Pantheon Report

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

System info:
Linux 4.15.0-1028-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

Git summary:
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7e8a17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcb2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdef58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0edcbf90c077e64d
third_party/libutp @ b3465b942e826f2b179eaab4a906ce6b7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/pantheon-tunnel @ f866d3f58d27af942717625ee3a354cc2e802bd
third_party/pcc @ 1afcc957fa0d66618b623c091a55f8ec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8ac08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1b8143ebc978f3c9f42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1a3b8b2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74c9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
test from GCE Tokyo to GCE Iowa, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)
<table>
<thead>
<tr>
<th>scheme</th>
<th># runs</th>
<th>mean avg tput (Mbit/s)</th>
<th>mean 95th-%ile delay (ms)</th>
<th>mean loss rate (%)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>flow 1</td>
<td>flow 2</td>
<td>flow 3</td>
</tr>
<tr>
<td>TCP BBR</td>
<td>5</td>
<td>469.45</td>
<td>450.17</td>
<td>416.87</td>
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<td>Copa</td>
<td>5</td>
<td>288.67</td>
<td>242.79</td>
<td>231.07</td>
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<td>TCP Cubic</td>
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<td>448.48</td>
<td>452.13</td>
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<td>542.39</td>
<td>363.02</td>
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<td>PCC-Vivace</td>
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<td>WebRTC media</td>
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<td>0.05</td>
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</table>
Run 1: Statistics of TCP BBR

Start at: 2019-04-24 08:32:23
End at: 2019-04-24 08:32:53
Local clock offset: -0.059 ms
Remote clock offset: -0.49 ms

# Below is generated by plot.py at 2019-04-24 12:08:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 907.76 Mbit/s
95th percentile per-packet one-way delay: 167.545 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 474.53 Mbit/s
95th percentile per-packet one-way delay: 152.517 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 433.97 Mbit/s
95th percentile per-packet one-way delay: 183.751 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 439.95 Mbit/s
95th percentile per-packet one-way delay: 162.911 ms
Loss rate: 1.98%
Run 2: Statistics of TCP BBR

Start at: 2019-04-24 09:08:20
End at: 2019-04-24 09:08:50
Local clock offset: 0.0 ms
Remote clock offset: -0.448 ms

# Below is generated by plot.py at 2019-04-24 12:08:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 881.94 Mbit/s
95th percentile per-packet one-way delay: 171.083 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 454.98 Mbit/s
95th percentile per-packet one-way delay: 148.469 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 443.80 Mbit/s
95th percentile per-packet one-way delay: 174.414 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 400.59 Mbit/s
95th percentile per-packet one-way delay: 186.914 ms
Loss rate: 2.69%
Run 2: Report of TCP BBR — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 456.66 Mbps)
  - Flow 1 egress (mean 454.98 Mbps)
  - Flow 2 ingress (mean 446.39 Mbps)
  - Flow 2 egress (mean 443.80 Mbps)
  - Flow 3 ingress (mean 436.42 Mbps)
  - Flow 3 egress (mean 400.59 Mbps)

- **Packet Delay (ms):**
  - Flow 1 (95th percentile 148.47 ms)
  - Flow 2 (95th percentile 174.41 ms)
  - Flow 3 (95th percentile 186.91 ms)
Run 3: Statistics of TCP BBR

Start at: 2019-04-24 09:44:34
End at: 2019-04-24 09:45:04
Local clock offset: -0.073 ms
Remote clock offset: -0.456 ms

# Below is generated by plot.py at 2019-04-24 12:08:58
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 934.61 Mbit/s
95th percentile per-packet one-way delay: 158.181 ms
 Loss rate: 1.30%
-- Flow 1:
 Average throughput: 486.38 Mbit/s
95th percentile per-packet one-way delay: 156.148 ms
 Loss rate: 0.93%
-- Flow 2:
 Average throughput: 466.33 Mbit/s
95th percentile per-packet one-way delay: 163.731 ms
 Loss rate: 1.64%
-- Flow 3:
 Average throughput: 419.61 Mbit/s
95th percentile per-packet one-way delay: 141.347 ms
 Loss rate: 1.83%
Run 3: Report of TCP BBR — Data Link

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

### Throughput
- **Flow 1 ingress (mean 488.88 Mbit/s)**
- **Flow 1 egress (mean 486.38 Mbit/s)**
- **Flow 2 ingress (mean 471.10 Mbit/s)**
- **Flow 2 egress (mean 466.33 Mbit/s)**
- **Flow 3 ingress (mean 422.00 Mbit/s)**
- **Flow 3 egress (mean 419.61 Mbit/s)**

### Latency
- **Flow 1 (95th percentile 156.15 ms)**
- **Flow 2 (95th percentile 163.73 ms)**
- **Flow 3 (95th percentile 141.35 ms)**
Run 4: Statistics of TCP BBR

Start at: 2019-04-24 10:20:54
Local clock offset: -0.041 ms
Remote clock offset: -0.514 ms

# Below is generated by plot.py at 2019-04-24 12:08:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 859.15 Mbit/s
95th percentile per-packet one-way delay: 181.244 ms
Loss rate: 1.27%
-- Flow 1:
Average throughput: 453.83 Mbit/s
95th percentile per-packet one-way delay: 181.819 ms
Loss rate: 1.01%
-- Flow 2:
Average throughput: 424.58 Mbit/s
95th percentile per-packet one-way delay: 185.754 ms
Loss rate: 1.57%
-- Flow 3:
Average throughput: 373.40 Mbit/s
95th percentile per-packet one-way delay: 149.167 ms
Loss rate: 1.57%
Run 4: Report of TCP BBR — Data Link

![Graph showing network throughput and delay over time.]

Legend:
- Flow 1 ingress (mean 456.52 Mbit/s) - Flow 1 egress (mean 455.83 Mbit/s)
- Flow 2 ingress (mean 428.59 Mbit/s) - Flow 2 egress (mean 424.58 Mbit/s)
- Flow 3 ingress (mean 374.53 Mbit/s) - Flow 3 egress (mean 373.49 Mbit/s)
Run 5: Statistics of TCP BBR

Start at: 2019-04-24 10:57:08
Local clock offset: -0.032 ms
Remote clock offset: -0.035 ms

# Below is generated by plot.py at 2019-04-24 12:09:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 946.65 Mbit/s
  95th percentile per-packet one-way delay: 176.239 ms
  Loss rate: 1.53%
-- Flow 1:
  Average throughput: 477.53 Mbit/s
  95th percentile per-packet one-way delay: 179.301 ms
  Loss rate: 1.14%
-- Flow 2:
  Average throughput: 482.16 Mbit/s
  95th percentile per-packet one-way delay: 177.669 ms
  Loss rate: 1.17%
-- Flow 3:
  Average throughput: 450.80 Mbit/s
  95th percentile per-packet one-way delay: 163.083 ms
  Loss rate: 3.49%
Run 5: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 480.99 Mbit/s)
- Flow 1 egress (mean 477.53 Mbit/s)
- Flow 2 ingress (mean 484.77 Mbit/s)
- Flow 2 egress (mean 482.16 Mbit/s)
- Flow 3 ingress (mean 461.17 Mbit/s)
- Flow 3 egress (mean 450.89 Mbit/s)

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

- Flow 1 (95th percentile 179.30 ms)
- Flow 2 (95th percentile 177.67 ms)
- Flow 3 (95th percentile 163.08 ms)
Run 1: Statistics of Copa

Start at: 2019-04-24 08:54:43
Local clock offset: -0.045 ms
Remote clock offset: -0.317 ms

# Below is generated by plot.py at 2019-04-24 12:09:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 520.19 Mbit/s
95th percentile per-packet one-way delay: 81.836 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 271.40 Mbit/s
95th percentile per-packet one-way delay: 80.965 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 257.36 Mbit/s
95th percentile per-packet one-way delay: 78.592 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 235.96 Mbit/s
95th percentile per-packet one-way delay: 100.051 ms
Loss rate: 1.65%
Run 1: Report of Copa — Data Link

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

Throughput (Mbit/s)

- Flow 1 ingress (mean 271.30 Mbit/s)
- Flow 1 egress (mean 271.40 Mbit/s)
- Flow 2 ingress (mean 257.00 Mbit/s)
- Flow 2 egress (mean 257.36 Mbit/s)
- Flow 3 ingress (mean 236.88 Mbit/s)
- Flow 3 egress (mean 235.96 Mbit/s)

Delay (ms)

- Flow 1 (95th percentile 80.97 ms)
- Flow 2 (95th percentile 78.59 ms)
- Flow 3 (95th percentile 100.05 ms)
Run 2: Statistics of Copa

Start at: 2019-04-24 09:30:50
End at: 2019-04-24 09:31:20
Local clock offset: -0.06 ms
Remote clock offset: -0.514 ms

# Below is generated by plot.py at 2019-04-24 12:09:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 506.74 Mbit/s
95th percentile per.packet one-way delay: 95.467 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 271.84 Mbit/s
95th percentile per.packet one-way delay: 98.576 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 257.97 Mbit/s
95th percentile per.packet one-way delay: 96.685 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 192.69 Mbit/s
95th percentile per.packet one-way delay: 81.895 ms
Loss rate: 0.73%
Run 2: Report of Copa — Data Link

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

- **Flow 1 ingress (mean 271.60 Mb/s)**
- **Flow 1 egress (mean 271.84 Mb/s)**
- **Flow 2 ingress (mean 257.96 Mb/s)**
- **Flow 2 egress (mean 257.97 Mb/s)**
- **Flow 3 ingress (mean 191.64 Mb/s)**
- **Flow 3 egress (mean 192.69 Mb/s)**

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

- **Flow 1 (95th percentile 98.58 ms)**
- **Flow 2 (95th percentile 96.69 ms)**
- **Flow 3 (95th percentile 81.89 ms)**
Run 3: Statistics of Copa

Start at: 2019-04-24 10:07:10
End at: 2019-04-24 10:07:40
Local clock offset: -0.052 ms
Remote clock offset: -0.815 ms

# Below is generated by plot.py at 2019-04-24 12:10:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 527.12 Mbit/s
95th percentile per-packet one-way delay: 97.248 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 294.37 Mbit/s
95th percentile per-packet one-way delay: 87.971 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 244.88 Mbit/s
95th percentile per-packet one-way delay: 92.868 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 212.25 Mbit/s
95th percentile per-packet one-way delay: 127.263 ms
Loss rate: 1.54%
Run 3: Report of Copa — Data Link
Run 4: Statistics of Copa

End at: 2019-04-24 10:44:07
Local clock offset: 0.009 ms
Remote clock offset: 0.035 ms

# Below is generated by plot.py at 2019-04-24 12:26:16
# Datalink statistics

-- Total of 3 flows:
Average throughput: 546.55 Mbit/s
95th percentile per-packet one-way delay: 82.955 ms
Loss rate: 0.67%

-- Flow 1:
Average throughput: 310.21 Mbit/s
95th percentile per-packet one-way delay: 83.765 ms
Loss rate: 0.36%

-- Flow 2:
Average throughput: 227.62 Mbit/s
95th percentile per-packet one-way delay: 80.288 ms
Loss rate: 0.85%

-- Flow 3:
Average throughput: 258.45 Mbit/s
95th percentile per-packet one-way delay: 81.707 ms
Loss rate: 1.47%
Run 4: Report of Copa — Data Link

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

- Flow 1 ingress (mean 310.01 Mbit/s)
- Flow 1 egress (mean 310.21 Mbit/s)
- Flow 2 ingress (mean 228.12 Mbit/s)
- Flow 2 egress (mean 227.02 Mbit/s)
- Flow 3 ingress (mean 258.98 Mbit/s)
- Flow 3 egress (mean 258.45 Mbit/s)
Run 5: Statistics of Copa

End at: 2019-04-24 11:20:18
Local clock offset: -0.075 ms
Remote clock offset: -0.187 ms

# Below is generated by plot.py at 2019-04-24 12:26:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 530.17 Mbit/s
95th percentile per-packet one-way delay: 75.557 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 295.55 Mbit/s
95th percentile per-packet one-way delay: 73.269 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 226.12 Mbit/s
95th percentile per-packet one-way delay: 76.602 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 255.98 Mbit/s
95th percentile per-packet one-way delay: 79.629 ms
Loss rate: 1.47%
Run 5: Report of Copa — Data Link

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The first graph shows the throughput over time for different flows. Flow 1 ingress (mean 295.65 Mbit/s) and Flow 1 egress (mean 295.55 Mbit/s) are represented by blue dashed and solid lines, respectively. Similarly, Flow 2 ingress (mean 225.67 Mbit/s) and Flow 2 egress (mean 226.12 Mbit/s) are shown in green dashed and solid lines. Flow 3 ingress (mean 256.53 Mbit/s) and Flow 3 egress (mean 255.98 Mbit/s) are depicted in red dashed and solid lines.

The second graph illustrates the per-packet one-way delay over time. Flow 1 (95th percentile 73.27 ms), Flow 2 (95th percentile 76.60 ms), and Flow 3 (95th percentile 79.63 ms) are marked with respective symbols.

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(text continues)
Run 1: Statistics of TCP Cubic

Start at: 2019-04-24 08:47:26
End at: 2019-04-24 08:47:56
Local clock offset: -0.036 ms
Remote clock offset: -0.446 ms

# Below is generated by plot.py at 2019-04-24 12:26:16
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 808.69 Mbit/s
  95th percentile per-packet one-way delay: 108.156 ms
  Loss rate: 0.81%
-- Flow 1:
  Average throughput: 340.39 Mbit/s
  95th percentile per-packet one-way delay: 64.845 ms
  Loss rate: 0.44%
-- Flow 2:
  Average throughput: 500.89 Mbit/s
  95th percentile per-packet one-way delay: 111.471 ms
  Loss rate: 0.72%
-- Flow 3:
  Average throughput: 410.78 Mbit/s
  95th percentile per-packet one-way delay: 114.262 ms
  Loss rate: 1.95%
Run 1: Report of TCP Cubic — Data Link
Run 2: Statistics of TCP Cubic

End at: 2019-04-24 09:23:50
Local clock offset: -0.092 ms
Remote clock offset: -0.151 ms

# Below is generated by plot.py at 2019-04-24 12:26:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 889.06 Mbit/s
95th percentile per-packet one-way delay: 104.127 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 485.21 Mbit/s
95th percentile per-packet one-way delay: 82.456 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 434.91 Mbit/s
95th percentile per-packet one-way delay: 128.793 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 347.86 Mbit/s
95th percentile per-packet one-way delay: 78.275 ms
Loss rate: 1.58%
Run 2: Report of TCP Cubic — Data Link

Throughput (Mbit/s)

Flow 1 ingress (mean 485.11 Mbit/s)
Flow 1 egress (mean 485.21 Mbit/s)
Flow 2 ingress (mean 434.22 Mbit/s)
Flow 2 egress (mean 434.91 Mbit/s)
Flow 3 ingress (mean 348.99 Mbit/s)
Flow 3 egress (mean 347.96 Mbit/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 82.46 ms)
Flow 2 (95th percentile 128.79 ms)
Flow 3 (95th percentile 78.28 ms)
Run 3: Statistics of TCP Cubic

Start at: 2019-04-24 09:59:44
End at: 2019-04-24 10:00:14
Local clock offset: -0.075 ms
Remote clock offset: -0.682 ms

# Below is generated by plot.py at 2019-04-24 12:26:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 887.80 Mbit/s
95th percentile per-packet one-way delay: 145.665 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 472.10 Mbit/s
95th percentile per-packet one-way delay: 157.054 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 437.80 Mbit/s
95th percentile per-packet one-way delay: 92.913 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 378.43 Mbit/s
95th percentile per-packet one-way delay: 89.064 ms
Loss rate: 1.20%
Run 3: Report of TCP Cubic — Data Link

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

- **Flow 1 ingress** (mean 471.85 Mbit/s)
- **Flow 1 egress** (mean 472.10 Mbit/s)
- **Flow 2 ingress** (mean 437.55 Mbit/s)
- **Flow 2 egress** (mean 437.80 Mbit/s)
- **Flow 3 ingress** (mean 378.14 Mbit/s)
- **Flow 3 egress** (mean 378.43 Mbit/s)

**Per-packet round trip delay**

- **Flow 1** (95th percentile 157.05 ms)
- **Flow 2** (95th percentile 92.91 ms)
- **Flow 3** (95th percentile 89.06 ms)
Run 4: Statistics of TCP Cubic

Start at: 2019-04-24 10:36:08
End at: 2019-04-24 10:36:38
Local clock offset: -0.046 ms
Remote clock offset: -0.2 ms

# Below is generated by plot.py at 2019-04-24 12:26:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 853.03 Mbit/s
95th percentile per-packet one-way delay: 88.179 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 449.49 Mbit/s
95th percentile per-packet one-way delay: 76.460 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 413.39 Mbit/s
95th percentile per-packet one-way delay: 92.851 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 390.61 Mbit/s
95th percentile per-packet one-way delay: 131.828 ms
Loss rate: 1.57%
Run 4: Report of TCP Cubic — Data Link

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**Throughput (Mbps):**

- Flow 1 ingress (mean 449.50 Mbps)
- Flow 1 egress (mean 449.49 Mbps)
- Flow 2 ingress (mean 413.79 Mbps)
- Flow 2 egress (mean 413.39 Mbps)
- Flow 3 ingress (mean 390.79 Mbps)
- Flow 3 egress (mean 390.61 Mbps)

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

- Flow 1 (95th percentile 76.46 ms)
- Flow 2 (95th percentile 92.85 ms)
- Flow 3 (95th percentile 111.83 ms)
Run 5: Statistics of TCP Cubic

Start at: 2019-04-24 11:12:22
End at: 2019-04-24 11:12:52
Local clock offset: -0.061 ms
Remote clock offset: -0.185 ms

# Below is generated by plot.py at 2019-04-24 12:26:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 956.66 Mbit/s
95th percentile per-packet one-way delay: 129.821 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 495.19 Mbit/s
95th percentile per-packet one-way delay: 136.304 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 473.64 Mbit/s
95th percentile per-packet one-way delay: 77.367 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 445.08 Mbit/s
95th percentile per-packet one-way delay: 108.386 ms
Loss rate: 1.85%
Run 5: Report of TCP Cubic — Data Link

---

**Throughput (Mbps)**

- **Flow 1** ingress (mean 495.19 Mbps)
- **Flow 2** ingress (mean 472.65 Mbps)
- **Flow 3** ingress (mean 447.77 Mbps)

**IPG (ms)**

- **Flow 1** (95th percentile 136.30 ms)
- **Flow 2** (95th percentile 77.37 ms)
- **Flow 3** (95th percentile 108.39 ms)
Run 1: Statistics of FillP

Start at: 2019-04-24 09:05:18
End at: 2019-04-24 09:05:48
Local clock offset: -0.017 ms
Remote clock offset: -0.435 ms

# Below is generated by plot.py at 2019-04-24 12:28:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 859.23 Mbit/s
95th percentile per-packet one-way delay: 112.422 ms
Loss rate: 1.15%
-- Flow 1:
Average throughput: 539.80 Mbit/s
95th percentile per-packet one-way delay: 123.359 ms
Loss rate: 1.33%
-- Flow 2:
Average throughput: 344.76 Mbit/s
95th percentile per-packet one-way delay: 65.654 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 274.54 Mbit/s
95th percentile per-packet one-way delay: 67.224 ms
Loss rate: 1.31%
Run 1: Report of FillP — Data Link

![Graph of Throughput and Delay over Time]

Throughput (Mbps):
- Flow 1 ingress (mean 544.96 Mbps)
- Flow 1 egress (mean 539.80 Mbps)
- Flow 2 ingress (mean 345.09 Mbps)
- Flow 2 egress (mean 344.76 Mbps)
- Flow 3 ingress (mean 274.47 Mbps)
- Flow 3 egress (mean 274.54 Mbps)

Packet Delay (ms):
- Flow 1 (95th percentile 123.36 ms)
- Flow 2 (95th percentile 65.65 ms)
- Flow 3 (95th percentile 67.22 ms)
Run 2: Statistics of FillP

Start at: 2019-04-24 09:41:32
End at: 2019-04-24 09:42:02
Local clock offset: -0.081 ms
Remote clock offset: -0.624 ms

# Below is generated by plot.py at 2019-04-24 12:41:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 861.03 Mbit/s
95th percentile per-packet one-way delay: 122.500 ms
Loss rate: 1.47%
-- Flow 1:
Average throughput: 521.26 Mbit/s
95th percentile per-packet one-way delay: 130.556 ms
Loss rate: 1.89%
-- Flow 2:
Average throughput: 375.89 Mbit/s
95th percentile per-packet one-way delay: 69.001 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 274.97 Mbit/s
95th percentile per-packet one-way delay: 67.903 ms
Loss rate: 1.42%
Run 2: Report of FillP — Data Link

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

- Flow 1 ingress (mean 529.34 Mbps)
- Flow 1 egress (mean 521.26 Mbps)
- Flow 2 ingress (mean 375.91 Mbps)
- Flow 2 egress (mean 375.89 Mbps)
- Flow 3 ingress (mean 275.15 Mbps)
- Flow 3 egress (mean 274.97 Mbps)
Run 3: Statistics of FillP

Start at: 2019-04-24 10:17:51
End at: 2019-04-24 10:18:21
Local clock offset: -0.068 ms
Remote clock offset: -0.617 ms

# Below is generated by plot.py at 2019-04-24 12:44:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 885.38 Mbit/s
95th percentile per-packet one-way delay: 107.384 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 553.19 Mbit/s
95th percentile per-packet one-way delay: 113.850 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 352.76 Mbit/s
95th percentile per-packet one-way delay: 67.475 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 298.04 Mbit/s
95th percentile per-packet one-way delay: 67.476 ms
Loss rate: 1.62%
Run 3: Report of FillP — Data Link
Run 4: Statistics of FillP

Start at: 2019-04-24 10:54:03
End at: 2019-04-24 10:54:33
Local clock offset: -0.03 ms
Remote clock offset: 0.086 ms

# Below is generated by plot.py at 2019-04-24 12:44:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 897.53 Mbit/s
95th percentile per-packet one-way delay: 116.700 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 555.66 Mbit/s
95th percentile per-packet one-way delay: 122.517 ms
Loss rate: 2.12%
-- Flow 2:
Average throughput: 383.52 Mbit/s
95th percentile per-packet one-way delay: 69.802 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 265.54 Mbit/s
95th percentile per-packet one-way delay: 66.742 ms
Loss rate: 1.48%
Run 4: Report of FillP — Data Link

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

- Flow 1 Ingress (mean 385.65 Mbit/s), Egress (mean 555.66 Mbit/s)
- Flow 2 Ingress (mean 382.92 Mbit/s), Egress (mean 383.52 Mbit/s)
- Flow 3 Ingress (mean 266.33 Mbit/s), Egress (mean 265.54 Mbit/s)

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

- Flow 1 (95th percentile 122.52 ms)
- Flow 2 (95th percentile 69.88 ms)
- Flow 3 (95th percentile 66.74 ms)
Run 5: Statistics of FillP

Start at: 2019-04-24 11:30:31
End at: 2019-04-24 11:31:01
Local clock offset: -0.046 ms
Remote clock offset: -0.015 ms

# Below is generated by plot.py at 2019-04-24 12:44:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 859.35 Mbit/s
95th percentile per-packet one-way delay: 84.494 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 542.05 Mbit/s
95th percentile per-packet one-way delay: 91.233 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 358.19 Mbit/s
95th percentile per-packet one-way delay: 68.592 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 242.44 Mbit/s
95th percentile per-packet one-way delay: 66.758 ms
Loss rate: 1.28%
Run 5: Report of FillP — Data Link

Thousand (Mbit/s)

Time (s)

Throughput (Mbit/s)

Flow 1 ingress (mean 541.90 Mbit/s)

Flow 1 egress (mean 542.05 Mbit/s)

Flow 2 ingress (mean 357.99 Mbit/s)

Flow 2 egress (mean 358.19 Mbit/s)

Flow 3 ingress (mean 242.87 Mbit/s)

Flow 3 egress (mean 242.44 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 91.23 ms)

Flow 2 (95th percentile 68.59 ms)

Flow 3 (95th percentile 68.76 ms)
Run 1: Statistics of FillP-Sheep

Start at: 2019-04-24 09:03:31
End at: 2019-04-24 09:04:01
Local clock offset: -0.072 ms
Remote clock offset: -0.51 ms

# Below is generated by plot.py at 2019-04-24 12:44:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 828.41 Mbit/s
95th percentile per-packet one-way delay: 99.691 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 531.06 Mbit/s
95th percentile per-packet one-way delay: 109.714 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 317.71 Mbit/s
95th percentile per-packet one-way delay: 67.422 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 262.48 Mbit/s
95th percentile per-packet one-way delay: 67.166 ms
Loss rate: 1.65%
Run 1: Report of FillP-Sheep — Data Link
Run 2: Statistics of FillP-Sheep

End at: 2019-04-24 09:40:13
Local clock offset: -0.071 ms
Remote clock offset: -0.451 ms

# Below is generated by plot.py at 2019-04-24 12:44:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 853.49 Mbit/s
95th percentile per-packet one-way delay: 90.511 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 549.99 Mbit/s
95th percentile per-packet one-way delay: 95.926 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 331.20 Mbit/s
95th percentile per-packet one-way delay: 67.379 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 254.32 Mbit/s
95th percentile per-packet one-way delay: 65.901 ms
Loss rate: 1.38%
Run 2: Report of FillP-Sheep — Data Link
Run 3: Statistics of FillP-Sheep

Start at: 2019-04-24 10:16:02
Local clock offset: -0.069 ms
Remote clock offset: -0.677 ms

# Below is generated by plot.py at 2019-04-24 12:45:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 851.54 Mbit/s
95th percentile per-packet one-way delay: 72.326 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 547.31 Mbit/s
95th percentile per-packet one-way delay: 75.442 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 343.41 Mbit/s
95th percentile per-packet one-way delay: 67.409 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 232.44 Mbit/s
95th percentile per-packet one-way delay: 67.061 ms
Loss rate: 1.68%
Run 3: Report of FillP-Sheep — Data Link

![Graph of data link throughput and delay over time for flows 1, 2, and 3 with respective mean bandwidths and 95th percentiles for delay.]

- Flow 1 ingress (mean 546.35 Mbit/s)
- Flow 1 egress (mean 547.31 Mbit/s)
- Flow 2 ingress (mean 343.59 Mbit/s)
- Flow 2 egress (mean 343.41 Mbit/s)
- Flow 3 ingress (mean 233.14 Mbit/s)
- Flow 3 egress (mean 232.44 Mbit/s)
Run 4: Statistics of FillP-Sheep

End at: 2019-04-24 10:53:02
Local clock offset: -0.001 ms
Remote clock offset: 0.117 ms

# Below is generated by plot.py at 2019-04-24 12:45:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 430.71 Mbit/s
  95th percentile per-packet one-way delay: 67.010 ms
  Loss rate: 0.74%
-- Flow 1:
  Average throughput: 127.60 Mbit/s
  95th percentile per-packet one-way delay: 70.454 ms
  Loss rate: 0.97%
-- Flow 2:
  Average throughput: 326.93 Mbit/s
  95th percentile per-packet one-way delay: 66.902 ms
  Loss rate: 0.58%
-- Flow 3:
  Average throughput: 261.46 Mbit/s
  95th percentile per-packet one-way delay: 65.239 ms
  Loss rate: 0.78%
Run 4: Report of FillP-Sheep — Data Link

![Graph of Throughput vs Time](image1)

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

Local clock offset: -0.069 ms
Remote clock offset: -0.208 ms

# Below is generated by plot.py at 2019-04-24 12:58:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 826.50 Mbit/s
  95th percentile per-packet one-way delay: 92.298 ms
  Loss rate: 0.50%
-- Flow 1:
  Average throughput: 518.61 Mbit/s
  95th percentile per-packet one-way delay: 101.453 ms
  Loss rate: 0.36%
-- Flow 2:
  Average throughput: 341.66 Mbit/s
  95th percentile per-packet one-way delay: 67.139 ms
  Loss rate: 0.52%
-- Flow 3:
  Average throughput: 247.23 Mbit/s
  95th percentile per-packet one-way delay: 64.828 ms
  Loss rate: 1.37%
Run 5: Report of FillP-Sheep — Data Link

[Graph showing throughput and delay for different flows over time]
Run 1: Statistics of Indigo

Start at: 2019-04-24 09:01:42
End at: 2019-04-24 09:02:12
Local clock offset: -0.064 ms
Remote clock offset: -0.061 ms

# Below is generated by plot.py at 2019-04-24 12:58:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 399.67 Mbit/s
95th percentile per-packet one-way delay: 66.376 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 208.67 Mbit/s
95th percentile per-packet one-way delay: 66.833 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 174.25 Mbit/s
95th percentile per-packet one-way delay: 65.208 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 182.38 Mbit/s
95th percentile per-packet one-way delay: 67.356 ms
Loss rate: 1.48%
Run 1: Report of Indigo — Data Link
Run 2: Statistics of Indigo

Start at: 2019-04-24 09:37:50
End at: 2019-04-24 09:38:20
Local clock offset: -0.077 ms
Remote clock offset: -0.475 ms

# Below is generated by plot.py at 2019-04-24 12:58:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 399.81 Mbit/s
95th percentile per-packet one-way delay: 66.177 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 212.37 Mbit/s
95th percentile per-packet one-way delay: 65.897 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 205.43 Mbit/s
95th percentile per-packet one-way delay: 66.166 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 159.83 Mbit/s
95th percentile per-packet one-way delay: 67.590 ms
Loss rate: 1.49%
Run 2: Report of Indigo — Data Link
Run 3: Statistics of Indigo

Local clock offset: -0.071 ms
Remote clock offset: -0.7 ms

# Below is generated by plot.py at 2019-04-24 12:58:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 395.75 Mbit/s
95th percentile per-packet one-way delay: 67.286 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 207.31 Mbit/s
95th percentile per-packet one-way delay: 66.834 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 203.77 Mbit/s
95th percentile per-packet one-way delay: 68.118 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 166.90 Mbit/s
95th percentile per-packet one-way delay: 67.681 ms
Loss rate: 1.52%
Run 3: Report of Indigo — Data Link
Run 4: Statistics of Indigo

End at: 2019-04-24 10:51:11
Local clock offset: -0.011 ms
Remote clock offset: 0.145 ms

# Below is generated by plot.py at 2019-04-24 12:58:21
# Datalink statistics
   -- Total of 3 flows:
    Average throughput: 392.32 Mbit/s
    95th percentile per-packet one-way delay: 73.717 ms
    Loss rate: 0.62%
   -- Flow 1:
    Average throughput: 214.03 Mbit/s
    95th percentile per-packet one-way delay: 73.630 ms
    Loss rate: 0.41%
   -- Flow 2:
    Average throughput: 192.04 Mbit/s
    95th percentile per-packet one-way delay: 84.175 ms
    Loss rate: 0.66%
   -- Flow 3:
    Average throughput: 160.02 Mbit/s
    95th percentile per-packet one-way delay: 66.105 ms
    Loss rate: 1.38%
Run 4: Report of Indigo — Data Link

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

- **Throughput (Mbps)**: The top graph illustrates the throughput over time for different flows.
  - **Flow 1 ingress** (mean 213.98 Mbps)
  - **Flow 1 egress** (mean 214.03 Mbps)
  - **Flow 2 ingress** (mean 192.06 Mbps)
  - **Flow 2 egress** (mean 192.04 Mbps)
  - **Flow 3 ingress** (mean 160.12 Mbps)
  - **Flow 3 egress** (mean 160.02 Mbps)

- **Per-packet one-way delay (ms)**: The bottom graph shows the per-packet one-way delay over time for different flows.
  - **Flow 1 (95th percentile 73.63 ms)**
  - **Flow 2 (95th percentile 84.17 ms)**
  - **Flow 3 (95th percentile 66.11 ms)**
Run 5: Statistics of Indigo

Start at: 2019-04-24 11:26:53
Local clock offset: -0.043 ms
Remote clock offset: -0.209 ms

# Below is generated by plot.py at 2019-04-24 12:58:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 383.07 Mbit/s
95th percentile per-packet one-way delay: 70.592 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 210.33 Mbit/s
95th percentile per-packet one-way delay: 70.984 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 180.48 Mbit/s
95th percentile per-packet one-way delay: 74.660 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 166.74 Mbit/s
95th percentile per-packet one-way delay: 66.687 ms
Loss rate: 1.49%
Run 5: Report of Indigo — Data Link

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![Throughput Graph](image)

![Latency Graph](image)

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Run 1: Statistics of Indigo-MusesC3

Start at: 2019-04-24 08:51:08
End at: 2019-04-24 08:51:38
Local clock offset: -0.042 ms
Remote clock offset: -0.522 ms

# Below is generated by plot.py at 2019-04-24 12:58:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 732.79 Mbit/s
  95th percentile per-packet one-way delay: 71.389 ms
  Loss rate: 0.55%
-- Flow 1:
  Average throughput: 433.85 Mbit/s
  95th percentile per-packet one-way delay: 72.486 ms
  Loss rate: 0.22%
-- Flow 2:
  Average throughput: 371.94 Mbit/s
  95th percentile per-packet one-way delay: 70.216 ms
  Loss rate: 0.55%
-- Flow 3:
  Average throughput: 219.92 Mbit/s
  95th percentile per-packet one-way delay: 69.038 ms
  Loss rate: 2.91%
Run 1: Report of Indigo-MusesC3 — Data Link

Throughput vs Time (s):
- Flow 1 ingress (mean 323.86 Mbps)
- Flow 1 egress (mean 433.85 Mbps)
- Flow 2 ingress (mean 371.42 Mbps)
- Flow 2 egress (mean 371.94 Mbps)
- Flow 3 ingress (mean 222.89 Mbps)
- Flow 3 egress (mean 219.92 Mbps)

Per-packet one-way delay (ms):
- Flow 1 (95th percentile 72.49 ms)
- Flow 2 (95th percentile 70.22 ms)
- Flow 3 (95th percentile 69.04 ms)
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-04-24 09:27:03
End at: 2019-04-24 09:27:33
Local clock offset: -0.055 ms
Remote clock offset: -0.621 ms

# Below is generated by plot.py at 2019-04-24 12:58:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 727.39 Mbit/s
95th percentile per-packet one-way delay: 73.727 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 430.11 Mbit/s
95th percentile per-packet one-way delay: 75.972 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 359.06 Mbit/s
95th percentile per-packet one-way delay: 66.618 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 255.22 Mbit/s
95th percentile per-packet one-way delay: 67.945 ms
Loss rate: 1.97%
Run 2: Report of Indigo-MusesC3 — Data Link

![Graph showing data link throughput and delay](image)

- Flow 1 ingress (mean 429.44 Mbit/s)
- Flow 1 egress (mean 430.11 Mbit/s)
- Flow 2 ingress (mean 359.14 Mbit/s)
- Flow 2 egress (mean 359.06 Mbit/s)
- Flow 3 ingress (mean 236.04 Mbit/s)
- Flow 3 egress (mean 255.22 Mbit/s)

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

- Flow 1 (95th percentile 75.97 ms)
- Flow 2 (95th percentile 66.62 ms)
- Flow 3 (95th percentile 67.94 ms)
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-04-24 10:03:33
End at: 2019-04-24 10:04:03
Local clock offset: -0.077 ms
Remote clock offset: -0.626 ms

# Below is generated by plot.py at 2019-04-24 13:09:08
# Datalink statistics
-- Total of 3 flows:
95th percentile per-packet one-way delay: 72.856 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 438.44 Mbit/s
95th percentile per-packet one-way delay: 73.643 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 367.02 Mbit/s
95th percentile per-packet one-way delay: 70.892 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 257.16 Mbit/s
95th percentile per-packet one-way delay: 75.766 ms
Loss rate: 2.43%
Run 3: Report of Indigo-MusesC3 — Data Link

[Graph showing throughput and packet loss over time for different flows]
Run 4: Statistics of Indigo-MusesC3

Local clock offset: -0.048 ms
Remote clock offset: -0.223 ms

# Below is generated by plot.py at 2019-04-24 13:11:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 748.11 Mbit/s
95th percentile per-packet one-way delay: 72.799 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 451.24 Mbit/s
95th percentile per-packet one-way delay: 72.943 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 370.58 Mbit/s
95th percentile per-packet one-way delay: 73.107 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 229.12 Mbit/s
95th percentile per-packet one-way delay: 69.320 ms
Loss rate: 2.69%
Run 4: Report of Indigo-MusesC3 — Data Link

[Diagram showing throughput and per-packet one-way delay for flows 1, 2, and 3, with specified means and 95th percentiles for ingress and egress.]
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-04-24 11:16:04
End at: 2019-04-24 11:16:34
Local clock offset: -0.083 ms
Remote clock offset: -0.105 ms

# Below is generated by plot.py at 2019-04-24 13:11:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 742.62 Mbit/s
95th percentile per-packet one-way delay: 78.249 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 440.59 Mbit/s
95th percentile per-packet one-way delay: 81.771 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 355.88 Mbit/s
95th percentile per-packet one-way delay: 72.646 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 265.10 Mbit/s
95th percentile per-packet one-way delay: 65.387 ms
Loss rate: 2.05%
Run 5: Report of Indigo-MusesC3 — Data Link

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

- **Flow 1 ingress (mean 439.80 Mbit/s)**
- **Flow 1 egress (mean 440.59 Mbit/s)**
- **Flow 2 ingress (mean 336.07 Mbit/s)**
- **Flow 2 egress (mean 355.88 Mbit/s)**
- **Flow 3 ingress (mean 266.18 Mbit/s)**
- **Flow 3 egress (mean 265.10 Mbit/s)**

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

- **Flow 1 (95th percentile 81.77 ms)**
- **Flow 2 (95th percentile 72.65 ms)**
- **Flow 3 (95th percentile 65.39 ms)**
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-04-24 08:59:52
End at: 2019-04-24 09:00:22
Local clock offset: -0.03 ms
Remote clock offset: -0.402 ms

# Below is generated by plot.py at 2019-04-24 13:12:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 778.63 Mbit/s
95th percentile per-packet one-way delay: 88.035 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 443.29 Mbit/s
95th percentile per-packet one-way delay: 92.083 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 382.11 Mbit/s
95th percentile per-packet one-way delay: 73.879 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 327.01 Mbit/s
95th percentile per-packet one-way delay: 71.219 ms
Loss rate: 1.35%
Run 1: Report of Indigo-MusesC5 — Data Link
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-04-24 09:36:01
End at: 2019-04-24 09:36:31
Local clock offset: -0.096 ms
Remote clock offset: -0.504 ms

# Below is generated by plot.py at 2019-04-24 13:12:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 740.14 Mbit/s
95th percentile per-packet one-way delay: 95.945 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 465.83 Mbit/s
95th percentile per-packet one-way delay: 100.305 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 390.54 Mbit/s
95th percentile per-packet one-way delay: 73.568 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 87.83 Mbit/s
95th percentile per-packet one-way delay: 63.286 ms
Loss rate: 2.14%
Run 2: Report of Indigo-MusesC5 — Data Link

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

- Flow 1 ingress (mean 465.04 Mbps)
- Flow 1 egress (mean 465.83 Mbps)
- Flow 2 ingress (mean 390.68 Mbps)
- Flow 2 egress (mean 390.54 Mbps)
- Flow 3 ingress (mean 88.23 Mbps)
- Flow 3 egress (mean 87.83 Mbps)

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

- Flow 1 (95th percentile 100.31 ms)
- Flow 2 (95th percentile 73.57 ms)
- Flow 3 (95th percentile 63.29 ms)
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-04-24 10:12:19
End at: 2019-04-24 10:12:49
Local clock offset: -0.08 ms
Remote clock offset: -0.684 ms

# Below is generated by plot.py at 2019-04-24 13:13:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 812.78 Mbit/s
95th percentile per-packet one-way delay: 90.926 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 462.59 Mbit/s
95th percentile per-packet one-way delay: 85.182 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 416.03 Mbit/s
95th percentile per-packet one-way delay: 112.632 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 291.80 Mbit/s
95th percentile per-packet one-way delay: 69.659 ms
Loss rate: 2.20%
Run 3: Report of Indigo-MusesC5 — Data Link
Run 4: Statistics of Indigo-MusesC5

Local clock offset: -0.026 ms
Remote clock offset: 0.125 ms

# Below is generated by plot.py at 2019-04-24 13:13:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 739.28 Mbit/s
95th percentile per-packet one-way delay: 83.960 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 464.97 Mbit/s
95th percentile per-packet one-way delay: 86.561 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 385.29 Mbit/s
95th percentile per-packet one-way delay: 83.753 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 101.71 Mbit/s
95th percentile per-packet one-way delay: 63.595 ms
Loss rate: 2.06%
Run 4: Report of Indigo-MusesC5 — Data Link

![Graphs showing throughput and per-packet delay over time for different flows.](image-url)
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-04-24 11:25:02
Local clock offset: -0.063 ms
Remote clock offset: 0.011 ms

# Below is generated by plot.py at 2019-04-24 13:13:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 760.90 Mbit/s
95th percentile per-packet one-way delay: 78.609 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 466.77 Mbit/s
95th percentile per-packet one-way delay: 79.266 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 415.99 Mbit/s
95th percentile per-packet one-way delay: 76.472 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 99.34 Mbit/s
95th percentile per-packet one-way delay: 63.521 ms
Loss rate: 1.82%
Run 5: Report of Indigo-MusesC5 — Data Link
Run 1: Statistics of Indigo-MusesD

Start at: 2019-04-24 08:42:31
End at: 2019-04-24 08:43:01
Local clock offset: -0.034 ms
Remote clock offset: -0.376 ms

# Below is generated by plot.py at 2019-04-24 13:20:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 644.10 Mbit/s
  95th percentile per-packet one-way delay: 67.450 ms
  Loss rate: 0.52%
-- Flow 1:
  Average throughput: 389.74 Mbit/s
  95th percentile per-packet one-way delay: 67.437 ms
  Loss rate: 0.35%
-- Flow 2:
  Average throughput: 354.69 Mbit/s
  95th percentile per-packet one-way delay: 67.740 ms
  Loss rate: 0.66%
-- Flow 3:
  Average throughput: 83.87 Mbit/s
  95th percentile per-packet one-way delay: 63.908 ms
  Loss rate: 1.98%
Run 1: Report of Indigo-MusesD — Data Link

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

- **Throughput**: Flow 1 ingress (mean 389.32 Mbit/s), Flow 1 egress (mean 389.74 Mbit/s), Flow 2 ingress (mean 354.55 Mbit/s), Flow 2 egress (mean 354.69 Mbit/s), Flow 3 ingress (mean 84.14 Mbit/s), Flow 3 egress (mean 83.87 Mbit/s).
- **Per-packet one-way delay**: Flow 1 (95th percentile 67.44 ms), Flow 2 (95th percentile 67.74 ms), Flow 3 (95th percentile 63.91 ms).
Run 2: Statistics of Indigo-MusesD

End at: 2019-04-24 09:18:53
Local clock offset: -0.09 ms
Remote clock offset: 0.233 ms

# Below is generated by plot.py at 2019-04-24 13:23:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 668.74 Mbit/s
95th percentile per-packet one-way delay: 73.973 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 386.76 Mbit/s
95th percentile per-packet one-way delay: 79.582 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 306.04 Mbit/s
95th percentile per-packet one-way delay: 65.019 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 319.97 Mbit/s
95th percentile per-packet one-way delay: 69.150 ms
Loss rate: 1.70%
Run 2: Report of Indigo-MusesD — Data Link

![Graph of Throughput (Mbps)](image1)

- Flow 1 ingress (mean 385.43 Mbps)
- Flow 1 egress (mean 386.76 Mbps)
- Flow 2 ingress (mean 335.77 Mbps)
- Flow 2 egress (mean 306.04 Mbps)
- Flow 3 ingress (mean 320.09 Mbps)
- Flow 3 egress (mean 319.97 Mbps)

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

- Flow 1 (95th percentile 79.58 ms)
- Flow 2 (95th percentile 65.02 ms)
- Flow 3 (95th percentile 69.15 ms)
Run 3: Statistics of Indigo-MusesD

Start at: 2019-04-24 09:54:41
Local clock offset: -0.087 ms
Remote clock offset: -0.79 ms

# Below is generated by plot.py at 2019-04-24 13:23:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 674.71 Mbit/s
95th percentile per-packet one-way delay: 73.457 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 363.29 Mbit/s
95th percentile per-packet one-way delay: 74.256 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 372.46 Mbit/s
95th percentile per-packet one-way delay: 73.860 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 265.69 Mbit/s
95th percentile per-packet one-way delay: 68.941 ms
Loss rate: 1.95%
Run 4: Statistics of Indigo-MusesD

Local clock offset: -0.044 ms
Remote clock offset: -0.274 ms

# Below is generated by plot.py at 2019-04-24 13:23:46
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 573.04 Mbit/s
  95th percentile per-packet one-way delay: 76.276 ms
  Loss rate: 0.45%
-- Flow 1:
  Average throughput: 319.71 Mbit/s
  95th percentile per-packet one-way delay: 79.501 ms
  Loss rate: 0.16%
-- Flow 2:
  Average throughput: 271.57 Mbit/s
  95th percentile per-packet one-way delay: 72.247 ms
  Loss rate: 0.23%
-- Flow 3:
  Average throughput: 300.73 Mbit/s
  95th percentile per-packet one-way delay: 69.961 ms
  Loss rate: 2.11%
Run 4: Report of Indigo-MusesD — Data Link
Run 5: Statistics of Indigo-MusesD

Start at: 2019-04-24 11:07:21
End at: 2019-04-24 11:07:51
Local clock offset: -0.03 ms
Remote clock offset: -0.082 ms

# Below is generated by plot.py at 2019-04-24 13:24:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 693.65 Mbit/s
  95th percentile per-packet one-way delay: 73.492 ms
  Loss rate: 0.58%
-- Flow 1:
  Average throughput: 414.12 Mbit/s
  95th percentile per-packet one-way delay: 75.773 ms
  Loss rate: 0.26%
-- Flow 2:
  Average throughput: 341.29 Mbit/s
  95th percentile per-packet one-way delay: 69.186 ms
  Loss rate: 0.67%
-- Flow 3:
  Average throughput: 224.77 Mbit/s
  95th percentile per-packet one-way delay: 65.348 ms
  Loss rate: 2.49%
Run 5: Report of Indigo-MusesD — Data Link

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

**Throughput (Mbps)**
- Flow 1 ingress (mean 413.24 Mbps)
- Flow 1 egress (mean 414.12 Mbps)
- Flow 2 ingress (mean 341.02 Mbps)
- Flow 2 egress (mean 341.29 Mbps)
- Flow 3 ingress (mean 226.70 Mbps)
- Flow 3 egress (mean 224.77 Mbps)

**Per-packet one-way delay (ms)**
- Flow 1 (95th percentile 75.77 ms)
- Flow 2 (95th percentile 69.19 ms)
- Flow 3 (95th percentile 65.35 ms)
Run 1: Statistics of Indigo-MusesT

Start at: 2019-04-24 08:58:01
End at: 2019-04-24 08:58:31
Local clock offset: -0.038 ms
Remote clock offset: -0.702 ms

# Below is generated by plot.py at 2019-04-24 13:26:18
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 772.13 Mbit/s
  95th percentile per-packet one-way delay: 94.165 ms
  Loss rate: 0.37%
-- Flow 1:
  Average throughput: 488.21 Mbit/s
  95th percentile per-packet one-way delay: 98.579 ms
  Loss rate: 0.24%
-- Flow 2:
  Average throughput: 397.29 Mbit/s
  95th percentile per-packet one-way delay: 75.458 ms
  Loss rate: 0.48%
-- Flow 3:
  Average throughput: 106.45 Mbit/s
  95th percentile per-packet one-way delay: 63.980 ms
  Loss rate: 1.70%
Run 1: Report of Indigo-MusesT — Data Link

![Graph showing data link throughput and packet delay over time for different flows.](image-url)
Run 2: Statistics of Indigo-MusesT

Start at: 2019-04-24 09:34:08
End at: 2019-04-24 09:34:38
Local clock offset: -0.104 ms
Remote clock offset: -0.707 ms

# Below is generated by plot.py at 2019-04-24 13:27:40
# Datalink statistics

-- Total of 3 flows:
Average throughput: 803.68 Mbit/s
95th percentile per-packet one-way delay: 102.059 ms
Loss rate: 0.58%

-- Flow 1:
Average throughput: 479.45 Mbit/s
95th percentile per-packet one-way delay: 111.889 ms
Loss rate: 0.36%

-- Flow 2:
Average throughput: 385.31 Mbit/s
95th percentile per-packet one-way delay: 74.788 ms
Loss rate: 0.54%

-- Flow 3:
Average throughput: 287.61 Mbit/s
95th percentile per-packet one-way delay: 69.941 ms
Loss rate: 2.02%
Run 2: Report of Indigo-MusesT — Data Link

[Graphs showing throughput and per-packet one-way delay over time for Flows 1, 2, and 3, with mean and 95th percentile values for ingress and egress.]
Run 3: Statistics of Indigo-MusesT

End at: 2019-04-24 10:10:59
Local clock offset: -0.051 ms
Remote clock offset: -0.753 ms

# Below is generated by plot.py at 2019-04-24 13:27:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 758.40 Mbit/s
  95th percentile per-packet one-way delay: 106.729 ms
  Loss rate: 0.53%
-- Flow 1:
  Average throughput: 472.66 Mbit/s
  95th percentile per-packet one-way delay: 131.439 ms
  Loss rate: 0.37%
-- Flow 2:
  Average throughput: 402.54 Mbit/s
  95th percentile per-packet one-way delay: 74.265 ms
  Loss rate: 0.70%
-- Flow 3:
  Average throughput: 104.13 Mbit/s
  95th percentile per-packet one-way delay: 64.153 ms
  Loss rate: 1.71%
Run 3: Report of Indigo-MusesT — Data Link
Run 4: Statistics of Indigo-MusesT

Local clock offset: -0.003 ms
Remote clock offset: -0.551 ms

# Below is generated by plot.py at 2019-04-24 13:34:09
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 802.62 Mbit/s
  95th percentile per-packet one-way delay: 88.169 ms
  Loss rate: 0.62%
-- Flow 1:
  Average throughput: 489.54 Mbit/s
  95th percentile per-packet one-way delay: 90.678 ms
  Loss rate: 0.34%
-- Flow 2:
  Average throughput: 370.75 Mbit/s
  95th percentile per-packet one-way delay: 71.002 ms
  Loss rate: 0.71%
-- Flow 3:
  Average throughput: 287.78 Mbit/s
  95th percentile per-packet one-way delay: 69.137 ms
  Loss rate: 2.12%
Run 4: Report of Indigo-MusesT — Data Link

**Throughput (Mbit/s):**
- Flow 1 ingress (mean 488.92 Mbit/s)
- Flow 1 egress (mean 489.54 Mbit/s)
- Flow 2 ingress (mean 370.79 Mbit/s)
- Flow 2 egress (mean 370.75 Mbit/s)
- Flow 3 ingress (mean 289.09 Mbit/s)
- Flow 3 egress (mean 287.78 Mbit/s)

**Per-packet one-way delay (ms):**
- Flow 1 (95th percentile 90.68 ms)
- Flow 2 (95th percentile 71.00 ms)
- Flow 3 (95th percentile 69.14 ms)
Run 5: Statistics of Indigo-MusesT

End at: 2019-04-24 11:23:40
Local clock offset: -0.065 ms
Remote clock offset: -0.226 ms

# Below is generated by plot.py at 2019-04-24 13:34:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 791.52 Mbit/s
95th percentile per-packet one-way delay: 89.609 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 464.03 Mbit/s
95th percentile per-packet one-way delay: 95.641 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 387.20 Mbit/s
95th percentile per-packet one-way delay: 72.886 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 292.10 Mbit/s
95th percentile per-packet one-way delay: 67.823 ms
Loss rate: 2.24%
Run 5: Report of Indigo-MusesT — Data Link

![Throughput Graph](image1)

![Delay Graph](image2)
Run 1: Statistics of LEDBAT

Start at: 2019-04-24 08:56:45
End at: 2019-04-24 08:57:15
Local clock offset: -0.043 ms
Remote clock offset: -0.443 ms

# Below is generated by plot.py at 2019-04-24 13:34:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 35.85 Mbit/s
95th percentile per-packet one-way delay: 64.487 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 23.10 Mbit/s
95th percentile per-packet one-way delay: 64.837 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 15.48 Mbit/s
95th percentile per-packet one-way delay: 64.041 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 7.60 Mbit/s
95th percentile per-packet one-way delay: 63.776 ms
Loss rate: 2.57%
Run 1: Report of LEDBAT — Data Link
Run 2: Statistics of LEDBAT

Start at: 2019-04-24 09:32:51
End at: 2019-04-24 09:33:21
Local clock offset: -0.114 ms
Remote clock offset: -0.631 ms

# Below is generated by plot.py at 2019-04-24 13:34:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 35.75 Mbit/s
95th percentile per-packet one-way delay: 64.664 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 23.07 Mbit/s
95th percentile per-packet one-way delay: 64.905 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 15.42 Mbit/s
95th percentile per-packet one-way delay: 64.314 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 7.61 Mbit/s
95th percentile per-packet one-way delay: 63.838 ms
Loss rate: 2.58%
Run 2: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 23.17 Mbit/s)
- Flow 1 egress (mean 23.07 Mbit/s)
- Flow 2 ingress (mean 15.60 Mbit/s)
- Flow 2 egress (mean 15.42 Mbit/s)
- Flow 3 ingress (mean 7.71 Mbit/s)
- Flow 3 egress (mean 7.61 Mbit/s)

![Graph showing packet round-trip time over time for different flows]

- Flow 1 (95th percentile 64.91 ms)
- Flow 2 (95th percentile 64.31 ms)
- Flow 3 (95th percentile 63.84 ms)
Run 3: Statistics of LEDBAT

End at: 2019-04-24 10:09:43
Local clock offset: -0.06 ms
Remote clock offset: -0.392 ms

# Below is generated by plot.py at 2019-04-24 13:34:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.02 Mbit/s
95th percentile per-packet one-way delay: 64.193 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 23.27 Mbit/s
95th percentile per-packet one-way delay: 64.274 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 15.46 Mbit/s
95th percentile per-packet one-way delay: 64.123 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 7.57 Mbit/s
95th percentile per-packet one-way delay: 63.923 ms
Loss rate: 2.58%
Run 3: Report of LEDBAT — Data Link

![Graph showing throughput and packet round trip delay over time for different flows.](image)
Run 4: Statistics of LEDBAT

Start at: 2019-04-24 10:45:42
Local clock offset: -0.017 ms
Remote clock offset: 0.116 ms

# Below is generated by plot.py at 2019-04-24 13:34:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 35.94 Mbit/s
95th percentile per-packet one-way delay: 64.236 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 23.25 Mbit/s
95th percentile per-packet one-way delay: 64.378 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 15.40 Mbit/s
95th percentile per-packet one-way delay: 64.101 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 7.51 Mbit/s
95th percentile per-packet one-way delay: 63.919 ms
Loss rate: 2.59%
Run 4: Report of LEDBAT — Data Link
Run 5: Statistics of LEDBAT

Local clock offset: -0.059 ms  
Remote clock offset: -0.123 ms  

# Below is generated by plot.py at 2019-04-24 13:34:37  
# Datalink statistics  
-- Total of 3 flows: 
Average throughput: 36.04 Mbit/s  
95th percentile per-packet one-way delay: 64.128 ms  
Loss rate: 1.09\%  
-- Flow 1:  
Average throughput: 23.27 Mbit/s  
95th percentile per-packet one-way delay: 64.063 ms  
Loss rate: 0.84\%  
-- Flow 2:  
Average throughput: 15.48 Mbit/s  
95th percentile per-packet one-way delay: 64.263 ms  
Loss rate: 1.27\%  
-- Flow 3:  
Average throughput: 7.58 Mbit/s  
95th percentile per-packet one-way delay: 64.113 ms  
Loss rate: 2.58\%
Run 5: Report of LEDBAT — Data Link
Run 1: Statistics of PCC-Allegro

Start at: 2019-04-24 08:45:28
End at: 2019-04-24 08:45:58
Local clock offset: -0.067 ms
Remote clock offset: -0.654 ms

# Below is generated by plot.py at 2019-04-24 13:49:18
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 653.53 Mbit/s
  95th percentile per-packet one-way delay: 204.468 ms
  Loss rate: 3.05%
-- Flow 1:
  Average throughput: 374.13 Mbit/s
  95th percentile per-packet one-way delay: 208.603 ms
  Loss rate: 4.46%
-- Flow 2:
  Average throughput: 291.66 Mbit/s
  95th percentile per-packet one-way delay: 71.839 ms
  Loss rate: 0.80%
-- Flow 3:
  Average throughput: 263.57 Mbit/s
  95th percentile per-packet one-way delay: 126.872 ms
  Loss rate: 1.79%
Run 1: Report of PCC-Allegro — Data Link

![Throughput and RTT graphs](image)

**Throughput Graph:**
- Flow 1 ingress (mean 389.92 Mbit/s)
- Flow 1 egress (mean 374.13 Mbit/s)
- Flow 2 ingress (mean 292.14 Mbit/s)
- Flow 2 egress (mean 291.66 Mbit/s)
- Flow 3 ingress (mean 264.80 Mbit/s)
- Flow 3 egress (mean 263.57 Mbit/s)

**RTT Graph:**
- Flow 1 (95th percentile 208.60 ms)
- Flow 2 (95th percentile 71.84 ms)
- Flow 3 (95th percentile 126.87 ms)
Run 2: Statistics of PCC-Allegro

End at: 2019-04-24 09:21:52
Local clock offset: -0.046 ms
Remote clock offset: -0.486 ms

# Below is generated by plot.py at 2019-04-24 13:49:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 667.63 Mbit/s
  95th percentile per-packet one-way delay: 205.775 ms
  Loss rate: 3.90%
-- Flow 1:
  Average throughput: 381.06 Mbit/s
  95th percentile per-packet one-way delay: 200.174 ms
  Loss rate: 4.73%
-- Flow 2:
  Average throughput: 312.68 Mbit/s
  95th percentile per-packet one-way delay: 213.089 ms
  Loss rate: 2.19%
-- Flow 3:
  Average throughput: 242.36 Mbit/s
  95th percentile per-packet one-way delay: 168.925 ms
  Loss rate: 4.25%
Run 2: Report of PCC-Allegro — Data Link

![Throughput Graph](image1)

![Delay Graph](image2)
Run 3: Statistics of PCC-Allegro

Start at: 2019-04-24 09:57:41
End at: 2019-04-24 09:58:11
Local clock offset: -0.084 ms
Remote clock offset: 0.084 ms

# Below is generated by plot.py at 2019-04-24 13:51:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 713.90 Mbit/s
95th percentile per-packet one-way delay: 187.641 ms
Loss rate: 5.13%
-- Flow 1:
Average throughput: 436.11 Mbit/s
95th percentile per-packet one-way delay: 191.483 ms
Loss rate: 7.35%
-- Flow 2:
Average throughput: 301.07 Mbit/s
95th percentile per-packet one-way delay: 101.298 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 239.51 Mbit/s
95th percentile per-packet one-way delay: 176.545 ms
Loss rate: 2.51%
Run 3: Report of PCC-Allegro — Data Link

![Graph of Throughput](image1)

- Flow 1 ingress (mean 468.68 Mbit/s)
- Flow 1 egress (mean 436.11 Mbit/s)
- Flow 2 ingress (mean 302.09 Mbit/s)
- Flow 2 egress (mean 301.07 Mbit/s)
- Flow 3 ingress (mean 242.51 Mbit/s)
- Flow 3 egress (mean 239.51 Mbit/s)

![Graph of Delay](image2)

- Flow 1 (95th percentile 191.48 ms)
- Flow 2 (95th percentile 101.30 ms)
- Flow 3 (95th percentile 176.54 ms)
Run 4: Statistics of PCC-Allegro

Start at: 2019-04-24 10:34:04
End at: 2019-04-24 10:34:34
Local clock offset: -0.026 ms
Remote clock offset: -0.417 ms

# Below is generated by plot.py at 2019-04-24 13:51:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 719.82 Mbit/s
95th percentile per-packet one-way delay: 190.872 ms
Loss rate: 3.39%
-- Flow 1:
Average throughput: 421.48 Mbit/s
95th percentile per-packet one-way delay: 196.035 ms
Loss rate: 5.03%
-- Flow 2:
Average throughput: 330.21 Mbit/s
95th percentile per-packet one-way delay: 121.463 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 243.07 Mbit/s
95th percentile per-packet one-way delay: 146.587 ms
Loss rate: 1.49%
Run 4: Report of PCC-Allegro — Data Link

Throughput (Mbps)

Flow 1 ingress (mean 441.93 Mbps)
Flow 1 egress (mean 421.48 Mbps)
Flow 2 ingress (mean 330.66 Mbps)
Flow 2 egress (mean 330.21 Mbps)
Flow 3 ingress (mean 243.57 Mbps)
Flow 3 egress (mean 243.07 Mbps)

Per-packet one-way delay (μs)

Flow 1 (95th percentile 196.03 μs)
Flow 2 (95th percentile 121.46 μs)
Flow 3 (95th percentile 146.59 μs)
Run 5: Statistics of PCC-Allegro

Start at: 2019-04-24 11:10:22
End at: 2019-04-24 11:10:52
Local clock offset: -0.022 ms
Remote clock offset: -0.061 ms

# Below is generated by plot.py at 2019-04-24 13:51:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 678.20 Mbit/s
95th percentile per-packet one-way delay: 190.327 ms
Loss rate: 5.61%
-- Flow 1:
Average throughput: 417.10 Mbit/s
95th percentile per-packet one-way delay: 192.247 ms
Loss rate: 7.98%
-- Flow 2:
Average throughput: 272.26 Mbit/s
95th percentile per-packet one-way delay: 84.194 ms
Loss rate: 1.34%
-- Flow 3:
Average throughput: 246.88 Mbit/s
95th percentile per-packet one-way delay: 153.650 ms
Loss rate: 2.05%
Run 5: Report of PCC-Allegro — Data Link

![Graph showing throughput and packet delay over time]

- Flow 1 ingress (mean 451.35 Mbit/s)
- Flow 1 egress (mean 417.10 Mbit/s)
- Flow 2 ingress (mean 274.17 Mbit/s)
- Flow 2 egress (mean 272.26 Mbit/s)
- Flow 3 ingress (mean 248.79 Mbit/s)
- Flow 3 egress (mean 246.89 Mbit/s)

![Graph showing packet delay over time]

- Flow 1 (95th percentile 192.25 ms)
- Flow 2 (95th percentile 84.19 ms)
- Flow 3 (95th percentile 153.65 ms)
Run 1: Statistics of PCC-Expr

Start at: 2019-04-24 08:37:38
End at: 2019-04-24 08:38:08
Local clock offset: -0.06 ms
Remote clock offset: -0.616 ms

# Below is generated by plot.py at 2019-04-24 13:51:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 503.76 Mbit/s
95th percentile per-packet one-way delay: 143.206 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 264.95 Mbit/s
95th percentile per-packet one-way delay: 146.825 ms
Loss rate: 1.30%
-- Flow 2:
Average throughput: 231.94 Mbit/s
95th percentile per-packet one-way delay: 124.691 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 259.59 Mbit/s
95th percentile per-packet one-way delay: 146.038 ms
Loss rate: 2.47%
Run 1: Report of PCC-Expr — Data Link

![Graph showing throughput and delay over time for different flows.](image-url)
Run 2: Statistics of PCC-Expr

End at: 2019-04-24 09:14:03
Local clock offset: -0.04 ms
Remote clock offset: 0.277 ms

# Below is generated by plot.py at 2019-04-24 13:51:48
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 438.91 Mbit/s
  95th percentile per-packet one-way delay: 93.450 ms
  Loss rate: 0.67%
-- Flow 1:
  Average throughput: 259.24 Mbit/s
  95th percentile per-packet one-way delay: 102.950 ms
  Loss rate: 0.47%
-- Flow 2:
  Average throughput: 223.91 Mbit/s
  95th percentile per-packet one-way delay: 80.262 ms
  Loss rate: 0.80%
-- Flow 3:
  Average throughput: 95.12 Mbit/s
  95th percentile per-packet one-way delay: 63.191 ms
  Loss rate: 1.65%
Run 2: Report of PCC-Expr — Data Link

**Throughput (Mb/s):**
- Flow 1 ingress (mean 259.36 Mb/s)
- Flow 1 egress (mean 259.24 Mb/s)
- Flow 2 ingress (mean 224.27 Mb/s)
- Flow 2 egress (mean 223.91 Mb/s)
- Flow 3 ingress (mean 95.45 Mb/s)
- Flow 3 egress (mean 95.12 Mb/s)

**Per-packet one-way delay (ms):**
- Flow 1 (95th percentile 102.95 ms)
- Flow 2 (95th percentile 80.26 ms)
- Flow 3 (95th percentile 63.19 ms)
Run 3: Statistics of PCC-Expr

Start at: 2019-04-24 09:49:49
End at: 2019-04-24 09:50:19
Local clock offset: -0.073 ms
Remote clock offset: -0.418 ms

# Below is generated by plot.py at 2019-04-24 13:51:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 447.99 Mbit/s
95th percentile per-packet one-way delay: 152.125 ms
Loss rate: 1.24%

-- Flow 1:
Average throughput: 279.74 Mbit/s
95th percentile per-packet one-way delay: 165.407 ms
Loss rate: 1.45%

-- Flow 2:
Average throughput: 207.72 Mbit/s
95th percentile per-packet one-way delay: 67.770 ms
Loss rate: 0.75%

-- Flow 3:
Average throughput: 93.00 Mbit/s
95th percentile per-packet one-way delay: 64.371 ms
Loss rate: 1.50%
Run 3: Report of PCC-Expr — Data Link

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

Legend:
- Flow 1 ingress (mean 282.65 Mbit/s)
- Flow 1 egress (mean 279.74 Mbit/s)
- Flow 2 ingress (mean 297.96 Mbit/s)
- Flow 2 egress (mean 297.72 Mbit/s)
- Flow 3 ingress (mean 93.20 Mbit/s)
- Flow 3 egress (mean 93.00 Mbit/s)
Run 4: Statistics of PCC-Expr

Start at: 2019-04-24 10:26:06
End at: 2019-04-24 10:26:36
Local clock offset: -0.074 ms
Remote clock offset: -0.278 ms

# Below is generated by plot.py at 2019-04-24 14:03:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 532.97 Mbit/s
95th percentile per-packet one-way delay: 178.092 ms
Loss rate: 2.52%
-- Flow 1:
Average throughput: 313.93 Mbit/s
95th percentile per-packet one-way delay: 176.226 ms
Loss rate: 2.81%
-- Flow 2:
Average throughput: 244.31 Mbit/s
95th percentile per-packet one-way delay: 182.458 ms
Loss rate: 2.33%
-- Flow 3:
Average throughput: 173.92 Mbit/s
95th percentile per-packet one-way delay: 80.199 ms
Loss rate: 1.45%
Run 4: Report of PCC-Expr — Data Link

[Graphs showing throughput and per-packet one-way delay over time for different flows.]
Run 5: Statistics of PCC-Expr

Start at: 2019-04-24 11:02:24
End at: 2019-04-24 11:02:54
Local clock offset: -0.042 ms
Remote clock offset: 0.025 ms

# Below is generated by plot.py at 2019-04-24 14:06:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 513.16 Mbit/s
95th percentile per-packet one-way delay: 186.583 ms
Loss rate: 3.72%
-- Flow 1:
Average throughput: 267.93 Mbit/s
95th percentile per-packet one-way delay: 173.792 ms
Loss rate: 1.86%
-- Flow 2:
Average throughput: 287.06 Mbit/s
95th percentile per-packet one-way delay: 192.070 ms
Loss rate: 6.81%
-- Flow 3:
Average throughput: 167.44 Mbit/s
95th percentile per-packet one-way delay: 97.312 ms
Loss rate: 1.49%
Run 5: Report of PCC-Expr — Data Link

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

Legend:
- Flow 1 ingress (mean 271.85 Mbit/s)
- Flow 1 egress (mean 267.93 Mbit/s)
- Flow 2 ingress (mean 306.08 Mbit/s)
- Flow 2 egress (mean 287.06 Mbit/s)
- Flow 3 ingress (mean 167.66 Mbit/s)
- Flow 3 egress (mean 167.44 Mbit/s)
Run 1: Statistics of QUIC Cubic

Start at: 2019-04-24 08:39:37
End at: 2019-04-24 08:40:07
Local clock offset: -0.028 ms
Remote clock offset: -0.473 ms

# Below is generated by plot.py at 2019-04-24 14:06:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.89 Mbit/s
95th percentile per-packet one-way delay: 63.577 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 46.05 Mbit/s
95th percentile per-packet one-way delay: 63.096 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 53.11 Mbit/s
95th percentile per-packet one-way delay: 63.140 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 19.53 Mbit/s
95th percentile per-packet one-way delay: 63.711 ms
Loss rate: 0.54%
Run 2: Statistics of QUIC Cubic

Start at: 2019-04-24 09:15:27
End at: 2019-04-24 09:15:57
Local clock offset: -0.042 ms
Remote clock offset: -0.546 ms

# Below is generated by plot.py at 2019-04-24 14:06:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 106.73 Mbit/s
95th percentile per-packet one-way delay: 63.161 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 60.96 Mbit/s
95th percentile per-packet one-way delay: 63.183 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 37.53 Mbit/s
95th percentile per-packet one-way delay: 63.151 ms
Loss rate: 1.66%
-- Flow 3:
Average throughput: 63.66 Mbit/s
95th percentile per-packet one-way delay: 63.053 ms
Loss rate: 0.25%
Run 2: Report of QUIC Cubic — Data Link
Run 3: Statistics of QUIC Cubic

Start at: 2019-04-24 09:51:44
End at: 2019-04-24 09:52:14
Local clock offset: -0.062 ms
Remote clock offset: -0.541 ms

# Below is generated by plot.py at 2019-04-24 14:06:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 109.07 Mbit/s
  95th percentile per-packet one-way delay: 63.145 ms
  Loss rate: 0.82%
-- Flow 1:
  Average throughput: 56.64 Mbit/s
  95th percentile per-packet one-way delay: 63.181 ms
  Loss rate: 0.59%
-- Flow 2:
  Average throughput: 49.31 Mbit/s
  95th percentile per-packet one-way delay: 62.799 ms
  Loss rate: 0.99%
-- Flow 3:
  Average throughput: 60.29 Mbit/s
  95th percentile per-packet one-way delay: 62.804 ms
  Loss rate: 1.18%
Run 3: Report of QUIC Cubic — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 56.73 Mbit/s)
Flow 1 egress (mean 56.64 Mbit/s)
Flow 2 ingress (mean 49.48 Mbit/s)
Flow 2 egress (mean 49.31 Mbit/s)
Flow 3 ingress (mean 60.37 Mbit/s)
Flow 3 egress (mean 60.29 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 63.18 ms)
Flow 2 (95th percentile 62.80 ms)
Flow 3 (95th percentile 62.80 ms)
Run 4: Statistics of QUIC Cubic

Local clock offset: -0.047 ms  
Remote clock offset: -0.671 ms  

# Below is generated by plot.py at 2019-04-24 14:06:56  
# Datalink statistics  
-- Total of 3 flows:  
95th percentile per-packet one-way delay: 63.526 ms  
Loss rate: 0.75%  
-- Flow 1:  
Average throughput: 52.90 Mbit/s  
95th percentile per-packet one-way delay: 63.537 ms  
Loss rate: 0.61%  
-- Flow 2:  
Average throughput: 50.99 Mbit/s  
95th percentile per-packet one-way delay: 63.494 ms  
Loss rate: 1.03%  
-- Flow 3:  
Average throughput: 61.54 Mbit/s  
95th percentile per-packet one-way delay: 63.537 ms  
Loss rate: 0.62%
Run 4: Report of QUIC Cubic — Data Link

---

**Throughput (Mbps)**

- Flow 1 ingress (mean 52.97 Mbps)
- Flow 1 egress (mean 52.90 Mbps)
- Flow 2 ingress (mean 51.20 Mbps)
- Flow 2 egress (mean 50.99 Mbps)
- Flow 3 ingress (mean 61.14 Mbps)
- Flow 3 egress (mean 61.54 Mbps)

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

- Flow 1 (95th percentile 63.54 ms)
- Flow 2 (95th percentile 63.49 ms)
- Flow 3 (95th percentile 63.54 ms)
Run 5: Statistics of QUIC Cubic

Start at: 2019-04-24 11:04:26
End at: 2019-04-24 11:04:56
Local clock offset: -0.057 ms
Remote clock offset: -0.171 ms

# Below is generated by plot.py at 2019-04-24 14:06:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 87.68 Mbit/s
  95th percentile per-packet one-way delay: 63.082 ms
  Loss rate: 0.83%
-- Flow 1:
  Average throughput: 52.63 Mbit/s
  95th percentile per-packet one-way delay: 62.955 ms
  Loss rate: 0.54%
-- Flow 2:
  Average throughput: 41.61 Mbit/s
  95th percentile per-packet one-way delay: 62.951 ms
  Loss rate: 1.44%
-- Flow 3:
  Average throughput: 22.68 Mbit/s
  95th percentile per-packet one-way delay: 63.200 ms
  Loss rate: 0.60%
Run 5: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 52.69 Mbit/s)
- Flow 1 egress (mean 52.63 Mbit/s)
- Flow 2 ingress (mean 41.95 Mbit/s)
- Flow 2 egress (mean 41.61 Mbit/s)
- Flow 3 ingress (mean 22.53 Mbit/s)
- Flow 3 egress (mean 22.58 Mbit/s)
Run 1: Statistics of SCReAM

Start at: 2019-04-24 09:07:08
End at: 2019-04-24 09:07:38
Local clock offset: -0.028 ms
Remote clock offset: -0.503 ms

# Below is generated by plot.py at 2019-04-24 14:06:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 63.616 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.650 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.334 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.560 ms
Loss rate: 1.08%
Run 1: Report of SCReAM — Data Link

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

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

End at: 2019-04-24 09:43:52
Local clock offset: -0.07 ms
Remote clock offset: -0.647 ms

# Below is generated by plot.py at 2019-04-24 14:06:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 63.422 ms
  Loss rate: 0.58%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.456 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.235 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.411 ms
  Loss rate: 1.10%
Run 2: Report of SCReAM — Data Link
Run 3: Statistics of SCReAM

Start at: 2019-04-24 10:19:42
End at: 2019-04-24 10:20:12
Local clock offset: -0.047 ms
Remote clock offset: -0.452 ms

# Below is generated by plot.py at 2019-04-24 14:06:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 63.396 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.424 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.076 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.406 ms
Loss rate: 1.08%
Run 3: Report of SCReAM — Data Link

![Graph 1: Throughput (Mbps)]

![Graph 2: Per-packet one-way delay (ms)]
Run 4: Statistics of SCReAM

End at: 2019-04-24 10:56:25
Local clock offset: -0.014 ms
Remote clock offset: 0.028 ms

# Below is generated by plot.py at 2019-04-24 14:06:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 63.401 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.262 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.469 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.404 ms
Loss rate: 1.08%
Run 4: Report of SCReAM — Data Link

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**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)**

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

- **Flow 1 (95th percentile 63.26 ms)**
- **Flow 2 (95th percentile 63.47 ms)**
- **Flow 3 (95th percentile 63.40 ms)**
Run 5: Statistics of SCReAM

Start at: 2019-04-24 11:32:21
End at: 2019-04-24 11:32:51
Local clock offset: -0.061 ms
Remote clock offset: -0.076 ms

# Below is generated by plot.py at 2019-04-24 14:06:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 63.449 ms
  Loss rate: 0.64%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.379 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.503 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.368 ms
  Loss rate: 1.45%
Run 5: Report of SCReAM — Data Link
Run 1: Statistics of Sprout

Start at: 2019-04-24 08:44:15
End at: 2019-04-24 08:44:45
Local clock offset: -0.019 ms
Remote clock offset: -0.654 ms

# Below is generated by plot.py at 2019-04-24 14:06:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.33 Mbit/s
95th percentile per-packet one-way delay: 64.201 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 6.74 Mbit/s
95th percentile per-packet one-way delay: 64.257 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 6.73 Mbit/s
95th percentile per-packet one-way delay: 64.170 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 6.50 Mbit/s
95th percentile per-packet one-way delay: 63.727 ms
Loss rate: 1.57%
Run 1: Report of Sprout — Data Link

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

Start at: 2019-04-24 09:20:08
End at: 2019-04-24 09:20:38
Local clock offset: -0.08 ms
Remote clock offset: -0.528 ms

# Below is generated by plot.py at 2019-04-24 14:06:57
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 13.39 Mbit/s
95th percentile per-packet one-way delay: 63.746 ms
Loss rate: 0.73%
-- Flow 1:
   Average throughput: 6.85 Mbit/s
95th percentile per-packet one-way delay: 63.702 ms
Loss rate: 0.51%
-- Flow 2:
   Average throughput: 6.64 Mbit/s
95th percentile per-packet one-way delay: 63.795 ms
Loss rate: 0.66%
-- Flow 3:
   Average throughput: 6.55 Mbit/s
95th percentile per-packet one-way delay: 63.784 ms
Loss rate: 1.56%
Run 2: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 6.87 Mbit/s)
- Flow 2 ingress (mean 6.64 Mbit/s)
- Flow 3 ingress (mean 6.54 Mbit/s)
- Flow 1 egress (mean 6.85 Mbit/s)
- Flow 2 egress (mean 6.64 Mbit/s)
- Flow 3 egress (mean 6.55 Mbit/s)
Run 3: Statistics of Sprout

Start at: 2019-04-24 09:56:27
End at: 2019-04-24 09:56:57
Local clock offset: -0.071 ms
Remote clock offset: -0.001 ms

# Below is generated by plot.py at 2019-04-24 14:06:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.45 Mbit/s
95th percentile per-packet one-way delay: 63.397 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 6.83 Mbit/s
95th percentile per-packet one-way delay: 63.426 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 6.79 Mbit/s
95th percentile per-packet one-way delay: 63.397 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 6.46 Mbit/s
95th percentile per-packet one-way delay: 63.277 ms
Loss rate: 1.48%
Run 3: Report of Sprout — Data Link
Run 4: Statistics of Sprout

End at: 2019-04-24 10:33:21
Local clock offset: -0.036 ms
Remote clock offset: -0.483 ms

# Below is generated by plot.py at 2019-04-24 14:06:57
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 13.29 Mbit/s
  95th percentile per-packet one-way delay: 64.299 ms
  Loss rate: 0.73%
-- Flow 1:
  Average throughput: 6.72 Mbit/s
  95th percentile per-packet one-way delay: 64.283 ms
  Loss rate: 0.46%
-- Flow 2:
  Average throughput: 6.66 Mbit/s
  95th percentile per-packet one-way delay: 64.399 ms
  Loss rate: 0.85%
-- Flow 3:
  Average throughput: 6.57 Mbit/s
  95th percentile per-packet one-way delay: 63.988 ms
  Loss rate: 1.29%
Run 4: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 6.72 Mbit/s)
- Flow 1 egress (mean 6.72 Mbit/s)
- Flow 2 ingress (mean 6.67 Mbit/s)
- Flow 2 egress (mean 6.66 Mbit/s)
- Flow 3 ingress (mean 6.57 Mbit/s)
- Flow 3 egress (mean 6.57 Mbit/s)

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

- Flow 1 (95th percentile 64.28 ms)
- Flow 2 (95th percentile 64.40 ms)
- Flow 3 (95th percentile 63.99 ms)
Run 5: Statistics of Sprout

Start at: 2019-04-24 11:09:08
End at: 2019-04-24 11:09:38
Local clock offset: -0.049 ms
Remote clock offset: 0.069 ms

# Below is generated by plot.py at 2019-04-24 14:06:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.47 Mbit/s
95th percentile per-packet one-way delay: 63.426 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 6.88 Mbit/s
95th percentile per-packet one-way delay: 63.312 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.74 Mbit/s
95th percentile per-packet one-way delay: 63.508 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 6.49 Mbit/s
95th percentile per-packet one-way delay: 63.485 ms
Loss rate: 1.57%
Run 5: Report of Sprout — Data Link
Run 1: Statistics of TaoVA-100x

Start at: 2019-04-24 08:35:41
End at: 2019-04-24 08:36:11
Local clock offset: -0.018 ms
Remote clock offset: -0.438 ms

# Below is generated by plot.py at 2019-04-24 14:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 461.63 Mbit/s
95th percentile per-packet one-way delay: 63.987 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 231.96 Mbit/s
95th percentile per-packet one-way delay: 63.262 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 234.45 Mbit/s
95th percentile per-packet one-way delay: 64.679 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 225.05 Mbit/s
95th percentile per-packet one-way delay: 65.528 ms
Loss rate: 1.16%
Run 1: Report of TaoVA-100x — Data Link

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

Legend:
- **Flow 1 ingress** (mean 232.11 Mbit/s)
- **Flow 1 egress** (mean 231.96 Mbit/s)
- **Flow 2 ingress** (mean 234.17 Mbit/s)
- **Flow 2 egress** (mean 234.45 Mbit/s)
- **Flow 3 ingress** (mean 224.77 Mbit/s)
- **Flow 3 egress** (mean 225.05 Mbit/s)

Legend for per-packet one way delay:
- **Flow 1** (95th percentile 63.26 ms)
- **Flow 2** (95th percentile 64.68 ms)
- **Flow 3** (95th percentile 65.53 ms)
Run 2: Statistics of TaoVA-100x

Start at: 2019-04-24 09:11:36
End at: 2019-04-24 09:12:06
Local clock offset: -0.037 ms
Remote clock offset: -0.561 ms

# Below is generated by plot.py at 2019-04-24 14:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 457.86 Mbit/s
95th percentile per-packet one-way delay: 64.792 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 233.95 Mbit/s
95th percentile per-packet one-way delay: 64.697 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 223.44 Mbit/s
95th percentile per-packet one-way delay: 63.849 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 228.71 Mbit/s
95th percentile per-packet one-way delay: 67.359 ms
Loss rate: 1.49%
Run 2: Report of TaoVA-100x — Data Link
Run 3: Statistics of TaoVA-100x

Local clock offset: -0.054 ms
Remote clock offset: -0.65 ms

# Below is generated by plot.py at 2019-04-24 14:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 445.97 Mbit/s
95th percentile per-packet one-way delay: 64.629 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 227.80 Mbit/s
95th percentile per-packet one-way delay: 64.615 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 218.07 Mbit/s
95th percentile per-packet one-way delay: 64.016 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 222.19 Mbit/s
95th percentile per-packet one-way delay: 65.732 ms
Loss rate: 1.41%
Run 3: Report of TaoVA-100x — Data Link

Throughput (Mbit/s):

- Flow 1 ingress (mean 227.90 Mbit/s)
- Flow 1 egress (mean 227.80 Mbit/s)
- Flow 2 ingress (mean 218.25 Mbit/s)
- Flow 2 egress (mean 218.07 Mbit/s)
- Flow 3 ingress (mean 222.52 Mbit/s)
- Flow 3 egress (mean 222.19 Mbit/s)

Per packet one way delay (ms):

- Flow 1 (95th percentile 64.61 ms)
- Flow 2 (95th percentile 64.02 ms)
- Flow 3 (95th percentile 65.73 ms)
Run 4: Statistics of TaoVA-100x

Local clock offset: -0.053 ms
Remote clock offset: -0.289 ms

# Below is generated by plot.py at 2019-04-24 14:08:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 445.90 Mbit/s
95th percentile per-packet one-way delay: 66.179 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 229.95 Mbit/s
95th percentile per-packet one-way delay: 63.826 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 222.06 Mbit/s
95th percentile per-packet one-way delay: 68.047 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 207.74 Mbit/s
95th percentile per-packet one-way delay: 66.770 ms
Loss rate: 1.52%
Run 4: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 229.98 Mbps)
- Flow 1 egress (mean 229.95 Mbps)
- Flow 2 ingress (mean 222.19 Mbps)
- Flow 2 egress (mean 222.06 Mbps)
- Flow 3 ingress (mean 208.26 Mbps)
- Flow 3 egress (mean 207.74 Mbps)

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

- Flow 1 (95th percentile 63.83 ms)
- Flow 2 (95th percentile 68.05 ms)
- Flow 3 (95th percentile 66.77 ms)
Run 5: Statistics of TaoVA-100x

Start at: 2019-04-24 11:00:27
End at: 2019-04-24 11:00:57
Local clock offset: -0.037 ms
Remote clock offset: -0.104 ms

# Below is generated by plot.py at 2019-04-24 14:08:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 445.70 Mbit/s
95th percentile per-packet one-way delay: 64.284 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 223.41 Mbit/s
95th percentile per-packet one-way delay: 63.979 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 229.90 Mbit/s
95th percentile per-packet one-way delay: 64.148 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 211.10 Mbit/s
95th percentile per-packet one-way delay: 66.195 ms
Loss rate: 1.46%
Run 5: Report of TaoVA-100x — Data Link

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

Throughput (Mbit/s)

<table>
<thead>
<tr>
<th>Time (s)</th>
<th>Flow 1 ingress (mean 223.52 Mbit/s)</th>
<th>Flow 1 egress (mean 223.41 Mbit/s)</th>
<th>Flow 2 ingress (mean 230.05 Mbit/s)</th>
<th>Flow 2 egress (mean 229.90 Mbit/s)</th>
<th>Flow 3 ingress (mean 211.50 Mbit/s)</th>
<th>Flow 3 egress (mean 211.10 Mbit/s)</th>
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</table>

Per-packet one-way delay (ms)

<table>
<thead>
<tr>
<th>Time (s)</th>
<th>Flow 1 (95th percentile 63.98 ms)</th>
<th>Flow 2 (95th percentile 64.15 ms)</th>
<th>Flow 3 (95th percentile 66.19 ms)</th>
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</tbody>
</table>
Run 1: Statistics of TCP Vegas

Start at: 2019-04-24 08:52:57
End at: 2019-04-24 08:53:27
Local clock offset: -0.018 ms
Remote clock offset: -0.64 ms

# Below is generated by plot.py at 2019-04-24 14:08:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 642.95 Mbit/s
95th percentile per-packet one-way delay: 72.274 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 292.73 Mbit/s
95th percentile per-packet one-way delay: 65.203 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 331.07 Mbit/s
95th percentile per-packet one-way delay: 71.818 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 394.97 Mbit/s
95th percentile per-packet one-way delay: 81.258 ms
Loss rate: 1.43%
Run 1: Report of TCP Vegas — Data Link
Run 2: Statistics of TCP Vegas

End at: 2019-04-24 09:29:23
Local clock offset: -0.067 ms
Remote clock offset: -0.434 ms

# Below is generated by plot.py at 2019-04-24 14:19:55
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 841.80 Mbit/s
  95th percentile per-packet one-way delay: 80.264 ms
  Loss rate: 0.57%
  -- Flow 1:
    Average throughput: 422.09 Mbit/s
    95th percentile per-packet one-way delay: 74.963 ms
    Loss rate: 0.22%
  -- Flow 2:
    Average throughput: 437.44 Mbit/s
    95th percentile per-packet one-way delay: 84.482 ms
    Loss rate: 0.65%
  -- Flow 3:
    Average throughput: 391.07 Mbit/s
    95th percentile per-packet one-way delay: 78.872 ms
    Loss rate: 1.50%
Run 2: Report of TCP Vegas — Data Link
Run 3: Statistics of TCP Vegas

Start at: 2019-04-24 10:05:23
End at: 2019-04-24 10:05:53
Local clock offset: -0.058 ms
Remote clock offset: -0.455 ms

# Below is generated by plot.py at 2019-04-24 14:19:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 655.05 Mbit/s
95th percentile per-packet one-way delay: 72.181 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 359.93 Mbit/s
95th percentile per-packet one-way delay: 65.049 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 270.74 Mbit/s
95th percentile per-packet one-way delay: 71.906 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 349.50 Mbit/s
95th percentile per-packet one-way delay: 91.648 ms
Loss rate: 1.33%
Run 3: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 359.35 Mbit/s)
- Flow 1 egress (mean 359.93 Mbit/s)
- Flow 2 ingress (mean 270.51 Mbit/s)
- Flow 2 egress (mean 270.74 Mbit/s)
- Flow 3 ingress (mean 349.72 Mbit/s)
- Flow 3 egress (mean 349.59 Mbit/s)
Run 4: Statistics of TCP Vegas

Local clock offset: -0.045 ms
Remote clock offset: 0.068 ms

# Below is generated by plot.py at 2019-04-24 14:20:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 754.66 Mbit/s
95th percentile per-packet one-way delay: 88.916 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 385.66 Mbit/s
95th percentile per-packet one-way delay: 84.073 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 353.06 Mbit/s
95th percentile per-packet one-way delay: 68.000 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 408.42 Mbit/s
95th percentile per-packet one-way delay: 99.417 ms
Loss rate: 1.44%
Run 4: Report of TCP Vegas — Data Link
Run 5: Statistics of TCP Vegas

Start at: 2019-04-24 11:17:55
End at: 2019-04-24 11:18:25
Local clock offset: -0.062 ms
Remote clock offset: 0.059 ms

# Below is generated by plot.py at 2019-04-24 14:22:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 758.52 Mbit/s
95th percentile per-packet one-way delay: 77.396 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 339.91 Mbit/s
95th percentile per-packet one-way delay: 63.381 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 440.95 Mbit/s
95th percentile per-packet one-way delay: 83.372 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 380.62 Mbit/s
95th percentile per-packet one-way delay: 78.742 ms
Loss rate: 1.52%
Run 5: Report of TCP Vegas — Data Link
Run 1: Statistics of Verus

Start at: 2019-04-24 08:40:55
End at: 2019-04-24 08:41:25
Local clock offset: -0.023 ms
Remote clock offset: -0.425 ms

# Below is generated by plot.py at 2019-04-24 14:22:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 228.20 Mbit/s
95th percentile per-packet one-way delay: 159.724 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 126.50 Mbit/s
95th percentile per-packet one-way delay: 134.820 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 127.36 Mbit/s
95th percentile per-packet one-way delay: 195.810 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 51.20 Mbit/s
95th percentile per-packet one-way delay: 78.575 ms
Loss rate: 1.09%
Run 1: Report of Verus — Data Link

Time (s)

Throughput (Mbit/s)

- Flow 1 ingress (mean 126.35 Mbit/s)
- Flow 1 egress (mean 126.50 Mbit/s)
- Flow 2 ingress (mean 128.04 Mbit/s)
- Flow 2 egress (mean 127.36 Mbit/s)
- Flow 3 ingress (mean 51.07 Mbit/s)
- Flow 3 egress (mean 51.20 Mbit/s)

Time (s)

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

- Flow 1 (95th percentile 134.82 ms)
- Flow 2 (95th percentile 195.81 ms)
- Flow 3 (95th percentile 78.58 ms)
Run 2: Statistics of Verus

Start at: 2019-04-24 09:16:46
End at: 2019-04-24 09:17:16
Local clock offset: -0.034 ms
Remote clock offset: -0.463 ms

# Below is generated by plot.py at 2019-04-24 14:22:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 239.74 Mbit/s
95th percentile per-packet one-way delay: 101.337 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 132.67 Mbit/s
95th percentile per-packet one-way delay: 82.145 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 128.91 Mbit/s
95th percentile per-packet one-way delay: 151.614 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 66.05 Mbit/s
95th percentile per-packet one-way delay: 66.999 ms
Loss rate: 1.80%
Run 2: Report of Verus — Data Link

![Graph of Throughput vs Time]

- Flow 1 ingress (mean 132.77 Mbit/s)
- Flow 1 egress (mean 132.67 Mbit/s)
- Flow 2 ingress (mean 128.99 Mbit/s)
- Flow 2 egress (mean 128.91 Mbit/s)
- Flow 3 ingress (mean 66.42 Mbit/s)
- Flow 3 egress (mean 66.05 Mbit/s)

![Graph of Per-Packet One-Way Delay vs Time]

- Flow 1 (95th percentile 82.14 ms)
- Flow 2 (95th percentile 151.61 ms)
- Flow 3 (95th percentile 67.00 ms)
Run 3: Statistics of Verus

Start at: 2019-04-24 09:53:03
End at: 2019-04-24 09:53:33
Local clock offset: -0.077 ms
Remote clock offset: -0.63 ms

# Below is generated by plot.py at 2019-04-24 14:22:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 251.35 Mbit/s
95th percentile per-packet one-way delay: 158.246 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 140.42 Mbit/s
95th percentile per-packet one-way delay: 157.270 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 138.65 Mbit/s
95th percentile per-packet one-way delay: 166.813 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 57.73 Mbit/s
95th percentile per-packet one-way delay: 69.707 ms
Loss rate: 1.33%
Run 3: Report of Verus — Data Link

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

Legend:
- Flow 1 ingress (mean 141.26 Mbit/s)
- Flow 1 egress (mean 140.42 Mbit/s)
- Flow 2 ingress (mean 138.77 Mbit/s)
- Flow 2 egress (mean 138.65 Mbit/s)
- Flow 3 ingress (mean 57.74 Mbit/s)
- Flow 3 egress (mean 57.73 Mbit/s)

Legend for packet delay:
- Flow 1 (95th percentile 157.27 ms)
- Flow 2 (95th percentile 166.81 ms)
- Flow 3 (95th percentile 69.71 ms)
Run 4: Statistics of Verus

Local clock offset: -0.018 ms
Remote clock offset: 0.536 ms

# Below is generated by plot.py at 2019-04-24 14:22:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 287.21 Mbit/s
  95th percentile per-packet one-way delay: 154.172 ms
  Loss rate: 0.99%
-- Flow 1:
  Average throughput: 143.70 Mbit/s
  95th percentile per-packet one-way delay: 116.458 ms
  Loss rate: 0.45%
-- Flow 2:
  Average throughput: 170.99 Mbit/s
  95th percentile per-packet one-way delay: 170.225 ms
  Loss rate: 1.16%
-- Flow 3:
  Average throughput: 89.76 Mbit/s
  95th percentile per-packet one-way delay: 140.333 ms
  Loss rate: 2.90%
Run 4: Report of Verus — Data Link

![Graph showing throughput and packet delay over time for different flows.](image-url)
Run 5: Statistics of Verus

Start at: 2019-04-24 11:05:44
End at: 2019-04-24 11:06:14
Local clock offset: ~0.053 ms
Remote clock offset: ~0.138 ms

# Below is generated by plot.py at 2019-04-24 14:24:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 239.47 Mbit/s
95th percentile per-packet one-way delay: 139.309 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 99.36 Mbit/s
95th percentile per-packet one-way delay: 75.613 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 143.56 Mbit/s
95th percentile per-packet one-way delay: 144.041 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 135.93 Mbit/s
95th percentile per-packet one-way delay: 149.680 ms
Loss rate: 2.71%
Run 5: Report of Verus — Data Link

![Graph of Throughput and Delay](chart.png)

**Throughput** (Mbps):
- **Flow 1 ingress** (mean 99.40 Mbps)
- **Flow 1 egress** (mean 99.36 Mbps)
- **Flow 2 ingress** (mean 144.68 Mbps)
- **Flow 2 egress** (mean 143.56 Mbps)
- **Flow 3 ingress** (mean 136.60 Mbps)
- **Flow 3 egress** (mean 135.93 Mbps)

**Per-packet one-way delay** (ms):
- **Flow 1** (95th percentile 75.61 ms)
- **Flow 2** (95th percentile 144.04 ms)
- **Flow 3** (95th percentile 149.68 ms)
Run 1: Statistics of PCC-Vivace

Start at: 2019-04-24 08:49:21
End at: 2019-04-24 08:49:51
Local clock offset: -0.052 ms
Remote clock offset: -0.486 ms

# Below is generated by plot.py at 2019-04-24 14:25:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 481.54 Mbit/s
  95th percentile per-packet one-way delay: 65.263 ms
  Loss rate: 0.76%
-- Flow 1:
  Average throughput: 284.62 Mbit/s
  95th percentile per-packet one-way delay: 65.963 ms
  Loss rate: 0.52%
-- Flow 2:
  Average throughput: 219.35 Mbit/s
  95th percentile per-packet one-way delay: 64.890 ms
  Loss rate: 0.90%
-- Flow 3:
  Average throughput: 157.06 Mbit/s
  95th percentile per-packet one-way delay: 64.774 ms
  Loss rate: 1.65%
Run 1: Report of PCC-Vivace — Data Link

![Graph showing network throughput and packet delay over time for different flows.](image-url)
Run 2: Statistics of PCC-Vivace

Start at: 2019-04-24 09:25:19
End at: 2019-04-24 09:25:49
Local clock offset: -0.024 ms
Remote clock offset: -0.57 ms

# Below is generated by plot.py at 2019-04-24 14:25:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 455.28 Mbit/s
  95th percentile per-packet one-way delay: 65.393 ms
  Loss rate: 0.58%
-- Flow 1:
  Average throughput: 309.57 Mbit/s
  95th percentile per-packet one-way delay: 65.468 ms
  Loss rate: 0.48%
-- Flow 2:
  Average throughput: 204.41 Mbit/s
  95th percentile per-packet one-way delay: 65.452 ms
  Loss rate: 0.65%
-- Flow 3:
  Average throughput: 30.82 Mbit/s
  95th percentile per-packet one-way delay: 63.055 ms
  Loss rate: 2.50%
Run 2: Report of PCC-Vivace — Data Link

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

Legend:
- Dashed blue line: Flow 1 ingress (mean 309.73 Mbit/s) and Flow 1 egress (mean 309.57 Mbit/s)
- Dashed green line: Flow 2 ingress (mean 204.44 Mbit/s) and Flow 2 egress (mean 204.41 Mbit/s)
- Dotted green line: Flow 3 ingress (mean 31.20 Mbit/s) and Flow 3 egress (mean 30.82 Mbit/s)
Run 3: Statistics of PCC-Vivace

Start at: 2019-04-24 10:01:43
End at: 2019-04-24 10:02:13
Local clock offset: -0.038 ms
Remote clock offset: -0.538 ms

# Below is generated by plot.py at 2019-04-24 14:25:51
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 510.73 Mbit/s
  95th percentile per-packet one-way delay: 67.635 ms
  Loss rate: 0.58%
-- Flow 1:
  Average throughput: 308.00 Mbit/s
  95th percentile per-packet one-way delay: 65.337 ms
  Loss rate: 0.32%
-- Flow 2:
  Average throughput: 264.08 Mbit/s
  95th percentile per-packet one-way delay: 89.914 ms
  Loss rate: 0.88%
-- Flow 3:
  Average throughput: 84.15 Mbit/s
  95th percentile per-packet one-way delay: 63.698 ms
  Loss rate: 1.54%
Run 3: Report of PCC-Vivace — Data Link
Run 4: Statistics of PCC-Vivace

Start at: 2019-04-24 10:38:05
End at: 2019-04-24 10:38:35
Local clock offset: -0.043 ms
Remote clock offset: -0.73 ms

# Below is generated by plot.py at 2019-04-24 14:25:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 503.48 Mbit/s
95th percentile per-packet one-way delay: 79.450 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 321.84 Mbit/s
95th percentile per-packet one-way delay: 81.675 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 232.75 Mbit/s
95th percentile per-packet one-way delay: 67.133 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 83.14 Mbit/s
95th percentile per-packet one-way delay: 63.779 ms
Loss rate: 1.81%
Run 4: Report of PCC-Vivace — Data Link
Run 5: Statistics of PCC-Vivace

End at: 2019-04-24 11:14:54
Local clock offset: -0.069 ms
Remote clock offset: 0.654 ms

# Below is generated by plot.py at 2019-04-24 14:25:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 389.62 Mbit/s
95th percentile per-packet one-way delay: 64.252 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 232.04 Mbit/s
95th percentile per-packet one-way delay: 64.885 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 196.27 Mbit/s
95th percentile per-packet one-way delay: 62.977 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 83.66 Mbit/s
95th percentile per-packet one-way delay: 62.437 ms
Loss rate: 1.68%
Run 5: Report of PCC-Vivace — Data Link
Run 1: Statistics of WebRTC media

Start at: 2019-04-24 08:34:29
End at: 2019-04-24 08:34:59
Local clock offset: -0.021 ms
Remote clock offset: -0.514 ms

# Below is generated by plot.py at 2019-04-24 14:25:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 63.360 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 63.305 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.287 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.581 ms
Loss rate: 0.00%
Run 1: Report of WebRTC media — Data Link

![Graph showing throughput and packet delay over time for different flows.](image)
Run 2: Statistics of WebRTC media

Start at: 2019-04-24 09:10:24
End at: 2019-04-24 09:10:54
Local clock offset: -0.03 ms
Remote clock offset: -0.6 ms

# Below is generated by plot.py at 2019-04-24 14:25:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.14 Mbit/s
  95th percentile per-packet one-way delay: 63.598 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 63.265 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 63.327 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 63.636 ms
  Loss rate: 0.00%
Run 2: Report of WebRTC media — Data Link

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

- 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

End at: 2019-04-24 09:47:11
Local clock offset: -0.065 ms
Remote clock offset: -0.386 ms

# Below is generated by plot.py at 2019-04-24 14:25:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 63.322 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 62.974 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.376 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 62.887 ms
Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link
Run 4: Statistics of WebRTC media

Local clock offset: -0.05 ms
Remote clock offset: -0.267 ms

# Below is generated by plot.py at 2019-04-24 14:25:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.14 Mbit/s
  95th percentile per-packet one-way delay: 63.285 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 63.225 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 62.878 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 63.332 ms
  Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link
Run 5: Statistics of WebRTC media

End at: 2019-04-24 10:59:45
Local clock offset: -0.015 ms
Remote clock offset: -0.237 ms

# Below is generated by plot.py at 2019-04-24 14:25:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 63.721 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.289 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.791 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.199 ms
Loss rate: 0.00%
Run 5: Report of WebRTC media — Data Link