Pantheon Report

Generated at 2019-02-13 00:18:37 (UTC).
Data path: GCE Sydney on ens4 (local) → GCE Tokyo on ens4 (remote).
Repeated the test of 21 congestion control schemes 5 times.
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.
NTP offsets were measured against time.google.com and have been applied to correct the timestamps in logs.

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

Git summary:
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fc45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedb7fe58e56f24
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/pantheon-tunnel @ f866d3f58d27af942717625ee3a354cc2e802bd
third_party/pcc @ 1af9c958fa0d66d18b623c091a55f3ec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8ac0d08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f33ff42
third_party/scream-reproduce @ f099118d1421aa3131bf1ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2b29562539f9494
M src/verus.hpp
M tools/plot.py

1
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
tthird_party/webrtc @ 3f0cc2a9061a41b6f9ddee4735770d143a1fa2851
test from GCE Sydney to GCE Tokyo, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)
<table>
<thead>
<tr>
<th>scheme</th>
<th># runs</th>
<th>mean avg tput (Mbit/s)</th>
<th>mean 95th-%ile delay (ms)</th>
<th>mean loss rate (%)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>flow 1</td>
<td>flow 2</td>
<td>flow 3</td>
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<td>TCP BBR</td>
<td>5</td>
<td>435.48</td>
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<td>PCC-Vivace</td>
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<td>0.53</td>
<td>0.22</td>
</tr>
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</table>
Run 1: Statistics of TCP BBR

Start at: 2019-02-12 17:27:51
End at: 2019-02-12 17:28:21
Local clock offset: 0.106 ms
Remote clock offset: -1.325 ms

# Below is generated by plot.py at 2019-02-12 20:56:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 868.65 Mbit/s
  95th percentile per-packet one-way delay: 137.647 ms
  Loss rate: 0.25%
-- Flow 1:
  Average throughput: 453.19 Mbit/s
  95th percentile per-packet one-way delay: 136.122 ms
  Loss rate: 0.19%
-- Flow 2:
  Average throughput: 420.86 Mbit/s
  95th percentile per-packet one-way delay: 117.296 ms
  Loss rate: 0.42%
-- Flow 3:
  Average throughput: 407.38 Mbit/s
  95th percentile per-packet one-way delay: 156.282 ms
  Loss rate: 0.12%
Run 1: Report of TCP BBR — Data Link
Run 2: Statistics of TCP BBR

Start at: 2019-02-12 18:09:29
End at: 2019-02-12 18:09:59
Local clock offset: 0.28 ms
Remote clock offset: 0.8 ms

# Below is generated by plot.py at 2019-02-12 20:56:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 838.49 Mbit/s
95th percentile per-packet one-way delay: 173.183 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 420.12 Mbit/s
95th percentile per-packet one-way delay: 175.187 ms
Loss rate: 1.14%
-- Flow 2:
Average throughput: 457.90 Mbit/s
95th percentile per-packet one-way delay: 169.519 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 341.74 Mbit/s
95th percentile per-packet one-way delay: 185.421 ms
Loss rate: 0.64%
Run 2: Report of TCP BBR — Data Link

![Graph showing throughput and per-packet delay for different flows.](image-url)
Run 3: Statistics of TCP BBR

Start at: 2019-02-12 18:49:47
End at: 2019-02-12 18:50:17
Local clock offset: 0.227 ms
Remote clock offset: -0.0 ms

# Below is generated by plot.py at 2019-02-12 20:56:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 886.52 Mbit/s
95th percentile per-packet one-way delay: 149.629 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 434.83 Mbit/s
95th percentile per-packet one-way delay: 130.097 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 454.31 Mbit/s
95th percentile per-packet one-way delay: 165.242 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 449.20 Mbit/s
95th percentile per-packet one-way delay: 160.956 ms
Loss rate: 0.12%
Run 3: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 435.66 Mbit/s)
- Flow 1 egress (mean 434.83 Mbit/s)
- Flow 2 ingress (mean 435.62 Mbit/s)
- Flow 2 egress (mean 454.31 Mbit/s)
- Flow 3 ingress (mean 449.77 Mbit/s)
- Flow 3 egress (mean 449.20 Mbit/s)
Run 4: Statistics of TCP BBR

Start at: 2019-02-12 19:31:34
End at: 2019-02-12 19:32:04
Local clock offset: -0.037 ms
Remote clock offset: 0.615 ms

# Below is generated by plot.py at 2019-02-12 20:57:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 906.01 Mbit/s
95th percentile per-packet one-way delay: 148.566 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 464.85 Mbit/s
95th percentile per-packet one-way delay: 148.592 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 478.17 Mbit/s
95th percentile per-packet one-way delay: 148.520 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 369.47 Mbit/s
95th percentile per-packet one-way delay: 148.532 ms
Loss rate: 0.49%
Run 4: Report of TCP BBR — Data Link

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**Throughput (Mbps)**

- Flow 1 ingress (mean 465.48 Mbps)
- Flow 1 egress (mean 464.85 Mbps)
- Flow 2 ingress (mean 480.35 Mbps)
- Flow 2 egress (mean 478.17 Mbps)
- Flow 3 ingress (mean 371.30 Mbps)
- Flow 3 egress (mean 369.47 Mbps)

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

- Flow 1 (95th percentile 148.59 ms)
- Flow 2 (95th percentile 148.52 ms)
- Flow 3 (95th percentile 148.53 ms)
Run 5: Statistics of TCP BBR

Start at: 2019-02-12 20:12:42
End at: 2019-02-12 20:13:12
Local clock offset: -0.182 ms
Remote clock offset: -0.846 ms

# Below is generated by plot.py at 2019-02-12 20:57:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 788.93 Mbit/s
95th percentile per-packet one-way delay: 139.518 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 404.43 Mbit/s
95th percentile per-packet one-way delay: 143.676 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 373.32 Mbit/s
95th percentile per-packet one-way delay: 117.363 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 410.12 Mbit/s
95th percentile per-packet one-way delay: 123.759 ms
Loss rate: 1.32%
Run 5: Report of TCP BBR — Data Link
Run 1: Statistics of Copa

Start at: 2019-02-12 17:25:17
End at: 2019-02-12 17:25:47
Local clock offset: 0.448 ms
Remote clock offset: -0.841 ms

# Below is generated by plot.py at 2019-02-12 21:00:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 550.84 Mbit/s
95th percentile per-packet one-way delay: 76.062 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 288.38 Mbit/s
95th percentile per-packet one-way delay: 73.433 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 264.80 Mbit/s
95th percentile per-packet one-way delay: 73.638 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 259.73 Mbit/s
95th percentile per-packet one-way delay: 82.189 ms
Loss rate: 0.02%
Run 1: Report of Copa — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 288.38 Mbps)
Flow 1 egress (mean 288.38 Mbps)
Flow 2 ingress (mean 264.80 Mbps)
Flow 2 egress (mean 264.80 Mbps)
Flow 3 ingress (mean 259.79 Mbps)
Flow 3 egress (mean 259.73 Mbps)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 73.43 ms)
Flow 2 (95th percentile 73.64 ms)
Flow 3 (95th percentile 82.19 ms)
Run 2: Statistics of Copa

Start at: 2019-02-12 18:06:46
End at: 2019-02-12 18:07:16
Local clock offset: -0.386 ms
Remote clock offset: -1.17 ms

# Below is generated by plot.py at 2019-02-12 21:00:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 500.41 Mbit/s
95th percentile per-packet one-way delay: 70.307 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 247.45 Mbit/s
95th percentile per-packet one-way delay: 64.911 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 266.47 Mbit/s
95th percentile per-packet one-way delay: 69.583 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 227.42 Mbit/s
95th percentile per-packet one-way delay: 76.284 ms
Loss rate: 0.03%
Run 2: Report of Copa — Data Link
Run 3: Statistics of Copa

Start at: 2019-02-12 18:47:14
End at: 2019-02-12 18:47:44
Local clock offset: -0.029 ms
Remote clock offset: 0.546 ms

# Below is generated by plot.py at 2019-02-12 21:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 578.95 Mbit/s
95th percentile per-packet one-way delay: 74.430 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 303.23 Mbit/s
95th percentile per-packet one-way delay: 73.183 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 287.80 Mbit/s
95th percentile per-packet one-way delay: 71.242 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 252.54 Mbit/s
95th percentile per-packet one-way delay: 84.840 ms
Loss rate: 0.02%
Run 3: Report of Copa — Data Link

![Graph showing throughput and per-packet one-way delay over time for different flows.]
Run 4: Statistics of Copa

Start at: 2019-02-12 19:29:10
End at: 2019-02-12 19:29:40
Local clock offset: -0.352 ms
Remote clock offset: 0.233 ms

# Below is generated by plot.py at 2019-02-12 21:19:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 520.99 Mbit/s
95th percentile per-packet one-way delay: 65.839 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 269.93 Mbit/s
95th percentile per-packet one-way delay: 65.124 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 243.69 Mbit/s
95th percentile per-packet one-way delay: 65.022 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 267.68 Mbit/s
95th percentile per-packet one-way delay: 67.733 ms
Loss rate: 0.03%
Run 4: Report of Copa — Data Link
Run 5: Statistics of Copa

Start at: 2019-02-12 20:10:12
End at: 2019-02-12 20:10:42
Local clock offset: -0.172 ms
Remote clock offset: -0.186 ms

# Below is generated by plot.py at 2019-02-12 21:25:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 585.40 Mbit/s
95th percentile per-packet one-way delay: 72.822 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 313.23 Mbit/s
95th percentile per-packet one-way delay: 71.309 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 293.87 Mbit/s
95th percentile per-packet one-way delay: 73.787 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 229.88 Mbit/s
95th percentile per-packet one-way delay: 74.430 ms
Loss rate: 0.00%
Run 5: Report of Copa — Data Link

![Throughput Graph]

![Latency Graph]
Run 1: Statistics of TCP Cubic

Start at: 2019-02-12 17:14:22
End at: 2019-02-12 17:14:52
Local clock offset: -0.074 ms
Remote clock offset: 0.621 ms

# Below is generated by plot.py at 2019-02-12 21:25:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 772.74 Mbit/s
95th percentile per-packet one-way delay: 108.466 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 381.34 Mbit/s
95th percentile per-packet one-way delay: 60.358 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 340.35 Mbit/s
95th percentile per-packet one-way delay: 119.355 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 495.85 Mbit/s
95th percentile per-packet one-way delay: 111.342 ms
Loss rate: 0.82%
Run 1: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 381.34 Mbit/s)
- Flow 1 egress (mean 381.34 Mbit/s)
- Flow 2 ingress (mean 340.34 Mbit/s)
- Flow 2 egress (mean 340.35 Mbit/s)
- Flow 3 ingress (mean 499.80 Mbit/s)
- Flow 3 egress (mean 495.85 Mbit/s)
Run 2: Statistics of TCP Cubic

Start at: 2019-02-12 17:55:18
End at: 2019-02-12 17:55:48
Local clock offset: -0.037 ms
Remote clock offset: -1.297 ms

# Below is generated by plot.py at 2019-02-12 21:25:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 997.22 Mbit/s
95th percentile per-packet one-way delay: 152.046 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 533.78 Mbit/s
95th percentile per-packet one-way delay: 95.395 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 501.26 Mbit/s
95th percentile per-packet one-way delay: 161.537 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 390.02 Mbit/s
95th percentile per-packet one-way delay: 79.073 ms
Loss rate: 0.00%
Run 2: Report of TCP Cubic — Data Link

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

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

- Flow 1 ingress (mean 534.02 Mbit/s)
- Flow 1 egress (mean 533.78 Mbit/s)
- Flow 2 ingress (mean 504.77 Mbit/s)
- Flow 2 egress (mean 501.26 Mbit/s)
- Flow 3 ingress (mean 390.04 Mbit/s)
- Flow 3 egress (mean 390.02 Mbit/s)

- Flow 1 (95th percentile 95.39 ms)
- Flow 2 (95th percentile 161.54 ms)
- Flow 3 (95th percentile 79.07 ms)
Run 3: Statistics of TCP Cubic

Start at: 2019-02-12 18:36:28
End at: 2019-02-12 18:36:58
Local clock offset: -0.248 ms
Remote clock offset: 0.259 ms

# Below is generated by plot.py at 2019-02-12 21:25:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1010.45 Mbit/s
95th percentile per-packet one-way delay: 122.665 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 539.90 Mbit/s
95th percentile per-packet one-way delay: 106.143 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 469.61 Mbit/s
95th percentile per-packet one-way delay: 117.947 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 474.25 Mbit/s
95th percentile per-packet one-way delay: 139.596 ms
Loss rate: 0.98%
Run 3: Report of TCP Cubic — Data Link

<table>
<thead>
<tr>
<th>Throughput (Mbit/s)</th>
<th>Time (s)</th>
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<td>25</td>
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<tr>
<td>60</td>
<td>30</td>
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</table>

**Throughput Chart:***
- Flow 1 ingress (mean 540.45 Mbit/s)
- Flow 1 egress (mean 539.90 Mbit/s)
- Flow 2 ingress (mean 470.79 Mbit/s)
- Flow 2 egress (mean 469.61 Mbit/s)
- Flow 3 ingress (mean 476.95 Mbit/s)
- Flow 3 egress (mean 474.25 Mbit/s)

<table>
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<tr>
<th>Packet delay (ms)</th>
<th>Time (s)</th>
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<td>50</td>
<td>25</td>
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<tr>
<td>60</td>
<td>30</td>
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</tbody>
</table>

**Packet Delay Chart:**
- Flow 1 (95th percentile 106.14 ms)
- Flow 2 (95th percentile 117.95 ms)
- Flow 3 (95th percentile 139.60 ms)
Run 4: Statistics of TCP Cubic

Start at: 2019-02-12 19:17:48
End at: 2019-02-12 19:18:18
Local clock offset: 0.227 ms
Remote clock offset: -0.157 ms

# Below is generated by plot.py at 2019-02-12 21:25:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 972.78 Mbit/s
95th percentile per-packet one-way delay: 152.287 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 472.85 Mbit/s
95th percentile per-packet one-way delay: 68.499 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 536.45 Mbit/s
95th percentile per-packet one-way delay: 159.602 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 428.52 Mbit/s
95th percentile per-packet one-way delay: 79.100 ms
Loss rate: 0.04%
Run 4: Report of TCP Cubic — Data Link

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

Flow 1 ingress (mean 472.88 Mbit/s)  Flow 1 egress (mean 472.85 Mbit/s)
Flow 2 ingress (mean 537.24 Mbit/s)  Flow 2 egress (mean 536.45 Mbit/s)
Flow 3 ingress (mean 426.70 Mbit/s)  Flow 3 egress (mean 428.52 Mbit/s)

Flow 1 (95th percentile 68.50 ms)  Flow 2 (95th percentile 159.60 ms)  Flow 3 (95th percentile 79.10 ms)
Run 5: Statistics of TCP Cubic

Start at: 2019-02-12 19:59:25
End at: 2019-02-12 19:59:55
Local clock offset: -0.61 ms
Remote clock offset: 0.232 ms

# Below is generated by plot.py at 2019-02-12 21:25:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 842.80 Mbit/s
95th percentile per-packet one-way delay: 86.649 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 480.75 Mbit/s
95th percentile per-packet one-way delay: 86.607 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 340.00 Mbit/s
95th percentile per-packet one-way delay: 91.082 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 408.26 Mbit/s
95th percentile per-packet one-way delay: 78.371 ms
Loss rate: 0.01%
Run 5: Report of TCP Cubic — Data Link

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

**Graph 1:** Throughput (Mbps) vs. Time (s)
- **Flow 1 Ingress (mean 480.76 Mbps)**
- **Flow 1 Egress (mean 480.75 Mbps)**
- **Flow 2 Ingress (mean 340.01 Mbps)**
- **Flow 2 Egress (mean 340.00 Mbps)**
- **Flow 3 Ingress (mean 408.30 Mbps)**
- **Flow 3 Egress (mean 408.26 Mbps)**

**Graph 2:** Per-packet one-way delay (ms) vs. Time (s)
- **Flow 1 (95th percentile 86.61 ms)**
- **Flow 2 (95th percentile 91.08 ms)**
- **Flow 3 (95th percentile 78.37 ms)**

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Run 1: Statistics of FillP

Start at: 2019-02-12 17:21:52
End at: 2019-02-12 17:22:22
Local clock offset: -0.214 ms
Remote clock offset: 0.272 ms

# Below is generated by plot.py at 2019-02-12 21:28:52
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 852.05 Mbit/s
  95th percentile per-packet one-way delay: 76.799 ms
  Loss rate: 0.19%
-- Flow 1:
  Average throughput: 546.14 Mbit/s
  95th percentile per-packet one-way delay: 99.091 ms
  Loss rate: 0.30%
-- Flow 2:
  Average throughput: 335.50 Mbit/s
  95th percentile per-packet one-way delay: 61.335 ms
  Loss rate: 0.01%
-- Flow 3:
  Average throughput: 248.00 Mbit/s
  95th percentile per-packet one-way delay: 61.930 ms
  Loss rate: 0.00%
Run 1: Report of FillP — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 547.78 Mbps)
- Flow 1 egress (mean 546.14 Mbps)
- Flow 2 ingress (mean 335.52 Mbps)
- Flow 2 egress (mean 335.50 Mbps)
- Flow 3 ingress (mean 248.00 Mbps)
- Flow 3 egress (mean 248.00 Mbps)

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

- Flow 1 (95th percentile 99.09 ms)
- Flow 2 (95th percentile 61.34 ms)
- Flow 3 (95th percentile 61.93 ms)
Run 2: Statistics of FillP

Start at: 2019-02-12 18:03:28
End at: 2019-02-12 18:03:58
Local clock offset: -0.107 ms
Remote clock offset: -0.058 ms

# Below is generated by plot.py at 2019-02-12 21:45:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 919.51 Mbit/s
95th percentile per-packet one-way delay: 67.441 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 597.62 Mbit/s
95th percentile per-packet one-way delay: 69.801 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 349.14 Mbit/s
95th percentile per-packet one-way delay: 62.585 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 271.03 Mbit/s
95th percentile per-packet one-way delay: 69.197 ms
Loss rate: 0.01%
Run 2: Report of FillP — Data Link

**Throughput (Mbps):**
- Flow 1 ingress: 597.62 Mbps (mean)
- Flow 2 ingress: 349.19 Mbps (mean)
- Flow 3 ingress: 271.26 Mbps (mean)
- Flow 1 egress: 597.62 Mbps (mean)
- Flow 2 egress: 349.14 Mbps (mean)
- Flow 3 egress: 271.03 Mbps (mean)

**Delay (ms):**
- Flow 1 (95th percentile: 69.80 ms)
- Flow 2 (95th percentile: 62.59 ms)
- Flow 3 (95th percentile: 69.20 ms)
Run 3: Statistics of FillP

Start at: 2019-02-12 18:43:53
End at: 2019-02-12 18:44:23
Local clock offset: -0.185 ms
Remote clock offset: -0.632 ms

# Below is generated by plot.py at 2019-02-12 21:46:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 850.44 Mbit/s
95th percentile per-packet one-way delay: 72.880 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 553.69 Mbit/s
95th percentile per-packet one-way delay: 76.805 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 331.68 Mbit/s
95th percentile per-packet one-way delay: 64.613 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 232.86 Mbit/s
95th percentile per-packet one-way delay: 59.538 ms
Loss rate: 0.00%
Run 3: Report of FillP — Data Link

![Graph showing network performance metrics](image)

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 553.81 Mbps)
  - Flow 1 egress (mean 553.69 Mbps)
  - Flow 2 ingress (mean 331.79 Mbps)
  - Flow 2 egress (mean 331.68 Mbps)
  - Flow 3 ingress (mean 232.85 Mbps)
  - Flow 3 egress (mean 232.86 Mbps)

- **Per-packet one way delay (ms):**
  - Flow 1 (95th percentile 76.81 ms)
  - Flow 2 (95th percentile 64.61 ms)
  - Flow 3 (95th percentile 59.54 ms)
Run 4: Statistics of FillP

Start at: 2019-02-12 19:25:52
End at: 2019-02-12 19:26:22
Local clock offset: -0.222 ms
Remote clock offset: -0.742 ms

# Below is generated by plot.py at 2019-02-12 21:51:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 893.72 Mbit/s
  95th percentile per-packet one-way delay: 59.066 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 585.10 Mbit/s
  95th percentile per-packet one-way delay: 59.334 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 349.16 Mbit/s
  95th percentile per-packet one-way delay: 58.766 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 229.78 Mbit/s
  95th percentile per-packet one-way delay: 57.945 ms
  Loss rate: 0.00%
Run 4: Report of FillP — Data Link

Throughput (Mbps):

- Flow 1 ingress (mean 585.12 Mbps)
- Flow 1 egress (mean 585.10 Mbps)
- Flow 2 ingress (mean 349.16 Mbps)
- Flow 2 egress (mean 349.16 Mbps)
- Flow 3 ingress (mean 229.80 Mbps)
- Flow 3 egress (mean 229.78 Mbps)

Per-packet one-way delay (ms):

- Flow 1 (95th percentile 59.33 ms)
- Flow 2 (95th percentile 58.77 ms)
- Flow 3 (95th percentile 57.95 ms)
Run 5: Statistics of FillP

Start at: 2019-02-12 20:06:46
End at: 2019-02-12 20:07:16
Local clock offset: 0.079 ms
Remote clock offset: -0.044 ms

# Below is generated by plot.py at 2019-02-12 21:52:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 931.10 Mbit/s
95th percentile per-packet one-way delay: 67.177 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 600.23 Mbit/s
95th percentile per-packet one-way delay: 67.266 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 370.96 Mbit/s
95th percentile per-packet one-way delay: 67.856 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 256.05 Mbit/s
95th percentile per-packet one-way delay: 62.794 ms
Loss rate: 0.00%
Run 5: Report of FillP — Data Link

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

- **Throughput** (Mbps):
  - Flow 1 Ingress (mean 601.85 Mbps)
  - Flow 1 Egress (mean 600.23 Mbps)
  - Flow 2 Ingress (mean 371.64 Mbps)
  - Flow 2 Egress (mean 370.96 Mbps)
  - Flow 3 Ingress (mean 256.11 Mbps)
  - Flow 3 Egress (mean 256.05 Mbps)

- **Delay** (ms):
  - Flow 1 (95th percentile 67.27 ms)
  - Flow 2 (95th percentile 67.86 ms)
  - Flow 3 (95th percentile 62.70 ms)
Run 1: Statistics of FillP-Sheep

Start at: 2019-02-12 17:02:29
End at: 2019-02-12 17:02:59
Local clock offset: 0.594 ms
Remote clock offset: -0.152 ms

# Below is generated by plot.py at 2019-02-12 21:52:41
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 878.60 Mbit/s
  95th percentile per-packet one-way delay: 62.306 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 552.70 Mbit/s
  95th percentile per-packet one-way delay: 59.533 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 350.82 Mbit/s
  95th percentile per-packet one-way delay: 65.025 ms
  Loss rate: 0.01%
-- Flow 3:
  Average throughput: 277.08 Mbit/s
  95th percentile per-packet one-way delay: 59.454 ms
  Loss rate: 0.00%
Run 1: Report of FillP-Sheep — Data Link

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

- Flow 1 ingress (mean 552.73 Mb/s)
- Flow 1 egress (mean 552.70 Mb/s)
- Flow 2 ingress (mean 350.92 Mb/s)
- Flow 2 egress (mean 350.82 Mb/s)
- Flow 3 ingress (mean 277.09 Mb/s)
- Flow 3 egress (mean 277.08 Mb/s)

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

- Flow 1 (95th percentile 59.53 ms)
- Flow 2 (95th percentile 65.03 ms)
- Flow 3 (95th percentile 59.45 ms)
Run 2: Statistics of FillP-Sheep

Start at: 2019-02-12 17:44:24
End at: 2019-02-12 17:44:54
Local clock offset: -0.195 ms
Remote clock offset: 0.405 ms

# Below is generated by plot.py at 2019-02-12 21:52:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 849.91 Mbit/s
95th percentile per-packet one-way delay: 71.870 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 542.55 Mbit/s
95th percentile per-packet one-way delay: 73.691 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 329.36 Mbit/s
95th percentile per-packet one-way delay: 59.326 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 266.81 Mbit/s
95th percentile per-packet one-way delay: 65.768 ms
Loss rate: 0.01%
Run 2: Report of FillP-Sheep — Data Link

Throughput (Mb/s)

Time (s)

Flow 1 ingress (mean 542.67 Mb/s)  Flow 1 egress (mean 542.55 Mb/s)
Flow 2 ingress (mean 329.38 Mb/s)  Flow 2 egress (mean 329.36 Mb/s)
Flow 3 ingress (mean 266.97 Mb/s)  Flow 3 egress (mean 266.81 Mb/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 73.69 ms)  Flow 2 (95th percentile 59.33 ms)  Flow 3 (95th percentile 65.77 ms)
Run 3: Statistics of FillP-Sheep

Start at: 2019-02-12 18:25:18
End at: 2019-02-12 18:25:48
Local clock offset: -0.218 ms
Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2019-02-12 21:52:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 840.84 Mbit/s
95th percentile per-packet one-way delay: 66.586 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 552.15 Mbit/s
95th percentile per-packet one-way delay: 67.410 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 309.36 Mbit/s
95th percentile per-packet one-way delay: 66.491 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 250.27 Mbit/s
95th percentile per-packet one-way delay: 61.220 ms
Loss rate: 0.00%
Run 3: Report of FillP-Sheep — Data Link

![Graph 1: Throughput vs. Time]

- Flow 1 ingress (mean 552.27 Mb/s)
- Flow 1 egress (mean 552.15 Mb/s)
- Flow 2 ingress (mean 309.16 Mb/s)
- Flow 2 egress (mean 309.36 Mb/s)
- Flow 3 ingress (mean 250.29 Mb/s)
- Flow 3 egress (mean 250.27 Mb/s)

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

- Flow 1 (95th percentile 67.41 ms)
- Flow 2 (95th percentile 66.49 ms)
- Flow 3 (95th percentile 61.22 ms)
Run 4: Statistics of FillP-Sheep

Start at: 2019-02-12 19:06:19
End at: 2019-02-12 19:06:49
Local clock offset: -0.461 ms
Remote clock offset: 0.075 ms

# Below is generated by plot.py at 2019-02-12 21:55:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 850.16 Mbit/s
95th percentile per-packet one-way delay: 61.369 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 556.65 Mbit/s
95th percentile per-packet one-way delay: 60.606 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 319.06 Mbit/s
95th percentile per-packet one-way delay: 60.117 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 246.12 Mbit/s
95th percentile per-packet one-way delay: 65.348 ms
Loss rate: 0.00%
Run 4: Report of FillP-Sheep — Data Link

Throughput (Mbps/s)

- Flow 1 ingress (mean 555.22 Mbps/s)
- Flow 1 egress (mean 556.65 Mbps/s)
- Flow 2 ingress (mean 319.06 Mbps/s)
- Flow 2 egress (mean 319.06 Mbps/s)
- Flow 3 ingress (mean 246.12 Mbps/s)
- Flow 3 egress (mean 246.12 Mbps/s)

Packet delay (ms)

- Flow 1 (95th percentile 60.61 ms)
- Flow 2 (95th percentile 60.12 ms)
- Flow 3 (95th percentile 65.35 ms)
Run 5: Statistics of FillP-Sheep

Start at: 2019-02-12 19:48:18
End at: 2019-02-12 19:48:48
Local clock offset: -0.054 ms
Remote clock offset: -0.119 ms

# Below is generated by plot.py at 2019-02-12 22:11:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 821.97 Mbit/s
95th percentile per-packet one-way delay: 69.939 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 528.54 Mbit/s
95th percentile per-packet one-way delay: 73.628 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 317.28 Mbit/s
95th percentile per-packet one-way delay: 66.893 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 248.93 Mbit/s
95th percentile per-packet one-way delay: 59.601 ms
Loss rate: 0.00%
Run 5: Report of FillP-Sheep — Data Link

![Graph showing throughput and packet delay over time.]
Run 1: Statistics of Indigo

Start at: 2019-02-12 17:20:00
End at: 2019-02-12 17:20:30
Local clock offset: -0.077 ms
Remote clock offset: -1.427 ms

# Below is generated by plot.py at 2019-02-12 22:11:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 303.77 Mbit/s
95th percentile per-packet one-way delay: 57.359 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 126.81 Mbit/s
95th percentile per-packet one-way delay: 56.952 ms
Loss rate: 0.96%
-- Flow 2:
Average throughput: 184.96 Mbit/s
95th percentile per-packet one-way delay: 57.605 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 167.20 Mbit/s
95th percentile per-packet one-way delay: 57.486 ms
Loss rate: 0.00%
Run 1: Report of Indigo — Data Link

[Graph showing throughput and per-packet one-way delay for different flows over time]
Run 2: Statistics of Indigo

Start at: 2019-02-12 18:01:25
End at: 2019-02-12 18:01:55
Local clock offset: -0.519 ms
Remote clock offset: -0.127 ms

# Below is generated by plot.py at 2019-02-12 22:11:33
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 371.21 Mbit/s
  95th percentile per-packet one-way delay: 61.429 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 194.23 Mbit/s
  95th percentile per-packet one-way delay: 58.706 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 187.69 Mbit/s
  95th percentile per-packet one-way delay: 62.276 ms
  Loss rate: 0.01%
-- Flow 3:
  Average throughput: 162.43 Mbit/s
  95th percentile per-packet one-way delay: 58.959 ms
  Loss rate: 0.00%
Run 2: Report of Indigo — Data Link

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

- Flow 1 ingress (mean 194.23 Mbit/s)
- Flow 1 egress (mean 194.23 Mbit/s)
- Flow 2 ingress (mean 187.70 Mbit/s)
- Flow 2 egress (mean 187.69 Mbit/s)
- Flow 3 ingress (mean 162.43 Mbit/s)
- Flow 3 egress (mean 162.43 Mbit/s)

- Flow 1 (95th percentile 58.71 ms)
- Flow 2 (95th percentile 62.28 ms)
- Flow 3 (95th percentile 58.96 ms)
Run 3: Statistics of Indigo

Start at: 2019-02-12 18:41:52
End at: 2019-02-12 18:42:22
Local clock offset: -0.252 ms
Remote clock offset: 1.288 ms

# Below is generated by plot.py at 2019-02-12 22:11:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 378.15 Mbit/s
95th percentile per-packet one-way delay: 62.548 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 207.05 Mbit/s
95th percentile per-packet one-way delay: 62.557 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 177.71 Mbit/s
95th percentile per-packet one-way delay: 60.071 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 163.73 Mbit/s
95th percentile per-packet one-way delay: 63.564 ms
Loss rate: 0.02%
Run 3: Report of Indigo — Data Link
Run 4: Statistics of Indigo

Start at: 2019-02-12 19:23:42
End at: 2019-02-12 19:24:12
Local clock offset: -0.455 ms
Remote clock offset: 0.025 ms

# Below is generated by plot.py at 2019-02-12 22:11:33
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 379.53 Mbit/s
  95th percentile per-packet one-way delay: 61.528 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 203.84 Mbit/s
  95th percentile per-packet one-way delay: 62.064 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 187.51 Mbit/s
  95th percentile per-packet one-way delay: 58.822 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 157.96 Mbit/s
  95th percentile per-packet one-way delay: 59.244 ms
  Loss rate: 0.00%
Run 4: Report of Indigo — Data Link

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

![Graph 2: Per-packet round-trip delay vs Time](image2)
Run 5: Statistics of Indigo

Start at: 2019-02-12 20:04:45
End at: 2019-02-12 20:05:15
Local clock offset: -0.6 ms
Remote clock offset: -0.727 ms

# Below is generated by plot.py at 2019-02-12 22:11:33
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 376.03 Mbit/s
  95th percentile per-packet one-way delay: 58.470 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 204.93 Mbit/s
  95th percentile per-packet one-way delay: 58.307 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 181.53 Mbit/s
  95th percentile per-packet one-way delay: 58.689 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 156.11 Mbit/s
  95th percentile per-packet one-way delay: 58.435 ms
  Loss rate: 0.00%
Run 5: Report of Indigo — Data Link
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-02-12 16:51:50
End at: 2019-02-12 16:52:20
Local clock offset: 0.248 ms
Remote clock offset: 1.295 ms
Run 1: Report of Indigo-MusesC3 — Data Link

- Throughput (Mbps)
  - Flow 1 ingress (mean 337.69 Mbps)
  - Flow 1 egress (mean 337.69 Mbps)
  - Flow 2 ingress (mean 335.06 Mbps)
  - Flow 2 egress (mean 335.07 Mbps)
  - Flow 3 ingress (mean 236.80 Mbps)
  - Flow 3 egress (mean 236.89 Mbps)

- Per-packet one-way delay (ms)
  - Flow 1 (95th percentile 60.73 ms)
  - Flow 2 (95th percentile 60.72 ms)
  - Flow 3 (95th percentile 60.62 ms)
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-02-12 17:33:15
End at: 2019-02-12 17:33:45
Local clock offset: 0.22 ms
Remote clock offset: -0.131 ms

# Below is generated by plot.py at 2019-02-12 22:14:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 720.99 Mbit/s
  95th percentile per-packet one-way delay: 60.942 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 437.00 Mbit/s
  95th percentile per-packet one-way delay: 60.270 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 351.41 Mbit/s
  95th percentile per-packet one-way delay: 59.468 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 225.26 Mbit/s
  95th percentile per-packet one-way delay: 63.700 ms
  Loss rate: 0.07%
Run 2: Report of Indigo-MusesC3 — Data Link

![Throughput Chart](image1)

![Delay Chart](image2)
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-02-12 18:14:47
End at: 2019-02-12 18:15:17
Local clock offset: 0.238 ms
Remote clock offset: -0.706 ms

# Below is generated by plot.py at 2019-02-12 22:18:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 675.23 Mbit/s
95th percentile per-packet one-way delay: 62.482 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 410.46 Mbit/s
95th percentile per-packet one-way delay: 62.535 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 344.69 Mbit/s
95th percentile per-packet one-way delay: 62.697 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 233.37 Mbit/s
95th percentile per-packet one-way delay: 61.745 ms
Loss rate: 0.11%
Run 3: Report of Indigo-Muses C3 — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 410.41 Mbps)
  - Flow 1 egress (mean 410.46 Mbps)
  - Flow 2 ingress (mean 344.77 Mbps)
  - Flow 2 egress (mean 344.69 Mbps)
  - Flow 3 ingress (mean 233.54 Mbps)
  - Flow 3 egress (mean 233.37 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 62.53 ms)
  - Flow 2 (95th percentile 62.70 ms)
  - Flow 3 (95th percentile 61.74 ms)
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-02-12 18:55:17
End at: 2019-02-12 18:55:47
Local clock offset: 0.037 ms
Remote clock offset: 0.371 ms

# Below is generated by plot.py at 2019-02-12 22:23:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 728.07 Mbit/s
95th percentile per-packet one-way delay: 63.178 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 424.44 Mbit/s
95th percentile per-packet one-way delay: 61.449 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 373.37 Mbit/s
95th percentile per-packet one-way delay: 64.380 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 237.64 Mbit/s
95th percentile per-packet one-way delay: 59.557 ms
Loss rate: 0.00%
Run 4: Report of Indigo-MusesC3 — Data Link

![Graph showing throughput and latency data for different flows over time](image-url)
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-02-12 19:36:52
End at: 2019-02-12 19:37:22
Local clock offset: -0.218 ms
Remote clock offset: -0.957 ms

# Below is generated by plot.py at 2019-02-12 22:27:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 746.58 Mbit/s
95th percentile per-packet one-way delay: 59.874 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 435.97 Mbit/s
95th percentile per-packet one-way delay: 60.720 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 378.92 Mbit/s
95th percentile per-packet one-way delay: 58.228 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 253.28 Mbit/s
95th percentile per-packet one-way delay: 59.096 ms
Loss rate: 0.00%
Run 5: Report of Indigo-MusesC3 — Data Link

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![Image of throughput and packet loss graphs]

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Flow 1 ingress (mean 435.97 Mbit/s)
Flow 1 egress (mean 435.97 Mbit/s)
Flow 2 ingress (mean 378.92 Mbit/s)
Flow 2 egress (mean 378.92 Mbit/s)
Flow 3 ingress (mean 253.27 Mbit/s)
Flow 3 egress (mean 253.28 Mbit/s)

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Flow 1 (95th percentile 60.72 ms)
Flow 2 (95th percentile 58.23 ms)
Flow 3 (95th percentile 59.10 ms)
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-02-12 17:17:49
End at: 2019-02-12 17:18:19
Local clock offset: 0.187 ms
Remote clock offset: 0.779 ms

# Below is generated by plot.py at 2019-02-12 22:28:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 745.29 Mbit/s
95th percentile per-packet one-way delay: 72.819 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 469.00 Mbit/s
95th percentile per-packet one-way delay: 75.751 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 389.66 Mbit/s
95th percentile per-packet one-way delay: 66.772 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 83.51 Mbit/s
95th percentile per-packet one-way delay: 61.833 ms
Loss rate: 0.02%
Run 1: Report of Indigo-MusesC5 — Data Link
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-02-12 17:59:14
End at: 2019-02-12 17:59:44
Local clock offset: -0.114 ms
Remote clock offset: 0.004 ms

# Below is generated by plot.py at 2019-02-12 22:30:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 800.69 Mbit/s
  95th percentile per-packet one-way delay: 68.694 ms
  Loss rate: 0.07%
-- Flow 1:
  Average throughput: 458.12 Mbit/s
  95th percentile per-packet one-way delay: 70.105 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 394.48 Mbit/s
  95th percentile per-packet one-way delay: 67.542 ms
  Loss rate: 0.09%
-- Flow 3:
  Average throughput: 324.93 Mbit/s
  95th percentile per-packet one-way delay: 63.669 ms
  Loss rate: 0.33%
Run 2: Report of Indigo-MusesC5 — Data Link
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-02-12 18:39:56
End at: 2019-02-12 18:40:26
Local clock offset: -0.236 ms
Remote clock offset: -1.41 ms

# Below is generated by plot.py at 2019-02-12 22:30:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 749.84 Mbit/s
95th percentile per-packet one-way delay: 66.034 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 491.35 Mbit/s
95th percentile per-packet one-way delay: 67.509 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 361.20 Mbit/s
95th percentile per-packet one-way delay: 59.749 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 101.13 Mbit/s
95th percentile per-packet one-way delay: 59.626 ms
Loss rate: 0.07%
Run 3: Report of Indigo-MusesC5 — Data Link

![Graph showing throughput and per-packet round-trip delay for different flows.](image-url)
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-02-12 19:21:35
End at: 2019-02-12 19:22:05
Local clock offset: 0.023 ms
Remote clock offset: 0.559 ms

# Below is generated by plot.py at 2019-02-12 22:32:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 807.10 Mbit/s
95th percentile per-packet one-way delay: 69.331 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 496.42 Mbit/s
95th percentile per-packet one-way delay: 70.745 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 433.28 Mbit/s
95th percentile per-packet one-way delay: 66.997 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 113.83 Mbit/s
95th percentile per-packet one-way delay: 58.231 ms
Loss rate: 0.00%
Run 4: Report of Indigo-MusesC5 — Data Link
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-02-12 20:02:45
End at: 2019-02-12 20:03:15
Local clock offset: -0.609 ms
Remote clock offset: -0.16 ms

# Below is generated by plot.py at 2019-02-12 22:34:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 761.06 Mbit/s
95th percentile per-packet one-way delay: 88.052 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 473.74 Mbit/s
95th percentile per-packet one-way delay: 81.508 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 412.35 Mbit/s
95th percentile per-packet one-way delay: 95.350 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 79.67 Mbit/s
95th percentile per-packet one-way delay: 58.085 ms
Loss rate: 0.00%
Run 5: Report of Indigo-MusesC5 — Data Link

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

- Flow 1 ingress (mean 473.71 Mbps)
- Flow 1 egress (mean 473.34 Mbps)
- Flow 2 ingress (mean 412.38 Mbps)
- Flow 2 egress (mean 412.35 Mbps)
- Flow 3 ingress (mean 79.67 Mbps)
- Flow 3 egress (mean 79.67 Mbps)

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

- Flow 1 (95th percentile 81.51 ms)
- Flow 2 (95th percentile 95.35 ms)
- Flow 3 (95th percentile 58.09 ms)
Run 1: Statistics of Indigo-MusesD

Start at: 2019-02-12 16:57:17
End at: 2019-02-12 16:57:47
Local clock offset: 0.348 ms
Remote clock offset: 1.168 ms

# Below is generated by plot.py at 2019-02-12 22:35:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 672.85 Mbit/s
95th percentile per-packet one-way delay: 60.879 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 409.20 Mbit/s
95th percentile per-packet one-way delay: 61.133 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 315.78 Mbit/s
95th percentile per-packet one-way delay: 60.385 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 226.35 Mbit/s
95th percentile per-packet one-way delay: 60.389 ms
Loss rate: 0.00%
Run 1: Report of Indigo-MusesD — Data Link

![Graph showing throughput and per-packet one-way delay over time for different flows.]
Run 2: Statistics of Indigo-MusesD

Start at: 2019-02-12 17:38:55
End at: 2019-02-12 17:39:25
Local clock offset: 0.242 ms
Remote clock offset: -1.112 ms

# Below is generated by plot.py at 2019-02-12 22:41:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 684.73 Mbit/s
95th percentile per-packet one-way delay: 60.930 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 400.39 Mbit/s
95th percentile per-packet one-way delay: 61.109 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 339.00 Mbit/s
95th percentile per-packet one-way delay: 58.427 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 248.72 Mbit/s
95th percentile per-packet one-way delay: 61.915 ms
Loss rate: 0.08%
Run 2: Report of Indigo-MusesD — Data Link

![Graph of Throughput and Delay](image-url)

Throughput (Mbps)

- Flow 1 ingress (mean 400.39 Mbps)
- Flow 1 egress (mean 400.39 Mbps)
- Flow 2 ingress (mean 339.01 Mbps)
- Flow 2 egress (mean 339.00 Mbps)
- Flow 3 ingress (mean 248.85 Mbps)
- Flow 3 egress (mean 248.72 Mbps)

Per packet one-way delay (ms)

- Flow 1 (95th percentile 61.11 ms)
- Flow 2 (95th percentile 58.43 ms)
- Flow 3 (95th percentile 61.91 ms)
Run 3: Statistics of Indigo-MusesD

Start at: 2019-02-12 18:20:07
End at: 2019-02-12 18:20:37
Local clock offset: -0.426 ms
Remote clock offset: -1.164 ms

# Below is generated by plot.py at 2019-02-12 22:44:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 689.72 Mbit/s
95th percentile per-packet one-way delay: 61.332 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 391.82 Mbit/s
95th percentile per-packet one-way delay: 60.296 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 348.32 Mbit/s
95th percentile per-packet one-way delay: 69.806 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 292.56 Mbit/s
95th percentile per-packet one-way delay: 58.516 ms
Loss rate: 0.01%
Run 3: Report of Indigo-MusesD — Data Link

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

- Flow 1 ingress (mean 391.77 Mbit/s)
- Flow 1 egress (mean 391.82 Mbit/s)
- Flow 2 ingress (mean 348.36 Mbit/s)
- Flow 2 egress (mean 348.32 Mbit/s)
- Flow 3 ingress (mean 292.57 Mbit/s)
- Flow 3 egress (mean 292.56 Mbit/s)
Run 4: Statistics of Indigo-MusesD

Start at: 2019-02-12 19:00:50
End at: 2019-02-12 19:01:20
Local clock offset: -0.167 ms
Remote clock offset: 1.131 ms

# Below is generated by plot.py at 2019-02-12 22:46:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 710.84 Mbit/s
95th percentile per-packet one-way delay: 61.197 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 423.82 Mbit/s
95th percentile per-packet one-way delay: 61.092 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 347.10 Mbit/s
95th percentile per-packet one-way delay: 61.687 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 243.12 Mbit/s
95th percentile per-packet one-way delay: 60.653 ms
Loss rate: 0.00%
Run 4: Report of Indigo-MusesD — Data Link
Run 5: Statistics of Indigo-MusesD

Start at: 2019-02-12 19:42:41
End at: 2019-02-12 19:43:11
Local clock offset: 0.18 ms
Remote clock offset: 0.204 ms

# Below is generated by plot.py at 2019-02-12 22:46:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 670.35 Mbit/s
  95th percentile per-packet one-way delay: 62.489 ms
  Loss rate: 0.01%

-- Flow 1:
  Average throughput: 394.40 Mbit/s
  95th percentile per-packet one-way delay: 64.744 ms
  Loss rate: 0.01%

-- Flow 2:
  Average throughput: 309.21 Mbit/s
  95th percentile per-packet one-way delay: 60.780 ms
  Loss rate: 0.00%

-- Flow 3:
  Average throughput: 293.95 Mbit/s
  95th percentile per-packet one-way delay: 59.361 ms
  Loss rate: 0.00%
Run 5: Report of Indigo-MusesD — Data Link

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

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

Flow 1 ingress (mean 394.44 Mbit/s)
Flow 1 egress (mean 394.40 Mbit/s)
Flow 2 ingress (mean 309.20 Mbit/s)
Flow 2 egress (mean 309.21 Mbit/s)
Flow 3 ingress (mean 293.94 Mbit/s)
Flow 3 egress (mean 293.95 Mbit/s)
Run 1: Statistics of Indigo-MusesT

Start at: 2019-02-12 17:06:57
End at: 2019-02-12 17:07:27
Local clock offset: 0.133 ms
Remote clock offset: -1.459 ms

# Below is generated by plot.py at 2019-02-12 22:51:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 819.16 Mbit/s
95th percentile per-packet one-way delay: 64.581 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 489.86 Mbit/s
95th percentile per-packet one-way delay: 68.345 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 387.33 Mbit/s
95th percentile per-packet one-way delay: 59.040 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 292.99 Mbit/s
95th percentile per-packet one-way delay: 58.442 ms
Loss rate: 0.17%
Run 1: Report of Indigo-MusesT — Data Link

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**Throughput vs Time**

- **Flow 1 ingress (mean 489.87 Mbit/s)**
- **Flow 1 egress (mean 489.86 Mbit/s)**
- **Flow 2 ingress (mean 387.39 Mbit/s)**
- **Flow 2 egress (mean 387.33 Mbit/s)**
- **Flow 3 ingress (mean 293.45 Mbit/s)**
- **Flow 3 egress (mean 292.99 Mbit/s)**

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

- **Flow 1 (95th percentile 68.34 ms)**
- **Flow 2 (95th percentile 59.04 ms)**
- **Flow 3 (95th percentile 58.44 ms)**

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Run 2: Statistics of Indigo-MusesT

Start at: 2019-02-12 17:48:38
End at: 2019-02-12 17:49:08
Local clock offset: -0.465 ms
Remote clock offset: 0.02 ms

# Below is generated by plot.py at 2019-02-12 22:52:08
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 783.33 Mbit/s
  95th percentile per-packet one-way delay: 65.181 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 466.44 Mbit/s
  95th percentile per-packet one-way delay: 64.437 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 374.37 Mbit/s
  95th percentile per-packet one-way delay: 73.413 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 283.20 Mbit/s
  95th percentile per-packet one-way delay: 59.960 ms
  Loss rate: 0.00%
Run 2: Report of Indigo-MusesT — Data Link
Run 3: Statistics of Indigo-MusesT

Start at: 2019-02-12 18:29:31
End at: 2019-02-12 18:30:01
Local clock offset: 0.01 ms
Remote clock offset: 0.517 ms

# Below is generated by plot.py at 2019-02-12 22:54:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 796.46 Mbit/s
95th percentile per-packet one-way delay: 66.881 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 467.81 Mbit/s
95th percentile per-packet one-way delay: 65.776 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 386.48 Mbit/s
95th percentile per-packet one-way delay: 70.222 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 266.73 Mbit/s
95th percentile per-packet one-way delay: 60.021 ms
Loss rate: 0.00%
Run 3: Report of Indigo-MusesT — Data Link

![Graph 1: Throughput over Time]

- **Flow 1 ingress** (mean 467.79 Mbit/s)
- **Flow 1 egress** (mean 467.81 Mbit/s)
- **Flow 2 ingress** (mean 386.50 Mbit/s)
- **Flow 2 egress** (mean 386.48 Mbit/s)
- **Flow 3 ingress** (mean 266.73 Mbit/s)
- **Flow 3 egress** (mean 266.73 Mbit/s)

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

- **Flow 1** (95th percentile 65.78 ms)
- **Flow 2** (95th percentile 70.22 ms)
- **Flow 3** (95th percentile 60.02 ms)
Run 4: Statistics of Indigo-MusesT

Start at: 2019-02-12 19:10:36  
End at: 2019-02-12 19:11:06  
Local clock offset: 0.207 ms  
Remote clock offset: -0.078 ms

# Below is generated by plot.py at 2019-02-12 22:55:21  
# Datalink statistics
-- Total of 3 flows:
Average throughput: 763.13 Mbit/s
95th percentile per-packet one-way delay: 61.516 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 451.63 Mbit/s
95th percentile per-packet one-way delay: 61.910 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 375.46 Mbit/s
95th percentile per-packet one-way delay: 61.629 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 270.10 Mbit/s
95th percentile per-packet one-way delay: 59.351 ms
Loss rate: 0.03%
Run 4: Report of Indigo-MusesT — Data Link

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

![Graph 2: Per-packet one-way delay vs Time](image2)
Run 5: Statistics of Indigo-MusesT

Start at: 2019-02-12 19:52:27
End at: 2019-02-12 19:52:57
Local clock offset: -0.255 ms
Remote clock offset: -0.806 ms

# Below is generated by plot.py at 2019-02-12 23:01:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 833.06 Mbit/s
95th percentile per-packet one-way delay: 66.708 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 497.34 Mbit/s
95th percentile per-packet one-way delay: 69.126 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 412.74 Mbit/s
95th percentile per-packet one-way delay: 62.381 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 265.00 Mbit/s
95th percentile per-packet one-way delay: 60.141 ms
Loss rate: 0.00%
Run 5: Report of Indigo-MusesT — Data Link

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

- Flow 1 ingress (mean 497.34 Mbps)
- Flow 1 egress (mean 497.34 Mbps)
- Flow 2 ingress (mean 412.89 Mbps)
- Flow 2 egress (mean 412.74 Mbps)
- Flow 3 ingress (mean 264.68 Mbps)
- Flow 3 egress (mean 265.00 Mbps)

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

- Flow 1 (95th percentile 69.13 ms)
- Flow 2 (95th percentile 62.38 ms)
- Flow 3 (95th percentile 60.14 ms)
Run 1: Statistics of LEDBAT

Start at: 2019-02-12 16:50:33
End at: 2019-02-12 16:51:03
Local clock offset: 0.479 ms
Remote clock offset: -0.736 ms

# Below is generated by plot.py at 2019-02-12 23:01:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 42.70 Mbit/s
95th percentile per-packet one-way delay: 59.627 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 28.30 Mbit/s
95th percentile per-packet one-way delay: 57.216 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 17.03 Mbit/s
95th percentile per-packet one-way delay: 60.003 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.41 Mbit/s
95th percentile per-packet one-way delay: 56.938 ms
Loss rate: 0.00%
Run 1: Report of LEDBAT — Data Link

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

Flow 1 ingress (mean 28.30 Mbit/s)  Flow 2 ingress (mean 17.03 Mbit/s)  Flow 3 ingress (mean 9.41 Mbit/s)

Flow 1 egress (mean 28.30 Mbit/s)  Flow 2 egress (mean 17.03 Mbit/s)  Flow 3 egress (mean 9.41 Mbit/s)

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

Flow 1 (95th percentile 57.22 ms)  Flow 2 (95th percentile 60.00 ms)  Flow 3 (95th percentile 56.94 ms)
Run 2: Statistics of LEDBAT

Start at: 2019-02-12 17:31:55
End at: 2019-02-12 17:32:25
Local clock offset: 0.019 ms
Remote clock offset: -1.391 ms

# Below is generated by plot.py at 2019-02-12 23:01:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 44.18 Mbit/s
95th percentile per-packet one-way delay: 56.662 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 28.44 Mbit/s
95th percentile per-packet one-way delay: 56.629 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 18.98 Mbit/s
95th percentile per-packet one-way delay: 56.787 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.39 Mbit/s
95th percentile per-packet one-way delay: 56.137 ms
Loss rate: 0.00%
Run 2: Report of LEDBAT — Data Link

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

![Graph 2: Per-Packet Round-Trip Delay over Time](image)
Run 3: Statistics of LEDBAT

Start at: 2019-02-12 18:13:29
End at: 2019-02-12 18:13:59
Local clock offset: 0.255 ms
Remote clock offset: -0.561 ms

# Below is generated by plot.py at 2019-02-12 23:01:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 42.64 Mbit/s
95th percentile per-packet one-way delay: 60.078 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 26.95 Mbit/s
95th percentile per-packet one-way delay: 60.258 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 18.95 Mbit/s
95th percentile per-packet one-way delay: 56.854 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.37 Mbit/s
95th percentile per-packet one-way delay: 57.145 ms
Loss rate: 0.00%
Run 3: Report of LEDBAT — Data Link

![Graph 1]

- Flow 1 ingress (mean 26.95 Mbit/s)
- Flow 1 egress (mean 26.95 Mbit/s)
- Flow 2 ingress (mean 18.95 Mbit/s)
- Flow 2 egress (mean 18.95 Mbit/s)
- Flow 3 ingress (mean 9.38 Mbit/s)
- Flow 3 egress (mean 9.37 Mbit/s)

![Graph 2]

- Flow 1 (95th percentile 60.26 ms)
- Flow 2 (95th percentile 56.85 ms)
- Flow 3 (95th percentile 57.15 ms)
Run 4: Statistics of LEDBAT

Start at: 2019-02-12 18:53:59
End at: 2019-02-12 18:54:29
Local clock offset: -0.458 ms
Remote clock offset: -0.005 ms

# Below is generated by plot.py at 2019-02-12 23:01:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 44.15 Mbit/s
  95th percentile per-packet one-way delay: 58.386 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 28.42 Mbit/s
  95th percentile per-packet one-way delay: 58.393 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 18.97 Mbit/s
  95th percentile per-packet one-way delay: 58.454 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 9.38 Mbit/s
  95th percentile per-packet one-way delay: 58.095 ms
  Loss rate: 0.00%
Run 4: Report of LEDBAT — Data Link

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

Run 5: Statistics of LEDBAT

Start at: 2019-02-12 19:35:33
End at: 2019-02-12 19:36:03
Local clock offset: 0.031 ms
Remote clock offset: -0.064 ms

# Below is generated by plot.py at 2019-02-12 23:01:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 42.82 Mbit/s
95th percentile per-packet one-way delay: 60.428 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 28.36 Mbit/s
95th percentile per-packet one-way delay: 58.105 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 17.10 Mbit/s
95th percentile per-packet one-way delay: 60.963 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 9.39 Mbit/s
95th percentile per-packet one-way delay: 57.400 ms
Loss rate: 0.00%
Run 5: Report of LEDBAT — Data Link
Run 1: Statistics of PCC-Allegro

Start at: 2019-02-12 17:09:11
End at: 2019-02-12 17:09:41
Local clock offset: 0.184 ms
Remote clock offset: -0.68 ms

# Below is generated by plot.py at 2019-02-12 23:23:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 713.32 Mbit/s
95th percentile per-packet one-way delay: 190.758 ms
Loss rate: 2.43%
-- Flow 1:
Average throughput: 444.05 Mbit/s
95th percentile per-packet one-way delay: 204.522 ms
Loss rate: 3.85%
-- Flow 2:
Average throughput: 282.00 Mbit/s
95th percentile per-packet one-way delay: 68.263 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 246.66 Mbit/s
95th percentile per-packet one-way delay: 104.075 ms
Loss rate: 0.00%
Run 1: Report of PCC-Allegro — Data Link
Run 2: Statistics of PCC-Allegro

Start at: 2019-02-12 17:50:44
End at: 2019-02-12 17:51:14
Local clock offset: -0.042 ms
Remote clock offset: -0.758 ms

# Below is generated by plot.py at 2019-02-12 23:23:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 564.27 Mbit/s
95th percentile per-packet one-way delay: 168.166 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 269.68 Mbit/s
95th percentile per-packet one-way delay: 181.803 ms
Loss rate: 1.61%
-- Flow 2:
Average throughput: 317.43 Mbit/s
95th percentile per-packet one-way delay: 82.817 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 253.82 Mbit/s
95th percentile per-packet one-way delay: 101.008 ms
Loss rate: 0.00%
Run 2: Report of PCC-Allegro — Data Link

![Graph showing throughput and per-packet one-way delay over time for different flows.](image-url)
Run 3: Statistics of PCC-Allegro

Start at: 2019-02-12 18:31:41
End at: 2019-02-12 18:32:11
Local clock offset: -0.227 ms
Remote clock offset: -0.831 ms

# Below is generated by plot.py at 2019-02-12 23:27:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 733.21 Mbit/s
95th percentile per-packet one-way delay: 176.352 ms
Loss rate: 3.80%
-- Flow 1:
Average throughput: 412.58 Mbit/s
95th percentile per-packet one-way delay: 175.159 ms
Loss rate: 4.09%
-- Flow 2:
Average throughput: 362.29 Mbit/s
95th percentile per-packet one-way delay: 178.587 ms
Loss rate: 4.47%
-- Flow 3:
Average throughput: 242.82 Mbit/s
95th percentile per-packet one-way delay: 142.048 ms
Loss rate: 0.08%
Run 3: Report of PCC-Allegro — Data Link
Run 4: Statistics of PCC-Allegro

Start at: 2019-02-12 19:12:50
End at: 2019-02-12 19:13:20
Local clock offset: -0.396 ms
Remote clock offset: -1.0 ms

# Below is generated by plot.py at 2019-02-12 23:29:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 754.01 Mbit/s
95th percentile per-packet one-way delay: 190.012 ms
Loss rate: 3.97%
-- Flow 1:
Average throughput: 455.85 Mbit/s
95th percentile per-packet one-way delay: 189.868 ms
Loss rate: 5.73%
-- Flow 2:
Average throughput: 326.08 Mbit/s
95th percentile per-packet one-way delay: 198.392 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 247.83 Mbit/s
95th percentile per-packet one-way delay: 142.542 ms
Loss rate: 0.36%
Run 4: Report of PCC-Allegro — Data Link

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

- Flow 1 ingress (mean 483.59 Mbps)
- Flow 1 egress (mean 455.85 Mbps)
- Flow 2 ingress (mean 330.81 Mbps)
- Flow 2 egress (mean 326.08 Mbps)
- Flow 3 ingress (mean 248.66 Mbps)
- Flow 3 egress (mean 247.83 Mbps)

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

- Flow 1 (95th percentile 189.97 ms)
- Flow 2 (95th percentile 198.39 ms)
- Flow 3 (95th percentile 142.54 ms)
Run 5: Statistics of PCC-Allegro

Start at: 2019-02-12 19:54:38
End at: 2019-02-12 19:55:08
Local clock offset: 0.088 ms
Remote clock offset: -1.39 ms

# Below is generated by plot.py at 2019-02-12 23:29:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 740.52 Mbit/s
95th percentile per-packet one-way delay: 172.788 ms
Loss rate: 2.25%
-- Flow 1:
Average throughput: 426.39 Mbit/s
95th percentile per-packet one-way delay: 171.441 ms
Loss rate: 1.45%
-- Flow 2:
Average throughput: 292.63 Mbit/s
95th percentile per-packet one-way delay: 83.917 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 364.50 Mbit/s
95th percentile per-packet one-way delay: 186.165 ms
Loss rate: 8.22%
Run 5: Report of PCC-Allegro — Data Link

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**Throughput (Mbps)**

- **Flow 1 ingress (mean 432.66 Mbps)**
- **Flow 1 egress (mean 426.39 Mbps)**
- **Flow 2 ingress (mean 292.87 Mbps)**
- **Flow 2 egress (mean 292.83 Mbps)**
- **Flow 3 ingress (mean 396.80 Mbps)**
- **Flow 3 egress (mean 364.50 Mbps)**

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

- **Flow 1 (95th percentile 171.44 ms)**
- **Flow 2 (95th percentile 83.92 ms)**
- **Flow 3 (95th percentile 186.16 ms)**

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Run 1: Statistics of PCC-Expr

Start at: 2019-02-12 17:11:47  
End at: 2019-02-12 17:12:17  
Local clock offset: 0.562 ms  
Remote clock offset: -0.104 ms

# Below is generated by plot.py at 2019-02-12 23:29:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 511.90 Mbit/s  
95th percentile per-packet one-way delay: 151.440 ms  
Loss rate: 1.43%  
-- Flow 1:  
Average throughput: 283.06 Mbit/s  
95th percentile per-packet one-way delay: 150.043 ms  
Loss rate: 0.53%  
-- Flow 2:  
Average throughput: 263.59 Mbit/s  
95th percentile per-packet one-way delay: 191.669 ms  
Loss rate: 3.20%  
-- Flow 3:  
Average throughput: 159.44 Mbit/s  
95th percentile per-packet one-way delay: 109.931 ms  
Loss rate: 0.24%
Run 2: Statistics of PCC-Expr

Start at: 2019-02-12 17:52:54
End at: 2019-02-12 17:53:24
Local clock offset: 0.122 ms
Remote clock offset: -0.584 ms

# Below is generated by plot.py at 2019-02-12 23:29:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 503.41 Mbit/s
  95th percentile per-packet one-way delay: 126.415 ms
  Loss rate: 0.54%
-- Flow 1:
  Average throughput: 289.48 Mbit/s
  95th percentile per-packet one-way delay: 124.371 ms
  Loss rate: 0.20%
-- Flow 2:
  Average throughput: 271.47 Mbit/s
  95th percentile per-packet one-way delay: 165.593 ms
  Loss rate: 1.19%
-- Flow 3:
  Average throughput: 101.65 Mbit/s
  95th percentile per-packet one-way delay: 57.053 ms
  Loss rate: 0.00%
Run 2: Report of PCC-Expr — Data Link

Throughput (Mbps):

- Flow 1 ingress (mean 290.04 Mbps)
- Flow 1 egress (mean 289.48 Mbps)
- Flow 2 ingress (mean 274.63 Mbps)
- Flow 2 egress (mean 271.47 Mbps)
- Flow 3 ingress (mean 101.60 Mbps)
- Flow 3 egress (mean 101.65 Mbps)

Delay (ms):

- Flow 1 (95th percentile 124.37 ms)
- Flow 2 (95th percentile 165.59 ms)
- Flow 3 (95th percentile 57.05 ms)
Run 3: Statistics of PCC-Expr

Start at: 2019-02-12 18:33:57
End at: 2019-02-12 18:34:27
Local clock offset: -0.2 ms
Remote clock offset: 1.056 ms

# Below is generated by plot.py at 2019-02-12 23:30:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 546.07 Mbit/s
95th percentile per-packet one-way delay: 156.422 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 300.75 Mbit/s
95th percentile per-packet one-way delay: 136.487 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 278.91 Mbit/s
95th percentile per-packet one-way delay: 167.355 ms
Loss rate: 1.50%
-- Flow 3:
Average throughput: 181.52 Mbit/s
95th percentile per-packet one-way delay: 106.679 ms
Loss rate: 0.00%
Run 3: Report of PCC-Expr — Data Link
Run 4: Statistics of PCC-Expr

Start at: 2019-02-12 19:15:14
End at: 2019-02-12 19:15:44
Local clock offset: 0.174 ms
Remote clock offset: 0.496 ms

# Below is generated by plot.py at 2019-02-12 23:41:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 544.63 Mbit/s
95th percentile per-packet one-way delay: 160.529 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 300.84 Mbit/s
95th percentile per-packet one-way delay: 171.420 ms
Loss rate: 1.24%
-- Flow 2:
Average throughput: 273.81 Mbit/s
95th percentile per-packet one-way delay: 145.392 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 187.27 Mbit/s
95th percentile per-packet one-way delay: 64.581 ms
Loss rate: 0.07%
Run 4: Report of PCC-Expr — Data Link
Run 5: Statistics of PCC-Expr

Start at: 2019-02-12 19:57:04
End at: 2019-02-12 19:57:34
Local clock offset: -0.321 ms
Remote clock offset: 1.277 ms

# Below is generated by plot.py at 2019-02-12 23:46:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 565.32 Mbit/s
95th percentile per-packet one-way delay: 116.176 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 299.43 Mbit/s
95th percentile per-packet one-way delay: 79.838 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 305.38 Mbit/s
95th percentile per-packet one-way delay: 139.917 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 190.95 Mbit/s
95th percentile per-packet one-way delay: 67.101 ms
Loss rate: 0.11%
Run 5: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 299.72 Mbit/s)
- Flow 1 egress (mean 299.43 Mbit/s)
- Flow 2 ingress (mean 306.23 Mbit/s)
- Flow 2 egress (mean 305.38 Mbit/s)
- Flow 3 ingress (mean 190.07 Mbit/s)
- Flow 3 egress (mean 190.05 Mbit/s)

Flow 1 (95th percentile 79.84 ms)  Flow 2 (95th percentile 139.92 ms)  Flow 3 (95th percentile 67.10 ms)
Run 1: Statistics of QUIC Cubic

Start at: 2019-02-12 17:01:13
End at: 2019-02-12 17:01:43
Local clock offset: 0.549 ms
Remote clock offset: -1.572 ms

# Below is generated by plot.py at 2019-02-12 23:46:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 59.64 Mbit/s
  95th percentile per-packet one-way delay: 58.577 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 0.01 Mbit/s
  95th percentile per-packet one-way delay: 55.449 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 60.84 Mbit/s
  95th percentile per-packet one-way delay: 55.275 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 59.89 Mbit/s
  95th percentile per-packet one-way delay: 58.654 ms
  Loss rate: 0.04%
Run 1: Report of QUIC Cubic — Data Link

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

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

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Run 2: Statistics of QUIC Cubic

Start at: 2019-02-12 17:43:05
End at: 2019-02-12 17:43:35
Local clock offset: 0.156 ms
Remote clock offset: 0.502 ms

# Below is generated by plot.py at 2019-02-12 23:46:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.57 Mbit/s
95th percentile per-packet one-way delay: 61.042 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 43.32 Mbit/s
95th percentile per-packet one-way delay: 61.082 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 48.96 Mbit/s
95th percentile per-packet one-way delay: 60.835 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 63.32 Mbit/s
95th percentile per-packet one-way delay: 60.759 ms
Loss rate: 0.00%
Run 2: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 43.32 Mbit/s)
- Flow 1 egress (mean 43.32 Mbit/s)
- Flow 2 ingress (mean 48.97 Mbit/s)
- Flow 2 egress (mean 48.96 Mbit/s)
- Flow 3 ingress (mean 63.32 Mbit/s)
- Flow 3 egress (mean 63.32 Mbit/s)
Run 3: Statistics of QUIC Cubic

Start at: 2019-02-12 18:23:59
End at: 2019-02-12 18:24:29
Local clock offset: -0.221 ms
Remote clock offset: 0.529 ms

# Below is generated by plot.py at 2019-02-12 23:46:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.78 Mbit/s
95th percentile per-packet one-way delay: 61.249 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 43.45 Mbit/s
95th percentile per-packet one-way delay: 60.735 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 42.80 Mbit/s
95th percentile per-packet one-way delay: 61.319 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 33.67 Mbit/s
95th percentile per-packet one-way delay: 61.145 ms
Loss rate: 0.00%
Run 3: Report of QUIC Cubic — Data Link

![Graph showing throughput and packet delay over time for different flow ingress and egress rates.]

- Flow 1 ingress (mean 43.45 Mbit/s)
- Flow 1 egress (mean 43.45 Mbit/s)
- Flow 2 ingress (mean 42.81 Mbit/s)
- Flow 2 egress (mean 42.80 Mbit/s)
- Flow 3 ingress (mean 33.67 Mbit/s)
- Flow 3 egress (mean 33.67 Mbit/s)

![Graph showing packet delay distribution over time for different flow rates.]

- Flow 1 (95th percentile 60.73 ms)
- Flow 2 (95th percentile 61.32 ms)
- Flow 3 (95th percentile 61.15 ms)
Run 4: Statistics of QUIC Cubic

Start at: 2019-02-12 19:04:58
End at: 2019-02-12 19:05:28
Local clock offset: -0.196 ms
Remote clock offset: -0.427 ms

# Below is generated by plot.py at 2019-02-12 23:46:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.16 Mbit/s
95th percentile per-packet one-way delay: 60.312 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 46.54 Mbit/s
95th percentile per-packet one-way delay: 56.895 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 46.17 Mbit/s
95th percentile per-packet one-way delay: 60.368 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 21.26 Mbit/s
95th percentile per-packet one-way delay: 56.537 ms
Loss rate: 0.00%
Run 4: Report of QUIC Cubic — Data Link

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

- Flow 1 (mean 46.54 Mbit/s)
- Flow 2 (mean 46.17 Mbit/s)
- Flow 3 (mean 21.26 Mbit/s)
Run 5: Statistics of QUIC Cubic

Start at: 2019-02-12 19:46:58
End at: 2019-02-12 19:47:28
Local clock offset: -0.25 ms
Remote clock offset: -0.252 ms

# Below is generated by plot.py at 2019-02-12 23:46:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 101.12 Mbit/s
  95th percentile per-packet one-way delay: 57.056 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 50.46 Mbit/s
  95th percentile per-packet one-way delay: 57.054 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 57.33 Mbit/s
  95th percentile per-packet one-way delay: 56.923 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 38.55 Mbit/s
  95th percentile per-packet one-way delay: 57.145 ms
  Loss rate: 0.00%
Run 5: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 50.46 Mbps)
- Flow 1 egress (mean 50.46 Mbps)
- Flow 2 ingress (mean 57.33 Mbps)
- Flow 2 egress (mean 57.33 Mbps)
- Flow 3 ingress (mean 38.55 Mbps)
- Flow 3 egress (mean 38.55 Mbps)

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

- Flow 1 (95th percentile 57.05 ms)
- Flow 2 (95th percentile 56.92 ms)
- Flow 3 (95th percentile 57.15 ms)
Run 1: Statistics of SCReAM

Start at: 2019-02-12 17:24:05
End at: 2019-02-12 17:24:35
Local clock offset: 0.179 ms
Remote clock offset: -0.649 ms

# Below is generated by plot.py at 2019-02-12 23:46:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 59.942 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.037 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.988 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 56.782 ms
Loss rate: 0.00%
Run 1: Report of SCReAM — Data Link

[Graph showing throughput over time]

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

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Run 2: Statistics of SCReAM

Start at: 2019-02-12 18:05:34
End at: 2019-02-12 18:06:04
Local clock offset: -0.371 ms
Remote clock offset: 0.05 ms

# Below is generated by plot.py at 2019-02-12 23:46:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 60.881 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.880 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.742 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.971 ms
Loss rate: 0.35%
Run 2: Report of SCReAM — Data Link
Run 3: Statistics of SCReAM

Start at: 2019-02-12 18:46:02
End at: 2019-02-12 18:46:32
Local clock offset: -0.576 ms
Remote clock offset: -0.76 ms

# Below is generated by plot.py at 2019-02-12 23:46:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 60.180 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 56.706 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.297 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.263 ms
Loss rate: 0.00%
Run 3: Report of SCReAM — Data Link

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

- 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)

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

- Flow 1 (95th percentile 56.71 ms)
- Flow 2 (95th percentile 57.30 ms)
- Flow 3 (95th percentile 60.26 ms)
Run 4: Statistics of SCReAM

Start at: 2019-02-12 19:27:58
End at: 2019-02-12 19:28:28
Local clock offset: 0.045 ms
Remote clock offset: 0.355 ms

# Below is generated by plot.py at 2019-02-12 23:46:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 57.473 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.508 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.426 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.321 ms
Loss rate: 0.00%
Run 5: Statistics of SCReAM

Start at: 2019-02-12 20:09:00
End at: 2019-02-12 20:09:30
Local clock offset: -0.248 ms
Remote clock offset: 0.498 ms

# Below is generated by plot.py at 2019-02-12 23:46:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 57.928 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.962 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.684 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.669 ms
Loss rate: 0.00%
Run 5: Report of SCReAM — Data Link

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

- Throughput: The graph shows the throughput in Mbps for each flow over time. The y-axis represents throughput in Mbps, and the x-axis represents time in seconds. The throughput fluctuates over time, with different colors representing different flows.
- Delay: The lower graph displays the packet delay in ms for each flow. The x-axis represents time in seconds, and the y-axis represents delay in ms. The delay is represented by different colors and markers, indicating the 95th percentile values for each flow.
Run 1: Statistics of Sprout

Start at: 2019-02-12 16:53:29
End at: 2019-02-12 16:53:59
Local clock offset: -0.282 ms
Remote clock offset: -0.747 ms

# Below is generated by plot.py at 2019-02-12 23:46:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.13 Mbit/s
95th percentile per-packet one-way delay: 57.527 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.00 Mbit/s
95th percentile per-packet one-way delay: 57.463 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.50 Mbit/s
95th percentile per-packet one-way delay: 57.587 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.33 Mbit/s
95th percentile per-packet one-way delay: 57.469 ms
Loss rate: 0.00%
Run 1: Report of Sprout — Data Link

**Graph 1:**
- **Throughput:**
  - Flow 1 ingress (mean 7.00 Mbit/s)
  - Flow 1 egress (mean 7.00 Mbit/s)
  - Flow 2 ingress (mean 7.50 Mbit/s)
  - Flow 2 egress (mean 7.50 Mbit/s)
  - Flow 3 ingress (mean 6.33 Mbit/s)
  - Flow 3 egress (mean 6.33 Mbit/s)

**Graph 2:**
- **Per-packet round-trip delay (ms):**
  - Flow 1 (95th percentile 57.46 ms)
  - Flow 2 (95th percentile 57.59 ms)
  - Flow 3 (95th percentile 57.47 ms)
Run 2: Statistics of Sprout

Start at: 2019-02-12 17:35:14
End at: 2019-02-12 17:35:44
Local clock offset: -0.252 ms
Remote clock offset: -1.444 ms

# Below is generated by plot.py at 2019-02-12 23:46:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.77 Mbit/s
95th percentile per-packet one-way delay: 59.887 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.06 Mbit/s
95th percentile per-packet one-way delay: 57.098 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.89 Mbit/s
95th percentile per-packet one-way delay: 60.028 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.50 Mbit/s
95th percentile per-packet one-way delay: 59.765 ms
Loss rate: 0.00%
Run 2: Report of Sprout — Data Link

![Graph of data link throughput and delay over time for different flows.](image-url)
Run 3: Statistics of Sprout

Start at: 2019-02-12 18:16:41
End at: 2019-02-12 18:17:11
Local clock offset: -0.152 ms
Remote clock offset: 1.191 ms

# Below is generated by plot.py at 2019-02-12 23:46:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.99 Mbit/s
95th percentile per-packet one-way delay: 58.932 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.61 Mbit/s
95th percentile per-packet one-way delay: 58.985 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.58 Mbit/s
95th percentile per-packet one-way delay: 58.828 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.12 Mbit/s
95th percentile per-packet one-way delay: 58.849 ms
Loss rate: 0.00%
Run 3: Report of Sprout — Data Link
Run 4: Statistics of Sprout

Start at: 2019-02-12 18:57:15
End at: 2019-02-12 18:57:45
Local clock offset: -0.408 ms
Remote clock offset: 0.766 ms

# Below is generated by plot.py at 2019-02-12 23:46:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 14.45 Mbit/s
  95th percentile per-packet one-way delay: 61.983 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 7.87 Mbit/s
  95th percentile per-packet one-way delay: 58.588 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 6.59 Mbit/s
  95th percentile per-packet one-way delay: 61.546 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 6.66 Mbit/s
  95th percentile per-packet one-way delay: 62.299 ms
  Loss rate: 0.00%
Run 4: Report of Sprout — Data Link

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

- **Throughput (Mbps)**: Graph showing the throughput over time for flow 1 (dashed blue line), flow 2 (dotted green line), and flow 3 (solid red line).
- **Delay (ms)**: Graph showing the packet delay over time for flow 1 (blue line), flow 2 (green line), and flow 3 (red line).
Run 5: Statistics of Sprout

Start at: 2019-02-12 19:39:07
End at: 2019-02-12 19:39:37
Local clock offset: -0.213 ms
Remote clock offset: -0.052 ms

# Below is generated by plot.py at 2019-02-12 23:46:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.52 Mbit/s
95th percentile per-packet one-way delay: 61.194 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.64 Mbit/s
95th percentile per-packet one-way delay: 57.466 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.00 Mbit/s
95th percentile per-packet one-way delay: 61.323 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.71 Mbit/s
95th percentile per-packet one-way delay: 61.248 ms
Loss rate: 0.00%
Run 5: Report of Sprout — Data Link

[Graph showing throughput and packet delay over time with labels for each flow's ingress and egress data.]
Run 1: Statistics of TaoVA-100x

Start at: 2019-02-12 16:54:43
End at: 2019-02-12 16:55:13
Local clock offset: 0.28 ms
Remote clock offset: -1.398 ms

# Below is generated by plot.py at 2019-02-12 23:50:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 438.62 Mbit/s
95th percentile per-packet one-way delay: 57.396 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 224.62 Mbit/s
95th percentile per-packet one-way delay: 57.146 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 216.98 Mbit/s
95th percentile per-packet one-way delay: 56.587 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 208.20 Mbit/s
95th percentile per-packet one-way delay: 60.433 ms
Loss rate: 0.00%
Run 1: Report of TaoVA-100x — Data Link
Run 2: Statistics of TaoVA-100x

Start at: 2019-02-12 17:36:27
End at: 2019-02-12 17:36:57
Local clock offset: 0.267 ms
Remote clock offset: -0.739 ms

# Below is generated by plot.py at 2019-02-12 23:51:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 452.69 Mbit/s
  95th percentile per-packet one-way delay: 57.414 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 231.71 Mbit/s
  95th percentile per-packet one-way delay: 57.099 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 220.65 Mbit/s
  95th percentile per-packet one-way delay: 57.885 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 223.10 Mbit/s
  95th percentile per-packet one-way delay: 57.628 ms
  Loss rate: 0.00%
Run 2: Report of TaoVA-100x — Data Link
Run 3: Statistics of TaoVA-100x

Start at: 2019-02-12 18:17:55
End at: 2019-02-12 18:18:25
Local clock offset: -0.189 ms
Remote clock offset: -0.073 ms

# Below is generated by plot.py at 2019-02-12 23:51:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 447.79 Mbit/s
  95th percentile per-packet one-way delay: 60.720 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 223.52 Mbit/s
  95th percentile per-packet one-way delay: 60.926 ms
  Loss rate: 0.02%
-- Flow 2:
  Average throughput: 226.50 Mbit/s
  95th percentile per-packet one-way delay: 57.769 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 221.00 Mbit/s
  95th percentile per-packet one-way delay: 57.855 ms
  Loss rate: 0.00%
Run 3: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 223.54 Mbit/s)
- Flow 1 egress (mean 223.52 Mbit/s)
- Flow 2 ingress (mean 226.50 Mbit/s)
- Flow 2 egress (mean 226.50 Mbit/s)
- Flow 3 ingress (mean 220.99 Mbit/s)
- Flow 3 egress (mean 221.00 Mbit/s)

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

- Flow 1 (95th percentile 60.93 ms)
- Flow 2 (95th percentile 57.77 ms)
- Flow 3 (95th percentile 57.85 ms)
Run 4: Statistics of TaoVA-100x

Start at: 2019-02-12 18:58:29
End at: 2019-02-12 18:58:59
Local clock offset: -0.205 ms
Remote clock offset: 0.425 ms

# Below is generated by plot.py at 2019-02-12 23:52:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 454.51 Mbit/s
  95th percentile per-packet one-way delay: 61.412 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 227.86 Mbit/s
  95th percentile per-packet one-way delay: 58.028 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 229.06 Mbit/s
  95th percentile per-packet one-way delay: 58.523 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 223.17 Mbit/s
  95th percentile per-packet one-way delay: 62.252 ms
  Loss rate: 0.04%
Run 4: Report of TaoVA-100x — Data Link

Throughput (Mb/s)

Time (s)

Flow 1 ingress (mean 227.86 Mb/s)
Flow 1 egress (mean 227.86 Mb/s)
Flow 2 ingress (mean 229.06 Mb/s)
Flow 2 egress (mean 229.06 Mb/s)
Flow 3 ingress (mean 223.20 Mb/s)
Flow 3 egress (mean 223.17 Mb/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 58.03 ms)
Flow 2 (95th percentile 58.52 ms)
Flow 3 (95th percentile 62.25 ms)
Run 5: Statistics of TaoVA-100x

Start at: 2019-02-12 19:40:22
End at: 2019-02-12 19:40:52
Local clock offset: -0.051 ms
Remote clock offset: 0.23 ms

# Below is generated by plot.py at 2019-02-12 23:52:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 459.24 Mbit/s
95th percentile per-packet one-way delay: 58.042 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 234.48 Mbit/s
95th percentile per-packet one-way delay: 57.909 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 234.06 Mbit/s
95th percentile per-packet one-way delay: 57.869 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 207.96 Mbit/s
95th percentile per-packet one-way delay: 58.805 ms
Loss rate: 0.00%
Run 5: Report of TaoVA-100x — Data Link
Run 1: Statistics of TCP Vegas

Start at: 2019-02-12 16:59:11
End at: 2019-02-12 16:59:41
Local clock offset: -0.316 ms
Remote clock offset: -1.122 ms

# Below is generated by plot.py at 2019-02-12 23:52:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 778.09 Mbit/s
  95th percentile per-packet one-way delay: 63.710 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 428.80 Mbit/s
  95th percentile per-packet one-way delay: 59.979 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 374.17 Mbit/s
  95th percentile per-packet one-way delay: 58.029 ms
  Loss rate: 0.01%
-- Flow 3:
  Average throughput: 300.06 Mbit/s
  95th percentile per-packet one-way delay: 91.829 ms
  Loss rate: 0.00%
Run 1: Report of TCP Vegas — Data Link
Run 2: Statistics of TCP Vegas

Start at: 2019-02-12 17:40:55
End at: 2019-02-12 17:41:25
Local clock offset: -0.38 ms
Remote clock offset: -0.116 ms

# Below is generated by plot.py at 2019-02-13 00:07:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 903.77 Mbit/s
  95th percentile per-packet one-way delay: 73.759 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 466.72 Mbit/s
  95th percentile per-packet one-way delay: 71.246 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 453.23 Mbit/s
  95th percentile per-packet one-way delay: 76.339 ms
  Loss rate: 0.04%
-- Flow 3:
  Average throughput: 406.66 Mbit/s
  95th percentile per-packet one-way delay: 72.312 ms
  Loss rate: 0.00%
Run 2: Report of TCP Vegas — Data Link

Throughput (Mbit/s)

Time (s)

- Flow 1 ingress (mean 466.78 Mbit/s)
- Flow 1 egress (mean 466.72 Mbit/s)
- Flow 2 ingress (mean 453.33 Mbit/s)
- Flow 2 egress (mean 453.23 Mbit/s)
- Flow 3 ingress (mean 406.68 Mbit/s)
- Flow 3 egress (mean 406.66 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

- Flow 1 (95th percentile 71.25 ms)
- Flow 2 (95th percentile 76.34 ms)
- Flow 3 (95th percentile 72.31 ms)
Run 3: Statistics of TCP Vegas

Start at: 2019-02-12 18:22:01
End at: 2019-02-12 18:22:31
Local clock offset: 0.052 ms
Remote clock offset: -0.087 ms

# Below is generated by plot.py at 2019-02-13 00:07:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 715.48 Mbit/s
95th percentile per-packet one-way delay: 63.820 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 247.83 Mbit/s
95th percentile per-packet one-way delay: 56.892 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 492.66 Mbit/s
95th percentile per-packet one-way delay: 62.723 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 419.63 Mbit/s
95th percentile per-packet one-way delay: 70.141 ms
Loss rate: 0.14%
Run 3: Report of TCP Vegas — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 Ingress (mean 247.83 Mbps)
  - Flow 1 Egress (mean 247.83 Mbps)
  - Flow 2 Ingress (mean 492.78 Mbps)
  - Flow 2 Egress (mean 492.66 Mbps)
  - Flow 3 Ingress (mean 420.24 Mbps)
  - Flow 3 Egress (mean 419.63 Mbps)

- **Packet Delay (ms):**
  - Flow 1 (95th percentile 56.89 ms)
  - Flow 2 (95th percentile 62.72 ms)
  - Flow 3 (95th percentile 70.14 ms)
Run 4: Statistics of TCP Vegas

Start at: 2019-02-12 19:02:48
End at: 2019-02-12 19:03:18
Local clock offset: -0.199 ms
Remote clock offset: -0.754 ms

# Below is generated by plot.py at 2019-02-13 00:13:26
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 876.49 Mbit/s
 95th percentile per-packet one-way delay: 77.128 ms
 Loss rate: 0.00%
-- Flow 1:
 Average throughput: 399.68 Mbit/s
 95th percentile per-packet one-way delay: 57.882 ms
 Loss rate: 0.00%
-- Flow 2:
 Average throughput: 507.03 Mbit/s
 95th percentile per-packet one-way delay: 81.667 ms
 Loss rate: 0.00%
-- Flow 3:
 Average throughput: 418.78 Mbit/s
 95th percentile per-packet one-way delay: 83.141 ms
 Loss rate: 0.02%
Run 4: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 399.68 Mbit/s)
- Flow 1 egress (mean 399.68 Mbit/s)
- Flow 2 ingress (mean 507.03 Mbit/s)
- Flow 2 egress (mean 507.03 Mbit/s)
- Flow 3 ingress (mean 418.72 Mbit/s)
- Flow 3 egress (mean 418.78 Mbit/s)

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

- Flow 1 (95th percentile 57.88 ms)
- Flow 2 (95th percentile 81.67 ms)
- Flow 3 (95th percentile 83.14 ms)
Run 5: Statistics of TCP Vegas

Start at: 2019-02-12 19:44:40  
End at: 2019-02-12 19:45:10  
Local clock offset: 0.043 ms  
Remote clock offset: -0.685 ms

# Below is generated by plot.py at 2019-02-13 00:15:49  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 949.17 Mbit/s  
95th percentile per-packet one-way delay: 119.030 ms  
Loss rate: 0.03%  
-- Flow 1:  
Average throughput: 461.09 Mbit/s  
95th percentile per-packet one-way delay: 78.711 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 512.63 Mbit/s  
95th percentile per-packet one-way delay: 130.807 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 442.16 Mbit/s  
95th percentile per-packet one-way delay: 94.398 ms  
Loss rate: 0.01%

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Run 5: Report of TCP Vegas — Data Link
Run 1: Statistics of Verus

Start at: 2019-02-12 17:30:09
End at: 2019-02-12 17:30:39
Local clock offset: 0.093 ms
Remote clock offset: -0.206 ms

# Below is generated by plot.py at 2019-02-13 00:15:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 219.28 Mbit/s
95th percentile per-packet one-way delay: 225.520 ms
Loss rate: 3.19%
-- Flow 1:
Average throughput: 131.99 Mbit/s
95th percentile per-packet one-way delay: 247.461 ms
Loss rate: 4.53%
-- Flow 2:
Average throughput: 100.55 Mbit/s
95th percentile per-packet one-way delay: 200.160 ms
Loss rate: 1.47%
-- Flow 3:
Average throughput: 64.66 Mbit/s
95th percentile per-packet one-way delay: 66.174 ms
Loss rate: 0.00%
Run 1: Report of Verus — Data Link

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**Throughput (Mbps)**

- **Flow 1 ingress** (mean 138.79 Mbps)
- **Flow 2 ingress** (mean 102.05 Mbps)
- **Flow 3 ingress** (mean 64.66 Mbps)
- **Flow 1 egress** (mean 131.99 Mbps)
- **Flow 2 egress** (mean 100.55 Mbps)
- **Flow 3 egress** (mean 64.66 Mbps)

**Throughput** vs **Time (s)**

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

- **Flow 1 (95th percentile 247.46 ms)**
- **Flow 2 (95th percentile 200.16 ms)**
- **Flow 3 (95th percentile 66.17 ms)**

**Delay** vs **Time (s)**
Run 2: Statistics of Verus

Start at: 2019-02-12 18:11:47
End at: 2019-02-12 18:12:17
Local clock offset: 0.258 ms
Remote clock offset: -0.189 ms

# Below is generated by plot.py at 2019-02-13 00:15:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 232.98 Mbit/s
95th percentile per-packet one-way delay: 109.766 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 120.99 Mbit/s
95th percentile per-packet one-way delay: 91.565 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 143.06 Mbit/s
95th percentile per-packet one-way delay: 122.763 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 52.81 Mbit/s
95th percentile per-packet one-way delay: 106.912 ms
Loss rate: 0.00%
Run 2: Report of Verus — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 121.12 Mbps)
- Flow 1 egress (mean 120.99 Mbps)
- Flow 2 ingress (mean 143.14 Mbps)
- Flow 2 egress (mean 143.06 Mbps)
- Flow 3 ingress (mean 53.10 Mbps)
- Flow 3 egress (mean 52.81 Mbps)

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

- Flow 1 (95th percentile 91.56 ms)
- Flow 2 (95th percentile 122.76 ms)
- Flow 3 (95th percentile 106.91 ms)
Run 3: Statistics of Verus

Start at: 2019-02-12 18:52:12
End at: 2019-02-12 18:52:42
Local clock offset: -0.211 ms
Remote clock offset: 1.281 ms

# Below is generated by plot.py at 2019-02-13 00:15:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 265.10 Mbit/s
95th percentile per-packet one-way delay: 128.362 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 186.87 Mbit/s
95th percentile per-packet one-way delay: 131.893 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 94.88 Mbit/s
95th percentile per-packet one-way delay: 101.633 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 46.88 Mbit/s
95th percentile per-packet one-way delay: 93.540 ms
Loss rate: 0.00%
Run 3: Report of Verus — Data Link

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

- Flow 1 ingress (mean 187.36 Mbit/s)
- Flow 1 egress (mean 186.67 Mbit/s)
- Flow 2 ingress (mean 94.98 Mbit/s)
- Flow 2 egress (mean 94.98 Mbit/s)
- Flow 3 ingress (mean 46.68 Mbit/s)
- Flow 3 egress (mean 46.68 Mbit/s)

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

- Flow 1 (95th percentile 131.89 ms)
- Flow 2 (95th percentile 101.63 ms)
- Flow 3 (95th percentile 93.54 ms)
Run 4: Statistics of Verus

Start at: 2019-02-12 19:33:50
End at: 2019-02-12 19:34:20
Local clock offset: -0.271 ms
Remote clock offset: -0.333 ms

# Below is generated by plot.py at 2019-02-13 00:15:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 222.18 Mbit/s
  95th percentile per-packet one-way delay: 101.404 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 134.70 Mbit/s
  95th percentile per-packet one-way delay: 108.859 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 92.54 Mbit/s
  95th percentile per-packet one-way delay: 65.636 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 79.81 Mbit/s
  95th percentile per-packet one-way delay: 61.963 ms
  Loss rate: 0.00%
Run 4: Report of Verus — Data Link

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**Throughput (Mbps)**

- Flow 1 ingress (mean 134.70 Mbps)
- Flow 1 egress (mean 134.70 Mbps)
- Flow 2 ingress (mean 92.54 Mbps)
- Flow 2 egress (mean 92.54 Mbps)
- Flow 3 ingress (mean 79.83 Mbps)
- Flow 3 egress (mean 79.81 Mbps)

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**Packet Delay (ms)**

- Flow 1 (95th percentile 108.86 ms)
- Flow 2 (95th percentile 65.64 ms)
- Flow 3 (95th percentile 61.96 ms)
Run 5: Statistics of Verus

Start at: 2019-02-12 20:14:46
End at: 2019-02-12 20:15:16
Local clock offset: -0.638 ms
Remote clock offset: -0.212 ms

# Below is generated by plot.py at 2019-02-13 00:15:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 250.36 Mbit/s
95th percentile per-packet one-way delay: 217.953 ms
Loss rate: 1.95%
-- Flow 1:
Average throughput: 147.99 Mbit/s
95th percentile per-packet one-way delay: 134.440 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 76.32 Mbit/s
95th percentile per-packet one-way delay: 62.808 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 158.22 Mbit/s
95th percentile per-packet one-way delay: 248.903 ms
Loss rate: 8.72%
Run 5: Report of Verus — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 148.02 Mbps)
  - Flow 1 egress (mean 147.99 Mbps)
  - Flow 2 ingress (mean 76.34 Mbps)
  - Flow 2 egress (mean 76.32 Mbps)
  - Flow 3 ingress (mean 173.34 Mbps)
  - Flow 3 egress (mean 158.22 Mbps)

- **One-way delay (ms):**
  - Flow 1 (95th percentile 134.44 ms)
  - Flow 2 (95th percentile 62.81 ms)
  - Flow 3 (95th percentile 248.90 ms)
Run 1: Statistics of PCC-Vivace

Start at: 2019-02-12 17:04:42
End at: 2019-02-12 17:05:12
Local clock offset: 0.147 ms
Remote clock offset: -1.556 ms

# Below is generated by plot.py at 2019-02-13 00:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 560.64 Mbit/s
95th percentile per-packet one-way delay: 64.439 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 332.28 Mbit/s
95th percentile per-packet one-way delay: 59.133 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 250.20 Mbit/s
95th percentile per-packet one-way delay: 97.265 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 186.31 Mbit/s
95th percentile per-packet one-way delay: 58.538 ms
Loss rate: 0.00%
Run 1: Report of PCC-Vivace — Data Link

[Graph 1: Throughput vs. Time] (Legend: Flow 1 ingress (mean 332.29 Mbit/s), Flow 1 egress (mean 332.28 Mbit/s), Flow 2 ingress (mean 250.19 Mbit/s), Flow 2 egress (mean 250.20 Mbit/s), Flow 3 ingress (mean 186.31 Mbit/s), Flow 3 egress (mean 186.31 Mbit/s))

[Graph 2: Packet size vs. Time] (Legend: Flow 1 (95th percentile 59.13 ms), Flow 2 (95th percentile 97.27 ms), Flow 3 (95th percentile 58.54 ms))
Run 2: Statistics of PCC-Vivace

Start at: 2019-02-12 17:46:28
End at: 2019-02-12 17:46:58
Local clock offset: 0.006 ms
Remote clock offset: 0.371 ms

# Below is generated by plot.py at 2019-02-13 00:17:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 535.90 Mbit/s
95th percentile per-packet one-way delay: 64.194 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 321.57 Mbit/s
95th percentile per-packet one-way delay: 63.372 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 270.18 Mbit/s
95th percentile per-packet one-way delay: 121.908 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 105.08 Mbit/s
95th percentile per-packet one-way delay: 58.152 ms
Loss rate: 0.00%
Run 2: Report of PCC-Vivace — Data Link
Run 3: Statistics of PCC-Vivace

Start at: 2019-02-12 18:27:17
End at: 2019-02-12 18:27:47
Local clock offset: -0.212 ms
Remote clock offset: -1.359 ms

# Below is generated by plot.py at 2019-02-13 00:17:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 508.56 Mbit/s
  95th percentile per-packet one-way delay: 57.852 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 317.53 Mbit/s
  95th percentile per-packet one-way delay: 58.769 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 241.15 Mbit/s
  95th percentile per-packet one-way delay: 57.121 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 92.52 Mbit/s
  95th percentile per-packet one-way delay: 56.461 ms
  Loss rate: 0.00%
Run 4: Statistics of PCC-Vivace

Start at: 2019-02-12 19:08:23
End at: 2019-02-12 19:08:53
Local clock offset: -0.494 ms
Remote clock offset: 1.226 ms

# Below is generated by plot.py at 2019-02-13 00:18:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 578.12 Mbit/s
95th percentile per-packet one-way delay: 72.744 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 323.17 Mbit/s
95th percentile per-packet one-way delay: 70.589 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 290.98 Mbit/s
95th percentile per-packet one-way delay: 112.705 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 186.31 Mbit/s
95th percentile per-packet one-way delay: 60.531 ms
Loss rate: 0.00%
Run 4: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 323.16 Mbit/s)
- Flow 1 egress (mean 323.17 Mbit/s)
- Flow 2 ingress (mean 291.31 Mbit/s)
- Flow 2 egress (mean 290.98 Mbit/s)
- Flow 3 ingress (mean 186.31 Mbit/s)
- Flow 3 egress (mean 186.31 Mbit/s)
Run 5: Statistics of PCC-Vivace

Start at: 2019-02-12 19:50:18
End at: 2019-02-12 19:50:48
Local clock offset: -0.547 ms
Remote clock offset: 0.261 ms

# Below is generated by plot.py at 2019-02-13 00:18:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 585.95 Mbit/s
95th percentile per-packet one-way delay: 97.759 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 319.00 Mbit/s
95th percentile per-packet one-way delay: 141.820 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 276.48 Mbit/s
95th percentile per-packet one-way delay: 63.868 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 252.18 Mbit/s
95th percentile per-packet one-way delay: 65.046 ms
Loss rate: 0.00%
Run 5: Report of PCC-Vivace — Data Link

![Graph showing throughput over time for Flow 1 ingress, Flow 1 egress, Flow 2 ingress, Flow 2 egress, Flow 3 ingress, and Flow 3 egress.](image)

- **Flow 1 ingress** (mean 319.07 Mbps)
- **Flow 1 egress** (mean 319.00 Mbps)
- **Flow 2 ingress** (mean 276.47 Mbps)
- **Flow 2 egress** (mean 276.48 Mbps)
- **Flow 3 ingress** (mean 252.18 Mbps)
- **Flow 3 egress** (mean 252.18 Mbps)

![Graph showing per-packet one-way delay over time for Flow 1, Flow 2, and Flow 3.](image)

- **Flow 1** (95th percentile 141.82 ms)
- **Flow 2** (95th percentile 63.87 ms)
- **Flow 3** (95th percentile 65.05 ms)

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Run 1: Statistics of WebRTC media

Start at: 2019-02-12 17:16:36
End at: 2019-02-12 17:17:06
Local clock offset: 0.041 ms
Remote clock offset: -0.22 ms

# Below is generated by plot.py at 2019-02-13 00:18:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.65 Mbit/s
95th percentile per-packet one-way delay: 60.590 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 57.502 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 57.526 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 60.737 ms
Loss rate: 0.47%
Run 1: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 1.93 Mbit/s)
- Flow 1 egress (mean 1.93 Mbit/s)
- Flow 2 ingress (mean 1.34 Mbit/s)
- Flow 2 egress (mean 1.34 Mbit/s)
- Flow 3 ingress (mean 0.51 Mbit/s)
- Flow 3 egress (mean 0.51 Mbit/s)
Run 2: Statistics of WebRTC media

Start at: 2019-02-12 17:58:02
End at: 2019-02-12 17:58:32
Local clock offset: -0.453 ms
Remote clock offset: 0.097 ms

# Below is generated by plot.py at 2019-02-13 00:18:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 61.464 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 61.450 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 61.564 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.936 ms
Loss rate: 0.00%
Run 2: Report of WebRTC media — Data Link

![Graph 1: Throughput vs. 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)**

![Graph 2: Packet Delay vs. Time]

- **Flow 1 (95th percentile 61.45 ms)**
- **Flow 2 (95th percentile 61.56 ms)**
- **Flow 3 (95th percentile 57.94 ms)**
Run 3: Statistics of WebRTC media

Start at: 2019-02-12 18:38:44
End at: 2019-02-12 18:39:14
Local clock offset: -0.634 ms
Remote clock offset: 0.136 ms

# Below is generated by plot.py at 2019-02-13 00:18:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 61.176 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 61.256 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.934 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.946 ms
Loss rate: 0.00%
Run 4: Statistics of WebRTC media

Start at: 2019-02-12 19:20:22
End at: 2019-02-12 19:20:52
Local clock offset: -0.494 ms
Remote clock offset: -0.938 ms

# Below is generated by plot.py at 2019-02-13 00:18:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.61 Mbit/s
95th percentile per-packet one-way delay: 56.781 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.99 Mbit/s
95th percentile per-packet one-way delay: 56.816 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.17 Mbit/s
95th percentile per-packet one-way delay: 56.664 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 56.750 ms
Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link
Run 5: Statistics of WebRTC media

Start at: 2019-02-12 20:01:33
End at: 2019-02-12 20:02:03
Local clock offset: 0.212 ms
Remote clock offset: -0.161 ms

# Below is generated by plot.py at 2019-02-13 00:18:33
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 2.21 Mbit/s
  95th percentile per-packet one-way delay: 56.700 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 2.13 Mbit/s
  95th percentile per-packet one-way delay: 56.618 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 60.042 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 60.049 ms
  Loss rate: 0.00%
Run 5: Report of WebRTC media — Data Link

Throughput (Mbps)

Time (s)

- Flow 1 ingress (mean 2.12 Mbps)
- Flow 1 egress (mean 2.13 Mbps)
- Flow 2 ingress (mean 0.05 Mbps)
- Flow 2 egress (mean 0.05 Mbps)
- Flow 3 ingress (mean 0.05 Mbps)
- Flow 3 egress (mean 0.05 Mbps)

Per packet one way delay [ms]

Time (s)

- Flow 1 (95th percentile 56.62 ms)
- Flow 2 (95th percentile 60.04 ms)
- Flow 3 (95th percentile 60.05 ms)