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 @ 0b8e9a949603c38423b94f9f
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd22b90d2c64fcd45e12e92f9
third_party/genericCC @ d0153f8e694aa89e93b032143ceddbfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0eddbbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ d9c5e33091330aca25ecd105ab2db634d5c40d
third_party/pantheon-tunnel @ f866d3f5d27af9d42717625ee3a354cc2e02bd
third_party/pcc @ 1a9c958fa0d66d18b23c091a55f5c872b9481e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f55613e8ac08f72c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3c4f42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c66a261149af262956293bf9a494
M src/verus.hpp
M tools/plot.py
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>
<thead>
<tr>
<th>scheme</th>
<th># runs</th>
<th>mean avg tput (Mbit/s)</th>
<th>mean 95th-%ile delay (ms)</th>
<th>mean loss rate (%)</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>flow 1</td>
<td>flow 2</td>
<td>flow 3</td>
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<tr>
<td>TCP BBR</td>
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<td>526.86</td>
<td>513.94</td>
<td>476.69</td>
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<td>Copa</td>
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<td>285.58</td>
<td>293.26</td>
<td>276.69</td>
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<td>575.23</td>
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<td>370.78</td>
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<td>WebRTC media</td>
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<td>0.46</td>
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</table>
Run 1: Statistics of TCP BBR

End at: 2019-01-25 17:00:03
Local clock offset: -0.048 ms
Remote clock offset: -0.124 ms

# Below is generated by plot.py at 2019-01-25 20:12:20
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1013.34 Mbit/s
  95th percentile per-packet one-way delay: 174.343 ms
  Loss rate: 0.96%
-- Flow 1:
  Average throughput: 515.07 Mbit/s
  95th percentile per-packet one-way delay: 181.268 ms
  Loss rate: 0.88%
-- Flow 2:
  Average throughput: 502.36 Mbit/s
  95th percentile per-packet one-way delay: 173.552 ms
  Loss rate: 1.46%
-- Flow 3:
  Average throughput: 491.88 Mbit/s
  95th percentile per-packet one-way delay: 133.597 ms
  Loss rate: 0.18%
Run 1: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 519.66 Mbps)
- Flow 1 egress (mean 515.07 Mbps)
- Flow 2 ingress (mean 509.84 Mbps)
- Flow 2 egress (mean 502.36 Mbps)
- Flow 3 ingress (mean 492.77 Mbps)
- Flow 3 egress (mean 491.88 Mbps)

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

- Flow 1 (95th percentile 181.27 ms)
- Flow 2 (95th percentile 173.55 ms)
- Flow 3 (95th percentile 133.60 ms)
Run 2: Statistics of TCP BBR

Start at: 2019-01-25 17:36:23
End at: 2019-01-25 17:36:53
Local clock offset: -0.064 ms
Remote clock offset: -0.052 ms

# Below is generated by plot.py at 2019-01-25 20:13:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1059.25 Mbit/s
  95th percentile per-packet one-way delay: 153.297 ms
  Loss rate: 0.70%
-- Flow 1:
  Average throughput: 562.22 Mbit/s
  95th percentile per-packet one-way delay: 139.493 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 512.46 Mbit/s
  95th percentile per-packet one-way delay: 153.893 ms
  Loss rate: 1.26%
-- Flow 3:
  Average throughput: 468.30 Mbit/s
  95th percentile per-packet one-way delay: 168.352 ms
  Loss rate: 1.09%
Run 2: Report of TCP BBR — Data Link

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

- **Throughput**
  - Flow 1 ingress (mean 563.62 Mbit/s)
  - Flow 2 ingress (mean 519.01 Mbit/s)
  - Flow 3 ingress (mean 473.46 Mbit/s)
  - Flow 1 egress (mean 562.22 Mbit/s)
  - Flow 2 egress (mean 512.46 Mbit/s)
  - Flow 3 egress (mean 468.39 Mbit/s)

- **Packet Delivery Delay**
  - Flow 1 (95th percentile 139.49 ms)
  - Flow 2 (95th percentile 153.89 ms)
  - Flow 3 (95th percentile 168.35 ms)
Run 3: Statistics of TCP BBR

Local clock offset: -0.47 ms
Remote clock offset: 0.174 ms

# Below is generated by plot.py at 2019-01-25 20:13:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1026.48 Mbit/s
  95th percentile per-packet one-way delay: 154.796 ms
  Loss rate: 0.93%
  -- Flow 1:
    Average throughput: 511.24 Mbit/s
    95th percentile per-packet one-way delay: 125.945 ms
    Loss rate: 0.37%
  -- Flow 2:
    Average throughput: 538.35 Mbit/s
    95th percentile per-packet one-way delay: 167.812 ms
    Loss rate: 1.00%
  -- Flow 3:
    Average throughput: 470.90 Mbit/s
    95th percentile per-packet one-way delay: 168.067 ms
    Loss rate: 2.53%
Run 3: Report of TCP BBR — Data Link

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

![Graph 2: Per-packet one-way delay (ms) vs Time (s)]
Run 4: Statistics of TCP BBR

End at: 2019-01-25 18:50:29
Local clock offset: -0.059 ms
Remote clock offset: 0.257 ms

# Below is generated by plot.py at 2019-01-25 20:13:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1007.27 Mbit/s
  95th percentile per-packet one-way delay: 160.745 ms
  Loss rate: 0.81%
-- Flow 1:
  Average throughput: 521.81 Mbit/s
  95th percentile per-packet one-way delay: 161.990 ms
  Loss rate: 0.60%
-- Flow 2:
  Average throughput: 500.35 Mbit/s
  95th percentile per-packet one-way delay: 150.286 ms
  Loss rate: 0.39%
-- Flow 3:
  Average throughput: 458.05 Mbit/s
  95th percentile per-packet one-way delay: 171.186 ms
  Loss rate: 2.38%
Run 4: Report of TCP BBR — Data Link

**Throughput (Mbps)**

- Flow 1 ingress (mean 524.98 Mbps)
- Flow 1 egress (mean 521.81 Mbps)
- Flow 2 ingress (mean 502.31 Mbps)
- Flow 2 egress (mean 500.35 Mbps)
- Flow 3 ingress (mean 469.23 Mbps)
- Flow 3 egress (mean 458.05 Mbps)

**Packet one-way delay (ms)**

- Flow 1 (95th percentile 161.99 ms)
- Flow 2 (95th percentile 150.29 ms)
- Flow 3 (95th percentile 171.19 ms)
Run 5: Statistics of TCP BBR

End at: 2019-01-25 19:27:02
Local clock offset: -0.028 ms
Remote clock offset: 0.396 ms

# Below is generated by plot.py at 2019-01-25 20:13:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1032.35 Mbit/s
95th percentile per-packet one-way delay: 153.265 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 523.95 Mbit/s
95th percentile per-packet one-way delay: 138.455 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 516.19 Mbit/s
95th percentile per-packet one-way delay: 157.968 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 494.34 Mbit/s
95th percentile per-packet one-way delay: 155.171 ms
Loss rate: 0.19%
Run 5: Report of TCP BBR — Data Link
Run 1: Statistics of Copa

End at: 2019-01-25 16:52:55
Local clock offset: 0.09 ms
Remote clock offset: -0.048 ms

# Below is generated by plot.py at 2019-01-25 20:13:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 551.38 Mbit/s
  95th percentile per-packet one-way delay: 64.884 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 282.79 Mbit/s
  95th percentile per-packet one-way delay: 59.304 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 282.10 Mbit/s
  95th percentile per-packet one-way delay: 68.773 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 241.34 Mbit/s
  95th percentile per-packet one-way delay: 84.275 ms
  Loss rate: 0.00%
Run 1: Report of Copa — Data Link

![Graph showing data link performance metrics over time.](image-url)
Run 2: Statistics of Copa

Start at: 2019-01-25 17:29:02
End at: 2019-01-25 17:29:32
Local clock offset: -0.056 ms
Remote clock offset: -0.095 ms

# Below is generated by plot.py at 2019-01-25 20:14:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 608.24 Mbit/s
95th percentile per-packet one-way delay: 60.769 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 304.69 Mbit/s
95th percentile per-packet one-way delay: 60.619 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 309.34 Mbit/s
95th percentile per-packet one-way delay: 59.306 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 293.26 Mbit/s
95th percentile per-packet one-way delay: 62.544 ms
Loss rate: 0.16%
Run 2: Report of Copa — Data Link

For the throughput data:

- Flow 1 ingress (mean 304.69 Mbit/s)
- Flow 1 egress (mean 304.69 Mbit/s)
- Flow 2 ingress (mean 309.37 Mbit/s)
- Flow 2 egress (mean 309.34 Mbit/s)
- Flow 3 ingress (mean 293.74 Mbit/s)
- Flow 3 egress (mean 293.26 Mbit/s)

For the packet delay data:

- Flow 1 (95th percentile 60.62 ms)
- Flow 2 (95th percentile 59.31 ms)
- Flow 3 (95th percentile 62.54 ms)
Run 3: Statistics of Copa

Start at: 2019-01-25 18:06:05
End at: 2019-01-25 18:06:35
Local clock offset: -0.101 ms
Remote clock offset: 0.124 ms

# Below is generated by plot.py at 2019-01-25 20:14:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 612.66 Mbit/s
95th percentile per-packet one-way delay: 59.346 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 310.16 Mbit/s
95th percentile per-packet one-way delay: 56.183 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 313.41 Mbit/s
95th percentile per-packet one-way delay: 59.762 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 281.38 Mbit/s
95th percentile per-packet one-way delay: 68.259 ms
Loss rate: 0.07%
Run 3: Report of Copa — Data Link

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

**Throughput (Mbps)**
- Flow 1 ingress (mean 310.17 Mbps)
- Flow 1 egress (mean 310.16 Mbps)
- Flow 2 ingress (mean 313.43 Mbps)
- Flow 2 egress (mean 313.41 Mbps)
- Flow 3 ingress (mean 281.57 Mbps)
- Flow 3 egress (mean 281.38 Mbps)

**Packet delay (ms)**
- Flow 1 (95th percentile 56.18 ms)
- Flow 2 (95th percentile 59.76 ms)
- Flow 3 (95th percentile 68.26 ms)
Run 4: Statistics of Copa

End at: 2019-01-25 18:43:09
Local clock offset: 0.047 ms
Remote clock offset: 0.242 ms

# Below is generated by plot.py at 2019-01-25 20:30:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 550.05 Mbit/s
  95th percentile per-packet one-way delay: 59.128 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 256.23 Mbit/s
  95th percentile per-packet one-way delay: 57.700 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 293.79 Mbit/s
  95th percentile per-packet one-way delay: 59.615 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 295.54 Mbit/s
  95th percentile per-packet one-way delay: 59.720 ms
  Loss rate: 0.00%
Run 4: Report of Copa — Data Link

[Graph of throughput over time with legend indicating flow ingress and egress rates]

[Graph of per packet one-way delay with legend indicating flow 1, 2, and 3 delays]
Run 5: Statistics of Copa

End at: 2019-01-25 19:19:50
Local clock offset: −0.062 ms
Remote clock offset: 0.379 ms

# Below is generated by plot.py at 2019-01-25 20:30:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 542.66 Mbit/s
95th percentile per-packet one-way delay: 70.784 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 274.04 Mbit/s
95th percentile per-packet one-way delay: 64.977 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 267.64 Mbit/s
95th percentile per-packet one-way delay: 71.122 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 271.93 Mbit/s
95th percentile per-packet one-way delay: 89.881 ms
Loss rate: 0.00%
Run 5: Report of Copa — Data Link

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

End at: 2019-01-25 16:57:59
Local clock offset: -0.399 ms
Remote clock offset: -0.083 ms

# Below is generated by plot.py at 2019-01-25 20:31:52
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1072.04 Mbit/s
  95th percentile per-packet one-way delay: 139.304 ms
  Loss rate: 0.15%
-- Flow 1:
  Average throughput: 588.04 Mbit/s
  95th percentile per-packet one-way delay: 144.011 ms
  Loss rate: 0.18%
-- Flow 2:
  Average throughput: 479.46 Mbit/s
  95th percentile per-packet one-way delay: 109.367 ms
  Loss rate: 0.05%
-- Flow 3:
  Average throughput: 495.80 Mbit/s
  95th percentile per-packet one-way delay: 87.467 ms
  Loss rate: 0.24%
Run 1: Report of TCP Cubic — Data Link
Run 2: Statistics of TCP Cubic

Start at: 2019-01-25 17:34:18
End at: 2019-01-25 17:34:48
Local clock offset: -0.066 ms
Remote clock offset: -0.081 ms

# Below is generated by plot.py at 2019-01-25 20:32:20
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1086.79 Mbit/s
  95th percentile per-packet one-way delay: 149.924 ms
  Loss rate: 0.32%
-- Flow 1:
  Average throughput: 562.33 Mbit/s
  95th percentile per-packet one-way delay: 113.020 ms
  Loss rate: 0.19%
-- Flow 2:
  Average throughput: 544.42 Mbit/s
  95th percentile per-packet one-way delay: 154.072 ms
  Loss rate: 0.30%
-- Flow 3:
  Average throughput: 486.02 Mbit/s
  95th percentile per-packet one-way delay: 133.223 ms
  Loss rate: 0.77%
Run 2: Report of TCP Cubic — Data Link

[Graphs showing throughput and packet delay over time for different flows.]
Run 3: Statistics of TCP Cubic

Start at: 2019-01-25 18:11:18
End at: 2019-01-25 18:11:48
Local clock offset: 0.095 ms
Remote clock offset: 0.166 ms

# Below is generated by plot.py at 2019-01-25 20:33:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1127.83 Mbit/s
95th percentile per-packet one-way delay: 147.027 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 564.98 Mbit/s
95th percentile per-packet one-way delay: 150.238 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 599.63 Mbit/s
95th percentile per-packet one-way delay: 101.780 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 492.05 Mbit/s
95th percentile per-packet one-way delay: 146.839 ms
Loss rate: 0.52%
Run 3: Report of TCP Cubic — Data Link

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

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

- Flow 1 ingress (mean 566.97 Mbit/s)
- Flow 1 egress (mean 564.98 Mbit/s)
- Flow 2 ingress (mean 603.37 Mbit/s)
- Flow 2 egress (mean 599.63 Mbit/s)
- Flow 3 ingress (mean 494.82 Mbit/s)
- Flow 3 egress (mean 492.05 Mbit/s)

- Flow 1 (95th percentile 150.24 ms)
- Flow 2 (95th percentile 101.78 ms)
- Flow 3 (95th percentile 146.04 ms)
Run 4: Statistics of TCP Cubic

Start at: 2019-01-25 18:47:51
Local clock offset: -0.304 ms
Remote clock offset: 0.325 ms

# Below is generated by plot.py at 2019-01-25 20:33:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1103.04 Mbit/s
95th percentile per-packet one-way delay: 123.684 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 578.59 Mbit/s
95th percentile per-packet one-way delay: 108.258 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 574.93 Mbit/s
95th percentile per-packet one-way delay: 138.938 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 425.60 Mbit/s
95th percentile per-packet one-way delay: 103.516 ms
Loss rate: 0.01%
Run 4: Report of TCP Cubic — Data Link
Run 5: Statistics of TCP Cubic

End at: 2019-01-25 19:24:54
Local clock offset: -0.035 ms
Remote clock offset: 0.363 ms

# Below is generated by plot.py at 2019-01-25 20:35:02
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1123.60 Mbit/s
  95th percentile per-packet one-way delay: 148.154 ms
  Loss rate: 0.28%
-- Flow 1:
  Average throughput: 582.21 Mbit/s
  95th percentile per-packet one-way delay: 130.256 ms
  Loss rate: 0.28%
-- Flow 2:
  Average throughput: 581.33 Mbit/s
  95th percentile per-packet one-way delay: 140.152 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 463.73 Mbit/s
  95th percentile per-packet one-way delay: 172.737 ms
  Loss rate: 0.95%
Run 5: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 583.83 Mbps)
- Flow 1 egress (mean 582.21 Mbps)
- Flow 2 ingress (mean 581.35 Mbps)
- Flow 2 egress (mean 581.33 Mbps)
- Flow 3 ingress (mean 468.24 Mbps)
- Flow 3 egress (mean 463.73 Mbps)

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

- Flow 1 (95th percentile 130.26 ms)
- Flow 2 (95th percentile 140.15 ms)
- Flow 3 (95th percentile 172.74 ms)
Run 1: Statistics of FillP

Start at: 2019-01-25 16:38:57
Local clock offset: 0.437 ms
Remote clock offset: -0.083 ms

# Below is generated by plot.py at 2019-01-25 20:35:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 889.16 Mbit/s
95th percentile per-packet one-way delay: 57.946 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 568.13 Mbit/s
95th percentile per-packet one-way delay: 64.727 ms
Loss rate: 0.97%
-- Flow 2:
Average throughput: 352.81 Mbit/s
95th percentile per-packet one-way delay: 49.108 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 258.10 Mbit/s
95th percentile per-packet one-way delay: 48.909 ms
Loss rate: 0.00%
Run 1: Report of FillP — Data Link

Throughput (Mbps):

- Flow 1 ingress (mean 573.67 Mbps)
- Flow 1 egress (mean 568.13 Mbps)
- Flow 2 ingress (mean 352.80 Mbps)
- Flow 2 egress (mean 352.81 Mbps)
- Flow 3 ingress (mean 258.10 Mbps)
- Flow 3 egress (mean 258.10 Mbps)

Per-packet one-way delay (ms):

- Flow 1 (95th percentile 64.73 ms)
- Flow 2 (95th percentile 49.11 ms)
- Flow 3 (95th percentile 48.91 ms)
Run 2: Statistics of FillP

Start at: 2019-01-25 17:15:29
End at: 2019-01-25 17:15:59
Local clock offset: 0.092 ms
Remote clock offset: -0.083 ms

# Below is generated by plot.py at 2019-01-25 20:51:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 934.71 Mbit/s
95th percentile per-packet one-way delay: 54.809 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 588.38 Mbit/s
95th percentile per-packet one-way delay: 60.613 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 383.58 Mbit/s
95th percentile per-packet one-way delay: 53.277 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 274.70 Mbit/s
95th percentile per-packet one-way delay: 49.238 ms
Loss rate: 0.00%
Run 2: Report of FillP — Data Link

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

- Flow 1 ingress (mean 587.75 Mbps)
- Flow 1 egress (mean 588.38 Mbps)
- Flow 2 ingress (mean 383.27 Mbps)
- Flow 2 egress (mean 383.58 Mbps)
- Flow 3 ingress (mean 274.79 Mbps)
- Flow 3 egress (mean 274.70 Mbps)

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

- Flow 1 (95th percentile 60.61 ms)
- Flow 2 (95th percentile 53.28 ms)
- Flow 3 (95th percentile 49.24 ms)
Run 3: Statistics of FillP

Start at: 2019-01-25 17:52:25
End at: 2019-01-25 17:52:55
Local clock offset: -0.094 ms
Remote clock offset: 0.085 ms

# Below is generated by plot.py at 2019-01-25 20:51:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 925.83 Mbit/s
95th percentile per-packet one-way delay: 59.745 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 584.63 Mbit/s
95th percentile per-packet one-way delay: 60.808 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 382.79 Mbit/s
95th percentile per-packet one-way delay: 53.179 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 260.34 Mbit/s
95th percentile per-packet one-way delay: 50.629 ms
Loss rate: 0.00%
Run 3: Report of FillP — Data Link

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

- Flow 1 Ingress (mean 584.68 Mbps)
- Flow 1 Egress (mean 584.63 Mbps)
- Flow 2 Ingress (mean 382.85 Mbps)
- Flow 2 Egress (mean 382.79 Mbps)
- Flow 3 Ingress (mean 260.34 Mbps)
- Flow 3 Egress (mean 260.34 Mbps)

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

- Flow 1 (95th percentile 60.81 ms)
- Flow 2 (95th percentile 53.18 ms)
- Flow 3 (95th percentile 50.63 ms)
Run 4: Statistics of FillP

End at: 2019-01-25 18:29:47
Local clock offset: 0.015 ms
Remote clock offset: 0.228 ms

# Below is generated by plot.py at 2019-01-25 20:53:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 927.76 Mbit/s
95th percentile per-packet one-way delay: 73.083 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 593.37 Mbit/s
95th percentile per-packet one-way delay: 76.525 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 368.19 Mbit/s
95th percentile per-packet one-way delay: 52.319 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 270.91 Mbit/s
95th percentile per-packet one-way delay: 50.469 ms
Loss rate: 0.00%
Run 4: Report of FillP — Data Link
Run 5: Statistics of FillP

Start at: 2019-01-25 19:06:02
End at: 2019-01-25 19:06:32
Local clock offset: -0.022 ms
Remote clock offset: 0.343 ms

# Below is generated by plot.py at 2019-01-25 20:53:22
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 916.90 Mbit/s
  95th percentile per-packet one-way delay: 90.933 ms
  Loss rate: 0.24%
-- Flow 1:
  Average throughput: 583.14 Mbit/s
  95th percentile per-packet one-way delay: 97.890 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 366.53 Mbit/s
  95th percentile per-packet one-way delay: 52.055 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 271.90 Mbit/s
  95th percentile per-packet one-way delay: 50.878 ms
  Loss rate: 0.00%
Run 5: Report of FillP — Data Link

![Data Link Throughput Graph]

- Flow 1 Ingress (mean 585.38 Mbit/s)
- Flow 1 Egress (mean 583.14 Mbit/s)
- Flow 2 Ingress (mean 366.53 Mbit/s)
- Flow 2 Egress (mean 366.53 Mbit/s)
- Flow 3 Ingress (mean 271.90 Mbit/s)
- Flow 3 Egress (mean 271.90 Mbit/s)

![Data Link Delay Graph]

- Flow 1 (95th percentile 97.89 ms)
- Flow 2 (95th percentile 52.05 ms)
- Flow 3 (95th percentile 50.88 ms)
Run 1: Statistics of FillP-Sheep

Start at: 2019-01-25 16:45:38
End at: 2019-01-25 16:46:08
Local clock offset: 0.076 ms
Remote clock offset: -0.056 ms

# Below is generated by plot.py at 2019-01-25 20:53:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 845.35 Mbit/s
95th percentile per-packet one-way delay: 61.818 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 554.31 Mbit/s
95th percentile per-packet one-way delay: 66.191 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 312.11 Mbit/s
95th percentile per-packet one-way delay: 49.656 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 249.06 Mbit/s
95th percentile per-packet one-way delay: 51.060 ms
Loss rate: 0.00%
Run 1: Report of FillP-Sheep — Data Link

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

- **Flow 1 Ingress (mean 555.79 Mbit/s)**
- **Flow 1 Egress (mean 554.31 Mbit/s)**
- **Flow 2 Ingress (mean 312.11 Mbit/s)**
- **Flow 2 Egress (mean 312.11 Mbit/s)**
- **Flow 3 Ingress (mean 249.05 Mbit/s)**
- **Flow 3 Egress (mean 249.06 Mbit/s)**

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

- **Flow 1 (95th percentile 66.19 ms)**
- **Flow 2 (95th percentile 49.66 ms)**
- **Flow 3 (95th percentile 51.06 ms)**

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Run 2: Statistics of FillP-Sheep

End at: 2019-01-25 17:22:45
Local clock offset: -0.051 ms
Remote clock offset: -0.086 ms

# Below is generated by plot.py at 2019-01-25 20:53:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 865.14 Mbit/s
95th percentile per-packet one-way delay: 56.314 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 560.69 Mbit/s
95th percentile per-packet one-way delay: 61.344 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 337.47 Mbit/s
95th percentile per-packet one-way delay: 52.768 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 242.89 Mbit/s
95th percentile per-packet one-way delay: 49.522 ms
Loss rate: 0.00%
Run 2: Report of FillP-Sheep — Data Link

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

**Throughput (Mbps):**
- **Flow 1 ingress (mean 560.69 Mbps)**
- **Flow 1 egress (mean 560.69 Mbps)**
- **Flow 2 ingress (mean 337.48 Mbps)**
- **Flow 2 egress (mean 337.47 Mbps)**
- **Flow 3 ingress (mean 242.88 Mbps)**
- **Flow 3 egress (mean 242.89 Mbps)**

**Per-packet one way delay (ms):**
- **Flow 1 (95th percentile 61.34 ms)**
- **Flow 2 (95th percentile 52.77 ms)**
- **Flow 3 (95th percentile 49.52 ms)**

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Run 3: Statistics of FillP-Sheep

Start at: 2019-01-25 17:59:10
End at: 2019-01-25 17:59:40
Local clock offset: -0.03 ms
Remote clock offset: 0.113 ms

# Below is generated by plot.py at 2019-01-25 20:53:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 867.15 Mbit/s
95th percentile per-packet one-way delay: 53.602 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 579.21 Mbit/s
95th percentile per-packet one-way delay: 56.116 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 310.12 Mbit/s
95th percentile per-packet one-way delay: 49.106 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 246.98 Mbit/s
95th percentile per-packet one-way delay: 51.072 ms
Loss rate: 0.14%
Run 3: Report of FillP-Sheep — Data Link

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

- **Flow 1 Ingress (mean 579.21 Mbps)**
- **Flow 1 Egress (mean 579.21 Mbps)**
- **Flow 2 Ingress (mean 310.12 Mbps)**
- **Flow 2 Egress (mean 310.12 Mbps)**
- **Flow 3 Ingress (mean 247.33 Mbps)**
- **Flow 3 Egress (mean 246.98 Mbps)**

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

- **Flow 1 (95th percentile 56.12 ms)**
- **Flow 2 (95th percentile 49.11 ms)**
- **Flow 3 (95th percentile 51.07 ms)**

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Run 4: Statistics of FillP-Sheep

Start at: 2019-01-25 18:35:56
End at: 2019-01-25 18:36:26
Local clock offset: -0.136 ms
Remote clock offset: 0.245 ms

# Below is generated by plot.py at 2019-01-25 20:54:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 855.56 Mbit/s
95th percentile per-packet one-way delay: 53.731 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 566.62 Mbit/s
95th percentile per-packet one-way delay: 55.503 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 315.41 Mbit/s
95th percentile per-packet one-way delay: 50.608 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 241.03 Mbit/s
95th percentile per-packet one-way delay: 49.989 ms
Loss rate: 0.00%
Run 4: Report of FillP-Sheep — Data Link

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

Legend:
- Flow 1 ingress (mean 566.64 Mbit/s)
- Flow 1 egress (mean 566.62 Mbit/s)
- Flow 2 ingress (mean 315.41 Mbit/s)
- Flow 2 egress (mean 315.41 Mbit/s)
- Flow 3 ingress (mean 241.03 Mbit/s)
- Flow 3 egress (mean 241.03 Mbit/s)
Run 5: Statistics of FillP-Sheep

Start at: 2019-01-25 19:12:40
Local clock offset: -0.004 ms
Remote clock offset: 0.329 ms

# Below is generated by plot.py at 2019-01-25 21:10:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 811.80 Mbit/s
95th percentile per-packet one-way delay: 66.365 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 531.87 Mbit/s
95th percentile per-packet one-way delay: 69.709 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 305.85 Mbit/s
95th percentile per-packet one-way delay: 50.672 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 232.15 Mbit/s
95th percentile per-packet one-way delay: 49.861 ms
Loss rate: 0.00%
Run 5: Report of FillP-Sheep — Data Link

**Throughput (Mbps)**

- **Flow 1 ingress** (mean 531.92 Mbps)
- **Flow 1 egress** (mean 531.87 Mbps)
- **Flow 2 ingress** (mean 305.89 Mbps)
- **Flow 2 egress** (mean 305.85 Mbps)
- **Flow 3 ingress** (mean 232.12 Mbps)
- **Flow 3 egress** (mean 232.15 Mbps)

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

- **Flow 1** (95th percentile 69.71 ms)
- **Flow 2** (95th percentile 50.67 ms)
- **Flow 3** (95th percentile 49.86 ms)
Run 1: Statistics of Indigo

End at: 2019-01-25 16:49:56
Local clock offset: -0.077 ms
Remote clock offset: -0.109 ms

# Below is generated by plot.py at 2019-01-25 21:10:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 402.07 Mbit/s
95th percentile per-packet one-way delay: 50.937 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 215.86 Mbit/s
95th percentile per-packet one-way delay: 47.847 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 194.02 Mbit/s
95th percentile per-packet one-way delay: 51.619 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 178.03 Mbit/s
95th percentile per-packet one-way delay: 51.571 ms
Loss rate: 0.03%
Run 1: Report of Indigo — Data Link

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

- **Flow 1 ingress (mean 215.86 Mbit/s)**
- **Flow 1 egress (mean 215.86 Mbit/s)**
- **Flow 2 ingress (mean 194.02 Mbit/s)**
- **Flow 2 egress (mean 194.02 Mbit/s)**
- **Flow 3 ingress (mean 176.03 Mbit/s)**
- **Flow 3 egress (mean 176.03 Mbit/s)**

- **Flow 1 (95th percentile 47.85 ms)**
- **Flow 2 (95th percentile 51.62 ms)**
- **Flow 3 (95th percentile 51.57 ms)**
Run 2: Statistics of Indigo

Start at: 2019-01-25 17:26:02
End at: 2019-01-25 17:26:32
Local clock offset: 0.305 ms
Remote clock offset: -0.113 ms

# Below is generated by plot.py at 2019-01-25 21:10:04
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 410.41 Mbit/s
  95th percentile per-packet one-way delay: 47.881 ms
    Loss rate: 0.00%
-- Flow 1:
 Average throughput: 220.11 Mbit/s
  95th percentile per-packet one-way delay: 47.667 ms
    Loss rate: 0.00%
-- Flow 2:
 Average throughput: 199.20 Mbit/s
  95th percentile per-packet one-way delay: 48.196 ms
    Loss rate: 0.00%
-- Flow 3:
 Average throughput: 178.56 Mbit/s
  95th percentile per-packet one-way delay: 47.928 ms
    Loss rate: 0.00%
Run 2: Report of Indigo — Data Link
Run 3: Statistics of Indigo

Start at: 2019-01-25 18:03:02
End at: 2019-01-25 18:03:32
Local clock offset: -0.071 ms
Remote clock offset: 0.165 ms

# Below is generated by plot.py at 2019-01-25 21:10:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 413.23 Mbit/s
95th percentile per-packet one-way delay: 49.001 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 220.74 Mbit/s
95th percentile per-packet one-way delay: 49.282 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 202.59 Mbit/s
95th percentile per-packet one-way delay: 48.162 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 179.59 Mbit/s
95th percentile per-packet one-way delay: 49.031 ms
Loss rate: 0.00%
Run 3: Report of Indigo — Data Link

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

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 220.74 Mbps)
Flow 1 egress (mean 220.74 Mbps)
Flow 2 ingress (mean 202.59 Mbps)
Flow 2 egress (mean 202.59 Mbps)
Flow 3 ingress (mean 179.59 Mbps)
Flow 3 egress (mean 179.59 Mbps)

![Graph of Per-packet E2E delay (ms) vs Time (s)]

Per-packet E2E delay (ms)

Time (s)

Flow 1 (95th percentile 49.28 ms)
Flow 2 (95th percentile 48.16 ms)
Flow 3 (95th percentile 49.03 ms)
Run 4: Statistics of Indigo

Start at: 2019-01-25 18:39:40
End at: 2019-01-25 18:40:10
Local clock offset: -0.162 ms
Remote clock offset: 0.257 ms

# Below is generated by plot.py at 2019-01-25 21:10:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 403.58 Mbit/s
95th percentile per-packet one-way delay: 48.741 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 215.48 Mbit/s
95th percentile per-packet one-way delay: 48.351 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 196.14 Mbit/s
95th percentile per-packet one-way delay: 49.307 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 178.58 Mbit/s
95th percentile per-packet one-way delay: 48.302 ms
Loss rate: 0.00%
Run 4: Report of Indigo — Data Link
Run 5: Statistics of Indigo

End at: 2019-01-25 19:16:51
Local clock offset: -0.029 ms
Remote clock offset: 0.341 ms

# Below is generated by plot.py at 2019-01-25 21:10:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 403.92 Mbit/s
95th percentile per-packet one-way delay: 49.522 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 213.64 Mbit/s
95th percentile per-packet one-way delay: 49.664 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 199.84 Mbit/s
95th percentile per-packet one-way delay: 49.051 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 179.81 Mbit/s
95th percentile per-packet one-way delay: 49.845 ms
Loss rate: 0.48%
Run 5: Report of Indigo — Data Link
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-01-25 16:54:27
End at: 2019-01-25 16:54:57
Local clock offset: -0.027 ms
Remote clock offset: -0.095 ms

# Below is generated by plot.py at 2019-01-25 21:10:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 837.15 Mbit/s
95th percentile per-packet one-way delay: 56.680 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 496.12 Mbit/s
95th percentile per-packet one-way delay: 58.566 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 410.16 Mbit/s
95th percentile per-packet one-way delay: 49.916 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 280.92 Mbit/s
95th percentile per-packet one-way delay: 51.516 ms
Loss rate: 0.00%
Run 1: Report of Indigo-MusesC3 — Data Link
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-01-25 17:31:10
End at: 2019-01-25 17:31:40
Local clock offset: 0.067 ms
Remote clock offset: -0.137 ms

# Below is generated by plot.py at 2019-01-25 21:10:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 839.44 Mbit/s
95th percentile per-packet one-way delay: 59.345 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 493.66 Mbit/s
95th percentile per-packet one-way delay: 56.153 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 407.08 Mbit/s
95th percentile per-packet one-way delay: 69.659 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 306.45 Mbit/s
95th percentile per-packet one-way delay: 50.022 ms
Loss rate: 0.02%
Run 2: Report of Indigo-MusesC3 — Data Link

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

- Flow 1 ingress (mean 493.67 Mbps)
- Flow 1 egress (mean 493.66 Mbps)
- Flow 2 ingress (mean 407.08 Mbps)
- Flow 2 egress (mean 407.08 Mbps)
- Flow 3 ingress (mean 306.52 Mbps)
- Flow 3 egress (mean 306.45 Mbps)

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

- Flow 1 (95th percentile 56.15 ms)
- Flow 2 (95th percentile 69.66 ms)
- Flow 3 (95th percentile 50.02 ms)
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-01-25 18:08:13
End at: 2019-01-25 18:08:43
Local clock offset: -0.06 ms
Remote clock offset: 0.13 ms

# Below is generated by plot.py at 2019-01-25 21:19:08
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 790.83 Mbit/s
  95th percentile per-packet one-way delay: 54.590 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 470.73 Mbit/s
  95th percentile per-packet one-way delay: 57.176 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 381.95 Mbit/s
  95th percentile per-packet one-way delay: 50.331 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 292.32 Mbit/s
  95th percentile per-packet one-way delay: 49.258 ms
  Loss rate: 0.00%
Run 3: Report of Indigo-MusesC3 — Data Link

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

- Flow 1 ingress (mean 470.73 Mbit/s)
- Flow 1 egress (mean 470.73 Mbit/s)
- Flow 2 ingress (mean 381.98 Mbit/s)
- Flow 2 egress (mean 381.95 Mbit/s)
- Flow 3 ingress (mean 292.35 Mbit/s)
- Flow 3 egress (mean 292.32 Mbit/s)
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-01-25 18:44:42
End at: 2019-01-25 18:45:12
Local clock offset: -0.114 ms
Remote clock offset: 0.216 ms

# Below is generated by plot.py at 2019-01-25 21:22:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 861.03 Mbit/s
  95th percentile per-packet one-way delay: 59.955 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 517.96 Mbit/s
  95th percentile per-packet one-way delay: 61.588 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 426.94 Mbit/s
  95th percentile per-packet one-way delay: 58.351 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 261.90 Mbit/s
  95th percentile per-packet one-way delay: 49.541 ms
  Loss rate: 0.00%
Run 4: Report of Indigo-MusesC3 — Data Link
Run 5: Statistics of Indigo-MusesC3

Local clock offset: -0.027 ms
Remote clock offset: 0.442 ms

# Below is generated by plot.py at 2019-01-25 21:22:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 714.02 Mbit/s
95th percentile per-packet one-way delay: 57.714 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 438.80 Mbit/s
95th percentile per-packet one-way delay: 59.440 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 334.17 Mbit/s
95th percentile per-packet one-way delay: 55.959 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 247.92 Mbit/s
95th percentile per-packet one-way delay: 52.623 ms
Loss rate: 0.00%
Run 5: Report of Indigo-MusesC3 — Data Link

![Graph showing throughput over time for different flows]

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

- Flow 1 ingress (mean 438.79 Mbit/s) - Flow 1 egress (mean 438.80 Mbit/s)
- Flow 2 ingress (mean 334.16 Mbit/s) - Flow 2 egress (mean 334.17 Mbit/s)
- Flow 3 ingress (mean 247.91 Mbit/s) - Flow 3 egress (mean 247.92 Mbit/s)

Flow 1 (95th percentile 59.44 ms)
Flow 2 (95th percentile 55.96 ms)
Flow 3 (95th percentile 52.62 ms)
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-01-25 16:29:10
End at: 2019-01-25 16:29:40
Local clock offset: -0.368 ms
Remote clock offset: -0.01 ms
Run 1: Report of Indigo-MusesC5 — Data Link
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-01-25 17:05:23
End at: 2019-01-25 17:05:53
Local clock offset: -0.062 ms
Remote clock offset: -0.113 ms

# Below is generated by plot.py at 2019-01-25 21:23:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 905.94 Mbit/s
  95th percentile per-packet one-way delay: 67.869 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 525.58 Mbit/s
  95th percentile per-packet one-way delay: 70.604 ms
  Loss rate: 0.03%
-- Flow 2:
  Average throughput: 450.40 Mbit/s
  95th percentile per-packet one-way delay: 64.248 ms
  Loss rate: 0.01%
-- Flow 3:
  Average throughput: 326.76 Mbit/s
  95th percentile per-packet one-way delay: 54.616 ms
  Loss rate: 0.00%
Run 2: Report of Indigo-MusesC5 — Data Link
Run 3: Statistics of Indigo-MusesC5

End at: 2019-01-25 17:42:52
Local clock offset: -0.077 ms
Remote clock offset: 0.005 ms

# Below is generated by plot.py at 2019-01-25 21:25:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 918.41 Mbit/s
95th percentile per-packet one-way delay: 59.680 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 554.03 Mbit/s
95th percentile per-packet one-way delay: 61.504 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 401.07 Mbit/s
95th percentile per-packet one-way delay: 56.435 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 380.17 Mbit/s
95th percentile per-packet one-way delay: 56.236 ms
Loss rate: 0.06%
Run 3: Report of Indigo-MusesC5 — Data Link
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-01-25 18:19:15
End at: 2019-01-25 18:19:45
Local clock offset: -0.018 ms
Remote clock offset: 0.198 ms

# Below is generated by plot.py at 2019-01-25 21:25:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 872.28 Mbit/s
95th percentile per-packet one-way delay: 60.686 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 514.88 Mbit/s
95th percentile per-packet one-way delay: 63.229 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 434.84 Mbit/s
95th percentile per-packet one-way delay: 54.499 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 291.29 Mbit/s
95th percentile per-packet one-way delay: 59.231 ms
Loss rate: 0.00%
Run 4: Report of Indigo-MusesC5 — Data Link
Run 5: Statistics of Indigo-MusesC5

End at: 2019-01-25 18:56:26
Local clock offset: -0.059 ms
Remote clock offset: 0.263 ms

# Below is generated by plot.py at 2019-01-25 21:26:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 905.83 Mbit/s
95th percentile per-packet one-way delay: 62.879 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 525.62 Mbit/s
95th percentile per-packet one-way delay: 61.125 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 454.68 Mbit/s
95th percentile per-packet one-way delay: 68.113 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 316.71 Mbit/s
95th percentile per-packet one-way delay: 53.916 ms
Loss rate: 0.00%
Run 5: Report of Indigo-MusesC5 — Data Link

Throughput (Mbps):

- Flow 1 ingress (mean 525.61 Mbps)
- Flow 1 egress (mean 525.62 Mbps)
- Flow 2 ingress (mean 454.68 Mbps)
- Flow 2 egress (mean 454.68 Mbps)
- Flow 3 ingress (mean 316.77 Mbps)
- Flow 3 egress (mean 316.71 Mbps)

Per packet one way delay (ms):

- Flow 1 (95th percentile 61.12 ms)
- Flow 2 (95th percentile 68.11 ms)
- Flow 3 (95th percentile 53.92 ms)
Run 1: Statistics of Indigo-MusesD

Start at: 2019-01-25 17:03:37
End at: 2019-01-25 17:04:07
Local clock offset: -0.102 ms
Remote clock offset: -0.093 ms

# Below is generated by plot.py at 2019-01-25 21:28:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 765.18 Mbit/s
95th percentile per-packet one-way delay: 72.008 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 476.85 Mbit/s
95th percentile per-packet one-way delay: 73.681 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 414.15 Mbit/s
95th percentile per-packet one-way delay: 68.768 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 72.29 Mbit/s
95th percentile per-packet one-way delay: 47.677 ms
Loss rate: 0.10%
Run 1: Report of Indigo-MusesD — Data Link

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

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

- Flow 1 ingress (mean 476.84 Mbit/s)
- Flow 1 egress (mean 476.85 Mbit/s)
- Flow 2 ingress (mean 414.19 Mbit/s)
- Flow 2 egress (mean 414.15 Mbit/s)
- Flow 3 ingress (mean 72.37 Mbit/s)
- Flow 3 egress (mean 72.29 Mbit/s)

Flow 1 (95th percentile 73.68 ms)
Flow 2 (95th percentile 68.77 ms)
Flow 3 (95th percentile 47.68 ms)
Run 2: Statistics of Indigo-MusesD

Start at: 2019-01-25 17:40:37
End at: 2019-01-25 17:41:07
Local clock offset: 0.02 ms
Remote clock offset: -0.037 ms

# Below is generated by plot.py at 2019-01-25 21:32:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 765.16 Mbit/s
95th percentile per-packet one-way delay: 55.337 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 468.91 Mbit/s
95th percentile per-packet one-way delay: 60.658 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 413.13 Mbit/s
95th percentile per-packet one-way delay: 52.735 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 60.44 Mbit/s
95th percentile per-packet one-way delay: 47.435 ms
Loss rate: 0.00%
Run 2: Report of Indigo-MusesD — Data Link

![Throughput graph](image1)

![Per-packet one-way delay graph](image2)

- Flow 1 ingress (mean 469.02 Mbit/s)
- Flow 1 egress (mean 468.91 Mbit/s)
- Flow 2 ingress (mean 413.12 Mbit/s)
- Flow 2 egress (mean 413.13 Mbit/s)
- Flow 3 ingress (mean 60.44 Mbit/s)
- Flow 3 egress (mean 60.44 Mbit/s)

![Flow 1 (95th percentile 60.66 ms)](image3)
- Flow 2 (95th percentile 52.73 ms)
- Flow 3 (95th percentile 47.44 ms)
Run 3: Statistics of Indigo-MusesD

Start at: 2019-01-25 18:17:27
End at: 2019-01-25 18:17:57
Local clock offset: -0.149 ms
Remote clock offset: 0.202 ms

# Below is generated by plot.py at 2019-01-25 21:34:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 788.98 Mbit/s
95th percentile per-packet one-way delay: 65.215 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 512.08 Mbit/s
95th percentile per-packet one-way delay: 65.364 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 397.85 Mbit/s
95th percentile per-packet one-way delay: 66.065 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 68.53 Mbit/s
95th percentile per-packet one-way delay: 47.619 ms
Loss rate: 0.00%
Run 3: Report of Indigo-MusesD — Data Link

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

- **Flow 1**: Ingress (mean 512.08 Mbit/s) and Egress (mean 512.08 Mbit/s)
- **Flow 2**: Ingress (mean 397.84 Mbit/s) and Egress (mean 397.85 Mbit/s)
- **Flow 3**: Ingress (mean 68.53 Mbit/s) and Egress (mean 68.53 Mbit/s)
Run 4: Statistics of Indigo-MusesD

Start at: 2019-01-25 18:54:09
End at: 2019-01-25 18:54:39
Local clock offset: -0.048 ms
Remote clock offset: 0.299 ms

# Below is generated by plot.py at 2019-01-25 21:35:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 745.76 Mbit/s
95th percentile per-packet one-way delay: 82.374 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 467.65 Mbit/s
95th percentile per-packet one-way delay: 58.986 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 400.43 Mbit/s
95th percentile per-packet one-way delay: 117.996 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 76.61 Mbit/s
95th percentile per-packet one-way delay: 47.701 ms
Loss rate: 0.01%
Run 4: Report of Indigo-MusesD — Data Link

Throughput (Mbps) vs. Time (s)

- **Flow 1 ingress (mean 467.67 Mbps)**
- **Flow 1 egress (mean 467.65 Mbps)**
- **Flow 2 ingress (mean 400.41 Mbps)**
- **Flow 2 egress (mean 400.43 Mbps)**
- **Flow 3 ingress (mean 76.62 Mbps)**
- **Flow 3 egress (mean 76.61 Mbps)**

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

- **Flow 1 (95th percentile 58.99 ms)**
- **Flow 2 (95th percentile 118.00 ms)**
- **Flow 3 (95th percentile 47.70 ms)**

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Run 5: Statistics of Indigo-MusesD

Start at: 2019-01-25 19:30:34
Local clock offset: -0.042 ms
Remote clock offset: 0.349 ms

# Below is generated by plot.py at 2019-01-25 21:37:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 742.55 Mbit/s
95th percentile per-packet one-way delay: 78.892 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 487.93 Mbit/s
95th percentile per-packet one-way delay: 73.644 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 366.27 Mbit/s
95th percentile per-packet one-way delay: 88.469 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 63.37 Mbit/s
95th percentile per-packet one-way delay: 46.967 ms
Loss rate: 0.00%
Run 5: Report of Indigo-MusesD — Data Link
Run 1: Statistics of Indigo-MusesT

Start at: 2019-01-25 16:32:02
End at: 2019-01-25 16:32:32
Local clock offset: -0.019 ms
Remote clock offset: 0.084 ms

# Below is generated by plot.py at 2019-01-25 21:41:57
# Datalink statistics
  -- Total of 3 flows:
  Average throughput: 876.93 Mbit/s
  95th percentile per-packet one-way delay: 81.944 ms
  Loss rate: 0.00%
  -- Flow 1:
  Average throughput: 524.49 Mbit/s
  95th percentile per-packet one-way delay: 83.440 ms
  Loss rate: 0.00%
  -- Flow 2:
  Average throughput: 437.95 Mbit/s
  95th percentile per-packet one-way delay: 82.985 ms
  Loss rate: 0.01%
  -- Flow 3:
  Average throughput: 261.14 Mbit/s
  95th percentile per-packet one-way delay: 51.942 ms
  Loss rate: 0.00%
Run 1: Report of Indigo-MusesT — Data Link
Run 2: Statistics of Indigo-MusesT

Start at: 2019-01-25 17:08:34
End at: 2019-01-25 17:09:04
Local clock offset: 0.045 ms
Remote clock offset: -0.097 ms

# Below is generated by plot.py at 2019-01-25 21:41:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 852.03 Mbit/s
95th percentile per-packet one-way delay: 65.918 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 507.15 Mbit/s
95th percentile per-packet one-way delay: 70.248 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 409.21 Mbit/s
95th percentile per-packet one-way delay: 54.645 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 298.95 Mbit/s
95th percentile per-packet one-way delay: 51.071 ms
Loss rate: 0.00%
Run 2: Report of Indigo-MusesT — Data Link

---

**Graph 1:**
Throughput (Mbps) vs. Time (s)
- **Flow 1 ingress (mean 507.13 Mbps):**
- **Flow 1 egress (mean 507.13 Mbps):**
- **Flow 2 ingress (mean 409.14 Mbps):**
- **Flow 2 egress (mean 409.21 Mbps):**
- **Flow 3 ingress (mean 298.86 Mbps):**
- **Flow 3 egress (mean 298.95 Mbps):**

**Graph 2:**
Per-packet one-way delay (ms) vs. Time (s)
- **Flow 1 (95th percentile 70.25 ms):**
- **Flow 2 (95th percentile 54.65 ms):**
- **Flow 3 (95th percentile 51.07 ms):**
Run 3: Statistics of Indigo-MusesT

Start at: 2019-01-25 17:45:34
End at: 2019-01-25 17:46:04
Local clock offset: ~0.077 ms
Remote clock offset: 0.057 ms

# Below is generated by plot.py at 2019-01-25 21:42:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 856.20 Mbit/s
95th percentile per-packet one-way delay: 79.605 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 510.59 Mbit/s
95th percentile per-packet one-way delay: 88.486 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 409.76 Mbit/s
95th percentile per-packet one-way delay: 50.806 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 299.61 Mbit/s
95th percentile per-packet one-way delay: 49.832 ms
Loss rate: 0.00%
Run 3: Report of Indigo-MusesT — Data Link
Run 4: Statistics of Indigo-MusesT

Local clock offset: -0.003 ms
Remote clock offset: 0.189 ms

# Below is generated by plot.py at 2019-01-25 21:44:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 864.46 Mbit/s
95th percentile per-packet one-way delay: 81.081 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 547.44 Mbit/s
95th percentile per-packet one-way delay: 86.448 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 446.42 Mbit/s
95th percentile per-packet one-way delay: 62.326 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 107.92 Mbit/s
95th percentile per-packet one-way delay: 47.932 ms
Loss rate: 0.00%
Run 4: Report of Indigo-MusesT — Data Link

---

**Throughput (Mbps)**

- **Flow 1 Ingress** (mean 547.43 Mbps)
- **Flow 1 Egress** (mean 547.44 Mbps)
- **Flow 2 Ingress** (mean 446.42 Mbps)
- **Flow 2 Egress** (mean 446.42 Mbps)
- **Flow 3 Ingress** (mean 107.92 Mbps)
- **Flow 3 Egress** (mean 107.92 Mbps)

---

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

- **Flow 1** (95th percentile: 86.45 ms)
- **Flow 2** (95th percentile: 62.33 ms)
- **Flow 3** (95th percentile: 47.93 ms)
Run 5: Statistics of Indigo-MusesT

Start at: 2019-01-25 18:59:07
End at: 2019-01-25 18:59:37
Local clock offset: -0.026 ms
Remote clock offset: 0.275 ms

# Below is generated by plot.py at 2019-01-25 21:48:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 907.57 Mbit/s
95th percentile per-packet one-way delay: 84.957 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 533.25 Mbit/s
95th percentile per-packet one-way delay: 85.923 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 449.80 Mbit/s
95th percentile per-packet one-way delay: 84.628 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 311.35 Mbit/s
95th percentile per-packet one-way delay: 50.149 ms
Loss rate: 0.00%
Run 5: Report of Indigo-MusesT — Data Link

![Graphs showing throughput and per-packet one-way delay over time for different data flows.](image-url)
Run 1: Statistics of LEDBAT

Start at: 2019-01-25 16:30:44
Local clock offset: -0.028 ms
Remote clock offset: -0.027 ms

# Below is generated by plot.py at 2019-01-25 21:48:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.77 Mbit/s
95th percentile per-packet one-way delay: 48.280 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 41.75 Mbit/s
95th percentile per-packet one-way delay: 47.681 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 27.56 Mbit/s
95th percentile per-packet one-way delay: 48.527 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.97 Mbit/s
95th percentile per-packet one-way delay: 48.471 ms
Loss rate: 0.00%
Run 1: Report of LEDBAT — Data Link
Run 2: Statistics of LEDBAT

Start at: 2019-01-25 17:07:17
End at: 2019-01-25 17:07:47
Local clock offset: -0.047 ms
Remote clock offset: 0.079 ms

# Below is generated by plot.py at 2019-01-25 21:48:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.32 Mbit/s
95th percentile per-packet one-way delay: 48.627 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 41.15 Mbit/s
95th percentile per-packet one-way delay: 48.728 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 28.08 Mbit/s
95th percentile per-packet one-way delay: 48.365 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.70 Mbit/s
95th percentile per-packet one-way delay: 48.180 ms
Loss rate: 0.00%
Run 2: Report of LEDBAT — Data Link

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

Graph 1: Throughout (Mbit/s) vs. Time (s)
- Flow 1 ingress (mean 41.15 Mbit/s)
- Flow 1 egress (mean 41.15 Mbit/s)
- Flow 2 ingress (mean 28.09 Mbit/s)
- Flow 2 egress (mean 28.08 Mbit/s)
- Flow 3 ingress (mean 13.70 Mbit/s)
- Flow 3 egress (mean 13.70 Mbit/s)

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

Graph 2: Per packet one way delay (ms)
- Flow 1 (95th percentile 48.73 ms)
- Flow 2 (95th percentile 48.37 ms)
- Flow 3 (95th percentile 48.18 ms)
Run 3: Statistics of LEDBAT

Start at: 2019-01-25 17:44:17
End at: 2019-01-25 17:44:47
Local clock offset: -0.118 ms
Remote clock offset: 0.007 ms

# Below is generated by plot.py at 2019-01-25 21:48:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.82 Mbit/s
95th percentile per-packet one-way delay: 48.642 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 40.99 Mbit/s
95th percentile per-packet one-way delay: 48.647 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 27.57 Mbit/s
95th percentile per-packet one-way delay: 48.668 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.57 Mbit/s
95th percentile per-packet one-way delay: 48.567 ms
Loss rate: 0.00%
Run 3: Report of LEDBAT — Data Link

---

**Throughput Graph**

```
<table>
<thead>
<tr>
<th>Time (s)</th>
<th>Throughput (Mbit/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10</td>
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<td>5</td>
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<td>25</td>
<td>35</td>
</tr>
<tr>
<td>30</td>
<td>40</td>
</tr>
</tbody>
</table>
```

**Delay Graph**

```
<table>
<thead>
<tr>
<th>Time (s)</th>
<th>Per Packet One Way Delay (ms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>50</td>
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<tr>
<td>5</td>
<td>45</td>
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<td>30</td>
</tr>
<tr>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>30</td>
<td>20</td>
</tr>
</tbody>
</table>
```

---

Flow 1 Ingress (mean 40.99 Mbit/s)  
Flow 1 Egress (mean 40.99 Mbit/s)  
Flow 2 Ingress (mean 27.57 Mbit/s)  
Flow 2 Egress (mean 27.57 Mbit/s)  
Flow 3 Ingress (mean 13.57 Mbit/s)  
Flow 3 Egress (mean 13.57 Mbit/s)  

---

Flow 1 (95th percentile 48.65 ms)  
Flow 2 (95th percentile 48.67 ms)  
Flow 3 (95th percentile 48.57 ms)
Run 4: Statistics of LEDBAT

Local clock offset: -0.091 ms
Remote clock offset: 0.178 ms

# Below is generated by plot.py at 2019-01-25 21:48:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.72 Mbit/s
95th percentile per-packet one-way delay: 48.096 ms
Loss rate: 0.00%

-- Flow 1:
Average throughput: 42.70 Mbit/s
95th percentile per-packet one-way delay: 47.973 ms
Loss rate: 0.00%

-- Flow 2:
Average throughput: 27.58 Mbit/s
95th percentile per-packet one-way delay: 48.290 ms
Loss rate: 0.00%

-- Flow 3:
Average throughput: 14.18 Mbit/s
95th percentile per-packet one-way delay: 47.485 ms
Loss rate: 0.00%
Run 4: Report of LEDBAT — Data Link

![Graph of Throughput and Per-packet Time Delay]

- **Throughput (Mbit/s):**
  - Flow 1 ingress (mean 42.70 Mbit/s)
  - Flow 1 egress (mean 42.70 Mbit/s)
  - Flow 2 ingress (mean 27.58 Mbit/s)
  - Flow 2 egress (mean 27.58 Mbit/s)
  - Flow 3 ingress (mean 14.18 Mbit/s)
  - Flow 3 egress (mean 14.18 Mbit/s)

- **Per-packet Time Delay [ms]:**
  - Flow 1 (95th percentile 47.97 ms)
  - Flow 2 (95th percentile 48.29 ms)
  - Flow 3 (95th percentile 47.48 ms)
Run 5: Statistics of LEDBAT

Start at: 2019-01-25 18:57:49
End at: 2019-01-25 18:58:19
Local clock offset: -0.047 ms
Remote clock offset: 0.263 ms

# Below is generated by plot.py at 2019-01-25 21:48:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.75 Mbit/s
95th percentile per-packet one-way delay: 48.332 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 41.42 Mbit/s
95th percentile per-packet one-way delay: 48.430 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 28.06 Mbit/s
95th percentile per-packet one-way delay: 48.211 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 14.00 Mbit/s
95th percentile per-packet one-way delay: 47.110 ms
Loss rate: 0.00%
Run 5: Report of LEDBAT — Data Link
Run 1: Statistics of PCC-Allegro

Start at: 2019-01-25 16:40:44
End at: 2019-01-25 16:41:14
Local clock offset: 0.144 ms
Remote clock offset: -0.081 ms

# Below is generated by plot.py at 2019-01-25 22:08:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 796.87 Mbit/s
  95th percentile per-packet one-way delay: 186.093 ms
  Loss rate: 3.86%
-- Flow 1:
  Average throughput: 465.25 Mbit/s
  95th percentile per-packet one-way delay: 181.950 ms
  Loss rate: 4.16%
-- Flow 2:
  Average throughput: 360.02 Mbit/s
  95th percentile per-packet one-way delay: 191.223 ms
  Loss rate: 4.38%
-- Flow 3:
  Average throughput: 278.55 Mbit/s
  95th percentile per-packet one-way delay: 109.610 ms
  Loss rate: 0.85%
Run 1: Report of PCC-Allegro — Data Link

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


Flow 1 (95th percentile 181.95 ms), Flow 2 (95th percentile 191.22 ms), Flow 3 (95th percentile 109.61 ms).
Run 2: Statistics of PCC-Allegro

Start at: 2019-01-25 17:17:18
End at: 2019-01-25 17:17:48
Local clock offset: 0.03 ms
Remote clock offset: 0.085 ms

# Below is generated by plot.py at 2019-01-25 22:08:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 768.62 Mbit/s
95th percentile per-packet one-way delay: 191.811 ms
Loss rate: 5.55%
-- Flow 1:
Average throughput: 384.56 Mbit/s
95th percentile per-packet one-way delay: 205.280 ms
Loss rate: 5.86%
-- Flow 2:
Average throughput: 450.44 Mbit/s
95th percentile per-packet one-way delay: 170.672 ms
Loss rate: 6.40%
-- Flow 3:
Average throughput: 261.95 Mbit/s
95th percentile per-packet one-way delay: 139.779 ms
Loss rate: 0.96%
Run 2: Report of PCC-Allegro — Data Link
Run 3: Statistics of PCC-Allegro

Start at: 2019-01-25 17:54:14
End at: 2019-01-25 17:54:44
Local clock offset: -0.475 ms
Remote clock offset: 0.105 ms

# Below is generated by plot.py at 2019-01-25 22:08:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 694.63 Mbit/s
95th percentile per-packet one-way delay: 156.651 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 406.70 Mbit/s
95th percentile per-packet one-way delay: 158.534 ms
Loss rate: 1.99%
-- Flow 2:
Average throughput: 311.20 Mbit/s
95th percentile per-packet one-way delay: 142.994 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 245.09 Mbit/s
95th percentile per-packet one-way delay: 86.497 ms
Loss rate: 0.00%
Run 3: Report of PCC-Allegro — Data Link

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

Start at: 2019-01-25 18:31:06
End at: 2019-01-25 18:31:36
Local clock offset: -0.158 ms
Remote clock offset: 0.256 ms

# Below is generated by plot.py at 2019-01-25 22:08:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 684.69 Mbit/s
95th percentile per-packet one-way delay: 176.574 ms
Loss rate: 2.14%
-- Flow 1:
Average throughput: 379.02 Mbit/s
95th percentile per-packet one-way delay: 189.570 ms
Loss rate: 3.80%
-- Flow 2:
Average throughput: 324.98 Mbit/s
95th percentile per-packet one-way delay: 69.711 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 272.26 Mbit/s
95th percentile per-packet one-way delay: 90.522 ms
Loss rate: 0.00%
Run 4: Report of PCC-Allegro — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 393.99 Mbps)
- Flow 1 egress (mean 379.02 Mbps)
- Flow 2 ingress (mean 324.99 Mbps)
- Flow 2 egress (mean 324.98 Mbps)
- Flow 3 ingress (mean 272.28 Mbps)
- Flow 3 egress (mean 272.26 Mbps)

**Delay (ms):**
- Flow 1 (95th percentile 189.57 ms)
- Flow 2 (95th percentile 69.71 ms)
- Flow 3 (95th percentile 90.52 ms)
Run 5: Statistics of PCC-Allegro

Start at: 2019-01-25 19:07:51
End at: 2019-01-25 19:08:21
Local clock offset: -0.012 ms
Remote clock offset: 0.338 ms

# Below is generated by plot.py at 2019-01-25 22:08:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 729.48 Mbit/s
95th percentile per-packet one-way delay: 150.736 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 383.12 Mbit/s
95th percentile per-packet one-way delay: 157.549 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 380.18 Mbit/s
95th percentile per-packet one-way delay: 96.725 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 282.38 Mbit/s
95th percentile per-packet one-way delay: 72.963 ms
Loss rate: 0.00%
Run 5: Report of PCC-Allegro — Data Link

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

- Flow 1 ingress (mean 384.14 Mbit/s)
- Flow 1 egress (mean 383.12 Mbit/s)
- Flow 2 ingress (mean 380.18 Mbit/s)
- Flow 2 egress (mean 380.18 Mbit/s)
- Flow 3 ingress (mean 282.38 Mbit/s)
- Flow 3 egress (mean 282.38 Mbit/s)

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

- Flow 1 (95th percentile 157.55 ms)
- Flow 2 (95th percentile 96.72 ms)
- Flow 3 (95th percentile 72.96 ms)
Run 1: Statistics of PCC-Expr

Local clock offset: 0.085 ms
Remote clock offset: -0.147 ms

# Below is generated by plot.py at 2019-01-25 22:08:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 575.47 Mbit/s
  95th percentile per-packet one-way delay: 172.144 ms
  Loss rate: 4.38%
-- Flow 1:
  Average throughput: 330.53 Mbit/s
  95th percentile per-packet one-way delay: 178.967 ms
  Loss rate: 6.91%
-- Flow 2:
  Average throughput: 231.06 Mbit/s
  95th percentile per-packet one-way delay: 159.753 ms
  Loss rate: 1.16%
-- Flow 3:
  Average throughput: 270.82 Mbit/s
  95th percentile per-packet one-way delay: 127.888 ms
  Loss rate: 0.00%
Run 1: Report of PCC-Expr — Data Link

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

- **Throughput** (Mbps):
  - Flow 1 ingress (mean 355.07 Mbps)
  - Flow 1 egress (mean 330.53 Mbps)
  - Flow 2 ingress (mean 233.78 Mbps)
  - Flow 2 egress (mean 231.06 Mbps)
  - Flow 3 ingress (mean 270.82 Mbps)
  - Flow 3 egress (mean 270.82 Mbps)

- **Per-packet end-to-end delay (ms):**
  - Flow 1 (95th percentile 178.97 ms)
  - Flow 2 (95th percentile 159.75 ms)
  - Flow 3 (95th percentile 127.89 ms)
Run 2: Statistics of PCC-Expr

Start at: 2019-01-25 17:24:01
End at: 2019-01-25 17:24:31
Local clock offset: 0.084 ms
Remote clock offset: -0.099 ms

# Below is generated by plot.py at 2019-01-25 22:08:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 547.81 Mbit/s
95th percentile per-packet one-way delay: 154.234 ms
Loss rate: 2.14%
-- Flow 1:
Average throughput: 319.83 Mbit/s
95th percentile per-packet one-way delay: 159.231 ms
Loss rate: 3.60%
-- Flow 2:
Average throughput: 254.90 Mbit/s
95th percentile per-packet one-way delay: 101.913 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 177.30 Mbit/s
95th percentile per-packet one-way delay: 71.402 ms
Loss rate: 0.00%
Run 2: Report of PCC-Expr — Data Link

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

Flow 1 ingress (mean 331.76 Mbit/s)  Flow 1 egress (mean 319.83 Mbit/s)
Flow 2 ingress (mean 254.97 Mbit/s)  Flow 2 egress (mean 254.90 Mbit/s)
Flow 3 ingress (mean 177.29 Mbit/s)  Flow 3 egress (mean 177.30 Mbit/s)
Run 3: Statistics of PCC-Expr

Start at: 2019-01-25 18:01:01
End at: 2019-01-25 18:01:31
Local clock offset: 0.301 ms
Remote clock offset: 0.131 ms

# Below is generated by plot.py at 2019-01-25 22:08:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 497.05 Mbit/s
95th percentile per-packet one-way delay: 103.391 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 287.38 Mbit/s
95th percentile per-packet one-way delay: 100.497 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 257.66 Mbit/s
95th percentile per-packet one-way delay: 144.130 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 115.04 Mbit/s
95th percentile per-packet one-way delay: 47.636 ms
Loss rate: 0.00%
Run 3: Report of PCC-Expr — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 288.75 Mbps)
- Flow 1 egress (mean 287.38 Mbps)
- Flow 2 ingress (mean 259.25 Mbps)
- Flow 2 egress (mean 257.66 Mbps)
- Flow 3 ingress (mean 115.04 Mbps)
- Flow 3 egress (mean 115.04 Mbps)

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

- Flow 1 (95th percentile 100.50 ms)
- Flow 2 (95th percentile 144.13 ms)
- Flow 3 (95th percentile 47.64 ms)
Run 4: Statistics of PCC-Expr

Start at: 2019-01-25 18:37:42
End at: 2019-01-25 18:38:12
Local clock offset: -0.131 ms
Remote clock offset: 0.256 ms

# Below is generated by plot.py at 2019-01-25 22:18:41
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 521.18 Mbit/s
  95th percentile per-packet one-way delay: 106.191 ms
  Loss rate: 0.29%
-- Flow 1:
  Average throughput: 284.96 Mbit/s
  95th percentile per-packet one-way delay: 134.626 ms
  Loss rate: 0.51%
-- Flow 2:
  Average throughput: 257.10 Mbit/s
  95th percentile per-packet one-way delay: 87.341 ms
  Loss rate: 0.02%
-- Flow 3:
  Average throughput: 198.05 Mbit/s
  95th percentile per-packet one-way delay: 51.142 ms
  Loss rate: 0.01%
Run 4: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 286.43 Mbit/s)
- Flow 1 egress (mean 284.96 Mbit/s)
- Flow 2 ingress (mean 257.12 Mbit/s)
- Flow 2 egress (mean 257.10 Mbit/s)
- Flow 3 ingress (mean 196.06 Mbit/s)
- Flow 3 egress (mean 196.05 Mbit/s)

- Flow 1 (95th percentile 134.63 ms)
- Flow 2 (95th percentile 87.34 ms)
- Flow 3 (95th percentile 51.14 ms)
Run 5: Statistics of PCC-Expr

End at: 2019-01-25 19:14:54
Local clock offset: 0.034 ms
Remote clock offset: 0.326 ms

# Below is generated by plot.py at 2019-01-25 22:21:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 524.52 Mbit/s
95th percentile per-packet one-way delay: 124.528 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 289.60 Mbit/s
95th percentile per-packet one-way delay: 146.046 ms
Loss rate: 0.96%
-- Flow 2:
Average throughput: 263.73 Mbit/s
95th percentile per-packet one-way delay: 114.715 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 180.76 Mbit/s
95th percentile per-packet one-way delay: 53.751 ms
Loss rate: 0.00%
Run 5: Report of PCC-Expr — Data Link

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

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

Legend:
- Flow 1 ingress (mean 292.42 Mbit/s)
- Flow 1 egress (mean 289.60 Mbit/s)
- Flow 2 ingress (mean 263.73 Mbit/s)
- Flow 2 egress (mean 263.73 Mbit/s)
- Flow 3 ingress (mean 180.68 Mbit/s)
- Flow 3 egress (mean 180.76 Mbit/s)
Run 1: Statistics of QUIC Cubic

Start at: 2019-01-25 16:56:16
End at: 2019-01-25 16:56:46
Local clock offset: -0.415 ms
Remote clock offset: -0.087 ms

# Below is generated by plot.py at 2019-01-25 22:21:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 32.47 Mbit/s
95th percentile per-packet one-way delay: 47.774 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 47.838 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.12 Mbit/s
95th percentile per-packet one-way delay: 47.782 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 15.67 Mbit/s
95th percentile per-packet one-way delay: 47.239 ms
Loss rate: 0.00%
Run 1: Report of QUIC Cubic — Data Link

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

- **Throughput (Mb/s)**
  - Flow 1 ingress (mean 0.01 Mb/s)
  - Flow 2 ingress (mean 41.12 Mb/s)
  - Flow 3 ingress (mean 15.67 Mb/s)
  - Flow 1 egress (mean 0.01 Mb/s)
  - Flow 2 egress (mean 41.12 Mb/s)
  - Flow 3 egress (mean 15.67 Mb/s)

- **Per-packet one-way delay (ms)**
  - Flow 1 (95th percentile 47.84 ms)
  - Flow 2 (95th percentile 47.78 ms)
  - Flow 3 (95th percentile 47.24 ms)
Run 2: Statistics of QUIC Cubic

Start at: 2019-01-25 17:33:00
End at: 2019-01-25 17:33:30
Local clock offset: -0.059 ms
Remote clock offset: -0.097 ms

# Below is generated by plot.py at 2019-01-25 22:21:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.30 Mbit/s
95th percentile per-packet one-way delay: 47.369 ms
Loss rate: 0.00%

-- Flow 1:
Average throughput: 66.33 Mbit/s
95th percentile per-packet one-way delay: 46.541 ms
Loss rate: 0.00%

-- Flow 2:
Average throughput: 30.92 Mbit/s
95th percentile per-packet one-way delay: 47.418 ms
Loss rate: 0.00%

-- Flow 3:
Average throughput: 19.90 Mbit/s
95th percentile per-packet one-way delay: 47.426 ms
Loss rate: 0.00%
Run 3: Statistics of QUIC Cubic

Start at: 2019-01-25 18:10:01
End at: 2019-01-25 18:10:31
Local clock offset: 0.043 ms
Remote clock offset: 0.16 ms

# Below is generated by plot.py at 2019-01-25 22:21:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 93.31 Mbit/s
  95th percentile per-packet one-way delay: 47.330 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 50.51 Mbit/s
  95th percentile per-packet one-way delay: 47.072 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 34.37 Mbit/s
  95th percentile per-packet one-way delay: 47.414 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 62.00 Mbit/s
  95th percentile per-packet one-way delay: 47.213 ms
  Loss rate: 0.00%
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic

Start at: 2019-01-25 18:46:34
End at: 2019-01-25 18:47:04
Local clock offset: -0.044 ms
Remote clock offset: 0.286 ms

# Below is generated by plot.py at 2019-01-25 22:21:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 102.04 Mbit/s
  95th percentile per-packet one-way delay: 47.326 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 56.26 Mbit/s
  95th percentile per-packet one-way delay: 47.351 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 38.10 Mbit/s
  95th percentile per-packet one-way delay: 47.252 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 62.46 Mbit/s
  95th percentile per-packet one-way delay: 46.475 ms
  Loss rate: 0.00%
Run 4: Report of QUIC Cubic — Data Link

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

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 56.26 Mbps)
  - Flow 1 egress (mean 56.26 Mbps)
  - Flow 2 ingress (mean 38.10 Mbps)
  - Flow 2 egress (mean 38.10 Mbps)
  - Flow 3 ingress (mean 62.33 Mbps)
  - Flow 3 egress (mean 62.46 Mbps)

- **Per packet one way delay [ms]**
  - Flow 1 (95th percentile 47.35 ms)
  - Flow 2 (95th percentile 47.25 ms)
  - Flow 3 (95th percentile 46.48 ms)
Run 5: Statistics of QUIC Cubic

Local clock offset: -0.038 ms
Remote clock offset: 0.369 ms

# Below is generated by plot.py at 2019-01-25 22:21:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.47 Mbit/s
95th percentile per-packet one-way delay: 47.257 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 56.72 Mbit/s
95th percentile per-packet one-way delay: 46.573 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 36.27 Mbit/s
95th percentile per-packet one-way delay: 47.348 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 17.23 Mbit/s
95th percentile per-packet one-way delay: 46.628 ms
Loss rate: 0.00%
Run 5: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

End at: 2019-01-25 16:51:44
Local clock offset: 0.124 ms
Remote clock offset: -0.097 ms

# Below is generated by plot.py at 2019-01-25 22:21:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 47.632 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.686 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.414 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 46.444 ms
Loss rate: 0.00%
Run 1: Report of SCReAM — Data Link
Run 2: Statistics of SCReAM

Start at: 2019-01-25 17:27:51
End at: 2019-01-25 17:28:21
Local clock offset: -0.047 ms
Remote clock offset: -0.1 ms

# Below is generated by plot.py at 2019-01-25 22:21:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 47.474 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.410 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.492 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.442 ms
Loss rate: 0.00%
Run 2: Report of SCReAM — Data Link
Run 3: Statistics of SCReAM

Start at: 2019-01-25 18:04:54
End at: 2019-01-25 18:05:24
Local clock offset: -0.468 ms
Remote clock offset: 0.13 ms

# Below is generated by plot.py at 2019-01-25 22:21:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 47.873 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 47.869 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 47.860 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 47.898 ms
  Loss rate: 0.00%
Run 3: Report of SCReAM — Data Link

![Graph showing throughput and ping results for different flows.]

- Flow 1 ingress (mean 0.22 Mbit/s)
- Flow 1 egress (mean 0.22 Mbit/s)
- Flow 2 ingress (mean 0.22 Mbit/s)
- Flow 2 egress (mean 0.22 Mbit/s)
- Flow 3 ingress (mean 0.22 Mbit/s)
- Flow 3 egress (mean 0.22 Mbit/s)
Run 4: Statistics of SCReAM

End at: 2019-01-25 18:41:58
Local clock offset: -0.134 ms
Remote clock offset: 0.25 ms

# Below is generated by plot.py at 2019-01-25 22:21:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 47.560 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.560 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 46.917 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.610 ms
Loss rate: 0.00%
Run 4: Report of SCReAM — Data Link

Throughput (Mbps)

Time (s)

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

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 47.56 ms)
Flow 2 (95th percentile 46.92 ms)
Flow 3 (95th percentile 47.61 ms)
Run 5: Statistics of SCReAM

Local clock offset: -0.033 ms
Remote clock offset: 0.32 ms

# Below is generated by plot.py at 2019-01-25 22:21:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 47.549 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 47.419 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 47.584 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 46.971 ms
  Loss rate: 0.00%
Run 5: Report of SCReAM — Data Link
Run 1: Statistics of Sprout

End at: 2019-01-25 16:43:17
Local clock offset: -0.013 ms
Remote clock offset: -0.096 ms

# Below is generated by plot.py at 2019-01-25 22:21:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 19.32 Mbit/s
  95th percentile per-packet one-way delay: 47.720 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 9.72 Mbit/s
  95th percentile per-packet one-way delay: 47.667 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 9.60 Mbit/s
  95th percentile per-packet one-way delay: 47.831 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 9.44 Mbit/s
  95th percentile per-packet one-way delay: 47.693 ms
  Loss rate: 0.00%
Run 1: Report of Sprout — Data Link
Run 2: Statistics of Sprout

End at: 2019-01-25 17:19:50
Local clock offset: -0.022 ms
Remote clock offset: -0.077 ms

# Below is generated by plot.py at 2019-01-25 22:21:54
# Datalink statistics

-- Total of 3 flows:
Average throughput: 19.19 Mbit/s
95th percentile per-packet one-way delay: 47.822 ms
Loss rate: 0.00%

-- Flow 1:
Average throughput: 9.69 Mbit/s
95th percentile per-packet one-way delay: 46.939 ms
Loss rate: 0.00%

-- Flow 2:
Average throughput: 9.65 Mbit/s
95th percentile per-packet one-way delay: 47.864 ms
Loss rate: 0.00%

-- Flow 3:
Average throughput: 9.39 Mbit/s
95th percentile per-packet one-way delay: 48.007 ms
Loss rate: 0.00%
Run 2: Report of Sprout — Data Link

[Graphs showing network performance metrics such as throughput and per-packet end-to-end delay for different flows.]
Run 3: Statistics of Sprout

Start at: 2019-01-25 17:56:14
End at: 2019-01-25 17:56:44
Local clock offset: 0.299 ms
Remote clock offset: 0.082 ms

# Below is generated by plot.py at 2019-01-25 22:21:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.19 Mbit/s
95th percentile per-packet one-way delay: 47.543 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.66 Mbit/s
95th percentile per-packet one-way delay: 47.615 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 9.62 Mbit/s
95th percentile per-packet one-way delay: 46.463 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.45 Mbit/s
95th percentile per-packet one-way delay: 47.326 ms
Loss rate: 0.01%
Run 3: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 9.66 Mbps)
- Flow 1 egress (mean 9.66 Mbps)
- Flow 2 ingress (mean 9.62 Mbps)
- Flow 2 egress (mean 9.62 Mbps)
- Flow 3 ingress (mean 9.45 Mbps)
- Flow 3 egress (mean 9.45 Mbps)

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

- Flow 1 (95th percentile 47.62 ms)
- Flow 2 (95th percentile 46.46 ms)
- Flow 3 (95th percentile 47.33 ms)
Run 4: Statistics of Sprout

Start at: 2019-01-25 18:33:01
End at: 2019-01-25 18:33:31
Local clock offset: -0.132 ms
Remote clock offset: 0.216 ms

# Below is generated by plot.py at 2019-01-25 22:21:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.15 Mbit/s
95th percentile per-packet one-way delay: 47.588 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.74 Mbit/s
95th percentile per-packet one-way delay: 47.597 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 9.68 Mbit/s
95th percentile per-packet one-way delay: 47.487 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.05 Mbit/s
95th percentile per-packet one-way delay: 47.790 ms
Loss rate: 0.00%
Run 4: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 9.74 Mbit/s)
- Flow 1 egress (mean 9.74 Mbit/s)
- Flow 2 ingress (mean 9.68 Mbit/s)
- Flow 2 egress (mean 9.68 Mbit/s)
- Flow 3 ingress (mean 9.05 Mbit/s)
- Flow 3 egress (mean 9.05 Mbit/s)

![Graph 2: Packet Delay vs. Time](image2)

- Flow 1 (95th percentile 47.60 ms)
- Flow 2 (95th percentile 47.49 ms)
- Flow 3 (95th percentile 47.79 ms)
Run 5: Statistics of Sprout

Start at: 2019-01-25 19:09:49
End at: 2019-01-25 19:10:19
Local clock offset: 0.467 ms
Remote clock offset: 0.298 ms

# Below is generated by plot.py at 2019-01-25 22:21:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.93 Mbit/s
95th percentile per-packet one-way delay: 47.312 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.49 Mbit/s
95th percentile per-packet one-way delay: 47.322 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 9.61 Mbit/s
95th percentile per-packet one-way delay: 47.346 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.24 Mbit/s
95th percentile per-packet one-way delay: 46.389 ms
Loss rate: 0.00%
Run 5: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 9.49 Mbps)
- Flow 1 egress (mean 9.49 Mbps)
- Flow 2 ingress (mean 9.61 Mbps)
- Flow 2 egress (mean 9.61 Mbps)
- Flow 3 ingress (mean 9.24 Mbps)
- Flow 3 egress (mean 9.24 Mbps)

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

- Flow 1 (95th percentile 47.32 ms)
- Flow 2 (95th percentile 47.35 ms)
- Flow 3 (95th percentile 46.39 ms)
Run 1: Statistics of TaoVA-100x

Start at: 2019-01-25 17:01:39
End at: 2019-01-25 17:02:09
Local clock offset: -0.047 ms
Remote clock offset: 0.062 ms

# Below is generated by plot.py at 2019-01-25 22:26:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 494.85 Mbit/s
95th percentile per-packet one-way delay: 47.996 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 247.60 Mbit/s
95th percentile per-packet one-way delay: 47.957 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 250.13 Mbit/s
95th percentile per-packet one-way delay: 48.001 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 242.75 Mbit/s
95th percentile per-packet one-way delay: 48.119 ms
Loss rate: 0.00%
Run 1: Report of TaoVA-100x — Data Link
Run 2: Statistics of TaoVA-100x

Start at: 2019-01-25 17:38:36
End at: 2019-01-25 17:39:06
Local clock offset: -0.046 ms
Remote clock offset: 0.007 ms

# Below is generated by plot.py at 2019-01-25 22:26:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 489.36 Mbit/s
95th percentile per-packet one-way delay: 47.806 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 246.31 Mbit/s
95th percentile per-packet one-way delay: 47.719 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 252.67 Mbit/s
95th percentile per-packet one-way delay: 47.862 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 224.97 Mbit/s
95th percentile per-packet one-way delay: 48.167 ms
Loss rate: 0.00%
Run 2: Report of TaoVA-100x — Data Link

![Graph of throughput and packet loss over time]

**Throughput (Mb/s)**
- Flow 1 ingress (mean 246.31 Mb/s)
- Flow 1 egress (mean 246.31 Mb/s)
- Flow 2 ingress (mean 252.66 Mb/s)
- Flow 2 egress (mean 252.67 Mb/s)
- Flow 3 ingress (mean 224.97 Mb/s)
- Flow 3 egress (mean 224.97 Mb/s)

**Per-packet one-way delay (μs)**
- Flow 1 (95th percentile 47.72 μs)
- Flow 2 (95th percentile 47.86 μs)
- Flow 3 (95th percentile 48.17 μs)
Run 3: Statistics of TaoVA-100x

End at: 2019-01-25 18:16:01
Local clock offset: -0.088 ms
Remote clock offset: 0.193 ms

# Below is generated by plot.py at 2019-01-25 22:26:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 490.68 Mbit/s
95th percentile per-packet one-way delay: 47.775 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 248.66 Mbit/s
95th percentile per-packet one-way delay: 47.720 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 249.34 Mbit/s
95th percentile per-packet one-way delay: 47.756 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 228.70 Mbit/s
95th percentile per-packet one-way delay: 48.389 ms
Loss rate: 0.00%
Run 3: Report of TaoVA-100x — Data Link

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

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 248.67 Mbit/s) — Flow 1 egress (mean 248.66 Mbit/s)
Flow 2 ingress (mean 249.34 Mbit/s) — Flow 2 egress (mean 249.34 Mbit/s)
Flow 3 ingress (mean 226.71 Mbit/s) — Flow 3 egress (mean 228.70 Mbit/s)

Packet loss (ms)

Time (s)

Flow 1 (95th percentile 47.72 ms) — Flow 2 (95th percentile 47.76 ms) — Flow 3 (95th percentile 48.39 ms)
Run 4: Statistics of TaoVA-100x

Start at: 2019-01-25 18:52:09
End at: 2019-01-25 18:52:39
Local clock offset: -0.434 ms
Remote clock offset: 0.297 ms

# Below is generated by plot.py at 2019-01-25 22:26:57
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 495.97 Mbit/s
  95th percentile per-packet one-way delay: 47.975 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 250.52 Mbit/s
  95th percentile per-packet one-way delay: 47.150 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 250.49 Mbit/s
  95th percentile per-packet one-way delay: 48.260 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 236.10 Mbit/s
  95th percentile per-packet one-way delay: 48.048 ms
  Loss rate: 0.00%
Run 4: Report of TaoVA-100x — Data Link

![Throughput Graph](image1)

![Packet Delay Graph](image2)
Run 5: Statistics of TaoVA-100x

Local clock offset: -0.037 ms
Remote clock offset: 0.38 ms

# Below is generated by plot.py at 2019-01-25 22:26:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 488.62 Mbit/s
95th percentile per-packet one-way delay: 48.176 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 253.30 Mbit/s
95th percentile per-packet one-way delay: 48.154 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 245.29 Mbit/s
95th percentile per-packet one-way delay: 47.611 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 216.51 Mbit/s
95th percentile per-packet one-way delay: 50.300 ms
Loss rate: 0.01%
Run 1: Statistics of TCP Vegas

Start at: 2019-01-25 16:33:54
End at: 2019-01-25 16:34:24
Local clock offset: -0.043 ms
Remote clock offset: -0.095 ms

# Below is generated by plot.py at 2019-01-25 22:28:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1025.12 Mbit/s
95th percentile per-packet one-way delay: 94.974 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 532.17 Mbit/s
95th percentile per-packet one-way delay: 94.215 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 504.87 Mbit/s
95th percentile per-packet one-way delay: 99.395 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 470.28 Mbit/s
95th percentile per-packet one-way delay: 84.786 ms
Loss rate: 0.17%
Run 1: Report of TCP Vegas — Data Link
Run 2: Statistics of TCP Vegas

Start at: 2019-01-25 17:10:25
End at: 2019-01-25 17:10:55
Local clock offset: 0.049 ms
Remote clock offset: -0.1 ms

# Below is generated by plot.py at 2019-01-25 22:40:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1051.41 Mbit/s
95th percentile per-packet one-way delay: 89.886 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 544.02 Mbit/s
95th percentile per-packet one-way delay: 77.731 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 527.89 Mbit/s
95th percentile per-packet one-way delay: 94.016 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 468.51 Mbit/s
95th percentile per-packet one-way delay: 84.895 ms
Loss rate: 0.17%
Run 2: Report of TCP Vegas — Data Link

![Graph of throughput and packet loss over time for different flows.](image-url)
Run 3: Statistics of TCP Vegas

Start at: 2019-01-25 17:47:26
End at: 2019-01-25 17:47:56
Local clock offset: -0.104 ms
Remote clock offset: 0.068 ms

# Below is generated by plot.py at 2019-01-25 22:40:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 949.34 Mbit/s
95th percentile per-packet one-way delay: 89.587 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 587.34 Mbit/s
95th percentile per-packet one-way delay: 73.159 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 298.87 Mbit/s
95th percentile per-packet one-way delay: 47.901 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 494.62 Mbit/s
95th percentile per-packet one-way delay: 135.344 ms
Loss rate: 0.21%
Run 3: Report of TCP Vegas — Data Link

Throughput (Mbps):
- Flow 1 ingress (mean 587.34 Mbps)
- Flow 1 egress (mean 587.34 Mbps)
- Flow 2 ingress (mean 298.87 Mbps)
- Flow 2 egress (mean 298.87 Mbps)
- Flow 3 ingress (mean 496.19 Mbps)
- Flow 3 egress (mean 494.62 Mbps)

Latency (ms):
- Flow 1 (95th percentile 73.16 ms)
- Flow 2 (95th percentile 47.90 ms)
- Flow 3 (95th percentile 135.34 ms)
Run 4: Statistics of TCP Vegas

Start at: 2019-01-25 18:24:18
Local clock offset: -0.067 ms
Remote clock offset: 0.199 ms

# Below is generated by plot.py at 2019-01-25 22:44:48
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 990.33 Mbit/s
  95th percentile per-packet one-way delay: 73.753 ms
  Loss rate: 0.04%
-- Flow 1:
  Average throughput: 553.66 Mbit/s
  95th percentile per-packet one-way delay: 70.500 ms
  Loss rate: 0.03%
-- Flow 2:
  Average throughput: 518.25 Mbit/s
  95th percentile per-packet one-way delay: 76.615 ms
  Loss rate: 0.06%
-- Flow 3:
  Average throughput: 274.98 Mbit/s
  95th percentile per-packet one-way delay: 47.194 ms
  Loss rate: 0.00%
Run 5: Statistics of TCP Vegas

Start at: 2019-01-25 19:01:00
End at: 2019-01-25 19:01:30
Local clock offset: 0.093 ms
Remote clock offset: 0.324 ms

# Below is generated by plot.py at 2019-01-25 22:46:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1055.77 Mbit/s
95th percentile per-packet one-way delay: 66.935 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 545.91 Mbit/s
95th percentile per-packet one-way delay: 68.457 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 528.24 Mbit/s
95th percentile per-packet one-way delay: 64.295 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 475.47 Mbit/s
95th percentile per-packet one-way delay: 62.585 ms
Loss rate: 0.00%
Run 5: Report of TCP Vegas — Data Link
Run 1: Statistics of Verus

Start at: 2019-01-25 16:44:00
End at: 2019-01-25 16:44:30
Local clock offset: 0.044 ms
Remote clock offset: -0.091 ms

# Below is generated by plot.py at 2019-01-25 22:46:12
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 282.73 Mbit/s
  95th percentile per-packet one-way delay: 107.240 ms
  Loss rate: 1.25%
-- Flow 1:
  Average throughput: 157.47 Mbit/s
  95th percentile per-packet one-way delay: 84.298 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 117.19 Mbit/s
  95th percentile per-packet one-way delay: 208.690 ms
  Loss rate: 4.10%
-- Flow 3:
  Average throughput: 143.94 Mbit/s
  95th percentile per-packet one-way delay: 106.843 ms
  Loss rate: 0.50%
Run 1: Report of Verus — Data Link
Run 2: Statistics of Verus

Start at: 2019-01-25 17:20:33
End at: 2019-01-25 17:21:03
Local clock offset: 0.07 ms
Remote clock offset: -0.026 ms

# Below is generated by plot.py at 2019-01-25 22:46:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 328.99 Mbit/s
95th percentile per-packet one-way delay: 202.712 ms
Loss rate: 2.97%
-- Flow 1:
Average throughput: 221.84 Mbit/s
95th percentile per-packet one-way delay: 209.459 ms
Loss rate: 4.13%
-- Flow 2:
Average throughput: 136.49 Mbit/s
95th percentile per-packet one-way delay: 126.293 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 49.74 Mbit/s
95th percentile per-packet one-way delay: 51.488 ms
Loss rate: 0.00%
Run 2: Report of Verus — Data Link
Run 3: Statistics of Verus

End at: 2019-01-25 17:57:58
Local clock offset: -0.067 ms
Remote clock offset: 0.083 ms

# Below is generated by plot.py at 2019-01-25 22:46:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 312.26 Mbit/s
95th percentile per-packet one-way delay: 144.525 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 172.62 Mbit/s
95th percentile per-packet one-way delay: 155.262 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 146.35 Mbit/s
95th percentile per-packet one-way delay: 93.161 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 129.88 Mbit/s
95th percentile per-packet one-way delay: 138.498 ms
Loss rate: 0.00%
Run 3: Report of Verus — Data Link
Run 4: Statistics of Verus

Start at: 2019-01-25 18:34:14
End at: 2019-01-25 18:34:44
Local clock offset: -0.133 ms
Remote clock offset: 0.263 ms

# Below is generated by plot.py at 2019-01-25 22:46:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 323.10 Mbit/s
95th percentile per-packet one-way delay: 198.700 ms
Loss rate: 1.89%
-- Flow 1:
Average throughput: 198.18 Mbit/s
95th percentile per-packet one-way delay: 210.477 ms
Loss rate: 3.04%
-- Flow 2:
Average throughput: 145.09 Mbit/s
95th percentile per-packet one-way delay: 74.368 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 86.97 Mbit/s
95th percentile per-packet one-way delay: 54.244 ms
Loss rate: 0.00%
Run 4: Report of Verus — Data Link

![Graph showing network performance metrics]

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**Throughput (Mbps)**

- **Flow 1 ingress** (mean 294.41 Mbps)
- **Flow 1 egress** (mean 198.18 Mbps)
- **Flow 2 ingress** (mean 145.07 Mbps)
- **Flow 2 egress** (mean 145.09 Mbps)
- **Flow 3 ingress** (mean 86.97 Mbps)
- **Flow 3 egress** (mean 86.97 Mbps)

**Per-packet end-to-end delay (ms)**

- **Flow 1** (95th percentile 210.48 ms)
- **Flow 2** (95th percentile 74.37 ms)
- **Flow 3** (95th percentile 54.24 ms)
Run 5: Statistics of Verus

Start at: 2019-01-25 19:11:02
Local clock offset: 0.084 ms
Remote clock offset: 0.307 ms

# Below is generated by plot.py at 2019-01-25 22:46:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 284.70 Mbit/s
95th percentile per-packet one-way delay: 76.129 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 143.63 Mbit/s
95th percentile per-packet one-way delay: 79.505 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 162.65 Mbit/s
95th percentile per-packet one-way delay: 73.567 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 100.46 Mbit/s
95th percentile per-packet one-way delay: 61.938 ms
Loss rate: 0.00%
Run 5: Report of Verus — Data Link
Run 1: Statistics of PCC-Vivace

Start at: 2019-01-25 16:35:56
End at: 2019-01-25 16:36:26
Local clock offset: -0.03 ms
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2019-01-25 22:48:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 566.15 Mbit/s
95th percentile per-packet one-way delay: 50.954 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 330.29 Mbit/s
95th percentile per-packet one-way delay: 49.769 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 261.54 Mbit/s
95th percentile per-packet one-way delay: 49.207 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 187.27 Mbit/s
95th percentile per-packet one-way delay: 52.797 ms
Loss rate: 0.02%
Run 1: Report of PCC-Vivace — Data Link

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![Graph 1: Throughput (Mbps) vs Time (s)](image1)
- Flow 1 ingress (mean 330.32 Mbps)
- Flow 1 egress (mean 330.29 Mbps)
- Flow 2 ingress (mean 261.54 Mbps)
- Flow 2 egress (mean 261.54 Mbps)
- Flow 3 ingress (mean 187.26 Mbps)
- Flow 3 egress (mean 187.27 Mbps)

![Graph 2: Per-packet one-way delay (ms) vs Time (s)](image2)
- Flow 1 (95th percentile 49.77 ms)
- Flow 2 (95th percentile 49.21 ms)
- Flow 3 (95th percentile 52.80 ms)

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Run 2: Statistics of PCC-Vivace

Start at: 2019-01-25 17:12:28
End at: 2019-01-25 17:12:58
Local clock offset: -0.037 ms
Remote clock offset: -0.107 ms

# Below is generated by plot.py at 2019-01-25 22:49:08
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 590.73 Mbit/s
  95th percentile per-packet one-way delay: 50.466 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 332.24 Mbit/s
  95th percentile per-packet one-way delay: 49.374 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 265.45 Mbit/s
  95th percentile per-packet one-way delay: 50.241 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 248.63 Mbit/s
  95th percentile per-packet one-way delay: 51.857 ms
  Loss rate: 0.00%
Run 2: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 332.23 Mbit/s)
- Flow 1 egress (mean 332.24 Mbit/s)
- Flow 2 ingress (mean 265.46 Mbit/s)
- Flow 2 egress (mean 265.45 Mbit/s)
- Flow 3 ingress (mean 248.62 Mbit/s)
- Flow 3 egress (mean 248.63 Mbit/s)

Flow 1 (95th percentile 49.37 ms)
Flow 2 (95th percentile 50.24 ms)
Flow 3 (95th percentile 51.86 ms)
Run 3: Statistics of PCC-Vivace

Local clock offset: -0.105 ms
Remote clock offset: 0.039 ms

# Below is generated by plot.py at 2019-01-25 22:49:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 530.14 Mbit/s
95th percentile per-packet one-way delay: 51.537 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 323.71 Mbit/s
95th percentile per-packet one-way delay: 75.987 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 264.80 Mbit/s
95th percentile per-packet one-way delay: 49.812 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 91.54 Mbit/s
95th percentile per-packet one-way delay: 47.568 ms
Loss rate: 0.00%
Run 3: Report of PCC-Vivace — Data Link

![Graph 1: Throughput (Mbps)]

![Graph 2: Per-packet round trip delay (ms)]
Run 4: Statistics of PCC-Vivace

Start at: 2019-01-25 18:26:18
End at: 2019-01-25 18:26:48
Local clock offset: 0.003 ms
Remote clock offset: 0.166 ms

# Below is generated by plot.py at 2019-01-25 22:49:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 536.38 Mbit/s
  95th percentile per-packet one-way delay: 56.631 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 346.25 Mbit/s
  95th percentile per-packet one-way delay: 52.315 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 258.55 Mbit/s
  95th percentile per-packet one-way delay: 102.884 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 55.54 Mbit/s
  95th percentile per-packet one-way delay: 47.588 ms
  Loss rate: 0.00%
Run 4: Report of PCC-Vivace — Data Link
Run 5: Statistics of PCC-Vivace

Start at: 2019-01-25 19:03:04
End at: 2019-01-25 19:03:34
Local clock offset: 0.001 ms
Remote clock offset: 0.293 ms

# Below is generated by plot.py at 2019-01-25 22:49:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 525.13 Mbit/s
95th percentile per-packet one-way delay: 81.767 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 313.74 Mbit/s
95th percentile per-packet one-way delay: 136.466 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 278.01 Mbit/s
95th percentile per-packet one-way delay: 49.168 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 80.53 Mbit/s
95th percentile per-packet one-way delay: 47.898 ms
Loss rate: 0.00%
Run 5: Report of PCC-Vivace — Data Link

Throughput (Mbps)

Time (s)

- Flow 1 ingress (mean 314.45 Mbps)
- Flow 1 egress (mean 313.74 Mbps)
- Flow 2 ingress (mean 278.01 Mbps)
- Flow 2 egress (mean 278.01 Mbps)
- Flow 3 ingress (mean 80.54 Mbps)
- Flow 3 egress (mean 80.53 Mbps)

Per-packet one-way delay (ms)

Time (s)

- Flow 1 (95th percentile 136.47 ms)
- Flow 2 (95th percentile 49.17 ms)
- Flow 3 (95th percentile 47.90 ms)
Run 1: Statistics of WebRTC media

Start at: 2019-01-25 16:37:45
End at: 2019-01-25 16:38:15
Local clock offset: -0.023 ms
Remote clock offset: 0.042 ms

# Below is generated by plot.py at 2019-01-25 22:49:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 47.658 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 47.427 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.68 Mbit/s
95th percentile per-packet one-way delay: 47.505 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.67 Mbit/s
95th percentile per-packet one-way delay: 47.711 ms
Loss rate: 0.00%
Run 1: Report of WebRTC media — Data Link
Run 2: Statistics of WebRTC media

Start at: 2019-01-25 17:14:19
End at: 2019-01-25 17:14:49
Local clock offset: -0.038 ms
Remote clock offset: 0.083 ms

# Below is generated by plot.py at 2019-01-25 22:49:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 47.661 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.674 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 46.812 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.667 ms
Loss rate: 0.00%
Run 2: Report of WebRTC media — Data Link

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

- 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 3: Statistics of WebRTC media

End at: 2019-01-25 17:51:43
Local clock offset: -0.08 ms
Remote clock offset: 0.043 ms

# Below is generated by plot.py at 2019-01-25 22:49:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.92 Mbit/s
95th percentile per-packet one-way delay: 47.525 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.13 Mbit/s
95th percentile per-packet one-way delay: 47.492 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 47.546 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 47.504 ms
Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link

![Graph 1](image1.png)

![Graph 2](image2.png)
Run 4: Statistics of WebRTC media

Start at: 2019-01-25 18:28:05
Local clock offset: -0.141 ms
Remote clock offset: 0.239 ms

# Below is generated by plot.py at 2019-01-25 22:49:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1.87 Mbit/s
  95th percentile per-packet one-way delay: 47.629 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 47.549 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.31 Mbit/s
  95th percentile per-packet one-way delay: 47.641 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.54 Mbit/s
  95th percentile per-packet one-way delay: 47.437 ms
  Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link
Run 5: Statistics of WebRTC media

Start at: 2019-01-25 19:04:51
End at: 2019-01-25 19:05:21
Local clock offset: -0.423 ms
Remote clock offset: 0.284 ms

# Below is generated by plot.py at 2019-01-25 22:49:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 47.770 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.283 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.094 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.798 ms
Loss rate: 0.00%
Run 5: Report of WebRTC media — Data Link

Throughput (Mbps)

Time (s)

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)

Per packet one way delay [ms]

Time (s)

Flow 1 (95th percentile 47.28 ms)
Flow 2 (95th percentile 47.09 ms)
Flow 3 (95th percentile 47.80 ms)