Pantheon Report

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 @ 0b8e9a94f603c38423b941f9f
third_party/fillp @ d6a145332fcee56963885d7e8e9a13d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e694aa8e93b032143cedbfe58e562f4
third_party/indigo @ 2601c92e649a9d838d4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaaab4a906ce6bb7cf3c3f
third_party/muses @ d9c5ea33091330aca25edc105ab2db6d345c40
third_party/pantheon-tunnel @ f866d3f58d27af9d42717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55feca872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cf
third_party/scream-reproduce @ f099118d421aa3131bf1f1ff1964974e1da3b9b2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f919a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af262956293f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_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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<tbody>
<tr>
<td>TCP BBR</td>
<td>5</td>
<td>488.99</td>
<td>466.77</td>
<td>437.41</td>
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<td>Copa</td>
<td>5</td>
<td>294.78</td>
<td>269.37</td>
<td>256.35</td>
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<td>TCP Cubic</td>
<td>5</td>
<td>550.54</td>
<td>482.82</td>
<td>442.12</td>
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<td>FillP</td>
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<td>347.13</td>
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<td>322.97</td>
<td>250.76</td>
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<td>352.20</td>
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<td>Verus</td>
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<td>293.72</td>
<td>155.64</td>
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<td>WebRTC media</td>
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<td>0.44</td>
<td>0.60</td>
<td>0.25</td>
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</table>
Run 1: Statistics of TCP BBR

Start at: 2019-01-25 16:44:26
End at: 2019-01-25 16:44:56
Local clock offset: -0.107 ms
Remote clock offset: -0.627 ms

# Below is generated by plot.py at 2019-01-25 20:33:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 964.09 Mbit/s
95th percentile per-packet one-way delay: 154.230 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 513.82 Mbit/s
95th percentile per-packet one-way delay: 124.204 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 471.84 Mbit/s
95th percentile per-packet one-way delay: 165.575 ms
Loss rate: 1.65%
-- Flow 3:
Average throughput: 409.56 Mbit/s
95th percentile per-packet one-way delay: 158.324 ms
Loss rate: 1.20%
Run 1: Report of TCP BBR — Data Link

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

- **Flow 1**: Ingress (mean 515.00 Mbit/s), Egress (mean 513.82 Mbit/s)
- **Flow 2**: Ingress (mean 479.68 Mbit/s), Egress (mean 471.84 Mbit/s)
- **Flow 3**: Ingress (mean 414.54 Mbit/s), Egress (mean 409.56 Mbit/s)
Run 2: Statistics of TCP BBR

Local clock offset: -0.384 ms  
Remote clock offset: -0.076 ms

# Below is generated by plot.py at 2019-01-25 20:33:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 961.35 Mbit/s
95th percentile per-packet one-way delay: 177.471 ms
Loss rate: 1.06%

-- Flow 1:
Average throughput: 506.81 Mbit/s
95th percentile per-packet one-way delay: 180.293 ms
Loss rate: 1.11%

-- Flow 2:
Average throughput: 455.85 Mbit/s
95th percentile per-packet one-way delay: 177.998 ms
Loss rate: 1.45%

-- Flow 3:
Average throughput: 454.17 Mbit/s
95th percentile per-packet one-way delay: 141.125 ms
Loss rate: 0.11%
Run 2: Report of TCP BBR — Data Link

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

- **Throughput (Mbit/s):**
  - Flow 1 ingress (mean 512.46 Mbit/s)
  - Flow 1 egress (mean 506.81 Mbit/s)
  - Flow 2 ingress (mean 462.55 Mbit/s)
  - Flow 2 egress (mean 455.85 Mbit/s)
  - Flow 3 ingress (mean 454.58 Mbit/s)
  - Flow 3 egress (mean 454.17 Mbit/s)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 180.29 ms)
  - Flow 2 (95th percentile 178.00 ms)
  - Flow 3 (95th percentile 141.12 ms)
Run 3: Statistics of TCP BBR

Start at: 2019-01-25 18:05:25
End at: 2019-01-25 18:05:55
Local clock offset: 0.294 ms
Remote clock offset: -0.739 ms

# Below is generated by plot.py at 2019-01-25 20:34:40
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 1011.54 Mbit/s
   95th percentile per-packet one-way delay: 171.638 ms
   Loss rate: 1.51%
-- Flow 1:
   Average throughput: 528.54 Mbit/s
   95th percentile per-packet one-way delay: 171.668 ms
   Loss rate: 1.43%
-- Flow 2:
   Average throughput: 500.31 Mbit/s
   95th percentile per-packet one-way delay: 159.131 ms
   Loss rate: 1.19%
-- Flow 3:
   Average throughput: 450.72 Mbit/s
   95th percentile per-packet one-way delay: 180.107 ms
   Loss rate: 2.47%
Run 3: Report of TCP BBR — Data Link

![Graph 1](Image 1)

Flow 1 ingress (mean 536.22 Mbit/s)  Flow 1 egress (mean 528.54 Mbit/s)
Flow 2 ingress (mean 506.36 Mbit/s)  Flow 2 egress (mean 500.31 Mbit/s)
Flow 3 ingress (mean 462.26 Mbit/s)  Flow 3 egress (mean 450.72 Mbit/s)

![Graph 2](Image 2)

Flow 1 (95th percentile 171.67 ms)  Flow 2 (95th percentile 159.13 ms)  Flow 3 (95th percentile 180.11 ms)
Run 4: Statistics of TCP BBR

Local clock offset: -0.058 ms
Remote clock offset: 0.0 ms

# Below is generated by plot.py at 2019-01-25 20:34:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 885.27 Mbit/s
95th percentile per-packet one-way delay: 164.040 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 462.02 Mbit/s
95th percentile per-packet one-way delay: 169.213 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 410.63 Mbit/s
95th percentile per-packet one-way delay: 124.596 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 451.04 Mbit/s
95th percentile per-packet one-way delay: 173.053 ms
Loss rate: 0.91%
Run 4: Report of TCP BBR — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 466.35 Mbps)
- Flow 1 egress (mean 462.02 Mbps)
- Flow 2 ingress (mean 410.66 Mbps)
- Flow 2 egress (mean 410.63 Mbps)
- Flow 3 ingress (mean 455.07 Mbps)
- Flow 3 egress (mean 451.04 Mbps)

**Latency (ms):**
- Flow 1 (95th percentile 169.21 ms)
- Flow 2 (95th percentile 124.60 ms)
- Flow 3 (95th percentile 173.05 ms)
Run 5: Statistics of TCP BBR

End at: 2019-01-25 19:30:01
Local clock offset: -0.33 ms
Remote clock offset: -0.49 ms

# Below is generated by plot.py at 2019-01-25 20:34:40
# Datalink statistics
-- Total of 3 flows:
    Average throughput: 903.24 Mbit/s
    95th percentile per-packet one-way delay: 169.358 ms
    Loss rate: 1.08%
-- Flow 1:
    Average throughput: 433.75 Mbit/s
    95th percentile per-packet one-way delay: 165.345 ms
    Loss rate: 0.38%
-- Flow 2:
    Average throughput: 495.20 Mbit/s
    95th percentile per-packet one-way delay: 175.452 ms
    Loss rate: 1.44%
-- Flow 3:
    Average throughput: 421.54 Mbit/s
    95th percentile per-packet one-way delay: 179.430 ms
    Loss rate: 2.35%
Run 5: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 435.41 Mbit/s)
- Flow 1 egress (mean 433.75 Mbit/s)
- Flow 2 ingress (mean 502.44 Mbit/s)
- Flow 2 egress (mean 495.20 Mbit/s)
- Flow 3 ingress (mean 431.77 Mbit/s)
- Flow 3 egress (mean 421.54 Mbit/s)
Run 1: Statistics of Copa

End at: 2019-01-25 16:29:43
Local clock offset: -0.141 ms
Remote clock offset: -1.416 ms

# Below is generated by plot.py at 2019-01-25 20:35:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 587.98 Mbit/s
95th percentile per-packet one-way delay: 75.801 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 320.72 Mbit/s
95th percentile per-packet one-way delay: 77.714 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 272.66 Mbit/s
95th percentile per-packet one-way delay: 73.426 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 253.56 Mbit/s
95th percentile per-packet one-way delay: 72.720 ms
Loss rate: 0.01%
Run 1: Report of Copa — Data Link

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

- Flow 1 ingress (mean 320.71 Mbit/s)
- Flow 1 egress (mean 320.72 Mbit/s)
- Flow 2 ingress (mean 272.64 Mbit/s)
- Flow 2 egress (mean 272.66 Mbit/s)
- Flow 3 ingress (mean 253.60 Mbit/s)
- Flow 3 egress (mean 253.56 Mbit/s)

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

- Flow 1 (95th percentile 77.71 ms)
- Flow 2 (95th percentile 73.43 ms)
- Flow 3 (95th percentile 72.72 ms)
Run 2: Statistics of Copa

Start at: 2019-01-25 17:08:03
End at: 2019-01-25 17:08:33
Local clock offset: -0.346 ms
Remote clock offset: 0.432 ms

# Below is generated by plot.py at 2019-01-25 20:36:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 586.22 Mbit/s
95th percentile per-packet one-way delay: 82.349 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 302.94 Mbit/s
95th percentile per-packet one-way delay: 76.915 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 290.17 Mbit/s
95th percentile per-packet one-way delay: 82.915 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 270.98 Mbit/s
95th percentile per-packet one-way delay: 94.706 ms
Loss rate: 0.01%
Run 2: Report of Copa — Data Link
Run 3: Statistics of Copa

Start at: 2019-01-25 17:48:45  
End at: 2019-01-25 17:49:15  
Local clock offset: -0.297 ms  
Remote clock offset: 0.147 ms

# Below is generated by plot.py at 2019-01-25 20:36:05  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 564.31 Mbit/s  
95th percentile per-packet one-way delay: 73.789 ms  
Loss rate: 0.03%  
-- Flow 1:  
Average throughput: 283.27 Mbit/s  
95th percentile per-packet one-way delay: 67.322 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 288.04 Mbit/s  
95th percentile per-packet one-way delay: 77.723 ms  
Loss rate: 0.08%  
-- Flow 3:  
Average throughput: 267.41 Mbit/s  
95th percentile per-packet one-way delay: 81.430 ms  
Loss rate: 0.00%
Run 3: Report of Copa — Data Link
Run 4: Statistics of Copa

Start at: 2019-01-25 18:31:02
End at: 2019-01-25 18:31:32
Local clock offset: 0.416 ms
Remote clock offset: -0.63 ms

# Below is generated by plot.py at 2019-01-25 20:54:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 597.50 Mbit/s
  95th percentile per-packet one-way delay: 75.151 ms
  Loss rate: 0.03%
-- Flow 1:
  Average throughput: 315.62 Mbit/s
  95th percentile per-packet one-way delay: 71.745 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 298.24 Mbit/s
  95th percentile per-packet one-way delay: 73.805 ms
  Loss rate: 0.06%
-- Flow 3:
  Average throughput: 250.74 Mbit/s
  95th percentile per-packet one-way delay: 84.282 ms
  Loss rate: 0.09%
Run 4: Report of Copa — Data Link

![Graph of throughput over time for different flows]

- **Flow 1 ingress** (mean 315.62 Mbit/s)
- **Flow 1 egress** (mean 315.62 Mbit/s)
- **Flow 2 ingress** (mean 298.36 Mbit/s)
- **Flow 2 egress** (mean 298.24 Mbit/s)
- **Flow 3 ingress** (mean 250.90 Mbit/s)
- **Flow 3 egress** (mean 250.74 Mbit/s)

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

- **Flow 1** (95th percentile 71.75 ms)
- **Flow 2** (95th percentile 73.81 ms)
- **Flow 3** (95th percentile 84.28 ms)
Run 5: Statistics of Copa

Local clock offset: -0.137 ms
Remote clock offset: 0.702 ms

# Below is generated by plot.py at 2019-01-25 20:54:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 462.48 Mbit/s
95th percentile per-packet one-way delay: 66.139 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 251.33 Mbit/s
95th percentile per-packet one-way delay: 69.035 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 197.73 Mbit/s
95th percentile per-packet one-way delay: 65.627 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 239.05 Mbit/s
95th percentile per-packet one-way delay: 63.175 ms
Loss rate: 0.00%
Run 5: Report of Copa — Data Link

Graph 1: Throughput (Mbps)

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

Legend:
- Flow 1 ingress (mean 251.37 Mbps)
- Flow 1 egress (mean 251.33 Mbps)
- Flow 2 ingress (mean 197.79 Mbps)
- Flow 2 egress (mean 197.73 Mbps)
- Flow 3 ingress (mean 239.05 Mbps)
- Flow 3 egress (mean 239.05 Mbps)

Legend for delay:
- Flow 1 (95th percentile 69.03 ms)
- Flow 2 (95th percentile 65.63 ms)
- Flow 3 (95th percentile 63.17 ms)
Run 1: Statistics of TCP Cubic

Start at: 2019-01-25 16:59:49  
End at: 2019-01-25 17:00:19  
Local clock offset: 0.289 ms  
Remote clock offset: 0.556 ms

# Below is generated by plot.py at 2019-01-25 20:54:07  
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1011.58 Mbit/s  
95th percentile per-packet one-way delay: 121.943 ms  
Loss rate: 0.10%
-- Flow 1:
Average throughput: 546.09 Mbit/s  
95th percentile per-packet one-way delay: 78.537 ms  
Loss rate: 0.00%
-- Flow 2:
Average throughput: 452.22 Mbit/s  
95th percentile per-packet one-way delay: 68.627 ms  
Loss rate: 0.01%
-- Flow 3:
Average throughput: 494.36 Mbit/s  
95th percentile per-packet one-way delay: 155.102 ms  
Loss rate: 0.58%
Run 1: Report of TCP Cubic — Data Link

![Graphs showing throughput and packet one way delay over time for different flows. Each graph has a legend indicating the throughput and packet delay statistics for each flow.]

Flow 1 ingress (mean 546.09 Mbit/s)  Flow 1 egress (mean 546.09 Mbit/s)
Flow 2 ingress (mean 452.24 Mbit/s)  Flow 2 egress (mean 452.22 Mbit/s)
Flow 3 ingress (mean 497.29 Mbit/s)  Flow 3 egress (mean 494.36 Mbit/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 78.54 ms)  Flow 2 (95th percentile 68.63 ms)  Flow 3 (95th percentile 155.10 ms)
Run 2: Statistics of TCP Cubic

Start at: 2019-01-25 17:39:54
End at: 2019-01-25 17:40:24
Local clock offset: 0.036 ms
Remote clock offset: -0.687 ms

# Below is generated by plot.py at 2019-01-25 20:54:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1019.11 Mbit/s
  95th percentile per-packet one-way delay: 119.793 ms
  Loss rate: 0.10%
-- Flow 1:
  Average throughput: 566.28 Mbit/s
  95th percentile per-packet one-way delay: 116.681 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 473.04 Mbit/s
  95th percentile per-packet one-way delay: 125.373 ms
  Loss rate: 0.30%
-- Flow 3:
  Average throughput: 413.49 Mbit/s
  95th percentile per-packet one-way delay: 77.521 ms
  Loss rate: 0.06%
Run 2: Report of TCP Cubic — Data Link

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**Graph 1:**
- **Y-axis:** Throughput (Mbit/s)
- **X-axis:** Time (s)
- **Legend:**
  - Flow 1 ingress (mean 566.32 Mbit/s)
  - Flow 1 egress (mean 566.28 Mbit/s)
  - Flow 2 ingress (mean 474.51 Mbit/s)
  - Flow 2 egress (mean 473.04 Mbit/s)
  - Flow 3 ingress (mean 413.64 Mbit/s)
  - Flow 3 egress (mean 413.49 Mbit/s)

**Graph 2:**
- **Y-axis:** Per-packet one-way delay (ms)
- **X-axis:** Time (s)
- **Legend:**
  - Flow 1 (95th percentile 116.69 ms)
  - Flow 2 (95th percentile 125.37 ms)
  - Flow 3 (95th percentile 77.52 ms)
Run 3: Statistics of TCP Cubic

End at: 2019-01-25 18:22:40
Local clock offset: -0.285 ms
Remote clock offset: -0.691 ms

# Below is generated by plot.py at 2019-01-25 20:55:32
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1058.91 Mbit/s
  95th percentile per-packet one-way delay: 159.454 ms
  Loss rate: 0.37%
-- Flow 1:
  Average throughput: 577.77 Mbit/s
  95th percentile per-packet one-way delay: 138.347 ms
  Loss rate: 0.19%
-- Flow 2:
  Average throughput: 513.51 Mbit/s
  95th percentile per-packet one-way delay: 103.699 ms
  Loss rate: 0.17%
-- Flow 3:
  Average throughput: 418.76 Mbit/s
  95th percentile per-packet one-way delay: 181.740 ms
  Loss rate: 1.62%
Run 4: Statistics of TCP Cubic

Start at: 2019-01-25 19:04:17
End at: 2019-01-25 19:04:47
Local clock offset: -0.09 ms
Remote clock offset: 1.301 ms

# Below is generated by plot.py at 2019-01-25 20:56:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1075.93 Mbit/s
95th percentile per-packet one-way delay: 145.085 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 568.69 Mbit/s
95th percentile per-packet one-way delay: 112.919 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 540.68 Mbit/s
95th percentile per-packet one-way delay: 164.782 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 442.89 Mbit/s
95th percentile per-packet one-way delay: 107.312 ms
Loss rate: 0.00%
Run 4: Report of TCP Cubic — Data Link

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

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

Flow 1 ingress (mean 569.01 Mbit/s)
Flow 1 egress (mean 568.69 Mbit/s)
Flow 2 ingress (mean 542.84 Mbit/s)
Flow 2 egress (mean 540.68 Mbit/s)
Flow 3 ingress (mean 442.90 Mbit/s)
Flow 3 egress (mean 442.89 Mbit/s)

Flow 1 (95th percentile 112.92 ms)
Flow 2 (95th percentile 164.78 ms)
Flow 3 (95th percentile 107.31 ms)
Run 5: Statistics of TCP Cubic

Local clock offset: -0.148 ms
Remote clock offset: -0.01 ms

# Below is generated by plot.py at 2019-01-25 20:56:20
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 929.81 Mbit/s
  95th percentile per-packet one-way delay: 114.702 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 493.87 Mbit/s
  95th percentile per-packet one-way delay: 141.051 ms
  Loss rate: 0.07%
-- Flow 2:
  Average throughput: 434.63 Mbit/s
  95th percentile per-packet one-way delay: 85.484 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 441.08 Mbit/s
  95th percentile per-packet one-way delay: 96.644 ms
  Loss rate: 0.28%
Run 5: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 494.23 Mbit/s)
- Flow 1 egress (mean 493.87 Mbit/s)
- Flow 2 ingress (mean 434.63 Mbit/s)
- Flow 2 egress (mean 434.63 Mbit/s)
- Flow 3 ingress (mean 442.34 Mbit/s)
- Flow 3 egress (mean 441.08 Mbit/s)

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

- Flow 1 (95th percentile 141.05 ms)
- Flow 2 (95th percentile 85.48 ms)
- Flow 3 (95th percentile 96.64 ms)
Run 1: Statistics of FillP

Start at: 2019-01-25 17:06:10
End at: 2019-01-25 17:06:40
Local clock offset: -0.147 ms
Remote clock offset: -0.686 ms

# Below is generated by plot.py at 2019-01-25 20:57:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 901.56 Mbit/s
95th percentile per-packet one-way delay: 70.233 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 571.16 Mbit/s
95th percentile per-packet one-way delay: 78.566 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 369.31 Mbit/s
95th percentile per-packet one-way delay: 63.899 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 253.97 Mbit/s
95th percentile per-packet one-way delay: 62.023 ms
Loss rate: 0.10%
Run 1: Report of FillP — Data Link

---

**Throughput (Mbps)**

- **Flow 1 Ingress (mean 571.52 Mbps)**
- **Flow 1 Egress (mean 571.16 Mbps)**
- **Flow 2 Ingress (mean 369.31 Mbps)**
- **Flow 2 Egress (mean 369.31 Mbps)**
- **Flow 3 Ingress (mean 254.18 Mbps)**
- **Flow 3 Egress (mean 253.97 Mbps)**

---

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

- **Flow 1 (95th percentile 78.57 ms)**
- **Flow 2 (95th percentile 63.90 ms)**
- **Flow 3 (95th percentile 62.02 ms)**
Run 2: Statistics of FillP

Start at: 2019-01-25 17:46:40
End at: 2019-01-25 17:47:10
Local clock offset: -0.304 ms
Remote clock offset: 1.348 ms

# Below is generated by plot.py at 2019-01-25 21:09:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 879.45 Mbit/s
95th percentile per-packet one-way delay: 68.246 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 573.64 Mbit/s
95th percentile per-packet one-way delay: 69.847 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 335.75 Mbit/s
95th percentile per-packet one-way delay: 63.161 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 249.32 Mbit/s
95th percentile per-packet one-way delay: 60.737 ms
Loss rate: 0.00%
Run 2: Report of FillP — Data Link

![Throughput Graph](image1)

**Legend:**
- Flow 1 Ingress (mean 573.65 Mbit/s)
- Flow 1 Egress (mean 573.64 Mbit/s)
- Flow 2 Ingress (mean 335.76 Mbit/s)
- Flow 2 Egress (mean 335.75 Mbit/s)
- Flow 3 Ingress (mean 249.37 Mbit/s)
- Flow 3 Egress (mean 249.32 Mbit/s)

![Delay Graph](image2)

**Legend:**
- Flow 1 (95th percentile 69.85 ms)
- Flow 2 (95th percentile 63.16 ms)
- Flow 3 (95th percentile 60.74 ms)
Run 3: Statistics of FillP

Start at: 2019-01-25 18:29:00
End at: 2019-01-25 18:29:30
Local clock offset: -0.199 ms
Remote clock offset: -0.709 ms

# Below is generated by plot.py at 2019-01-25 21:14:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 866.55 Mbit/s
95th percentile per-packet one-way delay: 71.824 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 549.81 Mbit/s
95th percentile per-packet one-way delay: 75.165 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 333.50 Mbit/s
95th percentile per-packet one-way delay: 64.833 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 285.67 Mbit/s
95th percentile per-packet one-way delay: 62.008 ms
Loss rate: 0.00%
Run 3: Report of FillP — Data Link

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

- Flow 1 Ingress (mean 549.90 Mb/s)
- Flow 1 Egress (mean 549.81 Mb/s)
- Flow 2 Ingress (mean 333.51 Mb/s)
- Flow 2 Egress (mean 333.50 Mb/s)
- Flow 3 Ingress (mean 285.76 Mb/s)
- Flow 3 Egress (mean 285.67 Mb/s)

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

- Flow 1 (95th percentile 75.17 ms)
- Flow 2 (95th percentile 64.83 ms)
- Flow 3 (95th percentile 62.01 ms)
Run 4: Statistics of FillP

End at: 2019-01-25 19:11:42
Local clock offset: 0.289 ms
Remote clock offset: -1.236 ms

# Below is generated by plot.py at 2019-01-25 21:15:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 901.81 Mbit/s
95th percentile per-packet one-way delay: 83.188 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 572.78 Mbit/s
95th percentile per-packet one-way delay: 88.787 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 342.32 Mbit/s
95th percentile per-packet one-way delay: 64.220 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 305.71 Mbit/s
95th percentile per-packet one-way delay: 64.581 ms
Loss rate: 0.02%
Run 4: Report of FillP — Data Link

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

- **Throughput (Mbps)**
  - Flow 1 ingress: mean 572.90 Mbps
  - Flow 1 egress: mean 572.78 Mbps
  - Flow 2 ingress: mean 342.33 Mbps
  - Flow 2 egress: mean 342.32 Mbps
  - Flow 3 ingress: mean 304.95 Mbps
  - Flow 3 egress: mean 305.71 Mbps

- **Packet delay (ms)**
  - Flow 1 (95th percentile 88.79 ms)
  - Flow 2 (95th percentile 64.22 ms)
  - Flow 3 (95th percentile 64.58 ms)
Run 5: Statistics of FillP

Local clock offset: 0.149 ms
Remote clock offset: -0.143 ms

# Below is generated by plot.py at 2019-01-25 21:15:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 880.21 Mbit/s
95th percentile per-packet one-way delay: 95.546 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 558.04 Mbit/s
95th percentile per-packet one-way delay: 103.478 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 354.79 Mbit/s
95th percentile per-packet one-way delay: 60.447 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 263.05 Mbit/s
95th percentile per-packet one-way delay: 59.893 ms
Loss rate: 0.00%
Run 5: Report of FillP — Data Link

Throughput (Mb/s)

Time (s)

Flow 1 ingress (mean 560.64 Mb/s)  Flow 1 egress (mean 558.04 Mb/s)
Flow 2 ingress (mean 354.78 Mb/s)  Flow 2 egress (mean 354.79 Mb/s)
Flow 3 ingress (mean 263.04 Mb/s)  Flow 3 egress (mean 263.05 Mb/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 103.48 ms)  Flow 2 (95th percentile 60.45 ms)  Flow 3 (95th percentile 59.89 ms)
Run 1: Statistics of FillP-Sheep

Start at: 2019-01-25 16:41:19
End at: 2019-01-25 16:41:49
Local clock offset: -0.154 ms
Remote clock offset: 1.321 ms

# Below is generated by plot.py at 2019-01-25 21:15:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 797.14 Mbit/s
95th percentile per-packet one-way delay: 67.038 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 520.57 Mbit/s
95th percentile per-packet one-way delay: 67.781 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 300.78 Mbit/s
95th percentile per-packet one-way delay: 64.985 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 229.21 Mbit/s
95th percentile per-packet one-way delay: 61.067 ms
Loss rate: 0.00%
Run 1: Report of FillP-Sheep — Data Link

Graph 1: Throughput vs Time

Graph 2: Per-packet delay vs Time

Legend:
- Blue dashed line: Flow 1 Ingress (mean 520.58 Mbit/s)
- Blue solid line: Flow 1 Egress (mean 520.57 Mbit/s)
- Green dashed line: Flow 2 Ingress (mean 300.90 Mbit/s)
- Green solid line: Flow 2 Egress (mean 300.78 Mbit/s)
- Red dashed line: Flow 3 Ingress (mean 229.21 Mbit/s)
- Red solid line: Flow 3 Egress (mean 229.21 Mbit/s)
Run 2: Statistics of FillP-Sheep

Start at: 2019-01-25 17:20:46  
End at: 2019-01-25 17:21:16  
Local clock offset: -0.57 ms  
Remote clock offset: 0.537 ms

# Below is generated by plot.py at 2019-01-25 21:15:26  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 818.96 Mbit/s  
95th percentile per-packet one-way delay: 65.126 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 526.61 Mbit/s  
95th percentile per-packet one-way delay: 69.465 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 321.99 Mbit/s  
95th percentile per-packet one-way delay: 60.696 ms  
Loss rate: 0.02%  
-- Flow 3:  
Average throughput: 238.34 Mbit/s  
95th percentile per-packet one-way delay: 61.334 ms  
Loss rate: 0.00%
Run 2: Report of FillP-Sheep — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 526.67 Mbps)
  - Flow 1 egress (mean 526.61 Mbps)
  - Flow 2 ingress (mean 322.05 Mbps)
  - Flow 2 egress (mean 321.99 Mbps)
  - Flow 3 ingress (mean 238.34 Mbps)
  - Flow 3 egress (mean 238.34 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 69.47 ms)
  - Flow 2 (95th percentile 60.70 ms)
  - Flow 3 (95th percentile 61.33 ms)
Run 3: Statistics of FillP-Sheep

Start at: 2019-01-25 18:02:14
End at: 2019-01-25 18:02:44
Local clock offset: -0.383 ms
Remote clock offset: -0.738 ms

# Below is generated by plot.py at 2019-01-25 21:16:20
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 836.48 Mbit/s
  95th percentile per-packet one-way delay: 69.183 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 532.60 Mbit/s
  95th percentile per-packet one-way delay: 76.816 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 323.02 Mbit/s
  95th percentile per-packet one-way delay: 61.861 ms
  Loss rate: 0.02%
-- Flow 3:
  Average throughput: 269.70 Mbit/s
  95th percentile per-packet one-way delay: 59.440 ms
  Loss rate: 0.00%
Run 3: Report of FillP-Sheep — Data Link

Throughput (Mb/s)

Time (s)

Flow 1 ingress (mean 532.67 Mbit/s)  Flow 1 egress (mean 532.60 Mbit/s)
Flow 2 ingress (mean 323.09 Mbit/s)  Flow 2 egress (mean 323.02 Mbit/s)
Flow 3 ingress (mean 269.71 Mbit/s)  Flow 3 egress (mean 269.70 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 76.82 ms)  Flow 2 (95th percentile 61.86 ms)  Flow 3 (95th percentile 59.44 ms)
Run 4: Statistics of FillP-Sheep

End at: 2019-01-25 18:45:18
Local clock offset: 0.122 ms
Remote clock offset: 0.035 ms

# Below is generated by plot.py at 2019-01-25 21:18:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 897.30 Mbit/s
95th percentile per-packet one-way delay: 63.193 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 574.61 Mbit/s
95th percentile per-packet one-way delay: 63.741 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 352.99 Mbit/s
95th percentile per-packet one-way delay: 62.187 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 263.42 Mbit/s
95th percentile per-packet one-way delay: 59.496 ms
Loss rate: 0.00%
Run 4: Report of FillP-Sheep — Data Link

![Graph showing throughput over time for different flows]
Run 5: Statistics of FillP-Sheep

Start at: 2019-01-25 19:26:15
End at: 2019-01-25 19:26:45
Local clock offset: -0.573 ms
Remote clock offset: -0.254 ms

# Below is generated by plot.py at 2019-01-25 21:30:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 834.19 Mbit/s
95th percentile per-packet one-way delay: 71.747 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 540.32 Mbit/s
95th percentile per-packet one-way delay: 73.509 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 316.09 Mbit/s
95th percentile per-packet one-way delay: 64.847 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 253.12 Mbit/s
95th percentile per-packet one-way delay: 61.856 ms
Loss rate: 0.00%
Run 5: Report of FillP-Sheep — Data Link

---

**Throughput (Mbps)**

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<tr>
<th>Time (s)</th>
<th>Flow 1 Ingress (mean 540.32 Mbps)</th>
<th>Flow 1 Egress (mean 540.32 Mbps)</th>
<th>Flow 2 Ingress (mean 315.66 Mbps)</th>
<th>Flow 2 Egress (mean 316.09 Mbps)</th>
<th>Flow 3 Ingress (mean 253.12 Mbps)</th>
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**Per-packet one way delay (ms)**

<table>
<thead>
<tr>
<th>Time (s)</th>
<th>Flow 1 (95th percentile 73.51 ms)</th>
<th>Flow 2 (95th percentile 64.85 ms)</th>
<th>Flow 3 (95th percentile 61.86 ms)</th>
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</table>
Run 1: Statistics of Indigo

Start at: 2019-01-25 17:04:06
End at: 2019-01-25 17:04:36
Local clock offset: -0.553 ms
Remote clock offset: -0.396 ms

# Below is generated by plot.py at 2019-01-25 21:30:50
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 388.63 Mbit/s
  95th percentile per-packet one-way delay: 58.358 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 212.38 Mbit/s
  95th percentile per-packet one-way delay: 58.159 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 190.26 Mbit/s
  95th percentile per-packet one-way delay: 58.722 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 155.62 Mbit/s
  95th percentile per-packet one-way delay: 58.498 ms
  Loss rate: 0.00%
Run 2: Statistics of Indigo

Start at: 2019-01-25 17:44:38
End at: 2019-01-25 17:45:08
Local clock offset: 0.275 ms
Remote clock offset: 0.424 ms

# Below is generated by plot.py at 2019-01-25 21:30:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 344.44 Mbit/s
95th percentile per-packet one-way delay: 58.214 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 180.84 Mbit/s
95th percentile per-packet one-way delay: 58.010 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 160.54 Mbit/s
95th percentile per-packet one-way delay: 58.179 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 176.76 Mbit/s
95th percentile per-packet one-way delay: 58.647 ms
Loss rate: 0.00%
Run 2: Report of Indigo — Data Link

[Graph showing throughput over time with different flow types and their respective mean data rates.]

[Graph showing per-packet round-trip delay over time with 95th percentile values for each flow.]
Run 3: Statistics of Indigo

Start at: 2019-01-25 18:26:54
Local clock offset: -0.269 ms
Remote clock offset: -0.664 ms

# Below is generated by plot.py at 2019-01-25 21:30:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 365.27 Mbit/s
95th percentile per-packet one-way delay: 60.532 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 199.65 Mbit/s
95th percentile per-packet one-way delay: 57.700 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 181.89 Mbit/s
95th percentile per-packet one-way delay: 61.423 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 139.15 Mbit/s
95th percentile per-packet one-way delay: 57.994 ms
Loss rate: 0.00%
Run 3: Report of Indigo — Data Link

![Graph showing throughput over time for different flows]

- **Flow 1 ingress (mean 199.65 Mbit/s)**
- **Flow 1 egress (mean 199.65 Mbit/s)**
- **Flow 2 ingress (mean 181.89 Mbit/s)**
- **Flow 2 egress (mean 181.89 Mbit/s)**
- **Flow 3 ingress (mean 139.17 Mbit/s)**
- **Flow 3 egress (mean 139.15 Mbit/s)**

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

- **Flow 1 (95th percentile 57.70 ms)**
- **Flow 2 (95th percentile 61.42 ms)**
- **Flow 3 (95th percentile 57.99 ms)**

60
Run 4: Statistics of Indigo

Start at: 2019-01-25 19:08:56
End at: 2019-01-25 19:09:26
Local clock offset: -0.151 ms
Remote clock offset: -0.343 ms

# Below is generated by plot.py at 2019-01-25 21:30:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 393.37 Mbit/s
95th percentile per-packet one-way delay: 61.257 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 208.07 Mbit/s
95th percentile per-packet one-way delay: 58.873 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 194.14 Mbit/s
95th percentile per-packet one-way delay: 62.345 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 175.41 Mbit/s
95th percentile per-packet one-way delay: 59.574 ms
Loss rate: 0.00%
Run 4: Report of Indigo — Data Link
Run 5: Statistics of Indigo

Start at: 2019-01-25 19:50:40
End at: 2019-01-25 19:51:10
Local clock offset: -0.004 ms
Remote clock offset: -0.519 ms

# Below is generated by plot.py at 2019-01-25 21:30:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 390.66 Mbit/s
95th percentile per-packet one-way delay: 61.140 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 204.90 Mbit/s
95th percentile per-packet one-way delay: 57.717 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 195.54 Mbit/s
95th percentile per-packet one-way delay: 61.609 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 174.98 Mbit/s
95th percentile per-packet one-way delay: 62.396 ms
Loss rate: 0.03%
Run 5: Report of Indigo — Data Link
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-01-25 17:02:08
End at: 2019-01-25 17:02:38
Local clock offset: -0.405 ms
Remote clock offset: 0.437 ms

# Below is generated by plot.py at 2019-01-25 21:31:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 750.21 Mbit/s
95th percentile per-packet one-way delay: 64.078 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 445.39 Mbit/s
95th percentile per-packet one-way delay: 64.988 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 373.55 Mbit/s
95th percentile per-packet one-way delay: 60.158 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 232.54 Mbit/s
95th percentile per-packet one-way delay: 59.441 ms
Loss rate: 0.00%
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-01-25 17:42:30
End at: 2019-01-25 17:43:00
Local clock offset: -0.152 ms
Remote clock offset: 0.02 ms

# Below is generated by plot.py at 2019-01-25 21:33:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 762.46 Mbit/s
95th percentile per-packet one-way delay: 63.535 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 446.18 Mbit/s
95th percentile per-packet one-way delay: 64.031 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 362.93 Mbit/s
95th percentile per-packet one-way delay: 59.903 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 300.99 Mbit/s
95th percentile per-packet one-way delay: 59.791 ms
Loss rate: 0.00%
Run 2: Report of Indigo-MusesC3 — Data Link

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

- Flow 1 ingress (mean 446.20 Mbit/s)
- Flow 1 egress (mean 446.18 Mbit/s)
- Flow 2 ingress (mean 362.93 Mbit/s)
- Flow 2 egress (mean 362.93 Mbit/s)
- Flow 3 ingress (mean 300.98 Mbit/s)
- Flow 3 egress (mean 300.99 Mbit/s)
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-01-25 18:24:54
Local clock offset: -0.276 ms
Remote clock offset: -0.441 ms

# Below is generated by plot.py at 2019-01-25 21:39:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 709.58 Mbit/s
95th percentile per-packet one-way delay: 61.794 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 416.83 Mbit/s
95th percentile per-packet one-way delay: 59.940 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 349.31 Mbit/s
95th percentile per-packet one-way delay: 62.648 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 259.70 Mbit/s
95th percentile per-packet one-way delay: 59.452 ms
Loss rate: 0.00%
Run 3: Report of Indigo-MusesC3 — Data Link
Run 4: Statistics of Indigo-MusesC3

End at: 2019-01-25 19:07:18
Local clock offset: -0.21 ms
Remote clock offset: -1.392 ms

# Below is generated by plot.py at 2019-01-25 21:42:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 772.69 Mbit/s
95th percentile per-packet one-way delay: 61.595 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 449.55 Mbit/s
95th percentile per-packet one-way delay: 59.442 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 387.41 Mbit/s
95th percentile per-packet one-way delay: 63.701 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 270.42 Mbit/s
95th percentile per-packet one-way delay: 58.626 ms
Loss rate: 0.00%
Run 4: Report of Indigo-MusesC3 — Data Link
Run 5: Statistics of Indigo-MusesC3

End at: 2019-01-25 19:49:01
Local clock offset: -0.123 ms
Remote clock offset: 0.105 ms

# Below is generated by plot.py at 2019-01-25 21:43:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 744.48 Mbit/s
  95th percentile per-packet one-way delay: 63.327 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 435.71 Mbit/s
  95th percentile per-packet one-way delay: 61.587 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 358.09 Mbit/s
  95th percentile per-packet one-way delay: 64.327 ms
  Loss rate: 0.03%
-- Flow 3:
  Average throughput: 282.45 Mbit/s
  95th percentile per-packet one-way delay: 63.003 ms
  Loss rate: 0.08%
Run 5: Report of Indigo-MusesC3 — Data Link

![Graph of throughput and packet delay over time]

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 435.79 Mbps)
  - Flow 1 egress (mean 435.71 Mbps)
  - Flow 2 ingress (mean 358.02 Mbps)
  - Flow 2 egress (mean 358.09 Mbps)
  - Flow 3 ingress (mean 282.52 Mbps)
  - Flow 3 egress (mean 282.45 Mbps)

- **Packet delay (ms)**
  - Flow 1 (95th percentile 61.59 ms)
  - Flow 2 (95th percentile 64.33 ms)
  - Flow 3 (95th percentile 63.00 ms)
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-01-25 16:33:26
End at: 2019-01-25 16:33:56
Local clock offset: -0.371 ms
Remote clock offset: -0.273 ms
Run 1: Report of Indigo-MusesC5 — Data Link
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-01-25 17:12:25
End at: 2019-01-25 17:12:55
Local clock offset: -0.601 ms
Remote clock offset: -0.286 ms

# Below is generated by plot.py at 2019-01-25 21:45:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 779.64 Mbit/s
  95th percentile per-packet one-way delay: 73.270 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 498.99 Mbit/s
  95th percentile per-packet one-way delay: 76.687 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 337.97 Mbit/s
  95th percentile per-packet one-way delay: 63.151 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 236.56 Mbit/s
  95th percentile per-packet one-way delay: 66.962 ms
  Loss rate: 0.05%
Run 2: Report of Indigo-MusesC5 — Data Link
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-01-25 17:53:26
End at: 2019-01-25 17:53:56
Local clock offset: 0.026 ms
Remote clock offset: -1.362 ms

# Below is generated by plot.py at 2019-01-25 21:47:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 847.25 Mbit/s
95th percentile per-packet one-way delay: 74.360 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 488.37 Mbit/s
95th percentile per-packet one-way delay: 75.156 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 439.86 Mbit/s
95th percentile per-packet one-way delay: 74.537 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 296.37 Mbit/s
95th percentile per-packet one-way delay: 65.214 ms
Loss rate: 0.00%
Run 3: Report of Indigo-MusesC5 — Data Link
Run 4: Statistics of Indigo-MusesC5

End at: 2019-01-25 18:36:53
Local clock offset: 0.174 ms
Remote clock offset: -0.676 ms

# Below is generated by plot.py at 2019-01-25 21:47:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 734.23 Mbit/s
95th percentile per-packet one-way delay: 66.803 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 455.39 Mbit/s
95th percentile per-packet one-way delay: 64.122 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 407.39 Mbit/s
95th percentile per-packet one-way delay: 69.330 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 87.98 Mbit/s
95th percentile per-packet one-way delay: 60.388 ms
Loss rate: 0.19%
Run 4: Report of Indigo-MusesC5 — Data Link
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-01-25 19:17:46
End at: 2019-01-25 19:18:16
Local clock offset: -0.122 ms
Remote clock offset: -0.531 ms

# Below is generated by plot.py at 2019-01-25 21:48:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 794.97 Mbit/s
95th percentile per-packet one-way delay: 75.913 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 494.82 Mbit/s
95th percentile per-packet one-way delay: 75.538 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 419.71 Mbit/s
95th percentile per-packet one-way delay: 79.128 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 102.21 Mbit/s
95th percentile per-packet one-way delay: 57.340 ms
Loss rate: 0.00%
Run 5: Report of Indigo-MusesC5 — Data Link

[Graph showing throughput and per-packet one-way delay over time for different flows]
Run 1: Statistics of Indigo-MusesD

End at: 2019-01-25 16:47:20
Local clock offset: -0.097 ms
Remote clock offset: 0.028 ms

# Below is generated by plot.py at 2019-01-25 21:49:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 671.78 Mbit/s
95th percentile per-packet one-way delay: 62.169 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 444.40 Mbit/s
95th percentile per-packet one-way delay: 63.226 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 349.52 Mbit/s
95th percentile per-packet one-way delay: 59.695 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.83 Mbit/s
95th percentile per-packet one-way delay: 60.736 ms
Loss rate: 0.00%
Run 1: Report of Indigo-MusesD — Data Link

![Graph showing throughput and per-packet round-trip delay]

- **Flow 1 ingress (mean 444.40 Mbit/s)**
- **Flow 1 egress (mean 444.40 Mbit/s)**
- **Flow 2 ingress (mean 349.53 Mbit/s)**
- **Flow 2 egress (mean 349.52 Mbit/s)**
- **Flow 3 ingress (mean 11.83 Mbit/s)**
- **Flow 3 egress (mean 11.83 Mbit/s)**
Run 2: Statistics of Indigo-MusesD

Start at: 2019-01-25 17:26:17
End at: 2019-01-25 17:26:47
Local clock offset: ~0.015 ms
Remote clock offset: ~0.605 ms

# Below is generated by plot.py at 2019-01-25 21:52:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 604.65 Mbit/s
95th percentile per-packet one-way delay: 65.210 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 421.17 Mbit/s
95th percentile per-packet one-way delay: 66.631 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 286.25 Mbit/s
95th percentile per-packet one-way delay: 62.372 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.24 Mbit/s
95th percentile per-packet one-way delay: 59.531 ms
Loss rate: 0.09%
Run 2: Report of Indigo-MusesD — Data Link

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

- **Flow 1** (ingress mean 421.18 Mbit/s, egress mean 421.17 Mbit/s)
- **Flow 2** (ingress mean 286.25 Mbit/s, egress mean 286.25 Mbit/s)
- **Flow 3** (ingress mean 13.24 Mbit/s, egress mean 13.24 Mbit/s)

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

- **Flow 1** (95th percentile 66.63 ms)
- **Flow 2** (95th percentile 62.37 ms)
- **Flow 3** (95th percentile 59.53 ms)
Run 3: Statistics of Indigo-MusesD

Start at: 2019-01-25 18:07:59
End at: 2019-01-25 18:08:29
Local clock offset: -0.551 ms
Remote clock offset: -0.109 ms

# Below is generated by plot.py at 2019-01-25 21:55:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 683.00 Mbit/s
95th percentile per-packet one-way delay: 63.740 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 467.14 Mbit/s
95th percentile per-packet one-way delay: 64.575 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 332.30 Mbit/s
95th percentile per-packet one-way delay: 62.091 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 12.15 Mbit/s
95th percentile per-packet one-way delay: 57.595 ms
Loss rate: 0.00%
Run 3: Report of Indigo-MusesD — Data Link

[Graphs showing throughput and packet delay over time for different flows]
Run 4: Statistics of Indigo-MusesD

Start at: 2019-01-25 18:50:42
End at: 2019-01-25 18:51:12
Local clock offset: 0.066 ms
Remote clock offset: 0.756 ms

# Below is generated by plot.py at 2019-01-25 21:55:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 522.55 Mbit/s
95th percentile per-packet one-way delay: 109.210 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 482.57 Mbit/s
95th percentile per-packet one-way delay: 110.575 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 56.99 Mbit/s
95th percentile per-packet one-way delay: 58.064 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 14.17 Mbit/s
95th percentile per-packet one-way delay: 57.798 ms
Loss rate: 0.00%
Run 4: Report of Indigo-MusesD — Data Link

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

- **Flow 1 ingress** (mean 482.56 Mbps)
- **Flow 1 egress** (mean 482.57 Mbps)
- **Flow 2 ingress** (mean 56.99 Mbps)
- **Flow 2 egress** (mean 56.99 Mbps)
- **Flow 3 ingress** (mean 14.17 Mbps)
- **Flow 3 egress** (mean 14.17 Mbps)

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

- **Flow 1** (95th percentile 110.58 ms)
- **Flow 2** (95th percentile 58.06 ms)
- **Flow 3** (95th percentile 57.80 ms)
Run 5: Statistics of Indigo-MusesD

End at: 2019-01-25 19:32:40
Local clock offset: 0.245 ms
Remote clock offset: -0.207 ms

# Below is generated by plot.py at 2019-01-25 21:59:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 719.21 Mbit/s
95th percentile per-packet one-way delay: 73.910 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 469.86 Mbit/s
95th percentile per-packet one-way delay: 76.616 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 382.53 Mbit/s
95th percentile per-packet one-way delay: 64.763 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 12.22 Mbit/s
95th percentile per-packet one-way delay: 56.454 ms
Loss rate: 0.00%
Run 5: Report of Indigo-MusesD — Data Link

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

Flow 1 ingress (mean 469.89 Mbit/s) — Flow 1 egress (mean 469.86 Mbit/s)
Flow 2 ingress (mean 382.54 Mbit/s) — Flow 2 egress (mean 382.53 Mbit/s)
Flow 3 ingress (mean 12.22 Mbit/s) — Flow 3 egress (mean 12.22 Mbit/s)

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

Flow 1 (95th percentile 76.62 ms) — Flow 2 (95th percentile 64.76 ms) — Flow 3 (95th percentile 56.45 ms)
Run 1: Statistics of Indigo-MusesT

Local clock offset: -0.303 ms  
Remote clock offset: 1.19 ms

# Below is generated by plot.py at 2019-01-25 22:02:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 874.60 Mbit/s  
95th percentile per-packet one-way delay: 67.275 ms  
Loss rate: 0.02%

-- Flow 1:
Average throughput: 516.07 Mbit/s  
95th percentile per-packet one-way delay: 65.864 ms  
Loss rate: 0.00%

-- Flow 2:
Average throughput: 437.46 Mbit/s  
95th percentile per-packet one-way delay: 73.147 ms  
Loss rate: 0.06%

-- Flow 3:
Average throughput: 277.14 Mbit/s  
95th percentile per-packet one-way delay: 61.454 ms  
Loss rate: 0.00%
Run 1: Report of Indigo-MusesT — Data Link
Run 2: Statistics of Indigo-MusesT

Start at: 2019-01-25 17:18:44
End at: 2019-01-25 17:19:14
Local clock offset: -0.162 ms
Remote clock offset: -0.098 ms

# Below is generated by plot.py at 2019-01-25 22:04:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 841.87 Mbit/s
95th percentile per-packet one-way delay: 77.928 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 496.05 Mbit/s
95th percentile per-packet one-way delay: 81.008 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 411.87 Mbit/s
95th percentile per-packet one-way delay: 69.985 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 314.75 Mbit/s
95th percentile per-packet one-way delay: 65.669 ms
Loss rate: 0.08%
Run 2: Report of Indigo-MusesT — Data Link

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

Throughput (Mbps):
- Flow 1 ingress (mean 495.93 Mbps)
- Flow 1 egress (mean 496.05 Mbps)
- Flow 2 ingress (mean 411.86 Mbps)
- Flow 2 egress (mean 411.87 Mbps)
- Flow 3 ingress (mean 314.89 Mbps)
- Flow 3 egress (mean 314.75 Mbps)

Per-packet one-way delay (ms):
- Flow 1 (95th percentile 81.01 ms)
- Flow 2 (95th percentile 69.98 ms)
- Flow 3 (95th percentile 65.67 ms)
Run 3: Statistics of Indigo-MusesT

Start at: 2019-01-25 17:59:54
End at: 2019-01-25 18:00:24
Local clock offset: -0.133 ms
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2019-01-25 22:04:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 800.92 Mbit/s
95th percentile per-packet one-way delay: 65.916 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 466.79 Mbit/s
95th percentile per-packet one-way delay: 66.691 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 390.38 Mbit/s
95th percentile per-packet one-way delay: 64.966 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 272.52 Mbit/s
95th percentile per-packet one-way delay: 62.733 ms
Loss rate: 0.01%
Run 3: Report of Indigo-MusesT — Data Link

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

- **Flow 1 ingress** (mean 466.80 Mbit/s)
- **Flow 1 egress** (mean 466.79 Mbit/s)
- **Flow 2 ingress** (mean 390.42 Mbit/s)
- **Flow 2 egress** (mean 390.38 Mbit/s)
- **Flow 3 ingress** (mean 272.29 Mbit/s)
- **Flow 3 egress** (mean 272.52 Mbit/s)

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

- **Flow 1** (95th percentile 66.69 ms)
- **Flow 2** (95th percentile 64.97 ms)
- **Flow 3** (95th percentile 62.73 ms)
Run 4: Statistics of Indigo-MusesT

End at: 2019-01-25 18:43:19
Local clock offset: -0.075 ms
Remote clock offset: -0.752 ms

# Below is generated by plot.py at 2019-01-25 22:05:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 792.65 Mbit/s
  95th percentile per-packet one-way delay: 63.864 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 470.91 Mbit/s
  95th percentile per-packet one-way delay: 64.219 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 374.47 Mbit/s
  95th percentile per-packet one-way delay: 63.930 ms
  Loss rate: 0.02%
-- Flow 3:
  Average throughput: 305.61 Mbit/s
  95th percentile per-packet one-way delay: 61.031 ms
  Loss rate: 0.00%
Run 4: Report of Indigo-MusesT — Data Link
Run 5: Statistics of Indigo-MusesT

Local clock offset: 0.101 ms
Remote clock offset: 0.123 ms

# Below is generated by plot.py at 2019-01-25 22:07:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 756.25 Mbit/s
95th percentile per-packet one-way delay: 92.243 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 457.96 Mbit/s
95th percentile per-packet one-way delay: 113.971 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 353.07 Mbit/s
95th percentile per-packet one-way delay: 64.906 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 277.32 Mbit/s
95th percentile per-packet one-way delay: 65.326 ms
Loss rate: 0.14%
Run 5: Report of Indigo-MusesT — Data Link

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

- Flow 1 ingress (mean 458.07 Mb/s)
- Flow 1 egress (mean 457.96 Mb/s)
- Flow 2 ingress (mean 332.94 Mb/s)
- Flow 2 egress (mean 333.07 Mb/s)
- Flow 3 ingress (mean 277.60 Mb/s)
- Flow 3 egress (mean 277.32 Mb/s)

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

- Flow 1 (95th percentile 113.97 ms)
- Flow 2 (95th percentile 64.91 ms)
- Flow 3 (95th percentile 65.33 ms)
Run 1: Statistics of LEDBAT

Start at: 2019-01-25 16:53:05
End at: 2019-01-25 16:53:35
Local clock offset: 0.007 ms
Remote clock offset: -0.73 ms

# Below is generated by plot.py at 2019-01-25 22:07:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.99 Mbit/s
95th percentile per-packet one-way delay: 57.714 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 28.32 Mbit/s
95th percentile per-packet one-way delay: 57.826 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 18.93 Mbit/s
95th percentile per-packet one-way delay: 57.296 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.38 Mbit/s
95th percentile per-packet one-way delay: 57.099 ms
Loss rate: 0.00%
Run 2: Statistics of LEDBAT

Start at: 2019-01-25 17:32:44
End at: 2019-01-25 17:33:14
Local clock offset: 0.045 ms
Remote clock offset: -0.18 ms

# Below is generated by plot.py at 2019-01-25 22:07:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.13 Mbit/s
95th percentile per-packet one-way delay: 60.812 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 26.91 Mbit/s
95th percentile per-packet one-way delay: 58.024 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 16.98 Mbit/s
95th percentile per-packet one-way delay: 61.254 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 8.89 Mbit/s
95th percentile per-packet one-way delay: 60.649 ms
Loss rate: 0.00%
Run 2: Report of LEDBAT — Data Link
Run 3: Statistics of LEDBAT

Start at: 2019-01-25 18:14:50
End at: 2019-01-25 18:15:20
Local clock offset: 0.079 ms
Remote clock offset: -0.657 ms

# Below is generated by plot.py at 2019-01-25 22:07:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.20 Mbit/s
95th percentile per-packet one-way delay: 59.917 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 26.81 Mbit/s
95th percentile per-packet one-way delay: 57.448 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 17.04 Mbit/s
95th percentile per-packet one-way delay: 60.306 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.39 Mbit/s
95th percentile per-packet one-way delay: 56.845 ms
Loss rate: 0.00%
Run 4: Statistics of LEDBAT

Start at: 2019-01-25 18:57:11
End at: 2019-01-25 18:57:41
Local clock offset: -0.063 ms
Remote clock offset: -0.15 ms

# Below is generated by plot.py at 2019-01-25 22:07:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.71 Mbit/s
95th percentile per-packet one-way delay: 60.300 ms
Loss rate: 0.00%

-- Flow 1:
Average throughput: 28.20 Mbit/s
95th percentile per-packet one-way delay: 58.008 ms
Loss rate: 0.00%

-- Flow 2:
Average throughput: 18.95 Mbit/s
95th percentile per-packet one-way delay: 58.045 ms
Loss rate: 0.00%

-- Flow 3:
Average throughput: 8.92 Mbit/s
95th percentile per-packet one-way delay: 60.808 ms
Loss rate: 0.00%
Run 4: Report of LEDBAT — Data Link

![Graph of throughput over time for different flows]

- Flow 1 ingress (mean 28.20 Mbit/s)
- Flow 1 egress (mean 28.20 Mbit/s)
- Flow 2 ingress (mean 18.95 Mbit/s)
- Flow 2 egress (mean 18.95 Mbit/s)
- Flow 3 ingress (mean 8.92 Mbit/s)
- Flow 3 egress (mean 8.92 Mbit/s)

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

- Flow 1 (95th percentile 58.01 ms)
- Flow 2 (95th percentile 58.05 ms)
- Flow 3 (95th percentile 60.81 ms)
Run 5: Statistics of LEDBAT

Local clock offset: -0.595 ms
Remote clock offset: 0.761 ms

# Below is generated by plot.py at 2019-01-25 22:07:09
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 42.14 Mbit/s
  95th percentile per-packet one-way delay: 59.498 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 26.60 Mbit/s
  95th percentile per-packet one-way delay: 59.539 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 18.76 Mbit/s
  95th percentile per-packet one-way delay: 59.491 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 9.35 Mbit/s
  95th percentile per-packet one-way delay: 58.865 ms
  Loss rate: 0.00%
Run 5: Report of LEDBAT — Data Link
Run 1: Statistics of PCC-Allegro

Start at: 2019-01-25 16:50:59
End at: 2019-01-25 16:51:29
Local clock offset: -0.101 ms
Remote clock offset: 0.02 ms

# Below is generated by plot.py at 2019-01-25 22:27:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 725.46 Mbit/s
95th percentile per-packet one-way delay: 201.733 ms
Loss rate: 5.76%
-- Flow 1:
Average throughput: 355.12 Mbit/s
95th percentile per-packet one-way delay: 198.511 ms
Loss rate: 5.48%
-- Flow 2:
Average throughput: 432.48 Mbit/s
95th percentile per-packet one-way delay: 208.699 ms
Loss rate: 7.61%
-- Flow 3:
Average throughput: 250.36 Mbit/s
95th percentile per-packet one-way delay: 79.460 ms
Loss rate: 0.02%
Run 1: Report of PCC-Allegro — Data Link

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

![Graph 2: One-Way Delay vs Time](image2)
Run 2: Statistics of PCC-Allegro

Start at: 2019-01-25 17:30:19
End at: 2019-01-25 17:30:49
Local clock offset: -0.395 ms
Remote clock offset: -0.191 ms

# Below is generated by plot.py at 2019-01-25 22:28:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 734.77 Mbit/s
95th percentile per-packet one-way delay: 180.516 ms
Loss rate: 3.56%
-- Flow 1:
Average throughput: 448.08 Mbit/s
95th percentile per-packet one-way delay: 189.151 ms
Loss rate: 5.65%
-- Flow 2:
Average throughput: 305.29 Mbit/s
95th percentile per-packet one-way delay: 81.845 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 254.17 Mbit/s
95th percentile per-packet one-way delay: 92.845 ms
Loss rate: 0.31%
Run 2: Report of PCC-Allegro — Data Link

Graph 1: Throughput (Mbps)
- Flow 1 ingress (mean 475.00 Mbps)
- Flow 1 egress (mean 448.08 Mbps)
- Flow 2 ingress (mean 305.34 Mbps)
- Flow 2 egress (mean 305.29 Mbps)
- Flow 3 ingress (mean 255.12 Mbps)
- Flow 3 egress (mean 254.17 Mbps)

Graph 2: Per-packet one-way delay (ms)
- Flow 1 (95th percentile 189.15 ms)
- Flow 2 (95th percentile 81.84 ms)
- Flow 3 (95th percentile 92.84 ms)
Run 3: Statistics of PCC-Allegro

Start at: 2019-01-25 18:12:24
End at: 2019-01-25 18:12:54
Local clock offset: -0.141 ms
Remote clock offset: 0.121 ms

# Below is generated by plot.py at 2019-01-25 22:28:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 691.36 Mbit/s
  95th percentile per-packet one-way delay: 192.253 ms
  Loss rate: 1.73%
-- Flow 1:
  Average throughput: 394.54 Mbit/s
  95th percentile per-packet one-way delay: 200.504 ms
  Loss rate: 2.84%
-- Flow 2:
  Average throughput: 319.32 Mbit/s
  95th percentile per-packet one-way delay: 123.490 ms
  Loss rate: 0.28%
-- Flow 3:
  Average throughput: 256.03 Mbit/s
  95th percentile per-packet one-way delay: 110.411 ms
  Loss rate: 0.04%
Run 3: Report of PCC-Allegro — Data Link
Run 4: Statistics of PCC-Allegro

Start at: 2019-01-25 18:54:52
Local clock offset: -0.156 ms
Remote clock offset: -0.651 ms

# Below is generated by plot.py at 2019-01-25 22:28:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 640.47 Mbit/s
95th percentile per-packet one-way delay: 176.744 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 346.71 Mbit/s
95th percentile per-packet one-way delay: 177.877 ms
Loss rate: 2.51%
-- Flow 2:
Average throughput: 364.25 Mbit/s
95th percentile per-packet one-way delay: 167.505 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 155.65 Mbit/s
95th percentile per-packet one-way delay: 130.502 ms
Loss rate: 0.01%
Run 5: Statistics of PCC-Allegro

Start at: 2019-01-25 19:36:40
End at: 2019-01-25 19:37:10
Local clock offset: -0.191 ms
Remote clock offset: -0.079 ms

# Below is generated by plot.py at 2019-01-25 22:30:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 670.54 Mbit/s
95th percentile per-packet one-way delay: 130.538 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 365.54 Mbit/s
95th percentile per-packet one-way delay: 133.803 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 339.64 Mbit/s
95th percentile per-packet one-way delay: 97.787 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 240.54 Mbit/s
95th percentile per-packet one-way delay: 169.378 ms
Loss rate: 1.96%
Run 5: Report of PCC-Allegro — Data Link

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

End at: 2019-01-25 16:49:16
Local clock offset: -0.558 ms
Remote clock offset: -1.4 ms

# Below is generated by plot.py at 2019-01-25 22:30:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 568.57 Mbit/s
  95th percentile per-packet one-way delay: 168.595 ms
  Loss rate: 2.77%
-- Flow 1:
  Average throughput: 325.61 Mbit/s
  95th percentile per-packet one-way delay: 162.680 ms
  Loss rate: 1.87%
-- Flow 2:
  Average throughput: 225.38 Mbit/s
  95th percentile per-packet one-way delay: 67.385 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 277.08 Mbit/s
  95th percentile per-packet one-way delay: 182.692 ms
  Loss rate: 9.79%
Run 1: Report of PCC-Expr — Data Link

![Graph showing throughput and per-packet one-way delay for different flows.](image)
Run 2: Statistics of PCC-Expr

Start at: 2019-01-25 17:28:08
End at: 2019-01-25 17:28:38
Local clock offset: -0.12 ms
Remote clock offset: -0.003 ms

# Below is generated by plot.py at 2019-01-25 22:30:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 487.10 Mbit/s
95th percentile per-packet one-way delay: 98.584 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 257.96 Mbit/s
95th percentile per-packet one-way delay: 108.936 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 249.82 Mbit/s
95th percentile per-packet one-way delay: 62.869 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 191.10 Mbit/s
95th percentile per-packet one-way delay: 104.754 ms
Loss rate: 0.00%
Run 2: Report of PCC-Expr — Data Link
Run 3: Statistics of PCC-Expr

Start at: 2019-01-25 18:10:02
End at: 2019-01-25 18:10:32
Local clock offset: -0.089 ms
Remote clock offset: -0.233 ms

# Below is generated by plot.py at 2019-01-25 22:30:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 532.77 Mbit/s
  95th percentile per-packet one-way delay: 146.337 ms
  Loss rate: 0.65%
-- Flow 1:
  Average throughput: 299.23 Mbit/s
  95th percentile per-packet one-way delay: 117.387 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 262.24 Mbit/s
  95th percentile per-packet one-way delay: 164.893 ms
  Loss rate: 1.33%
-- Flow 3:
  Average throughput: 180.13 Mbit/s
  95th percentile per-packet one-way delay: 59.725 ms
  Loss rate: 0.00%
Run 3: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 300.38 Mbps)
- Flow 1 egress (mean 299.23 Mbps)
- Flow 2 ingress (mean 265.75 Mbps)
- Flow 2 egress (mean 262.24 Mbps)
- Flow 3 ingress (mean 180.13 Mbps)
- Flow 3 egress (mean 180.13 Mbps)

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

- Flow 1 (95th percentile 117.39 ms)
- Flow 2 (95th percentile 164.89 ms)
- Flow 3 (95th percentile 59.73 ms)
Run 4: Statistics of PCC-Expr

End at: 2019-01-25 18:53:05
Local clock offset: -0.297 ms
Remote clock offset: 1.106 ms

# Below is generated by plot.py at 2019-01-25 22:38:51
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 465.87 Mbit/s
   95th percentile per-packet one-way delay: 170.479 ms
   Loss rate: 1.12%
-- Flow 1:
   Average throughput: 288.73 Mbit/s
   95th percentile per-packet one-way delay: 172.752 ms
   Loss rate: 1.74%
-- Flow 2:
   Average throughput: 221.76 Mbit/s
   95th percentile per-packet one-way delay: 146.230 ms
   Loss rate: 0.12%
-- Flow 3:
   Average throughput: 90.42 Mbit/s
   95th percentile per-packet one-way delay: 62.666 ms
   Loss rate: 0.00%
Run 4: Report of PCC-Expr — Data Link
Run 5: Statistics of PCC-Expr

End at: 2019-01-25 19:34:43
Local clock offset: -0.121 ms
Remote clock offset: -0.004 ms

# Below is generated by plot.py at 2019-01-25 22:44:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 518.95 Mbit/s
95th percentile per-packet one-way delay: 133.946 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 294.02 Mbit/s
95th percentile per-packet one-way delay: 147.324 ms
Loss rate: 1.26%
-- Flow 2:
Average throughput: 252.25 Mbit/s
95th percentile per-packet one-way delay: 94.939 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 173.91 Mbit/s
95th percentile per-packet one-way delay: 97.289 ms
Loss rate: 0.00%
Run 5: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 297.78 Mbit/s)
- Flow 1 egress (mean 294.02 Mbit/s)
- Flow 2 ingress (mean 252.50 Mbit/s)
- Flow 2 egress (mean 252.25 Mbit/s)
- Flow 3 ingress (mean 173.90 Mbit/s)
- Flow 3 egress (mean 173.91 Mbit/s)

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

- Flow 1 (95th percentile 147.32 ms)
- Flow 2 (95th percentile 94.94 ms)
- Flow 3 (95th percentile 97.29 ms)
Run 1: Statistics of QUIC Cubic

Start at: 2019-01-25 16:58:34
End at: 2019-01-25 16:59:04
Local clock offset: -0.01 ms
Remote clock offset: -0.315 ms

# Below is generated by plot.py at 2019-01-25 22:44:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 46.98 Mbit/s
95th percentile per-packet one-way delay: 60.104 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 59.860 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 49.20 Mbit/s
95th percentile per-packet one-way delay: 56.716 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 43.60 Mbit/s
95th percentile per-packet one-way delay: 60.161 ms
Loss rate: 0.07%
Run 1: Report of QUIC Cubic — Data Link
Run 2: Statistics of QUIC Cubic

Start at: 2019-01-25 17:38:33
End at: 2019-01-25 17:39:03
Local clock offset: 0.251 ms
Remote clock offset: -0.006 ms

# Below is generated by plot.py at 2019-01-25 22:44:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 108.92 Mbit/s
95th percentile per-packet one-way delay: 57.552 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 56.10 Mbit/s
95th percentile per-packet one-way delay: 56.777 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 71.84 Mbit/s
95th percentile per-packet one-way delay: 56.724 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 15.63 Mbit/s
95th percentile per-packet one-way delay: 60.139 ms
Loss rate: 0.00%
Run 2: Report of QUIC Cubic — Data Link

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

- **Flow 1 ingress (mean 56.10 Mbit/s)**
- **Flow 1 egress (mean 56.10 Mbit/s)**
- **Flow 2 ingress (mean 71.84 Mbit/s)**
- **Flow 2 egress (mean 71.84 Mbit/s)**
- **Flow 3 ingress (mean 15.63 Mbit/s)**
- **Flow 3 egress (mean 15.63 Mbit/s)**
Run 3: Statistics of QUIC Cubic

Start at: 2019-01-25 18:20:49
End at: 2019-01-25 18:21:19
Local clock offset: -0.029 ms
Remote clock offset: -0.268 ms

# Below is generated by plot.py at 2019-01-25 22:44:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.29 Mbit/s
95th percentile per-packet one-way delay: 57.223 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 54.60 Mbit/s
95th percentile per-packet one-way delay: 57.253 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 35.75 Mbit/s
95th percentile per-packet one-way delay: 56.953 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 51.71 Mbit/s
95th percentile per-packet one-way delay: 56.840 ms
Loss rate: 0.00%
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic

Start at: 2019-01-25 19:02:57  
End at: 2019-01-25 19:03:27  
Local clock offset: 0.173 ms  
Remote clock offset: 0.853 ms

# Below is generated by plot.py at 2019-01-25 22:44:59  
# Datalink statistics

-- Total of 3 flows:
Average throughput: 93.45 Mbit/s
95th percentile per-packet one-way delay: 57.880 ms
Loss rate: 0.00%

-- Flow 1:
Average throughput: 40.62 Mbit/s
95th percentile per-packet one-way delay: 57.899 ms
Loss rate: 0.00%

-- Flow 2:
Average throughput: 49.06 Mbit/s
95th percentile per-packet one-way delay: 57.874 ms
Loss rate: 0.00%

-- Flow 3:
Average throughput: 61.70 Mbit/s
95th percentile per-packet one-way delay: 57.712 ms
Loss rate: 0.00%
Run 4: Report of QUIC Cubic — Data Link
Run 5: Statistics of QUIC Cubic

End at: 2019-01-25 19:45:26
Local clock offset: -0.177 ms
Remote clock offset: 0.699 ms

# Below is generated by plot.py at 2019-01-25 22:45:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 89.38 Mbit/s
  95th percentile per-packet one-way delay: 61.419 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 48.10 Mbit/s
  95th percentile per-packet one-way delay: 61.247 ms
  Loss rate: 0.02%
-- Flow 2:
  Average throughput: 30.66 Mbit/s
  95th percentile per-packet one-way delay: 57.635 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 63.82 Mbit/s
  95th percentile per-packet one-way delay: 61.533 ms
  Loss rate: 0.00%
Run 5: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

End at: 2019-01-25 16:43:44
Local clock offset: -0.127 ms
Remote clock offset: -0.175 ms

# Below is generated by plot.py at 2019-01-25 22:45:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 60.710 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 60.471 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 57.121 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 60.780 ms
  Loss rate: 0.00%
Run 1: Report of SCReAM — Data Link

![Graph 1: Throughput (Mbps)]

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

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

- **Flow 1 (95th percentile 60.47 ms)**
- **Flow 2 (95th percentile 57.12 ms)**
- **Flow 3 (95th percentile 60.78 ms)**
Run 2: Statistics of SCReAM

End at: 2019-01-25 17:23:11
Local clock offset: -0.049 ms
Remote clock offset: 0.567 ms

# Below is generated by plot.py at 2019-01-25 22:45:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 61.136 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.168 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 57.776 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 57.796 ms
  Loss rate: 0.00%
Run 2: Report of SCReAM — Data Link

[Graph showing throughput and packet delivery time for different flows]
Run 3: Statistics of SCReAM

Start at: 2019-01-25 18:04:14
End at: 2019-01-25 18:04:44
Local clock offset: 0.05 ms
Remote clock offset: 0.637 ms

# Below is generated by plot.py at 2019-01-25 22:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 57.738 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.715 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.768 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.643 ms
Loss rate: 0.00%
Run 3: Report of SCReAM — Data Link
Run 4: Statistics of SCReAM

End at: 2019-01-25 18:47:27
Local clock offset: -0.278 ms
Remote clock offset: -0.673 ms

# Below is generated by plot.py at 2019-01-25 22:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 60.286 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.309 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 56.648 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 56.779 ms
Loss rate: 0.00%
Run 4: Report of SCReAM — Data Link
Run 5: Statistics of SCReAM

Local clock offset: -0.161 ms
Remote clock offset: 0.663 ms

# Below is generated by plot.py at 2019-01-25 22:45:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 61.191 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 57.945 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.221 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 57.947 ms
  Loss rate: 0.00%
Run 5: Report of SCReAM — Data Link

Throughput (Mbps)

Time (s)

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

Delay (ms)

Time (s)

Flow 1 (95th percentile 57.95 ms)  Flow 2 (95th percentile 61.22 ms)  Flow 3 (95th percentile 57.95 ms)
Run 1: Statistics of Sprout

Start at: 2019-01-25 16:34:57
End at: 2019-01-25 16:35:27
Local clock offset: 0.297 ms
Remote clock offset: -0.009 ms

# Below is generated by plot.py at 2019-01-25 22:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.97 Mbit/s
95th percentile per-packet one-way delay: 57.491 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.82 Mbit/s
95th percentile per-packet one-way delay: 57.236 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.70 Mbit/s
95th percentile per-packet one-way delay: 57.617 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 5.96 Mbit/s
95th percentile per-packet one-way delay: 57.394 ms
Loss rate: 0.00%
Run 1: Report of Sprout — Data Link

**Throughput (Mbps)**

- **Flow 1 ingress** (mean 7.82 Mbps)
- **Flow 1 egress** (mean 7.82 Mbps)
- **Flow 2 ingress** (mean 7.70 Mbps)
- **Flow 2 egress** (mean 7.70 Mbps)
- **Flow 3 ingress** (mean 5.96 Mbps)
- **Flow 3 egress** (mean 5.96 Mbps)

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

- **Flow 1 (95th percentile 57.24 ms)**
- **Flow 2 (95th percentile 57.62 ms)**
- **Flow 3 (95th percentile 57.39 ms)**
Run 2: Statistics of Sprout

Start at: 2019-01-25 17:14:27
End at: 2019-01-25 17:14:57
Local clock offset: -0.027 ms
Remote clock offset: -0.728 ms

# Below is generated by plot.py at 2019-01-25 22:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.74 Mbit/s
95th percentile per-packet one-way delay: 60.234 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.77 Mbit/s
95th percentile per-packet one-way delay: 56.875 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.91 Mbit/s
95th percentile per-packet one-way delay: 60.373 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.22 Mbit/s
95th percentile per-packet one-way delay: 56.797 ms
Loss rate: 0.00%
Run 2: Report of Sprout — Data Link

Graph 1: Time vs. Throughput (Mbps)

Graph 2: Time vs. Per-packet one-way delay (ms)

Legend:
- Flow 1 ingress (mean 7.77 Mbps)
- Flow 1 egress (mean 7.77 Mbps)
- Flow 2 ingress (mean 6.91 Mbps)
- Flow 2 egress (mean 6.91 Mbps)
- Flow 3 ingress (mean 7.22 Mbps)
- Flow 3 egress (mean 7.22 Mbps)
Run 3: Statistics of Sprout

End at: 2019-01-25 17:56:02
Local clock offset: -0.138 ms
Remote clock offset: 0.115 ms

# Below is generated by plot.py at 2019-01-25 22:45:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 14.99 Mbit/s
  95th percentile per-packet one-way delay: 57.843 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 7.89 Mbit/s
  95th percentile per-packet one-way delay: 57.686 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 7.70 Mbit/s
  95th percentile per-packet one-way delay: 57.636 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 6.04 Mbit/s
  95th percentile per-packet one-way delay: 58.100 ms
  Loss rate: 0.00%
Run 3: Report of Sprout — Data Link
Run 4: Statistics of Sprout

Start at: 2019-01-25 18:38:36
End at: 2019-01-25 18:39:06
Local clock offset: 0.206 ms
Remote clock offset: -0.568 ms

# Below is generated by plot.py at 2019-01-25 22:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.66 Mbit/s
95th percentile per-packet one-way delay: 60.143 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.09 Mbit/s
95th percentile per-packet one-way delay: 60.236 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.71 Mbit/s
95th percentile per-packet one-way delay: 56.896 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.44 Mbit/s
95th percentile per-packet one-way delay: 56.842 ms
Loss rate: 0.00%
Run 4: Report of Sprout — Data Link

![Graph 1: Throughput (Mbps)]

![Graph 2: Per packet one way delay (ms)]
Run 5: Statistics of Sprout

Start at: 2019-01-25 19:20:00
End at: 2019-01-25 19:20:30
Local clock offset: -0.164 ms
Remote clock offset: 0.135 ms

# Below is generated by plot.py at 2019-01-25 22:45:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 14.31 Mbit/s
  95th percentile per-packet one-way delay: 61.226 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 6.88 Mbit/s
  95th percentile per-packet one-way delay: 61.255 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 7.89 Mbit/s
  95th percentile per-packet one-way delay: 57.900 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 6.64 Mbit/s
  95th percentile per-packet one-way delay: 61.372 ms
  Loss rate: 0.00%
Run 5: Report of Sprout — Data Link

```
Flow 1 ingress (mean 6.88 Mbit/s)  Flow 1 egress (mean 6.88 Mbit/s)
Flow 2 ingress (mean 7.89 Mbit/s)  Flow 2 egress (mean 7.89 Mbit/s)
Flow 3 ingress (mean 6.64 Mbit/s)  Flow 3 egress (mean 6.64 Mbit/s)
```

```
Flow 1 (95th percentile 61.26 ms)  Flow 2 (95th percentile 57.90 ms)  Flow 3 (95th percentile 61.37 ms)
```
Run 1: Statistics of TaoVA-100x

End at: 2019-01-25 16:54:53
Local clock offset: -0.53 ms
Remote clock offset: -0.891 ms

# Below is generated by plot.py at 2019-01-25 22:47:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 453.18 Mbit/s
95th percentile per-packet one-way delay: 59.950 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 234.88 Mbit/s
95th percentile per-packet one-way delay: 57.508 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 217.08 Mbit/s
95th percentile per-packet one-way delay: 60.685 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 223.02 Mbit/s
95th percentile per-packet one-way delay: 58.533 ms
Loss rate: 0.00%
Run 1: Report of TaoVA-100x — Data Link
Run 2: Statistics of TaoVA-100x

Start at: 2019-01-25 17:34:02
End at: 2019-01-25 17:34:32
Local clock offset: 0.234 ms
Remote clock offset: -0.272 ms

# Below is generated by plot.py at 2019-01-25 22:47:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 465.79 Mbit/s
  95th percentile per-packet one-way delay: 59.881 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 237.36 Mbit/s
  95th percentile per-packet one-way delay: 56.843 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 232.58 Mbit/s
  95th percentile per-packet one-way delay: 56.952 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 221.45 Mbit/s
  95th percentile per-packet one-way delay: 60.432 ms
  Loss rate: 0.03%
Run 2: Report of TaoVA-100x — Data Link

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

- **Flow 1 ingress (mean 237.36 Mbit/s)**
- **Flow 1 egress (mean 237.36 Mbit/s)**
- **Flow 2 ingress (mean 232.58 Mbit/s)**
- **Flow 2 egress (mean 232.58 Mbit/s)**
- **Flow 3 ingress (mean 221.46 Mbit/s)**
- **Flow 3 egress (mean 221.45 Mbit/s)**
Run 3: Statistics of TaoVA-100x

Start at: 2019-01-25 18:16:10
End at: 2019-01-25 18:16:40
Local clock offset: -0.551 ms
Remote clock offset: -0.192 ms

# Below is generated by plot.py at 2019-01-25 22:47:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 451.41 Mbit/s
95th percentile per-packet one-way delay: 61.346 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 231.53 Mbit/s
95th percentile per-packet one-way delay: 61.667 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 230.46 Mbit/s
95th percentile per-packet one-way delay: 58.850 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 199.99 Mbit/s
95th percentile per-packet one-way delay: 61.585 ms
Loss rate: 0.00%
Run 3: Report of TaoVA-100x — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 231.53 Mbit/s) — Flow 1 egress (mean 231.53 Mbit/s)
Flow 2 ingress (mean 230.44 Mbit/s) — Flow 2 egress (mean 230.46 Mbit/s)
Flow 3 ingress (mean 199.99 Mbit/s) — Flow 3 egress (mean 199.99 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 61.67 ms) — Flow 2 (95th percentile 58.85 ms) — Flow 3 (95th percentile 61.59 ms)
Run 4: Statistics of TaoVA-100x

End at: 2019-01-25 18:58:58
Local clock offset: -0.275 ms
Remote clock offset: -0.31 ms

# Below is generated by plot.py at 2019-01-25 22:47:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 445.35 Mbit/s
95th percentile per-packet one-way delay: 61.275 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 226.14 Mbit/s
95th percentile per-packet one-way delay: 61.943 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 223.51 Mbit/s
95th percentile per-packet one-way delay: 57.897 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 211.54 Mbit/s
95th percentile per-packet one-way delay: 60.370 ms
Loss rate: 0.01%
Run 4: Report of TaoVA-100x — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 226.15 Mbit/s)  Flow 1 egress (mean 226.14 Mbit/s)
Flow 2 ingress (mean 223.51 Mbit/s)  Flow 2 egress (mean 223.51 Mbit/s)
Flow 3 ingress (mean 211.55 Mbit/s)  Flow 3 egress (mean 211.54 Mbit/s)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 61.94 ms)  Flow 2 (95th percentile 57.90 ms)  Flow 3 (95th percentile 60.37 ms)
Run 5: Statistics of TaoVA-100x

End at: 2019-01-25 19:40:47
Local clock offset: -0.119 ms
Remote clock offset: -0.038 ms

# Below is generated by plot.py at 2019-01-25 22:47:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 440.35 Mbit/s
95th percentile per-packet one-way delay: 60.497 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 221.95 Mbit/s
95th percentile per-packet one-way delay: 60.622 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 224.67 Mbit/s
95th percentile per-packet one-way delay: 57.240 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 206.84 Mbit/s
95th percentile per-packet one-way delay: 57.363 ms
Loss rate: 0.00%
Run 1: Statistics of TCP Vegas

End at: 2019-01-25 16:31:50
Local clock offset: -0.225 ms
Remote clock offset: 0.055 ms

# Below is generated by plot.py at 2019-01-25 22:49:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 952.27 Mbit/s
95th percentile per-packet one-way delay: 76.261 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 505.86 Mbit/s
95th percentile per-packet one-way delay: 68.848 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 498.12 Mbit/s
95th percentile per-packet one-way delay: 82.544 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 348.88 Mbit/s
95th percentile per-packet one-way delay: 83.964 ms
Loss rate: 0.71%
Run 2: Statistics of TCP Vegas

Start at: 2019-01-25 17:10:22
End at: 2019-01-25 17:10:52
Local clock offset: -0.013 ms
Remote clock offset: -0.847 ms

# Below is generated by plot.py at 2019-01-25 22:56:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 813.65 Mbit/s
95th percentile per-packet one-way delay: 79.380 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 408.37 Mbit/s
95th percentile per-packet one-way delay: 86.685 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 436.63 Mbit/s
95th percentile per-packet one-way delay: 64.919 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 344.58 Mbit/s
95th percentile per-packet one-way delay: 65.391 ms
Loss rate: 0.03%
Run 2: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 408.35 Mbit/s)
- Flow 1 egress (mean 408.37 Mbit/s)
- Flow 2 ingress (mean 436.63 Mbit/s)
- Flow 2 egress (mean 436.63 Mbit/s)
- Flow 3 ingress (mean 344.57 Mbit/s)
- Flow 3 egress (mean 344.58 Mbit/s)
Run 3: Statistics of TCP Vegas

End at: 2019-01-25 17:51:43
Local clock offset: -0.322 ms
Remote clock offset: 0.153 ms

# Below is generated by plot.py at 2019-01-25 23:02:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 876.95 Mbit/s
95th percentile per-packet one-way delay: 73.163 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 465.74 Mbit/s
95th percentile per-packet one-way delay: 65.644 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 449.79 Mbit/s
95th percentile per-packet one-way delay: 81.403 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 336.28 Mbit/s
95th percentile per-packet one-way delay: 70.271 ms
Loss rate: 0.01%
Run 3: Report of TCP Vegas — Data Link
Run 4: Statistics of TCP Vegas

Start at: 2019-01-25 18:33:45
End at: 2019-01-25 18:34:15
Local clock offset: 0.012 ms
Remote clock offset: 0.928 ms

# Below is generated by plot.py at 2019-01-25 23:07:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1021.98 Mbit/s
95th percentile per-packet one-way delay: 111.683 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 578.79 Mbit/s
95th percentile per-packet one-way delay: 116.499 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 453.06 Mbit/s
95th percentile per-packet one-way delay: 65.519 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 425.91 Mbit/s
95th percentile per-packet one-way delay: 86.327 ms
Loss rate: 0.06%
Run 4: Report of TCP Vegas — Data Link

**Throughput (Mbps):**

- Flow 1 ingress (mean 578.77 Mbps)
- Flow 1 egress (mean 578.79 Mbps)
- Flow 2 ingress (mean 453.07 Mbps)
- Flow 2 egress (mean 453.06 Mbps)
- Flow 3 ingress (mean 426.06 Mbps)
- Flow 3 egress (mean 425.91 Mbps)

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

- Flow 1 (95th percentile 116.50 ms)
- Flow 2 (95th percentile 65.52 ms)
- Flow 3 (95th percentile 86.33 ms)
Run 5: Statistics of TCP Vegas

End at: 2019-01-25 19:16:02
Local clock offset: -0.132 ms
Remote clock offset: 0.579 ms

# Below is generated by plot.py at 2019-01-25 23:07:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 831.69 Mbit/s
  95th percentile per-packet one-way delay: 79.282 ms
  Loss rate: 0.03%

-- Flow 1:
  Average throughput: 394.62 Mbit/s
  95th percentile per-packet one-way delay: 62.000 ms
  Loss rate: 0.00%

-- Flow 2:
  Average throughput: 454.66 Mbit/s
  95th percentile per-packet one-way delay: 84.687 ms
  Loss rate: 0.01%

-- Flow 3:
  Average throughput: 403.94 Mbit/s
  95th percentile per-packet one-way delay: 83.017 ms
  Loss rate: 0.17%
Run 5: Report of TCP Vegas — Data Link

![Graph of Network Performance]

Throughput (Mbps): 0 to 600
Time (s): 0 to 30

Flow 1:
- Ingress: Mean 394.62 Mbps
- Egress: Mean 394.62 Mbps
- 95th Percentile 62.00 ms

Flow 2:
- Ingress: Mean 454.67 Mbps
- Egress: Mean 454.66 Mbps
- 95th Percentile 84.69 ms

Flow 3:
- Ingress: Mean 404.53 Mbps
- Egress: Mean 403.94 Mbps
- 95th Percentile 83.02 ms

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Run 1: Statistics of Verus

Start at: 2019-01-25 16:36:11
End at: 2019-01-25 16:36:41
Local clock offset: 0.319 ms
Remote clock offset: -0.344 ms

# Below is generated by plot.py at 2019-01-25 23:07:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 308.98 Mbit/s
  95th percentile per-packet one-way delay: 215.822 ms
  Loss rate: 3.90%
-- Flow 1:
  Average throughput: 138.00 Mbit/s
  95th percentile per-packet one-way delay: 113.994 ms
  Loss rate: 0.21%
-- Flow 2:
  Average throughput: 214.41 Mbit/s
  95th percentile per-packet one-way delay: 233.430 ms
  Loss rate: 7.90%
-- Flow 3:
  Average throughput: 87.23 Mbit/s
  95th percentile per-packet one-way delay: 69.491 ms
  Loss rate: 0.00%
Run 1: Report of Verus — Data Link

---

**Throughput (Mbps):**

- **Flow 1 ingress** (mean 138.33 Mbps)
- **Flow 1 egress** (mean 138.00 Mbps)
- **Flow 2 ingress** (mean 232.79 Mbps)
- **Flow 2 egress** (mean 214.41 Mbps)
- **Flow 3 ingress** (mean 87.23 Mbps)
- **Flow 3 egress** (mean 87.23 Mbps)

**Round-trip one-way delay (ms):**

- **Flow 1** (95th percentile 113.99 ms)
- **Flow 2** (95th percentile 233.43 ms)
- **Flow 3** (95th percentile 69.49 ms)
Run 2: Statistics of Verus

Start at: 2019-01-25 17:15:42
End at: 2019-01-25 17:16:12
Local clock offset: -0.188 ms
Remote clock offset: 0.603 ms

# Below is generated by plot.py at 2019-01-25 23:07:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 295.51 Mbit/s
95th percentile per-packet one-way delay: 167.155 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 147.24 Mbit/s
95th percentile per-packet one-way delay: 107.496 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 183.12 Mbit/s
95th percentile per-packet one-way delay: 183.858 ms
Loss rate: 1.09%
-- Flow 3:
Average throughput: 82.53 Mbit/s
95th percentile per-packet one-way delay: 65.804 ms
Loss rate: 0.00%
Run 2: Report of Verus — Data Link

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

- Flow 1 ingress (mean 147.24 Mbit/s)
- Flow 1 egress (mean 147.24 Mbit/s)
- Flow 2 ingress (mean 183.10 Mbit/s)
- Flow 2 egress (mean 183.12 Mbit/s)
- Flow 3 ingress (mean 82.56 Mbit/s)
- Flow 3 egress (mean 82.53 Mbit/s)
Run 3: Statistics of Verus

Start at: 2019-01-25 17:56:46
End at: 2019-01-25 17:57:16
Local clock offset: -0.416 ms
Remote clock offset: -0.631 ms

# Below is generated by plot.py at 2019-01-25 23:07:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 264.01 Mbit/s
95th percentile per-packet one-way delay: 108.108 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 129.71 Mbit/s
95th percentile per-packet one-way delay: 92.912 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 151.25 Mbit/s
95th percentile per-packet one-way delay: 95.546 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 102.83 Mbit/s
95th percentile per-packet one-way delay: 225.280 ms
Loss rate: 3.53%
Run 3: Report of Verus — Data Link
Run 4: Statistics of Verus

End at: 2019-01-25 18:40:20
Local clock offset: 0.187 ms
Remote clock offset: -0.145 ms

# Below is generated by plot.py at 2019-01-25 23:07:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 287.61 Mbit/s
95th percentile per-packet one-way delay: 159.172 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 181.13 Mbit/s
95th percentile per-packet one-way delay: 120.370 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 130.05 Mbit/s
95th percentile per-packet one-way delay: 183.501 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 61.24 Mbit/s
95th percentile per-packet one-way delay: 60.977 ms
Loss rate: 0.00%
Run 4: Report of Verus — Data Link

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

- Flow 1 ingress (mean 181.19 Mbit/s)
- Flow 1 egress (mean 181.13 Mbit/s)
- Flow 2 ingress (mean 130.92 Mbit/s)
- Flow 2 egress (mean 130.05 Mbit/s)
- Flow 3 ingress (mean 61.24 Mbit/s)
- Flow 3 egress (mean 61.24 Mbit/s)

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

- Flow 1 (95th percentile 120.37 ms)
- Flow 2 (95th percentile 183.50 ms)
- Flow 3 (95th percentile 60.98 ms)
Run 5: Statistics of Verus

Local clock offset: -0.117 ms  
Remote clock offset: 0.696 ms

# Below is generated by plot.py at 2019-01-25 23:07:21  
# Datalink statistics
-- Total of 3 flows:
Average throughput: 261.31 Mbit/s  
95th percentile per-packet one-way delay: 138.997 ms  
Loss rate: 0.01%

-- Flow 1:  
Average throughput: 175.86 Mbit/s  
95th percentile per-packet one-way delay: 144.829 ms  
Loss rate: 0.01%

-- Flow 2:  
Average throughput: 77.05 Mbit/s  
95th percentile per-packet one-way delay: 84.549 ms  
Loss rate: 0.01%

-- Flow 3:  
Average throughput: 104.18 Mbit/s  
95th percentile per-packet one-way delay: 72.890 ms  
Loss rate: 0.00%
Run 5: Report of Verus — Data Link

![Graph of Throughput vs Time](image1)

![Graph of Per-packet One-way Delay vs Time](image2)

Flow 1 ingress (mean 175.86 Mbit/s)  Flow 1 egress (mean 175.86 Mbit/s)
Flow 2 ingress (mean 77.04 Mbit/s)  Flow 2 egress (mean 77.05 Mbit/s)
Flow 3 ingress (mean 104.18 Mbit/s) Flow 3 egress (mean 104.18 Mbit/s)

Flow 1 (95th percentile 144.83 ms)  Flow 2 (95th percentile 84.55 ms)  Flow 3 (95th percentile 72.89 ms)
Run 1: Statistics of PCC-Vivace

Start at: 2019-01-25 16:56:31
End at: 2019-01-25 16:57:01
Local clock offset: -0.062 ms
Remote clock offset: -0.066 ms

# Below is generated by plot.py at 2019-01-25 23:08:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 582.40 Mbit/s
95th percentile per-packet one-way delay: 61.992 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 339.77 Mbit/s
95th percentile per-packet one-way delay: 62.710 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 287.73 Mbit/s
95th percentile per-packet one-way delay: 59.561 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 153.59 Mbit/s
95th percentile per-packet one-way delay: 58.302 ms
Loss rate: 0.00%
Run 1: Report of PCC-Vivace — Data Link

Throughput (Mbps)

Flow 1 ingress (mean 339.77 Mbps)
Flow 1 egress (mean 339.77 Mbps)
Flow 2 ingress (mean 287.73 Mbps)
Flow 2 egress (mean 287.73 Mbps)
Flow 3 ingress (mean 153.59 Mbps)
Flow 3 egress (mean 153.59 Mbps)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 62.71 ms)
Flow 2 (95th percentile 59.56 ms)
Flow 3 (95th percentile 58.30 ms)
Run 2: Statistics of PCC-Vivace

Start at: 2019-01-25 17:36:26
End at: 2019-01-25 17:36:56
Local clock offset: -0.436 ms
Remote clock offset: -0.008 ms

# Below is generated by plot.py at 2019-01-25 23:09:09
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 588.44 Mbit/s
  95th percentile per-packet one-way delay: 69.238 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 335.73 Mbit/s
  95th percentile per-packet one-way delay: 62.568 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 299.67 Mbit/s
  95th percentile per-packet one-way delay: 93.853 ms
  Loss rate: 0.02%
-- Flow 3:
  Average throughput: 162.77 Mbit/s
  95th percentile per-packet one-way delay: 62.546 ms
  Loss rate: 0.00%
Run 2: Report of PCC-Vivace — Data Link

[Graph showing network performance metrics over time, with legends for different flows and their average rates.]
Run 3: Statistics of PCC-Vivace

Start at: 2019-01-25 18:18:33
End at: 2019-01-25 18:19:03
Local clock offset: -0.286 ms
Remote clock offset: -0.632 ms

# Below is generated by plot.py at 2019-01-25 23:09:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 562.18 Mbit/s
95th percentile per-packet one-way delay: 65.989 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 323.48 Mbit/s
95th percentile per-packet one-way delay: 66.123 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 264.27 Mbit/s
95th percentile per-packet one-way delay: 68.753 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 191.96 Mbit/s
95th percentile per-packet one-way delay: 62.148 ms
Loss rate: 0.00%
Run 3: Report of PCC-Vivace — Data Link
Run 4: Statistics of PCC-Vivace

Start at: 2019-01-25 19:00:37
End at: 2019-01-25 19:01:07
Local clock offset: 0.061 ms
Remote clock offset: 1.067 ms

# Below is generated by plot.py at 2019-01-25 23:09:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 569.98 Mbit/s
95th percentile per-packet one-way delay: 62.960 ms
Loss rate: 0.00%

-- Flow 1:
Average throughput: 333.43 Mbit/s
95th percentile per-packet one-way delay: 63.228 ms
Loss rate: 0.00%

-- Flow 2:
Average throughput: 273.26 Mbit/s
95th percentile per-packet one-way delay: 62.092 ms
Loss rate: 0.00%

-- Flow 3:
Average throughput: 165.90 Mbit/s
95th percentile per-packet one-way delay: 63.732 ms
Loss rate: 0.00%
Run 4: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 333.43 Mbit/s)
- Flow 1 egress (mean 333.43 Mbit/s)
- Flow 2 ingress (mean 273.26 Mbit/s)
- Flow 2 egress (mean 273.26 Mbit/s)
- Flow 3 ingress (mean 165.90 Mbit/s)
- Flow 3 egress (mean 165.90 Mbit/s)
Run 5: Statistics of PCC-Vivace

Local clock offset: -0.174 ms
Remote clock offset: 0.048 ms

# Below is generated by plot.py at 2019-01-25 23:09:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 592.00 Mbit/s
  95th percentile per-packet one-way delay: 171.247 ms
  Loss rate: 0.34%
-- Flow 1:
  Average throughput: 329.36 Mbit/s
  95th percentile per-packet one-way delay: 61.585 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 343.66 Mbit/s
  95th percentile per-packet one-way delay: 201.849 ms
  Loss rate: 0.88%
-- Flow 3:
  Average throughput: 103.99 Mbit/s
  95th percentile per-packet one-way delay: 57.697 ms
  Loss rate: 0.00%
Run 5: Report of PCC-Vivace — Data Link

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

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

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Run 1: Statistics of WebRTC media

End at: 2019-01-25 16:38:29
Local clock offset: -0.366 ms
Remote clock offset: -0.739 ms

# Below is generated by plot.py at 2019-01-25 23:09:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 60.399 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 56.813 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.66 Mbit/s
95th percentile per-packet one-way delay: 56.653 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.67 Mbit/s
95th percentile per-packet one-way delay: 60.450 ms
Loss rate: 0.00%
Run 1: Report of WebRTC media — Data Link
Run 2: Statistics of WebRTC media

Start at: 2019-01-25 17:17:32
End at: 2019-01-25 17:18:02
Local clock offset: -0.169 ms
Remote clock offset: -0.65 ms

# Below is generated by plot.py at 2019-01-25 23:09:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.14 Mbit/s
  95th percentile per-packet one-way delay: 59.967 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 60.014 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 56.677 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 56.720 ms
  Loss rate: 0.00%
Run 2: Report of WebRTC media — Data Link

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

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

Start at: 2019-01-25 17:58:42
End at: 2019-01-25 17:59:12
Local clock offset: -0.166 ms
Remote clock offset: 0.145 ms

# Below is generated by plot.py at 2019-01-25 23:09:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 61.062 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 60.952 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.442 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 61.108 ms
Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link

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

Flow 1 ingress (mean 0.05 Mbit/s), Flow 1 egress (mean 0.05 Mbit/s), Flow 2 ingress (mean 0.05 Mbit/s), Flow 2 egress (mean 0.05 Mbit/s), Flow 3 ingress (mean 0.05 Mbit/s), Flow 3 egress (mean 0.05 Mbit/s).
Run 4: Statistics of WebRTC media

Start at: 2019-01-25 18:41:36
End at: 2019-01-25 18:42:06
Local clock offset: -0.392 ms
Remote clock offset: 0.02 ms

# Below is generated by plot.py at 2019-01-25 23:09:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.66 Mbit/s
  95th percentile per-packet one-way delay: 60.810 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 2.03 Mbit/s
  95th percentile per-packet one-way delay: 60.848 ms
  Loss rate: 0.02%
-- Flow 2:
  Average throughput: 1.18 Mbit/s
  95th percentile per-packet one-way delay: 57.545 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.45 Mbit/s
  95th percentile per-packet one-way delay: 57.799 ms
  Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link
Run 5: Statistics of WebRTC media

Local clock offset: 0.12 ms  
Remote clock offset: 0.717 ms

# Below is generated by plot.py at 2019-01-25 23:09:53  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 61.340 ms  
Loss rate: 0.02%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 61.407 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 57.748 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 61.260 ms  
Loss rate: 0.00%
Run 5: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 0.04 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: Per-packet one-way delay (ms) vs Time (s)]

- Flow 1 (95th percentile 61.41 ms)
- Flow 2 (95th percentile 57.75 ms)
- Flow 3 (95th percentile 61.26 ms)