.30 Mbit/s)

![Delay Graph]

Flow 1 (95th percentile 47.69 ms)
Flow 2 (95th percentile 46.83 ms)
Flow 3 (95th percentile 47.68 ms)
Run 3: Statistics of Sprout

Start at: 2019-02-21 01:47:05
End at: 2019-02-21 01:47:36
Local clock offset: -0.07 ms
Remote clock offset: -0.165 ms

# Below is generated by plot.py at 2019-02-21 05:57:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.13 Mbit/s
95th percentile per-packet one-way delay: 47.670 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.69 Mbit/s
95th percentile per-packet one-way delay: 47.668 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 9.55 Mbit/s
95th percentile per-packet one-way delay: 47.730 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.40 Mbit/s
95th percentile per-packet one-way delay: 47.103 ms
Loss rate: 0.00%
Run 3: Report of Sprout — Data Link
Run 4: Statistics of Sprout

Start at: 2019-02-21 02:23:38
End at: 2019-02-21 02:24:08
Local clock offset: -0.047 ms
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2019-02-21 05:57:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.00 Mbit/s
95th percentile per-packet one-way delay: 47.544 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.69 Mbit/s
95th percentile per-packet one-way delay: 46.847 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 9.46 Mbit/s
95th percentile per-packet one-way delay: 47.678 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.21 Mbit/s
95th percentile per-packet one-way delay: 46.917 ms
Loss rate: 0.00%
Run 4: Report of Sprout — Data Link

[Graph showing throughput over time for different flows]

[Graph showing per packet round trip time over time for different flows]
Run 5: Statistics of Sprout

Start at: 2019-02-21 03:00:29
End at: 2019-02-21 03:00:59
Local clock offset: -0.103 ms
Remote clock offset: -0.029 ms

# Below is generated by plot.py at 2019-02-21 05:57:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.04 Mbit/s
95th percentile per-packet one-way delay: 47.599 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.67 Mbit/s
95th percentile per-packet one-way delay: 46.868 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 9.47 Mbit/s
95th percentile per-packet one-way delay: 47.685 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.33 Mbit/s
95th percentile per-packet one-way delay: 47.408 ms
Loss rate: 0.00%
Run 5: Report of Sprout — Data Link
Run 1: Statistics of TaoVA-100x

Start at: 2019-02-21 00:28:14
End at: 2019-02-21 00:28:44
Local clock offset: -0.146 ms
Remote clock offset: 0.03 ms

# Below is generated by plot.py at 2019-02-21 06:00:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 502.47 Mbit/s
95th percentile per-packet one-way delay: 48.754 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 258.82 Mbit/s
95th percentile per-packet one-way delay: 48.222 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 246.72 Mbit/s
95th percentile per-packet one-way delay: 50.316 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 234.71 Mbit/s
95th percentile per-packet one-way delay: 47.481 ms
Loss rate: 0.00%
Run 1: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 258.84 Mbit/s)
- Flow 2 ingress (mean 246.70 Mbit/s)
- Flow 3 ingress (mean 234.70 Mbit/s)
- Flow 1 egress (mean 258.82 Mbit/s)
- Flow 2 egress (mean 246.72 Mbit/s)
- Flow 3 egress (mean 234.71 Mbit/s)

- Flow 1 (95th percentile 48.22 ms)
- Flow 2 (95th percentile 50.32 ms)
- Flow 3 (95th percentile 47.48 ms)
Run 2: Statistics of TaoVA-100x

Start at: 2019-02-21 01:05:05
End at: 2019-02-21 01:05:35
Local clock offset: -0.051 ms
Remote clock offset: 0.017 ms

# Below is generated by plot.py at 2019-02-21 06:00:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 475.13 Mbit/s
95th percentile per-packet one-way delay: 49.045 ms
Loss rate: 0.00%

-- Flow 1:
Average throughput: 231.80 Mbit/s
95th percentile per-packet one-way delay: 47.364 ms
Loss rate: 0.00%

-- Flow 2:
Average throughput: 239.69 Mbit/s
95th percentile per-packet one-way delay: 50.378 ms
Loss rate: 0.00%

-- Flow 3:
Average throughput: 252.27 Mbit/s
95th percentile per-packet one-way delay: 49.747 ms
Loss rate: 0.00%
Run 2: Report of TaoVA-100x — Data Link

![Graph of throughput over time for different flows with varying mean bandwidths.]

![Graph of per-packet round-trip delay over time for different flows with 95th percentile delays.]
Run 3: Statistics of TaoVA-100x

Start at: 2019-02-21 01:41:48
End at: 2019-02-21 01:42:18
Local clock offset: -0.092 ms
Remote clock offset: -0.167 ms

# Below is generated by plot.py at 2019-02-21 06:01:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 494.00 Mbit/s
95th percentile per-packet one-way delay: 48.218 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 250.96 Mbit/s
95th percentile per-packet one-way delay: 48.082 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 246.57 Mbit/s
95th percentile per-packet one-way delay: 48.525 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 236.62 Mbit/s
95th percentile per-packet one-way delay: 47.626 ms
Loss rate: 0.00%
Run 3: Report of TaoVA-100x — Data Link

![Graph of throughput over time](image)

![Graph of per-packet one-way delay over time](image)
Run 4: Statistics of TaoVA-100x

Start at: 2019-02-21 02:18:20
End at: 2019-02-21 02:18:50
Local clock offset: -0.126 ms
Remote clock offset: -0.004 ms

# Below is generated by plot.py at 2019-02-21 06:01:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 488.18 Mbit/s
  95th percentile per-packet one-way delay: 48.948 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 240.13 Mbit/s
  95th percentile per-packet one-way delay: 49.075 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 251.74 Mbit/s
  95th percentile per-packet one-way delay: 47.464 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 241.69 Mbit/s
  95th percentile per-packet one-way delay: 51.714 ms
  Loss rate: 0.00%
Run 4: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 240.14 Mbit/s)
- Flow 1 egress (mean 240.13 Mbit/s)
- Flow 2 ingress (mean 251.74 Mbit/s)
- Flow 2 egress (mean 251.74 Mbit/s)
- Flow 3 ingress (mean 241.68 Mbit/s)
- Flow 3 egress (mean 241.69 Mbit/s)

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

- Flow 1 (95th percentile 49.08 ms)
- Flow 2 (95th percentile 47.46 ms)
- Flow 3 (95th percentile 51.71 ms)
Run 5: Statistics of TaoVA-100x

Start at: 2019-02-21 02:55:06
End at: 2019-02-21 02:55:36
Local clock offset: -0.061 ms
Remote clock offset: -0.054 ms

# Below is generated by plot.py at 2019-02-21 06:01:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 493.65 Mbit/s
95th percentile per-packet one-way delay: 47.522 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 254.10 Mbit/s
95th percentile per-packet one-way delay: 47.387 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 244.78 Mbit/s
95th percentile per-packet one-way delay: 47.589 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 230.44 Mbit/s
95th percentile per-packet one-way delay: 48.048 ms
Loss rate: 0.00%
Run 1: Statistics of TCP Vegas

Start at: 2019-02-21 00:26:12
End at: 2019-02-21 00:26:42
Local clock offset: -0.084 ms
Remote clock offset: 0.035 ms

# Below is generated by plot.py at 2019-02-21 06:03:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1045.08 Mbit/s
95th percentile per-packet one-way delay: 88.769 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 526.27 Mbit/s
95th percentile per-packet one-way delay: 90.022 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 527.62 Mbit/s
95th percentile per-packet one-way delay: 89.190 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 504.03 Mbit/s
95th percentile per-packet one-way delay: 64.477 ms
Loss rate: 0.00%
Run 1: Report of TCP Vegas — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 526.66 Mbps)  Flow 1 egress (mean 528.67 Mbps)
Flow 2 ingress (mean 528.92 Mbps)  Flow 2 egress (mean 527.62 Mbps)
Flow 3 ingress (mean 504.03 Mbps)  Flow 3 egress (mean 504.03 Mbps)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 90.02 ms)  Flow 2 (95th percentile 89.19 ms)  Flow 3 (95th percentile 64.48 ms)
Run 2: Statistics of TCP Vegas

Start at: 2019-02-21 01:03:03
End at: 2019-02-21 01:03:33
Local clock offset: -0.432 ms
Remote clock offset: 0.03 ms

# Below is generated by plot.py at 2019-02-21 06:10:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1007.65 Mbit/s
95th percentile per-packet one-way delay: 82.881 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 512.60 Mbit/s
95th percentile per-packet one-way delay: 70.113 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 507.78 Mbit/s
95th percentile per-packet one-way delay: 88.329 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 471.56 Mbit/s
95th percentile per-packet one-way delay: 85.592 ms
Loss rate: 0.12%
Run 2: Report of TCP Vegas — Data Link

Throughput (Mb/s)

- Flow 1 ingress (mean 512.60 Mb/s)
- Flow 1 egress (mean 512.60 Mb/s)
- Flow 2 ingress (mean 507.98 Mb/s)
- Flow 2 egress (mean 507.78 Mb/s)
- Flow 3 ingress (mean 472.13 Mb/s)
- Flow 3 egress (mean 471.56 Mb/s)

Per-packet one-way delay (ms)

- Flow 1 (95th percentile 70.11 ms)
- Flow 2 (95th percentile 88.33 ms)
- Flow 3 (95th percentile 85.59 ms)
Run 3: Statistics of TCP Vegas

Start at: 2019-02-21 01:39:50
End at: 2019-02-21 01:40:20
Local clock offset: -0.09 ms
Remote clock offset: -0.161 ms

# Below is generated by plot.py at 2019-02-21 06:16:04
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 975.24 Mbit/s
  95th percentile per-packet one-way delay: 85.975 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 491.80 Mbit/s
  95th percentile per-packet one-way delay: 56.147 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 467.63 Mbit/s
  95th percentile per-packet one-way delay: 80.944 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 517.36 Mbit/s
  95th percentile per-packet one-way delay: 99.351 ms
  Loss rate: 0.00%
Run 3: Report of TCP Vegas — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 491.80 Mbps)
- Flow 2 ingress (mean 467.63 Mbps)
- Flow 3 ingress (mean 517.35 Mbps)
- Flow 1 egress (mean 491.80 Mbps)
- Flow 2 egress (mean 467.63 Mbps)
- Flow 3 egress (mean 517.36 Mbps)

**Packet delay (ms):**
- Flow 1 (95th percentile 56.15 ms)
- Flow 2 (95th percentile 80.94 ms)
- Flow 3 (95th percentile 99.35 ms)
Run 4: Statistics of TCP Vegas

Start at: 2019-02-21 02:16:28
End at: 2019-02-21 02:16:58
Local clock offset: -0.043 ms
Remote clock offset: -0.02 ms

# Below is generated by plot.py at 2019-02-21 06:16:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 842.78 Mbit/s
95th percentile per-packet one-way delay: 63.148 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 306.26 Mbit/s
95th percentile per-packet one-way delay: 47.555 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 540.10 Mbit/s
95th percentile per-packet one-way delay: 66.827 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 533.00 Mbit/s
95th percentile per-packet one-way delay: 61.458 ms
Loss rate: 0.01%
Run 4: Report of TCP Vegas — Data Link

![Graph of Throughput vs Time]

- Flow 1 ingress (mean 306.26 Mbit/s)
- Flow 1 egress (mean 306.26 Mbit/s)
- Flow 2 ingress (mean 540.44 Mbit/s)
- Flow 2 egress (mean 540.10 Mbit/s)
- Flow 3 ingress (mean 532.98 Mbit/s)
- Flow 3 egress (mean 533.00 Mbit/s)

![Graph of Per-packet RTH vs Time]

- Flow 1 (95th percentile 47.55 ms)
- Flow 2 (95th percentile 66.83 ms)
- Flow 3 (95th percentile 61.48 ms)
Run 5: Statistics of TCP Vegas

Start at: 2019-02-21 02:53:03
End at: 2019-02-21 02:53:33
Local clock offset: -0.066 ms
Remote clock offset: -0.016 ms

# Below is generated by plot.py at 2019-02-21 06:19:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1038.82 Mbit/s
95th percentile per-packet one-way delay: 70.882 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 538.76 Mbit/s
95th percentile per-packet one-way delay: 67.730 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 523.89 Mbit/s
95th percentile per-packet one-way delay: 70.808 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 455.05 Mbit/s
95th percentile per-packet one-way delay: 73.891 ms
Loss rate: 0.07%
Run 5: Report of TCP Vegas — Data Link

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

**Throughput (Mbps)**
- Flow 1 ingress (mean 538.83 Mbps)
- Flow 1 egress (mean 538.76 Mbps)
- Flow 2 ingress (mean 524.24 Mbps)
- Flow 2 egress (mean 523.89 Mbps)
- Flow 3 ingress (mean 455.43 Mbps)
- Flow 3 egress (mean 455.05 Mbps)

**Per-packet round-trip time (ms)**
- Flow 1 (95th percentile 67.73 ms)
- Flow 2 (95th percentile 70.81 ms)
- Flow 3 (95th percentile 73.89 ms)
Run 1: Statistics of Verus

Start at: 2019-02-21 00:20:37
End at: 2019-02-21 00:21:07
Local clock offset: -0.107 ms
Remote clock offset: 0.046 ms

# Below is generated by plot.py at 2019-02-21 06:19:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 302.31 Mbit/s
  95th percentile per-packet one-way delay: 83.808 ms
  Loss rate: 0.56%
-- Flow 1:
  Average throughput: 181.69 Mbit/s
  95th percentile per-packet one-way delay: 84.319 ms
  Loss rate: 0.89%
-- Flow 2:
  Average throughput: 126.65 Mbit/s
  95th percentile per-packet one-way delay: 161.142 ms
  Loss rate: 0.09%
-- Flow 3:
  Average throughput: 113.56 Mbit/s
  95th percentile per-packet one-way delay: 56.477 ms
  Loss rate: 0.00%
Run 1: Report of Verus — Data Link

![Throughput Graph]

- Flow 1 ingress (mean 183.31 Mbit/s)
- Flow 1 egress (mean 181.69 Mbit/s)
- Flow 2 ingress (mean 126.78 Mbit/s)
- Flow 2 egress (mean 126.65 Mbit/s)
- Flow 3 ingress (mean 113.58 Mbit/s)
- Flow 3 egress (mean 113.56 Mbit/s)

![Delay Graph]

- Flow 1 (95th percentile 84.32 ms)
- Flow 2 (95th percentile 161.14 ms)
- Flow 3 (95th percentile 56.48 ms)
Run 2: Statistics of Verus

Start at: 2019-02-21 00:57:25
End at: 2019-02-21 00:57:55
Local clock offset: -0.09 ms
Remote clock offset: 0.022 ms

# Below is generated by plot.py at 2019-02-21 06:19:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 308.06 Mbit/s
  95th percentile per-packet one-way delay: 141.324 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 173.65 Mbit/s
  95th percentile per-packet one-way delay: 143.600 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 144.55 Mbit/s
  95th percentile per-packet one-way delay: 142.160 ms
  Loss rate: 0.14%
-- Flow 3:
  Average throughput: 118.45 Mbit/s
  95th percentile per-packet one-way delay: 103.712 ms
  Loss rate: 0.00%
Run 2: Report of Verus — Data Link
Run 3: Statistics of Verus

Start at: 2019-02-21 01:34:28
End at: 2019-02-21 01:34:58
Local clock offset: -0.059 ms
Remote clock offset: -0.126 ms

# Below is generated by plot.py at 2019-02-21 06:19:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 240.50 Mbit/s
  95th percentile per-packet one-way delay: 72.090 ms
  Loss rate: 0.32%
-- Flow 1:
  Average throughput: 126.90 Mbit/s
  95th percentile per-packet one-way delay: 57.468 ms
  Loss rate: 0.57%
-- Flow 2:
  Average throughput: 106.50 Mbit/s
  95th percentile per-packet one-way delay: 69.402 ms
  Loss rate: 0.06%
-- Flow 3:
  Average throughput: 129.75 Mbit/s
  95th percentile per-packet one-way delay: 137.495 ms
  Loss rate: 0.04%
Run 3: Report of Verus — Data Link

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

- Flow 1 ingress (mean 127.62 Mb/s)
- Flow 1 egress (mean 126.90 Mb/s)
- Flow 2 ingress (mean 106.55 Mb/s)
- Flow 2 egress (mean 106.50 Mb/s)
- Flow 3 ingress (mean 129.79 Mb/s)
- Flow 3 egress (mean 129.75 Mb/s)

*Note: The graphs provide insights into the network performance over different time periods.*
Run 4: Statistics of Verus

Start at: 2019-02-21 02:10:56
End at: 2019-02-21 02:11:26
Local clock offset: -0.108 ms
Remote clock offset: -0.033 ms

# Below is generated by plot.py at 2019-02-21 06:19:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 253.74 Mbit/s
95th percentile per-packet one-way delay: 95.716 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 133.21 Mbit/s
95th percentile per-packet one-way delay: 84.733 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 137.48 Mbit/s
95th percentile per-packet one-way delay: 105.260 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 88.47 Mbit/s
95th percentile per-packet one-way delay: 54.819 ms
Loss rate: 0.00%
Run 4: Report of Verus — Data Link

![Throughput graph](image)

- **Flow 1 ingress** (mean 133.21 Mbit/s)
- **Flow 1 egress** (mean 133.21 Mbit/s)
- **Flow 2 ingress** (mean 137.71 Mbit/s)
- **Flow 2 egress** (mean 137.48 Mbit/s)
- **Flow 3 ingress** (mean 88.48 Mbit/s)
- **Flow 3 egress** (mean 88.47 Mbit/s)

![Delay graph](image)

- **Flow 1** (95th percentile 84.73 ms)
- **Flow 2** (95th percentile 105.26 ms)
- **Flow 3** (95th percentile 54.82 ms)
Run 5: Statistics of Verus

Start at: 2019-02-21 02:47:32
End at: 2019-02-21 02:48:02
Local clock offset: -0.086 ms
Remote clock offset: -0.053 ms

# Below is generated by plot.py at 2019-02-21 06:19:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 282.05 Mbit/s
  95th percentile per-packet one-way delay: 95.685 ms
  Loss rate: 0.37%
-- Flow 1:
  Average throughput: 151.09 Mbit/s
  95th percentile per-packet one-way delay: 102.612 ms
  Loss rate: 0.62%
-- Flow 2:
  Average throughput: 156.30 Mbit/s
  95th percentile per-packet one-way delay: 86.997 ms
  Loss rate: 0.09%
-- Flow 3:
  Average throughput: 82.43 Mbit/s
  95th percentile per-packet one-way delay: 58.239 ms
  Loss rate: 0.00%
Run 5: Report of Verus — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 152.07 Mbps)
Flow 1 egress (mean 151.09 Mbps)
Flow 2 ingress (mean 156.44 Mbps)
Flow 2 egress (mean 156.30 Mbps)
Flow 3 ingress (mean 82.45 Mbps)
Flow 3 egress (mean 82.43 Mbps)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 102.61 ms)
Flow 2 (95th percentile 87.00 ms)
Flow 3 (95th percentile 58.24 ms)
Run 1: Statistics of PCC-Vivace

Start at: 2019-02-21 00:11:16
End at: 2019-02-21 00:11:46
Local clock offset: -0.101 ms
Remote clock offset: 0.094 ms

# Below is generated by plot.py at 2019-02-21 06:21:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 626.09 Mbit/s
95th percentile per-packet one-way delay: 84.485 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 392.16 Mbit/s
95th percentile per-packet one-way delay: 94.155 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 337.37 Mbit/s
95th percentile per-packet one-way delay: 71.573 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 27.97 Mbit/s
95th percentile per-packet one-way delay: 47.300 ms
Loss rate: 0.00%
Run 1: Report of PCC-Vivace — Data Link

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Run 2: Statistics of PCC-Vivace

Start at: 2019-02-21 00:48:07
End at: 2019-02-21 00:48:37
Local clock offset: -0.09 ms
Remote clock offset: 0.073 ms

# Below is generated by plot.py at 2019-02-21 06:21:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 578.64 Mbit/s
  95th percentile per-packet one-way delay: 61.518 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 348.60 Mbit/s
  95th percentile per-packet one-way delay: 76.723 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 269.57 Mbit/s
  95th percentile per-packet one-way delay: 49.539 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 154.08 Mbit/s
  95th percentile per-packet one-way delay: 48.661 ms
  Loss rate: 0.00%
Run 2: Report of PCC-Vivace — Data Link

Throughput (Mbit/s)

Flow 1 ingress (mean 348.60 Mbit/s)
Flow 1 egress (mean 348.60 Mbit/s)
Flow 2 ingress (mean 269.56 Mbit/s)
Flow 2 egress (mean 269.57 Mbit/s)
Flow 3 ingress (mean 154.09 Mbit/s)
Flow 3 egress (mean 154.08 Mbit/s)

Per-packet one way delay (ms)

Flow 1 (95th percentile 76.72 ms)  Flow 2 (95th percentile 49.54 ms)  Flow 3 (95th percentile 48.66 ms)
Run 3: Statistics of PCC-Vivace

Start at: 2019-02-21 01:24:58
End at: 2019-02-21 01:25:28
Local clock offset: -0.083 ms
Remote clock offset: -0.043 ms

# Below is generated by plot.py at 2019-02-21 06:21:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 599.87 Mbit/s
95th percentile per-packet one-way delay: 53.940 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 365.33 Mbit/s
95th percentile per-packet one-way delay: 53.626 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 281.56 Mbit/s
95th percentile per-packet one-way delay: 58.371 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 142.36 Mbit/s
95th percentile per-packet one-way delay: 50.389 ms
Loss rate: 0.00%
Run 3: Report of PCC-Vivace — Data Link
Run 4: Statistics of PCC-Vivace

Start at: 2019-02-21 02:01:40
End at: 2019-02-21 02:02:10
Local clock offset: -0.091 ms
Remote clock offset: -0.1 ms

# Below is generated by plot.py at 2019-02-21 06:21:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 598.99 Mbit/s
95th percentile per-packet one-way delay: 121.537 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 340.03 Mbit/s
95th percentile per-packet one-way delay: 137.581 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 249.17 Mbit/s
95th percentile per-packet one-way delay: 51.066 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 282.82 Mbit/s
95th percentile per-packet one-way delay: 58.076 ms
Loss rate: 0.00%
Run 4: Report of PCC-Vivace — Data Link

![Throughput graph]

- Flow 1 ingress (mean 340.50 Mb/s)
- Flow 1 egress (mean 340.03 Mb/s)
- Flow 2 ingress (mean 249.18 Mb/s)
- Flow 2 egress (mean 249.17 Mb/s)
- Flow 3 ingress (mean 282.82 Mb/s)
- Flow 3 egress (mean 282.62 Mb/s)

![Per-packet one-way delay graph]

- Flow 1 (95th percentile 137.58 ms)
- Flow 2 (95th percentile 51.07 ms)
- Flow 3 (95th percentile 58.08 ms)
Run 5: Statistics of PCC-Vivace

Start at: 2019-02-21 02:38:13
End at: 2019-02-21 02:38:43
Local clock offset: -0.071 ms
Remote clock offset: -0.011 ms

# Below is generated by plot.py at 2019-02-21 06:22:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 608.54 Mbit/s
95th percentile per-packet one-way delay: 54.081 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 348.55 Mbit/s
95th percentile per-packet one-way delay: 50.951 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 341.31 Mbit/s
95th percentile per-packet one-way delay: 56.052 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 100.17 Mbit/s
95th percentile per-packet one-way delay: 47.965 ms
Loss rate: 0.01%
Run 5: Report of PCC-Vivace — Data Link

![Graph showing throughput and packet waiting time](image)

Flow 1 ingress (mean 348.54 Mbit/s)  Flow 1 egress (mean 348.55 Mbit/s)
Flow 2 ingress (mean 341.31 Mbit/s)  Flow 2 egress (mean 341.31 Mbit/s)
Flow 3 ingress (mean 100.17 Mbit/s)  Flow 3 egress (mean 100.17 Mbit/s)

Per packet one way delay (ms)

- Flow 1 (95th percentile 50.95 ms)
- Flow 2 (95th percentile 56.05 ms)
- Flow 3 (95th percentile 47.97 ms)
Run 1: Statistics of WebRTC media

Start at: 2019-02-21 00:36:39
End at: 2019-02-21 00:37:09
Local clock offset: -0.1 ms
Remote clock offset: 0.066 ms

# Below is generated by plot.py at 2019-02-21 06:22:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.01 Mbit/s
  95th percentile per-packet one-way delay: 47.439 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 2.10 Mbit/s
  95th percentile per-packet one-way delay: 46.687 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.44 Mbit/s
  95th percentile per-packet one-way delay: 47.487 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.57 Mbit/s
  95th percentile per-packet one-way delay: 47.432 ms
  Loss rate: 0.00%
Run 1: Report of WebRTC media — Data Link

Throughput (Mbps)

Flow 1 ingress (mean 2.10 Mbps)
Flow 2 ingress (mean 1.44 Mbps)
Flow 3 ingress (mean 0.57 Mbps)
Flow 1 egress (mean 2.10 Mbps)
Flow 2 egress (mean 1.44 Mbps)
Flow 3 egress (mean 0.57 Mbps)

Per-packet one-way latency [ms]

Flow 1 (95th percentile 46.69 ms)
Flow 2 (95th percentile 47.49 ms)
Flow 3 (95th percentile 47.43 ms)
Run 2: Statistics of WebRTC media

Start at: 2019-02-21 01:13:31
End at: 2019-02-21 01:14:01
Local clock offset: -0.046 ms
Remote clock offset: 0.049 ms

# Below is generated by plot.py at 2019-02-21 06:22:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 47.533 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.512 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.503 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.604 ms
Loss rate: 0.05%
Run 2: Report of WebRTC media — Data Link

![Graph showing throughput and delay for different flows]

- Flow 1 ingress (mean 0.05 Mbit/s)
- Flow 1 egress (mean 0.05 Mbit/s)
- Flow 2 ingress (mean 0.05 Mbit/s)
- Flow 2 egress (mean 0.05 Mbit/s)
- Flow 3 ingress (mean 0.04 Mbit/s)
- Flow 3 egress (mean 0.05 Mbit/s)
Run 3: Statistics of WebRTC media

Start at: 2019-02-21 01:50:16
End at: 2019-02-21 01:50:46
Local clock offset: -0.111 ms
Remote clock offset: -0.165 ms

# Below is generated by plot.py at 2019-02-21 06:22:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.81 Mbit/s
95th percentile per-packet one-way delay: 47.478 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 47.353 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 47.520 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 47.400 ms
Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link
Run 4: Statistics of WebRTC media

Start at: 2019-02-21 02:26:46
End at: 2019-02-21 02:27:16
Local clock offset: -0.049 ms
Remote clock offset: -0.008 ms

# Below is generated by plot.py at 2019-02-21 06:22:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 47.758 ms
Loss rate: 0.00%

-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.475 ms
Loss rate: 0.00%

-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.858 ms
Loss rate: 0.00%

-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 46.579 ms
Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link

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

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

Start at: 2019-02-21 03:03:36
End at: 2019-02-21 03:04:06
Local clock offset: 0.264 ms
Remote clock offset: -0.054 ms

# Below is generated by plot.py at 2019-02-21 06:22:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.14 Mbit/s
  95th percentile per-packet one-way delay: 47.115 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 47.159 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 47.057 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 47.087 ms
  Loss rate: 0.00%
Run 5: Report of WebRTC media — Data Link