Pantheon Report

Generated at 2018-08-10 08:17:24 (UTC).
Data path: Stanford Ethernet (remote) → AWS California 1 Ethernet (local).
Repeated the test of 17 congestion control schemes 10 times.
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).
NTP offsets were measured against time.stanford.edu and have been applied to correct the timestamps in logs.

Git summary:
branch: master @ 7772df3413f4b07ba0096dfdd8e9d4c6dca623e3
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e99b032143cedbdef58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ 6f038ed31259d366f9840f65b82cbe8f464b1b39
third_party/pcc @ 1afcf958fa0d66d18b623c091a55feca872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a8273a86b42f1bc8143ebc978f3c7f42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3db2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2ba8f86211435ae071a32f96b7d8c504587f5d7f4
third_party/webRTC @ 3f0cc2a9061a41b6f9ddee4735770d143a1fa2851
test from Stanford to AWS California 1, 10 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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<td>flow 2</td>
<td>flow 3</td>
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<td>532.77</td>
<td>395.17</td>
<td>323.66</td>
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<td>Copa</td>
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<td>305.84</td>
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<td>TCP Cubic</td>
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<td>452.99</td>
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<tr>
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<td>571.57</td>
<td>397.73</td>
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<td>Indigo</td>
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<td>LEDBAT</td>
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<td>284.25</td>
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<tr>
<td>PCC-Allegro</td>
<td>10</td>
<td>656.37</td>
<td>166.53</td>
<td>105.20</td>
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<td>PCC-Expr</td>
<td>10</td>
<td>226.04</td>
<td>103.85</td>
<td>67.44</td>
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<tr>
<td>QUIC Cubic</td>
<td>10</td>
<td>75.02</td>
<td>66.30</td>
<td>53.86</td>
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<td>SCRReAM</td>
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<td>Sprout</td>
<td>10</td>
<td>21.06</td>
<td>20.98</td>
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<td>TaoVA-100x</td>
<td>10</td>
<td>218.86</td>
<td>194.45</td>
<td>113.99</td>
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<tr>
<td>TCP Vegas</td>
<td>10</td>
<td>318.76</td>
<td>298.38</td>
<td>285.20</td>
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<tr>
<td>Verus</td>
<td>10</td>
<td>196.79</td>
<td>141.01</td>
<td>102.93</td>
</tr>
<tr>
<td>PCC-Vivace</td>
<td>10</td>
<td>221.31</td>
<td>121.77</td>
<td>55.67</td>
</tr>
<tr>
<td>WebRTC media</td>
<td>10</td>
<td>1.52</td>
<td>1.15</td>
<td>0.49</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

Start at: 2018-08-10 01:45:27
End at: 2018-08-10 01:45:57
Local clock offset: 0.194 ms
Remote clock offset: 0.532 ms

# Below is generated by plot.py at 2018-08-10 06:17:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 899.10 Mbit/s
95th percentile per-packet one-way delay: 7.749 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 526.58 Mbit/s
95th percentile per-packet one-way delay: 8.150 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 398.99 Mbit/s
95th percentile per-packet one-way delay: 4.489 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 321.91 Mbit/s
95th percentile per-packet one-way delay: 4.763 ms
Loss rate: 0.23%
Run 1: Report of TCP BBR — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 526.45 Mbps)
- Flow 1 egress (mean 526.58 Mbps)
- Flow 2 ingress (mean 398.96 Mbps)
- Flow 2 egress (mean 398.99 Mbps)
- Flow 3 ingress (mean 322.01 Mbps)
- Flow 3 egress (mean 321.91 Mbps)

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

- Flow 1 (95th percentile 8.15 ms)
- Flow 2 (95th percentile 4.49 ms)
- Flow 3 (95th percentile 4.76 ms)
Run 2: Statistics of TCP BBR

Start at: 2018-08-10 02:12:27
End at: 2018-08-10 02:12:57
Local clock offset: -0.265 ms
Remote clock offset: 0.05 ms

# Below is generated by plot.py at 2018-08-10 06:17:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 901.22 Mbit/s
95th percentile per-packet one-way delay: 10.751 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 532.41 Mbit/s
95th percentile per-packet one-way delay: 11.310 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 391.63 Mbit/s
95th percentile per-packet one-way delay: 4.386 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 325.26 Mbit/s
95th percentile per-packet one-way delay: 4.401 ms
Loss rate: 0.22%
Run 2: Report of TCP BBR — Data Link
Run 3: Statistics of TCP BBR

Start at: 2018-08-10 02:39:27
End at: 2018-08-10 02:39:58
Local clock offset: -0.365 ms
Remote clock offset: -0.093 ms

# Below is generated by plot.py at 2018-08-10 06:17:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 905.71 Mbit/s
95th percentile per-packet one-way delay: 9.303 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 536.58 Mbit/s
95th percentile per-packet one-way delay: 9.858 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 392.00 Mbit/s
95th percentile per-packet one-way delay: 4.392 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 325.72 Mbit/s
95th percentile per-packet one-way delay: 4.436 ms
Loss rate: 0.22%
Run 3: Report of TCP BBR — Data Link

Throughput (Mb/s)

Time (s)

Flow 1 ingress (mean 536.44 Mb/s)  Flow 1 egress (mean 536.58 Mb/s)
Flow 2 ingress (mean 391.99 Mb/s)  Flow 2 egress (mean 392.00 Mb/s)
Flow 3 ingress (mean 326.72 Mb/s)  Flow 3 egress (mean 326.72 Mb/s)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 9.86 ms)  Flow 2 (95th percentile 4.39 ms)  Flow 3 (95th percentile 4.44 ms)
Run 4: Statistics of TCP BBR

Start at: 2018-08-10 03:06:29
End at: 2018-08-10 03:06:59
Local clock offset: -0.372 ms
Remote clock offset: -0.026 ms

# Below is generated by plot.py at 2018-08-10 06:17:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 901.87 Mbit/s
95th percentile per-packet one-way delay: 11.553 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 530.83 Mbit/s
95th percentile per-packet one-way delay: 12.026 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 395.59 Mbit/s
95th percentile per-packet one-way delay: 4.360 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 324.60 Mbit/s
95th percentile per-packet one-way delay: 4.393 ms
Loss rate: 0.23%
Run 4: Report of TCP BBR — Data Link

![Throughput Graph](image)

![Delay Graph](image)

Legend:
- Flow 1 ingress (mean 530.70 Mbit/s)
- Flow 1 egress (mean 530.83 Mbit/s)
- Flow 2 ingress (mean 395.54 Mbit/s)
- Flow 2 egress (mean 395.59 Mbit/s)
- Flow 3 ingress (mean 324.64 Mbit/s)
- Flow 3 egress (mean 324.69 Mbit/s)

Legend:
- Flow 1 (95th percentile 12.03 ms)
- Flow 2 (95th percentile 4.36 ms)
- Flow 3 (95th percentile 4.39 ms)
Run 5: Statistics of TCP BBR

Start at: 2018-08-10 03:33:36
End at: 2018-08-10 03:34:06
Local clock offset: -0.341 ms
Remote clock offset: 0.215 ms

# Below is generated by plot.py at 2018-08-10 06:17:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 901.43 Mbit/s
  95th percentile per-packet one-way delay: 10.000 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 530.97 Mbit/s
  95th percentile per-packet one-way delay: 10.405 ms
  Loss rate: 0.06%
-- Flow 2:
  Average throughput: 396.71 Mbit/s
  95th percentile per-packet one-way delay: 4.271 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 320.50 Mbit/s
  95th percentile per-packet one-way delay: 4.285 ms
  Loss rate: 0.34%
Run 5: Report of TCP BBR — Data Link

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

Legend:
- Flow 1 ingress (mean 530.94 Mbit/s)
- Flow 1 egress (mean 530.97 Mbit/s)
- Flow 2 ingress (mean 396.32 Mbit/s)
- Flow 2 egress (mean 396.71 Mbit/s)
- Flow 3 ingress (mean 320.93 Mbit/s)
- Flow 3 egress (mean 320.59 Mbit/s)
Run 6: Statistics of TCP BBR

Start at: 2018-08-10 04:00:33
End at: 2018-08-10 04:01:04
Local clock offset: -0.218 ms
Remote clock offset: 0.162 ms

# Below is generated by plot.py at 2018-08-10 06:17:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 909.69 Mbit/s
95th percentile per-packet one-way delay: 11.109 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 540.20 Mbit/s
95th percentile per-packet one-way delay: 11.493 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 395.47 Mbit/s
95th percentile per-packet one-way delay: 4.358 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 319.87 Mbit/s
95th percentile per-packet one-way delay: 4.374 ms
Loss rate: 0.29%
Run 6: Report of TCP BBR — Data Link
Run 7: Statistics of TCP BBR

Start at: 2018-08-10 04:27:38
End at: 2018-08-10 04:28:08
Local clock offset: -0.195 ms
Remote clock offset: -0.05 ms

# Below is generated by plot.py at 2018-08-10 06:17:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 902.80 Mbit/s
95th percentile per-packet one-way delay: 9.692 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 534.29 Mbit/s
95th percentile per-packet one-way delay: 10.045 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 394.36 Mbit/s
95th percentile per-packet one-way delay: 4.386 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 319.54 Mbit/s
95th percentile per-packet one-way delay: 4.397 ms
Loss rate: 0.27%
Run 7: Report of TCP BBR — Data Link

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

- **Flow 1** (ingress: 534.18 Mbit/s, egress: 534.29 Mbit/s)
- **Flow 2** (ingress: 393.99 Mbit/s, egress: 394.36 Mbit/s)
- **Flow 3** (ingress: 319.76 Mbit/s, egress: 319.54 Mbit/s)

![Graph showing packet latency over time for three flows.](image-url)

- **Flow 1** (95th percentile: 10.04 ms)
- **Flow 2** (95th percentile: 4.39 ms)
- **Flow 3** (95th percentile: 4.40 ms)
Run 8: Statistics of TCP BBR

Start at: 2018-08-10 04:54:37
End at: 2018-08-10 04:55:07
Local clock offset: -0.583 ms
Remote clock offset: -0.351 ms

# Below is generated by plot.py at 2018-08-10 06:17:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 899.30 Mbit/s
95th percentile per-packet one-way delay: 10.843 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 523.95 Mbit/s
95th percentile per-packet one-way delay: 11.149 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 399.56 Mbit/s
95th percentile per-packet one-way delay: 4.389 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 329.35 Mbit/s
95th percentile per-packet one-way delay: 4.410 ms
Loss rate: 0.21%
Run 8: Report of TCP BBR — Data Link
Run 9: Statistics of TCP BBR

Start at: 2018-08-10 05:21:34
End at: 2018-08-10 05:22:05
Local clock offset: -1.067 ms
Remote clock offset: -0.52 ms

# Below is generated by plot.py at 2018-08-10 06:27:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 907.46 Mbit/s
95th percentile per-packet one-way delay: 10.759 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 536.88 Mbit/s
95th percentile per-packet one-way delay: 11.079 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 394.28 Mbit/s
95th percentile per-packet one-way delay: 4.344 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 325.13 Mbit/s
95th percentile per-packet one-way delay: 4.381 ms
Loss rate: 0.22%
Run 9: Report of TCP BBR — Data Link

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

- **Flow 1 ingress** (mean 536.78 Mbps)
- **Flow 1 egress** (mean 536.88 Mbps)
- **Flow 2 ingress** (mean 394.27 Mbps)
- **Flow 2 egress** (mean 394.28 Mbps)
- **Flow 3 ingress** (mean 325.23 Mbps)
- **Flow 3 egress** (mean 325.33 Mbps)

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

- **Flow 1** (95th percentile 11.08 ms)
- **Flow 2** (95th percentile 4.34 ms)
- **Flow 3** (95th percentile 4.38 ms)
Run 10: Statistics of TCP BBR

Start at: 2018-08-10 05:48:33
End at: 2018-08-10 05:49:03
Local clock offset: -0.971 ms
Remote clock offset: 0.125 ms

# Below is generated by plot.py at 2018-08-10 06:27:03
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 904.48 Mbit/s
  95th percentile per-packet one-way delay: 9.093 ms
  Loss rate: 0.09%
-- Flow 1:
  Average throughput: 535.06 Mbit/s
  95th percentile per-packet one-way delay: 9.380 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 393.10 Mbit/s
  95th percentile per-packet one-way delay: 4.295 ms
  Loss rate: 0.10%
-- Flow 3:
  Average throughput: 324.69 Mbit/s
  95th percentile per-packet one-way delay: 4.320 ms
  Loss rate: 0.24%
Run 10: Report of TCP BBR — Data Link

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**Throughput (Mbps)**

- Flow 1 ingress (mean 534.92 Mbps)
- Flow 1 egress (mean 535.06 Mbps)
- Flow 2 ingress (mean 393.07 Mbps)
- Flow 2 egress (mean 393.10 Mbps)
- Flow 3 ingress (mean 324.73 Mbps)
- Flow 3 egress (mean 324.69 Mbps)

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

- Flow 1 (95th percentile 9.38 ms)
- Flow 2 (95th percentile 4.29 ms)
- Flow 3 (95th percentile 4.32 ms)
Run 1: Statistics of Copa

Start at: 2018-08-10 01:25:27
End at: 2018-08-10 01:25:57
Local clock offset: 0.155 ms
Remote clock offset: -0.035 ms

# Below is generated by plot.py at 2018-08-10 06:27:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 518.87 Mbit/s
95th percentile per-packet one-way delay: 1.101 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 319.46 Mbit/s
95th percentile per-packet one-way delay: 1.098 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 241.38 Mbit/s
95th percentile per-packet one-way delay: 1.083 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 116.47 Mbit/s
95th percentile per-packet one-way delay: 1.186 ms
Loss rate: 0.19%
Run 1: Report of Copa — Data Link

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

Legend:
- Flow 1 ingress (mean 319.34 Mbit/s) — Flow 1 egress (mean 319.46 Mbit/s)
- Flow 2 ingress (mean 241.35 Mbit/s) — Flow 2 egress (mean 241.38 Mbit/s)
- Flow 3 ingress (mean 116.39 Mbit/s) — Flow 3 egress (mean 116.47 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 1.10 ms)
- Flow 2 (95th percentile 1.08 ms)
- Flow 3 (95th percentile 1.19 ms)
Run 2: Statistics of Copa

Start at: 2018-08-10 01:52:24
End at: 2018-08-10 01:52:54
Local clock offset: -0.01 ms
Remote clock offset: 0.725 ms

# Below is generated by plot.py at 2018-08-10 06:27:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 508.53 Mbit/s
95th percentile per-packet one-way delay: 1.261 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 287.03 Mbit/s
95th percentile per-packet one-way delay: 1.293 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 229.76 Mbit/s
95th percentile per-packet one-way delay: 1.176 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 205.80 Mbit/s
95th percentile per-packet one-way delay: 1.337 ms
Loss rate: 0.17%
Run 2: Report of Copa — Data Link

Throughput (Mbps)

Flow 1 ingress (mean 286.92 Mbps)
Flow 1 egress (mean 287.03 Mbps)
Flow 2 ingress (mean 229.79 Mbps)
Flow 2 egress (mean 229.76 Mbps)
Flow 3 ingress (mean 205.75 Mbps)
Flow 3 egress (mean 205.89 Mbps)

Delay (ms)

Flow 1 (95th percentile 1.29 ms)
Flow 2 (95th percentile 1.18 ms)
Flow 3 (95th percentile 1.34 ms)
Run 3: Statistics of Copa

Start at: 2018-08-10 02:19:26
End at: 2018-08-10 02:19:56
Local clock offset: -0.266 ms
Remote clock offset: 0.0 ms

# Below is generated by plot.py at 2018-08-10 06:27:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 496.64 Mbit/s
95th percentile per-packet one-way delay: 1.224 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 313.28 Mbit/s
95th percentile per-packet one-way delay: 1.217 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 208.58 Mbit/s
95th percentile per-packet one-way delay: 1.228 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 134.27 Mbit/s
95th percentile per-packet one-way delay: 1.277 ms
Loss rate: 0.41%
Run 3: Report of Copa — Data Link
Run 4: Statistics of Copa

Start at: 2018-08-10 02:46:27
End at: 2018-08-10 02:46:57
Local clock offset: -0.397 ms
Remote clock offset: -0.017 ms

# Below is generated by plot.py at 2018-08-10 06:27:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 464.31 Mbit/s
95th percentile per-packet one-way delay: 1.216 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 272.23 Mbit/s
95th percentile per-packet one-way delay: 1.448 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 226.00 Mbit/s
95th percentile per-packet one-way delay: 1.024 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 125.25 Mbit/s
95th percentile per-packet one-way delay: 1.076 ms
Loss rate: 0.32%
Run 4: Report of Copa — Data Link

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

- Flow 1 ingress (mean 272.12 Mbit/s)
- Flow 1 egress (mean 272.33 Mbit/s)
- Flow 2 ingress (mean 225.92 Mbit/s)
- Flow 2 egress (mean 226.00 Mbit/s)
- Flow 3 ingress (mean 126.38 Mbit/s)
- Flow 3 egress (mean 125.25 Mbit/s)
Run 5: Statistics of Copa

Start at: 2018-08-10 03:13:29
End at: 2018-08-10 03:13:59
Local clock offset: -0.497 ms
Remote clock offset: 0.041 ms

# Below is generated by plot.py at 2018-08-10 06:28:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 529.86 Mbit/s
95th percentile per-packet one-way delay: 1.197 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 291.43 Mbit/s
95th percentile per-packet one-way delay: 1.424 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 290.79 Mbit/s
95th percentile per-packet one-way delay: 0.986 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 135.52 Mbit/s
95th percentile per-packet one-way delay: 1.034 ms
Loss rate: 0.06%
Run 5: Report of Copa — Data Link

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

- **Flow 1**: Ingress (mean 291.28 Mbit/s) and Egress (mean 291.43 Mbit/s)
- **Flow 2**: Ingress (mean 290.74 Mbit/s) and Egress (mean 290.79 Mbit/s)
- **Flow 3**: Ingress (mean 135.35 Mbit/s) and Egress (mean 135.52 Mbit/s)

![Graph showing packet loss over time for three different flows]

- **Flow 1**: 95th percentile 1.42 ms
- **Flow 2**: 95th percentile 0.99 ms
- **Flow 3**: 95th percentile 1.03 ms
Run 6: Statistics of Copa

Start at: 2018-08-10 03:40:32
End at: 2018-08-10 03:41:02
Local clock offset: -0.277 ms
Remote clock offset: 0.296 ms

# Below is generated by plot.py at 2018-08-10 06:28:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 493.17 Mbit/s
  95th percentile per-packet one-way delay: 1.088 ms
  Loss rate: 0.07%
-- Flow 1:
  Average throughput: 316.93 Mbit/s
  95th percentile per-packet one-way delay: 1.112 ms
  Loss rate: 0.06%
-- Flow 2:
  Average throughput: 214.04 Mbit/s
  95th percentile per-packet one-way delay: 1.023 ms
  Loss rate: 0.03%
-- Flow 3:
  Average throughput: 101.94 Mbit/s
  95th percentile per-packet one-way delay: 1.132 ms
  Loss rate: 0.24%
Run 6: Report of Copa — Data Link

![Throughput Graph](chart1)

![Delay Graph](chart2)

Legend:
- Flow 1 ingress (mean 316.92 Mbit/s)
- Flow 1 egress (mean 316.93 Mbit/s)
- Flow 2 ingress (mean 213.88 Mbit/s)
- Flow 2 egress (mean 214.04 Mbit/s)
- Flow 3 ingress (mean 101.99 Mbit/s)
- Flow 3 egress (mean 101.04 Mbit/s)

Legend:
- Flow 1 (95th percentile 1.11 ms)
- Flow 2 (95th percentile 1.02 ms)
- Flow 3 (95th percentile 1.13 ms)
Run 7: Statistics of Copa

Start at: 2018-08-10 04:07:33
End at: 2018-08-10 04:08:03
Local clock offset: -0.227 ms
Remote clock offset: 0.228 ms

# Below is generated by plot.py at 2018-08-10 06:37:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 497.19 Mbit/s
95th percentile per-packet one-way delay: 1.225 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 302.46 Mbit/s
95th percentile per-packet one-way delay: 1.238 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 220.64 Mbit/s
95th percentile per-packet one-way delay: 1.170 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 144.47 Mbit/s
95th percentile per-packet one-way delay: 1.297 ms
Loss rate: 0.19%
Run 7: Report of Copa — Data Link

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

- Flow 1 ingress (mean 302.35 Mbit/s)
- Flow 1 egress (mean 302.46 Mbit/s)
- Flow 2 ingress (mean 220.54 Mbit/s)
- Flow 2 egress (mean 220.64 Mbit/s)
- Flow 3 ingress (mean 144.46 Mbit/s)
- Flow 3 egress (mean 144.47 Mbit/s)
Run 8: Statistics of Copa

Start at: 2018-08-10 04:34:37
End at: 2018-08-10 04:35:07
Local clock offset: -0.245 ms
Remote clock offset: -0.06 ms

# Below is generated by plot.py at 2018-08-10 06:38:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 544.60 Mbit/s
95th percentile per-packet one-way delay: 1.152 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 321.27 Mbit/s
95th percentile per-packet one-way delay: 1.143 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 279.21 Mbit/s
95th percentile per-packet one-way delay: 1.158 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 112.95 Mbit/s
95th percentile per-packet one-way delay: 1.236 ms
Loss rate: 0.20%
Run 8: Report of Copa — Data Link

![Graph 1: Throughput (Mbps)]

- **Flow 1 ingress (mean 321.10 Mbps)**
- **Flow 1 egress (mean 321.27 Mbps)**
- **Flow 2 ingress (mean 279.12 Mbps)**
- **Flow 2 egress (mean 279.21 Mbps)**
- **Flow 3 ingress (mean 112.96 Mbps)**
- **Flow 3 egress (mean 112.95 Mbps)**

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

- **Flow 1 (95th percentile 1.14 ms)**
- **Flow 2 (95th percentile 1.16 ms)**
- **Flow 3 (95th percentile 1.24 ms)**
Run 9: Statistics of Copa

Start at: 2018-08-10 05:01:35
End at: 2018-08-10 05:02:05
Local clock offset: -0.728 ms
Remote clock offset: -0.418 ms

# Below is generated by plot.py at 2018-08-10 06:38:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 533.18 Mbit/s
95th percentile per-packet one-way delay: 1.104 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 327.51 Mbit/s
95th percentile per-packet one-way delay: 1.108 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 251.65 Mbit/s
95th percentile per-packet one-way delay: 1.083 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 115.32 Mbit/s
95th percentile per-packet one-way delay: 1.167 ms
Loss rate: 0.45%
Run 9: Report of Copa — Data Link

![Graph showing throughput and per-packet one-way delay over time for three different flows. The throughput graph shows three lines representing Flow 1 ingress, Flow 1 egress, Flow 2 ingress, Flow 2 egress, Flow 3 ingress, and Flow 3 egress. The per-packet one-way delay graph shows the 99th percentile delay for each flow.](image-url)
Run 10: Statistics of Copa

Start at: 2018-08-10 05:28:32
End at: 2018-08-10 05:29:02
Local clock offset: -1.14 ms
Remote clock offset: -0.214 ms

# Below is generated by plot.py at 2018-08-10 06:38:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 507.61 Mbit/s
95th percentile per-packet one-way delay: 1.095 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 306.75 Mbit/s
95th percentile per-packet one-way delay: 1.080 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 226.95 Mbit/s
95th percentile per-packet one-way delay: 1.088 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 150.55 Mbit/s
95th percentile per-packet one-way delay: 1.187 ms
Loss rate: 0.18%
Run 10: Report of Copa — Data Link
Run 1: Statistics of TCP Cubic

Start at: 2018-08-10 01:31:42
End at: 2018-08-10 01:32:12
Local clock offset: 0.161 ms
Remote clock offset: 0.199 ms

# Below is generated by plot.py at 2018-08-10 06:38:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 834.00 Mbit/s
  95th percentile per-packet one-way delay: 10.733 ms
  Loss rate: 0.09%
-- Flow 1:
  Average throughput: 461.10 Mbit/s
  95th percentile per-packet one-way delay: 11.163 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 401.24 Mbit/s
  95th percentile per-packet one-way delay: 4.299 ms
  Loss rate: 0.09%
-- Flow 3:
  Average throughput: 318.64 Mbit/s
  95th percentile per-packet one-way delay: 4.327 ms
  Loss rate: 0.23%
Run 1: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 461.03 Mbit/s)
- Flow 1 egress (mean 461.10 Mbit/s)
- Flow 2 ingress (mean 401.22 Mbit/s)
- Flow 2 egress (mean 401.24 Mbit/s)
- Flow 3 ingress (mean 318.73 Mbit/s)
- Flow 3 egress (mean 318.64 Mbit/s)

![Graph showing per-packet round-trip time in milliseconds over time for different flows.]

- Flow 1 (95th percentile 11.16 ms)
- Flow 2 (95th percentile 4.30 ms)
- Flow 3 (95th percentile 4.33 ms)
Run 2: Statistics of TCP Cubic

Start at: 2018-08-10 01:58:38
End at: 2018-08-10 01:59:08
Local clock offset: -0.219 ms
Remote clock offset: 0.619 ms

# Below is generated by plot.py at 2018-08-10 06:38:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 835.36 Mbit/s
95th percentile per-packet one-way delay: 11.201 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 469.38 Mbit/s
95th percentile per-packet one-way delay: 12.176 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 390.71 Mbit/s
95th percentile per-packet one-way delay: 4.243 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 318.69 Mbit/s
95th percentile per-packet one-way delay: 4.285 ms
Loss rate: 0.23%
Run 2: Report of TCP Cubic — Data Link

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

- **Throughput**: The top graph illustrates the throughput over time, with different lines indicating the ingress (mean 469.29 Mbit/s) and egress (mean 469.38 Mbit/s) for each flow. The throughput peaks and stabilizes over time.
- **Per-queue one-way delay**: The bottom graph shows the per-queue one-way delay for each flow, ranging from 0 to 25 ms. The delay varies significantly across flows and time, with some fluctuations indicating network activity.

Legend:
- Flow 1 ingress (mean 469.29 Mbit/s)
- Flow 1 egress (mean 469.38 Mbit/s)
- Flow 2 ingress (mean 390.70 Mbit/s)
- Flow 2 egress (mean 390.71 Mbit/s)
- Flow 3 ingress (mean 318.75 Mbit/s)
- Flow 3 egress (mean 318.69 Mbit/s)

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Run 3: Statistics of TCP Cubic

Start at: 2018-08-10 02:25:44
End at: 2018-08-10 02:26:14
Local clock offset: -0.369 ms
Remote clock offset: 0.048 ms

# Below is generated by plot.py at 2018-08-10 06:38:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 806.84 Mbit/s
95th percentile per-packet one-way delay: 4.344 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 441.35 Mbit/s
95th percentile per-packet one-way delay: 4.326 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 390.26 Mbit/s
95th percentile per-packet one-way delay: 4.343 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 318.55 Mbit/s
95th percentile per-packet one-way delay: 4.372 ms
Loss rate: 0.23%
Run 3: Report of TCP Cubic — Data Link

![Graph of Throughput vs Time](image1)

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

Legend:
- Flow 1 ingress (mean 441.29 Mbit/s)
- Flow 1 egress (mean 441.35 Mbit/s)
- Flow 2 ingress (mean 390.21 Mbit/s)
- Flow 2 egress (mean 390.26 Mbit/s)
- Flow 3 ingress (mean 318.61 Mbit/s)
- Flow 3 egress (mean 318.55 Mbit/s)
Run 4: Statistics of TCP Cubic

Start at: 2018-08-10 02:52:39  
End at: 2018-08-10 02:53:09  
Local clock offset: -0.325 ms  
Remote clock offset: -0.075 ms  

# Below is generated by plot.py at 2018-08-10 06:38:00  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 832.49 Mbit/s  
95th percentile per-packet one-way delay: 9.998 ms  
Loss rate: 0.08%  
-- Flow 1:  
Average throughput: 464.14 Mbit/s  
95th percentile per-packet one-way delay: 10.608 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 393.99 Mbit/s  
95th percentile per-packet one-way delay: 4.444 ms  
Loss rate: 0.09%  
-- Flow 3:  
Average throughput: 319.52 Mbit/s  
95th percentile per-packet one-way delay: 4.455 ms  
Loss rate: 0.22%
Run 4: Report of TCP Cubic — Data Link

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

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

Legend:
- Flow 1 ingress (mean 464.07 Mbps) - Flow 1 egress (mean 464.14 Mbps)
- Flow 2 ingress (mean 393.95 Mbps) - Flow 2 egress (mean 393.99 Mbps)
- Flow 3 ingress (mean 319.56 Mbps) - Flow 3 egress (mean 319.52 Mbps)
- Flow 1 (95th percentile 10.61 ms)
- Flow 2 (95th percentile 4.44 ms)
- Flow 3 (95th percentile 4.46 ms)
Run 5: Statistics of TCP Cubic

Start at: 2018-08-10 03:19:46
End at: 2018-08-10 03:20:16
Local clock offset: -0.318 ms
Remote clock offset: 0.117 ms

# Below is generated by plot.py at 2018-08-10 06:44:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 818.70 Mbit/s
95th percentile per-packet one-way delay: 4.332 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 448.68 Mbit/s
95th percentile per-packet one-way delay: 4.344 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 395.80 Mbit/s
95th percentile per-packet one-way delay: 4.316 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 320.66 Mbit/s
95th percentile per-packet one-way delay: 4.345 ms
Loss rate: 0.22%
Run 5: Report of TCP Cubic — Data Link

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

![Graph of Per-packet one-way delay (ms)](image)
Run 6: Statistics of TCP Cubic

Start at: 2018-08-10 03:46:50
End at: 2018-08-10 03:47:20
Local clock offset: -0.384 ms
Remote clock offset: 0.201 ms

# Below is generated by plot.py at 2018-08-10 06:44:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 799.23 Mbit/s
95th percentile per-packet one-way delay: 4.213 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 432.38 Mbit/s
95th percentile per-packet one-way delay: 4.191 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 391.85 Mbit/s
95th percentile per-packet one-way delay: 4.221 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 318.63 Mbit/s
95th percentile per-packet one-way delay: 4.236 ms
Loss rate: 0.23%
Run 6: Report of TCP Cubic — Data Link

![Graph of Throughput and Delay](image)

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 432.34 Mbps)
  - Flow 1 egress (mean 432.38 Mbps)
  - Flow 2 ingress (mean 391.80 Mbps)
  - Flow 2 egress (mean 391.85 Mbps)
  - Flow 3 ingress (mean 318.68 Mbps)
  - Flow 3 egress (mean 318.63 Mbps)

- **Delay (ms)**
  - Flow 1 (95th percentile 4.19 ms)
  - Flow 2 (95th percentile 4.22 ms)
  - Flow 3 (95th percentile 4.24 ms)
Run 7: Statistics of TCP Cubic

Start at: 2018-08-10 04:13:50
End at: 2018-08-10 04:14:20
Local clock offset: -0.239 ms
Remote clock offset: 0.244 ms

# Below is generated by plot.py at 2018-08-10 06:45:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 806.07 Mbit/s
  95th percentile per-packet one-way delay: 10.725 ms
  Loss rate: 0.09%
-- Flow 1:
  Average throughput: 430.32 Mbit/s
  95th percentile per-packet one-way delay: 11.376 ms
  Loss rate: 0.06%
-- Flow 2:
  Average throughput: 405.57 Mbit/s
  95th percentile per-packet one-way delay: 4.387 ms
  Loss rate: 0.09%
-- Flow 3:
  Average throughput: 318.69 Mbit/s
  95th percentile per-packet one-way delay: 4.421 ms
  Loss rate: 0.24%
Run 8: Statistics of TCP Cubic

Start at: 2018-08-10 04:40:52  
End at: 2018-08-10 04:41:22  
Local clock offset: -0.276 ms  
Remote clock offset: -0.027 ms 

# Below is generated by plot.py at 2018-08-10 06:45:20  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 803.28 Mbit/s  
95th percentile per-packet one-way delay: 4.393 ms  
Loss rate: 0.09%  
-- Flow 1:  
Average throughput: 435.11 Mbit/s  
95th percentile per-packet one-way delay: 4.354 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 392.38 Mbit/s  
95th percentile per-packet one-way delay: 4.387 ms  
Loss rate: 0.10%  
-- Flow 3:  
Average throughput: 321.37 Mbit/s  
95th percentile per-packet one-way delay: 4.436 ms  
Loss rate: 0.24%
Run 8: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 435.05 Mbps)
- Flow 1 egress (mean 435.11 Mbps)
- Flow 2 ingress (mean 392.35 Mbps)
- Flow 2 egress (mean 392.38 Mbps)
- Flow 3 ingress (mean 321.45 Mbps)
- Flow 3 egress (mean 321.37 Mbps)

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

- Flow 1 (95th percentile 4.35 ms)
- Flow 2 (95th percentile 4.39 ms)
- Flow 3 (95th percentile 4.44 ms)
Run 9: Statistics of TCP Cubic

Start at: 2018-08-10 05:07:54
End at: 2018-08-10 05:08:24
Local clock offset: -0.9 ms
Remote clock offset: -0.516 ms

# Below is generated by plot.py at 2018-08-10 06:46:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 855.25 Mbit/s
95th percentile per-packet one-way delay: 9.335 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 502.86 Mbit/s
95th percentile per-packet one-way delay: 9.875 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 371.23 Mbit/s
95th percentile per-packet one-way delay: 4.340 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 316.71 Mbit/s
95th percentile per-packet one-way delay: 4.354 ms
Loss rate: 0.24%
Run 9: Report of TCP Cubic — Data Link
Run 10: Statistics of TCP Cubic

Start at: 2018-08-10 05:34:48
End at: 2018-08-10 05:35:18
Local clock offset: -1.114 ms
Remote clock offset: -0.031 ms

# Below is generated by plot.py at 2018-08-10 06:46:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 811.04 Mbit/s
95th percentile per-packet one-way delay: 4.434 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 444.57 Mbit/s
95th percentile per-packet one-way delay: 4.425 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 392.69 Mbit/s
95th percentile per-packet one-way delay: 4.429 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 316.50 Mbit/s
95th percentile per-packet one-way delay: 4.454 ms
Loss rate: 0.21%
Run 10: Report of TCP Cubic — Data Link

Throughput (Mbps)

Time (s)

0 5 10 15 20 25 30

Flow 1 ingress (mean 444.51 Mbit/s)
Flow 1 egress (mean 444.57 Mbit/s)
Flow 2 ingress (mean 392.69 Mbit/s)
Flow 2 egress (mean 392.69 Mbit/s)
Flow 3 ingress (mean 316.56 Mbit/s)
Flow 3 egress (mean 316.50 Mbit/s)

Per packet one-way delay (ms)

0 5 10 15 20 25 30 35

Flow 1 (95th percentile 4.42 ms)
Flow 2 (95th percentile 4.43 ms)
Flow 3 (95th percentile 4.45 ms)
Run 1: Statistics of FillP

Start at: 2018-08-10 01:22:00
End at: 2018-08-10 01:22:30
Local clock offset: 0.12 ms
Remote clock offset: -0.207 ms

# Below is generated by plot.py at 2018-08-10 06:50:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 939.40 Mbit/s
95th percentile per-packet one-way delay: 3.746 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 578.62 Mbit/s
95th percentile per-packet one-way delay: 3.532 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 394.76 Mbit/s
95th percentile per-packet one-way delay: 3.782 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 296.91 Mbit/s
95th percentile per-packet one-way delay: 3.906 ms
Loss rate: 0.24%
Run 1: Report of FillP — Data Link

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

- Flow 1 ingress (mean 578.63 Mbps)
- Flow 1 egress (mean 578.62 Mbps)
- Flow 2 ingress (mean 294.72 Mbps)
- Flow 2 egress (mean 394.76 Mbps)
- Flow 3 ingress (mean 296.85 Mbps)
- Flow 3 egress (mean 296.91 Mbps)
Run 2: Statistics of FillP

Start at: 2018-08-10 01:48:58
End at: 2018-08-10 01:49:28
Local clock offset: 0.081 ms
Remote clock offset: 0.635 ms

# Below is generated by plot.py at 2018-08-10 06:50:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 914.82 Mbit/s
95th percentile per-packet one-way delay: 3.803 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 557.96 Mbit/s
95th percentile per-packet one-way delay: 3.646 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 386.27 Mbit/s
95th percentile per-packet one-way delay: 3.833 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 301.28 Mbit/s
95th percentile per-packet one-way delay: 3.932 ms
Loss rate: 0.21%
Run 2: Report of FillP — Data Link

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

Legend:
- Flow 1 ingress (mean 557.83 Mbit/s)
- Flow 1 egress (mean 557.96 Mbit/s)
- Flow 2 ingress (mean 386.23 Mbit/s)
- Flow 2 egress (mean 386.27 Mbit/s)
- Flow 3 ingress (mean 301.30 Mbit/s)
- Flow 3 egress (mean 301.28 Mbit/s)
Run 3: Statistics of FillP

Start at: 2018-08-10 02:15:58
End at: 2018-08-10 02:16:28
Local clock offset: -0.38 ms
Remote clock offset: 0.017 ms

# Below is generated by plot.py at 2018-08-10 06:57:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 938.09 Mbit/s
95th percentile per-packet one-way delay: 3.766 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 578.60 Mbit/s
95th percentile per-packet one-way delay: 3.830 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 389.66 Mbit/s
95th percentile per-packet one-way delay: 3.678 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 303.24 Mbit/s
95th percentile per-packet one-way delay: 3.794 ms
Loss rate: 0.23%
Run 3: Report of FillP — Data Link

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

- Flow 1 Ingress (mean 578.45 Mbit/s)
- Flow 1 Egress (mean 578.60 Mbit/s)
- Flow 2 Ingress (mean 389.61 Mbit/s)
- Flow 2 Egress (mean 389.66 Mbit/s)
- Flow 3 Ingress (mean 303.32 Mbit/s)
- Flow 3 Egress (mean 303.24 Mbit/s)

- Flow 1 (99th percentile 3.83 ms)
- Flow 2 (99th percentile 3.68 ms)
- Flow 3 (99th percentile 3.79 ms)
Run 4: Statistics of FillP

Start at: 2018-08-10 02:42:59
End at: 2018-08-10 02:43:29
Local clock offset: -0.474 ms
Remote clock offset: -0.078 ms

# Below is generated by plot.py at 2018-08-10 06:57:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 939.02 Mbit/s
95th percentile per-packet one-way delay: 3.667 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 579.38 Mbit/s
95th percentile per-packet one-way delay: 3.487 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 389.67 Mbit/s
95th percentile per-packet one-way delay: 3.707 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 304.03 Mbit/s
95th percentile per-packet one-way delay: 3.811 ms
Loss rate: 0.24%
Run 4: Report of FillP — Data Link

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

- Flow 1 Ingress (mean 579.21 Mbps) vs Flow 1 Egress (mean 579.58 Mbps)
- Flow 2 Ingress (mean 389.63 Mbps) vs Flow 2 Egress (mean 389.67 Mbps)
- Flow 3 Ingress (mean 304.06 Mbps) vs Flow 3 Egress (mean 304.03 Mbps)

![Graph showing 95th percentile delay for different flows]

- Flow 1 (95th percentile 3.49 ms)
- Flow 2 (95th percentile 3.71 ms)
- Flow 3 (95th percentile 3.81 ms)
Run 5: Statistics of FillP

Start at: 2018-08-10 03:10:01
End at: 2018-08-10 03:10:31
Local clock offset: -0.481 ms
Remote clock offset: -0.05 ms

# Below is generated by plot.py at 2018-08-10 06:57:46
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 941.77 Mbit/s
  95th percentile per-packet one-way delay: 3.655 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 580.14 Mbit/s
  95th percentile per-packet one-way delay: 3.457 ms
  Loss rate: 0.04%
-- Flow 2:
  Average throughput: 393.17 Mbit/s
  95th percentile per-packet one-way delay: 3.692 ms
  Loss rate: 0.09%
-- Flow 3:
  Average throughput: 302.46 Mbit/s
  95th percentile per-packet one-way delay: 3.795 ms
  Loss rate: 0.23%
Run 5: Report of FillP — Data Link
Run 6: Statistics of FillP

Start at: 2018-08-10 03:37:06
End at: 2018-08-10 03:37:36
Local clock offset: -0.255 ms
Remote clock offset: 0.256 ms

# Below is generated by plot.py at 2018-08-10 06:57:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 928.01 Mbit/s
95th percentile per-packet one-way delay: 26.215 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 567.56 Mbit/s
95th percentile per-packet one-way delay: 32.926 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 387.81 Mbit/s
95th percentile per-packet one-way delay: 3.770 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 308.77 Mbit/s
95th percentile per-packet one-way delay: 3.871 ms
Loss rate: 0.22%
Run 6: Report of FillP — Data Link

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

- Flow 1 Ingress (mean 570.77 Mbit/s)
- Flow 1 Egress (mean 567.56 Mbit/s)
- Flow 2 Ingress (mean 387.77 Mbit/s)
- Flow 2 Egress (mean 387.81 Mbit/s)
- Flow 3 Ingress (mean 308.82 Mbit/s)
- Flow 3 Egress (mean 308.77 Mbit/s)

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

- Flow 1 (95th percentile 32.93 ms)
- Flow 2 (95th percentile 3.77 ms)
- Flow 3 (95th percentile 3.87 ms)
Run 7: Statistics of FillP

Start at: 2018-08-10 04:04:06
End at: 2018-08-10 04:04:36
Local clock offset: -0.22 ms
Remote clock offset: 0.18 ms

# Below is generated by plot.py at 2018-08-10 06:58:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 917.30 Mbit/s
95th percentile per-packet one-way delay: 4.605 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 557.26 Mbit/s
95th percentile per-packet one-way delay: 7.867 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 391.65 Mbit/s
95th percentile per-packet one-way delay: 3.794 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 301.69 Mbit/s
95th percentile per-packet one-way delay: 3.908 ms
Loss rate: 0.24%
Run 7: Report of FillP — Data Link

![Graph representing data link performance metrics over time.](image-url)
Run 8: Statistics of FillP

Start at: 2018-08-10 04:31:10
End at: 2018-08-10 04:31:40
Local clock offset: -0.204 ms
Remote clock offset: -0.015 ms

# Below is generated by plot.py at 2018-08-10 06:59:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 939.19 Mbit/s
95th percentile per-packet one-way delay: 7.615 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 580.66 Mbit/s
95th percentile per-packet one-way delay: 14.319 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 391.00 Mbit/s
95th percentile per-packet one-way delay: 3.756 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 297.22 Mbit/s
95th percentile per-packet one-way delay: 10.538 ms
Loss rate: 0.25%
Run 8: Report of FillP — Data Link

![Graph 1: Throughput (Mbps/s) over Time (s) for different flows.]

**Throughput (Mbps/s)**

- **Flow 1 Ingress (mean 581.48 Mbps)**
- **Flow 1 Egress (mean 580.66 Mbps)**
- **Flow 2 Ingress (mean 390.95 Mbps)**
- **Flow 2 Egress (mean 392.00 Mbps)**
- **Flow 3 Ingress (mean 297.30 Mbps)**
- **Flow 3 Egress (mean 297.22 Mbps)**

![Graph 2: Per-packet round-trip delay (ms) over Time (s) for different flows.]

**Per-packet round-trip delay (ms)**

- **Flow 1 (95th percentile 14.32 ms)**
- **Flow 2 (95th percentile 3.76 ms)**
- **Flow 3 (95th percentile 10.54 ms)**
Run 9: Statistics of FillP

Start at: 2018-08-10 04:58:07
End at: 2018-08-10 04:58:37
Local clock offset: -0.748 ms
Remote clock offset: -0.422 ms

# Below is generated by plot.py at 2018-08-10 07:02:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 936.41 Mbit/s
95th percentile per-packet one-way delay: 3.781 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 581.07 Mbit/s
95th percentile per-packet one-way delay: 3.817 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 384.20 Mbit/s
95th percentile per-packet one-way delay: 3.713 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 301.97 Mbit/s
95th percentile per-packet one-way delay: 3.822 ms
Loss rate: 0.24%
Run 9: Report of FillP — Data Link
Run 10: Statistics of FillP

Start at: 2018-08-10 05:25:05
End at: 2018-08-10 05:25:35
Local clock offset: -1.027 ms
Remote clock offset: -0.339 ms

# Below is generated by plot.py at 2018-08-10 07:02:47
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 912.23 Mbit/s
  95th percentile per-packet one-way delay: 4.943 ms
  Loss rate: 0.09%
-- Flow 1:
  Average throughput: 551.91 Mbit/s
  95th percentile per-packet one-way delay: 11.504 ms
  Loss rate: 0.08%
-- Flow 2:
  Average throughput: 391.49 Mbit/s
  95th percentile per-packet one-way delay: 3.808 ms
  Loss rate: 0.08%
-- Flow 3:
  Average throughput: 301.87 Mbit/s
  95th percentile per-packet one-way delay: 3.930 ms
  Loss rate: 0.21%
Run 10: Report of FillIP — Data Link

Throughput (Mbps):

- Flow 1 ingress (mean 551.96 Mbps)
- Flow 1 egress (mean 551.91 Mbps)
- Flow 2 ingress (mean 392.45 Mbps)
- Flow 2 egress (mean 392.49 Mbps)
- Flow 3 ingress (mean 301.96 Mbps)
- Flow 3 egress (mean 301.87 Mbps)

Packet end-to-end delays (ms):

- Flow 1 (95th percentile 11.50 ms)
- Flow 2 (95th percentile 3.81 ms)
- Flow 3 (95th percentile 3.93 ms)
Run 1: Statistics of FillP-Sheep

Start at: 2018-08-10 01:23:44
End at: 2018-08-10 01:24:14
Local clock offset: 0.14 ms
Remote clock offset: -0.151 ms

# Below is generated by plot.py at 2018-08-10 07:09:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 937.38 Mbit/s
95th percentile per-packet one-way delay: 3.795 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 568.05 Mbit/s
95th percentile per-packet one-way delay: 3.707 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 398.38 Mbit/s
95th percentile per-packet one-way delay: 3.792 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 315.41 Mbit/s
95th percentile per-packet one-way delay: 3.893 ms
Loss rate: 0.23%
Run 1: Report of FillP-Sheep — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 Ingress (mean 567.92 Mbps)
- Flow 1 Egress (mean 568.05 Mbps)
- Flow 2 Ingress (mean 398.40 Mbps)
- Flow 2 Egress (mean 398.38 Mbps)
- Flow 3 Ingress (mean 315.49 Mbps)
- Flow 3 Egress (mean 315.41 Mbps)

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

- Flow 1 (95th percentile 3.71 ms)
- Flow 2 (95th percentile 3.79 ms)
- Flow 3 (95th percentile 3.89 ms)
Run 2: Statistics of FillP-Sheep

Start at: 2018-08-10 01:50:40
End at: 2018-08-10 01:51:10
Local clock offset: 0.031 ms
Remote clock offset: 0.737 ms

# Below is generated by plot.py at 2018-08-10 07:10:16
# Datalink statistics
    -- Total of 3 flows:
    Average throughput: 949.80 Mbit/s
    95th percentile per-packet one-way delay: 3.741 ms
    Loss rate: 0.07%
    -- Flow 1:
    Average throughput: 580.60 Mbit/s
    95th percentile per-packet one-way delay: 3.553 ms
    Loss rate: 0.04%
    -- Flow 2:
    Average throughput: 397.12 Mbit/s
    95th percentile per-packet one-way delay: 3.775 ms
    Loss rate: 0.08%
    -- Flow 3:
    Average throughput: 317.16 Mbit/s
    95th percentile per-packet one-way delay: 3.895 ms
    Loss rate: 0.21%
Run 2: Report of FillP-Sheep — Data Link
Run 3: Statistics of FillP-Sheep

Start at: 2018-08-10 02:17:42
End at: 2018-08-10 02:18:12
Local clock offset: -0.368 ms
Remote clock offset: 0.1 ms

# Below is generated by plot.py at 2018-08-10 07:10:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 949.78 Mbit/s
95th percentile per-packet one-way delay: 3.787 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 581.46 Mbit/s
95th percentile per-packet one-way delay: 15.940 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 396.91 Mbit/s
95th percentile per-packet one-way delay: 3.606 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 316.05 Mbit/s
95th percentile per-packet one-way delay: 3.736 ms
Loss rate: 0.21%
Run 3: Report of FillP-Sheep — Data Link
Run 4: Statistics of FillP-Sheep

Start at: 2018-08-10 02:44:43
End at: 2018-08-10 02:45:13
Local clock offset: -0.393 ms
Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2018-08-10 07:10:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 949.01 Mbit/s
95th percentile per-packet one-way delay: 6.868 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 579.24 Mbit/s
95th percentile per-packet one-way delay: 11.489 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 396.49 Mbit/s
95th percentile per-packet one-way delay: 3.764 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 320.95 Mbit/s
95th percentile per-packet one-way delay: 7.932 ms
Loss rate: 0.22%
Run 4: Report of FillP-Sheep — Data Link
Run 5: Statistics of FillP-Sheep

Start at: 2018-08-10 03:11:45
End at: 2018-08-10 03:12:15
Local clock offset: -0.495 ms
Remote clock offset: -0.036 ms

# Below is generated by plot.py at 2018-08-10 07:11:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 937.44 Mbit/s
95th percentile per-packet one-way delay: 4.870 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 567.55 Mbit/s
95th percentile per-packet one-way delay: 4.903 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 399.21 Mbit/s
95th percentile per-packet one-way delay: 4.770 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 315.83 Mbit/s
95th percentile per-packet one-way delay: 4.936 ms
Loss rate: 0.20%
Run 5: Report of FillP-Sheep — Data Link

[Graph of data link performance showing throughput and packet delay over time]

- Flow 1 ingress (mean 567.49 Mbit/s)
- Flow 1 egress (mean 567.55 Mbit/s)
- Flow 2 ingress (mean 399.26 Mbit/s)
- Flow 2 egress (mean 399.21 Mbit/s)
- Flow 3 ingress (mean 316.03 Mbit/s)
- Flow 3 egress (mean 315.83 Mbit/s)

[Graph of packet delay showing 95th percentile delay times]

- Flow 1 (95th percentile 4.90 ms)
- Flow 2 (95th percentile 4.77 ms)
- Flow 3 (95th percentile 4.94 ms)
Run 6: Statistics of FillP-Sheep

Start at: 2018-08-10 03:38:49
End at: 2018-08-10 03:39:19
Local clock offset: -0.339 ms
Remote clock offset: 0.259 ms

# Below is generated by plot.py at 2018-08-10 07:12:03
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 914.55 Mbit/s
   95th percentile per-packet one-way delay: 33.653 ms
   Loss rate: 0.70%
-- Flow 1:
   Average throughput: 545.41 Mbit/s
   95th percentile per-packet one-way delay: 35.939 ms
   Loss rate: 1.08%
-- Flow 2:
   Average throughput: 396.97 Mbit/s
   95th percentile per-packet one-way delay: 3.677 ms
   Loss rate: 0.09%
-- Flow 3:
   Average throughput: 318.03 Mbit/s
   95th percentile per-packet one-way delay: 3.818 ms
   Loss rate: 0.20%
Run 6: Report of FillP-Sheep — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 551.02 Mbps)
Flow 1 egress (mean 545.41 Mbps)
Flow 2 ingress (mean 396.92 Mbps)
Flow 2 egress (mean 396.97 Mbps)
Flow 3 ingress (mean 317.98 Mbps)
Flow 3 egress (mean 318.03 Mbps)

Per-packet round trip delay (ms)

Time (s)

Flow 1 (95th percentile 35.94 ms)
Flow 2 (95th percentile 3.68 ms)
Flow 3 (95th percentile 3.82 ms)
Run 7: Statistics of FillP-Sheep

Start at: 2018-08-10 04:05:49
End at: 2018-08-10 04:06:19
Local clock offset: -0.21 ms
Remote clock offset: 0.294 ms

# Below is generated by plot.py at 2018-08-10 07:16:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 950.96 Mbit/s
95th percentile per-packet one-way delay: 3.745 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 580.49 Mbit/s
95th percentile per-packet one-way delay: 3.488 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 397.87 Mbit/s
95th percentile per-packet one-way delay: 3.711 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 320.22 Mbit/s
95th percentile per-packet one-way delay: 10.917 ms
Loss rate: 0.21%
Run 7: Report of FillP-Sheep — Data Link

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**Throughput (Mbps/s)**

**Time (s)**

- Blue dashed line: Flow 1 ingress (mean 580.35 Mbps/s)
- Blue solid line: Flow 1 egress (mean 580.49 Mbps/s)
- Green dashed line: Flow 2 ingress (mean 397.81 Mbps/s)
- Green solid line: Flow 2 egress (mean 397.87 Mbps/s)
- Red dashed line: Flow 3 ingress (mean 320.23 Mbps/s)
- Red solid line: Flow 3 egress (mean 320.22 Mbps/s)

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**Per-packet round-trip delay (ms)**

**Time (s)**

- Blue solid line: Flow 1 (95th percentile 3.49 ms)
- Green solid line: Flow 2 (95th percentile 3.71 ms)
- Red solid line: Flow 3 (95th percentile 10.92 ms)
Run 8: Statistics of FillP-Sheep

Start at: 2018-08-10 04:32:54
End at: 2018-08-10 04:33:24
Local clock offset: -0.222 ms
Remote clock offset: -0.005 ms

# Below is generated by plot.py at 2018-08-10 07:16:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 937.57 Mbit/s
95th percentile per-packet one-way delay: 7.556 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 566.25 Mbit/s
95th percentile per-packet one-way delay: 8.505 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 398.51 Mbit/s
95th percentile per-packet one-way delay: 3.747 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 321.15 Mbit/s
95th percentile per-packet one-way delay: 9.373 ms
Loss rate: 0.22%
Run 8: Report of FillP-Sheep — Data Link

[Graph of throughput vs time for different flows]

[Graph of per-packet one-way delay vs time for different flows]
Run 9: Statistics of FillP-Sheep

Start at: 2018-08-10 04:59:51
End at: 2018-08-10 05:00:21
Local clock offset: -0.703 ms
Remote clock offset: -0.46 ms

# Below is generated by plot.py at 2018-08-10 07:23:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 948.82 Mbit/s
95th percentile per-packet one-way delay: 3.801 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 578.69 Mbit/s
95th percentile per-packet one-way delay: 3.648 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 396.68 Mbit/s
95th percentile per-packet one-way delay: 3.789 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 321.13 Mbit/s
95th percentile per-packet one-way delay: 4.027 ms
Loss rate: 0.22%
Run 9: Report of FillP-Sheep — Data Link

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

- **Flow 1**: Ingress (mean 578.44 Mbps), Egress (mean 578.69 Mbps)
- **Flow 2**: Ingress (mean 396.62 Mbps), Egress (mean 396.68 Mbps)
- **Flow 3**: Ingress (mean 320.95 Mbps), Egress (mean 321.13 Mbps)

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

- **Flow 1**: 95th percentile 3.65 ms
- **Flow 2**: 95th percentile 3.79 ms
- **Flow 3**: 95th percentile 4.03 ms
Run 10: Statistics of FillP-Sheep

Start at: 2018-08-10 05:26:48
End at: 2018-08-10 05:27:18
Local clock offset: -1.045 ms
Remote clock offset: -0.213 ms

# Below is generated by plot.py at 2018-08-10 07:23:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 937.55 Mbit/s
95th percentile per-packet one-way delay: 6.345 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 567.96 Mbit/s
95th percentile per-packet one-way delay: 10.264 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 399.20 Mbit/s
95th percentile per-packet one-way delay: 3.993 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 314.95 Mbit/s
95th percentile per-packet one-way delay: 3.895 ms
Loss rate: 0.22%
Run 10: Report of FillIP-Sheep — Data Link

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

- **Throughput (Mbps)**
  - Flow 1 Ingress (mean 568.05 Mbps)
  - Flow 1 Egress (mean 567.96 Mbps)
  - Flow 2 Ingress (mean 399.39 Mbps)
  - Flow 2 Egress (mean 399.20 Mbps)
  - Flow 3 Ingress (mean 315.01 Mbps)
  - Flow 3 Egress (mean 314.95 Mbps)

- **Per-packet one-way delay (ms)**
  - Flow 1 (95th percentile 10.26 ms)
  - Flow 2 (95th percentile 3.99 ms)
  - Flow 3 (95th percentile 3.90 ms)
Run 1: Statistics of Indigo

Start at: 2018-08-10 01:28:35
End at: 2018-08-10 01:29:05
Local clock offset: 0.087 ms
Remote clock offset: 0.077 ms

# Below is generated by plot.py at 2018-08-10 07:23:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 300.46 Mbit/s
95th percentile per-packet one-way delay: 0.963 ms
Loss rate: 0.09%

-- Flow 1:
Average throughput: 158.00 Mbit/s
95th percentile per-packet one-way delay: 0.951 ms
Loss rate: 0.05%

-- Flow 2:
Average throughput: 150.13 Mbit/s
95th percentile per-packet one-way delay: 0.970 ms
Loss rate: 0.11%

-- Flow 3:
Average throughput: 127.98 Mbit/s
95th percentile per-packet one-way delay: 0.993 ms
Loss rate: 0.19%
Run 1: Report of Indigo — Data Link

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

Legend:
- Flow 1 ingress (mean 157.98 Mbit/s)
- Flow 1 egress (mean 158.00 Mbit/s)
- Flow 2 ingress (mean 150.15 Mbit/s)
- Flow 2 egress (mean 150.13 Mbit/s)
- Flow 3 ingress (mean 127.96 Mbit/s)
- Flow 3 egress (mean 127.98 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 0.95 ms)
- Flow 2 (95th percentile 0.97 ms)
- Flow 3 (95th percentile 0.99 ms)
Run 2: Statistics of Indigo

Start at: 2018-08-10 01:55:31
End at: 2018-08-10 01:56:01
Local clock offset: -0.081 ms
Remote clock offset: 0.822 ms

# Below is generated by plot.py at 2018-08-10 07:23:32
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 305.31 Mbit/s
  95th percentile per-packet one-way delay: 1.150 ms
  Loss rate: 0.09%
-- Flow 1:
  Average throughput: 171.15 Mbit/s
  95th percentile per-packet one-way delay: 1.129 ms
  Loss rate: 0.06%
-- Flow 2:
  Average throughput: 153.79 Mbit/s
  95th percentile per-packet one-way delay: 1.159 ms
  Loss rate: 0.10%
-- Flow 3:
  Average throughput: 96.97 Mbit/s
  95th percentile per-packet one-way delay: 1.202 ms
  Loss rate: 0.22%
Run 2: Report of Indigo — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 171.09 Mbps)  Flow 1 egress (mean 171.15 Mbps)
Flow 2 ingress (mean 153.78 Mbps)  Flow 2 egress (mean 153.79 Mbps)
Flow 3 ingress (mean 97.01 Mbps)  Flow 3 egress (mean 96.97 Mbps)

Packet error rate (PER)

Time (s)

Flow 1 (95th percentile: 1.13 ms)  Flow 2 (95th percentile: 1.16 ms)  Flow 3 (95th percentile: 1.20 ms)
Run 3: Statistics of Indigo

Start at: 2018-08-10 02:22:33
End at: 2018-08-10 02:23:03
Local clock offset: -0.376 ms
Remote clock offset: 0.043 ms

# Below is generated by plot.py at 2018-08-10 07:23:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 296.79 Mbit/s
95th percentile per-packet one-way delay: 1.017 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 159.96 Mbit/s
95th percentile per-packet one-way delay: 1.007 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 157.98 Mbit/s
95th percentile per-packet one-way delay: 1.031 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 96.88 Mbit/s
95th percentile per-packet one-way delay: 1.040 ms
Loss rate: 0.21%
Run 3: Report of Indigo — Data Link

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

- Flow 1 ingress (mean 159.95 Mbit/s)
- Flow 1 egress (mean 159.96 Mbit/s)
- Flow 2 ingress (mean 157.98 Mbit/s)
- Flow 2 egress (mean 157.98 Mbit/s)
- Flow 3 ingress (mean 96.85 Mbit/s)
- Flow 3 egress (mean 96.89 Mbit/s)

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

- Flow 1 (95th percentile 1.01 ms)
- Flow 2 (95th percentile 1.03 ms)
- Flow 3 (95th percentile 1.04 ms)
Run 4: Statistics of Indigo

Start at: 2018-08-10 02:49:31
End at: 2018-08-10 02:50:01
Local clock offset: -0.448 ms
Remote clock offset: -0.022 ms

# Below is generated by plot.py at 2018-08-10 07:23:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 299.75 Mbit/s
95th percentile per-packet one-way delay: 0.968 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 163.60 Mbit/s
95th percentile per-packet one-way delay: 0.951 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 153.00 Mbit/s
95th percentile per-packet one-way delay: 0.983 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 104.44 Mbit/s
95th percentile per-packet one-way delay: 1.001 ms
Loss rate: 0.23%
Run 5: Statistics of Indigo

Start at: 2018-08-10 03:16:38
End at: 2018-08-10 03:17:08
Local clock offset: -0.393 ms
Remote clock offset: -0.016 ms

# Below is generated by plot.py at 2018-08-10 07:23:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 306.20 Mbit/s
95th percentile per-packet one-way delay: 1.107 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 160.53 Mbit/s
95th percentile per-packet one-way delay: 1.099 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 154.72 Mbit/s
95th percentile per-packet one-way delay: 1.101 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 130.66 Mbit/s
95th percentile per-packet one-way delay: 1.182 ms
Loss rate: 0.15%
Run 5: Report of Indigo — Data Link
Run 6: Statistics of Indigo

Start at: 2018-08-10 03:43:38
End at: 2018-08-10 03:44:08
Local clock offset: -0.374 ms
Remote clock offset: 0.217 ms

# Below is generated by plot.py at 2018-08-10 07:23:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 303.38 Mbit/s
95th percentile per-packet one-way delay: 0.983 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 172.72 Mbit/s
95th percentile per-packet one-way delay: 0.967 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 156.74 Mbit/s
95th percentile per-packet one-way delay: 0.998 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 80.79 Mbit/s
95th percentile per-packet one-way delay: 1.033 ms
Loss rate: 0.18%
Run 6: Report of Indigo — Data Link

![Graph showing throughput and latency over time]

Flow 1 ingress (mean 172.70 Mbit/s)  Flow 1 egress (mean 172.72 Mbit/s)
Flow 2 ingress (mean 156.69 Mbit/s)  Flow 2 egress (mean 156.74 Mbit/s)
Flow 3 ingress (mean 80.77 Mbit/s)  Flow 3 egress (mean 80.79 Mbit/s)

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

Flow 1 (95th percentile 0.97 ms)  Flow 2 (95th percentile 1.00 ms)  Flow 3 (95th percentile 1.03 ms)
Run 7: Statistics of Indigo

Start at: 2018-08-10 04:10:40
End at: 2018-08-10 04:11:10
Local clock offset: -0.242 ms
Remote clock offset: 0.334 ms

# Below is generated by plot.py at 2018-08-10 07:23:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 306.75 Mbit/s
95th percentile per-packet one-way delay: 1.042 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 175.85 Mbit/s
95th percentile per-packet one-way delay: 1.021 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 154.83 Mbit/s
95th percentile per-packet one-way delay: 1.049 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 85.30 Mbit/s
95th percentile per-packet one-way delay: 1.137 ms
Loss rate: 0.14%
Run 7: Report of Indigo — Data Link

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

- **Flow 1 ingress (mean 175.81 Mbps)**
- **Flow 1 egress (mean 175.85 Mbps)**
- **Flow 2 ingress (mean 154.80 Mbps)**
- **Flow 2 egress (mean 154.83 Mbps)**
- **Flow 3 ingress (mean 85.28 Mbps)**
- **Flow 3 egress (mean 85.30 Mbps)**

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

- Flow 1 (99th percentile 1.02 ms)
- Flow 2 (99th percentile 1.05 ms)
- Flow 3 (99th percentile 1.14 ms)
Run 8: Statistics of Indigo

Start at: 2018-08-10 04:37:46
End at: 2018-08-10 04:38:16
Local clock offset: -0.331 ms
Remote clock offset: -0.043 ms

# Below is generated by plot.py at 2018-08-10 07:23:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 300.50 Mbit/s
95th percentile per-packet one-way delay: 1.048 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 167.57 Mbit/s
95th percentile per-packet one-way delay: 1.039 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 150.52 Mbit/s
95th percentile per-packet one-way delay: 1.047 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 99.99 Mbit/s
95th percentile per-packet one-way delay: 1.101 ms
Loss rate: 0.18%
Run 9: Statistics of Indigo

Start at: 2018-08-10 05:04:43
End at: 2018-08-10 05:05:13
Local clock offset: -0.764 ms
Remote clock offset: -0.45 ms

# Below is generated by plot.py at 2018-08-10 07:23:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 309.56 Mbit/s
95th percentile per-packet one-way delay: 1.078 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 166.04 Mbit/s
95th percentile per-packet one-way delay: 1.062 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 150.04 Mbit/s
95th percentile per-packet one-way delay: 1.087 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 133.23 Mbit/s
95th percentile per-packet one-way delay: 1.154 ms
Loss rate: 0.17%
Run 9: Report of Indigo — Data Link

![Graph showing data link throughput and packet delay over time.]

- **Throughput (Mbps)**
  - Flow 1 Ingress: Mean 165.99 Mbps
  - Flow 1 Egress: Mean 166.04 Mbps
  - Flow 2 Ingress: Mean 150.06 Mbps
  - Flow 2 Egress: Mean 150.04 Mbps
  - Flow 3 Ingress: Mean 133.19 Mbps
  - Flow 3 Egress: Mean 133.23 Mbps

- **Packet Delay (ms)**
  - Flow 1 (95th percentile: 1.06 ms)
  - Flow 2 (95th percentile: 1.09 ms)
  - Flow 3 (95th percentile: 1.15 ms)
Run 10: Statistics of Indigo

Start at: 2018-08-10 05:31:39  
End at: 2018-08-10 05:32:09  
Local clock offset: -1.086 ms  
Remote clock offset: -0.096 ms

# Below is generated by plot.py at 2018-08-10 07:23:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 304.63 Mbit/s  
95th percentile per-packet one-way delay: 1.130 ms  
Loss rate: 0.06%

-- Flow 1:
Average throughput: 177.64 Mbit/s  
95th percentile per-packet one-way delay: 1.133 ms  
Loss rate: 0.03%

-- Flow 2:
Average throughput: 151.57 Mbit/s  
95th percentile per-packet one-way delay: 1.120 ms  
Loss rate: 0.08%

-- Flow 3:
Average throughput: 80.28 Mbit/s  
95th percentile per-packet one-way delay: 1.136 ms  
Loss rate: 0.19%
Run 10: Report of Indigo — Data Link
Run 1: Statistics of LEDBAT

Start at: 2018-08-10 01:39:19
End at: 2018-08-10 01:39:49
Local clock offset: 0.203 ms
Remote clock offset: 0.367 ms

# Below is generated by plot.py at 2018-08-10 07:23:32
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 501.78 Mbit/s
  95th percentile per-packet one-way delay: 1.742 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 276.04 Mbit/s
  95th percentile per-packet one-way delay: 1.608 ms
  Loss rate: 0.03%
-- Flow 2:
  Average throughput: 247.30 Mbit/s
  95th percentile per-packet one-way delay: 1.845 ms
  Loss rate: 0.16%
-- Flow 3:
  Average throughput: 184.49 Mbit/s
  95th percentile per-packet one-way delay: 1.942 ms
  Loss rate: 0.08%
Run 1: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 275.96 Mbit/s)
- Flow 2 ingress (mean 247.41 Mbit/s)
- Flow 3 ingress (mean 184.26 Mbit/s)

- Flow 1 egress (mean 276.04 Mbit/s)
- Flow 2 egress (mean 247.36 Mbit/s)
- Flow 3 egress (mean 184.49 Mbit/s)

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

- Flow 1 (95th percentile 1.61 ms)
- Flow 2 (95th percentile 1.84 ms)
- Flow 3 (95th percentile 1.94 ms)
Run 2: Statistics of LEDBAT

Start at: 2018-08-10 02:06:16
End at: 2018-08-10 02:06:46
Local clock offset: -0.305 ms
Remote clock offset: 0.164 ms

# Below is generated by plot.py at 2018-08-10 07:23:32
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 454.55 Mbit/s
  95th percentile per-packet one-way delay: 1.766 ms
  Loss rate: 0.07%
-- Flow 1:
  Average throughput: 261.65 Mbit/s
  95th percentile per-packet one-way delay: 1.669 ms
  Loss rate: 0.04%
-- Flow 2:
  Average throughput: 209.27 Mbit/s
  95th percentile per-packet one-way delay: 1.873 ms
  Loss rate: 0.11%
-- Flow 3:
  Average throughput: 161.54 Mbit/s
  95th percentile per-packet one-way delay: 1.842 ms
  Loss rate: 0.16%
Run 2: Report of LEDBAT — Data Link
Run 3: Statistics of LEDBAT

Start at: 2018-08-10 02:33:19
End at: 2018-08-10 02:33:49
Local clock offset: -0.317 ms
Remote clock offset: 0.026 ms

# Below is generated by plot.py at 2018-08-10 07:23:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 463.04 Mbit/s
95th percentile per-packet one-way delay: 1.859 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 269.62 Mbit/s
95th percentile per-packet one-way delay: 1.733 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 216.30 Mbit/s
95th percentile per-packet one-way delay: 2.051 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 161.22 Mbit/s
95th percentile per-packet one-way delay: 1.913 ms
Loss rate: 0.45%
Run 3: Report of LEDBAT — Data Link

![Graph showing data link throughput and packet delay over time.]

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 269.65 Mbps)
  - Flow 1 egress (mean 269.62 Mbps)
  - Flow 2 ingress (mean 216.31 Mbps)
  - Flow 2 egress (mean 216.30 Mbps)
  - Flow 3 ingress (mean 161.85 Mbps)
  - Flow 3 egress (mean 161.22 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (99th percentile 1.73 ms)
  - Flow 2 (99th percentile 2.05 ms)
  - Flow 3 (99th percentile 1.91 ms)
Run 4: Statistics of LEDBAT

Start at: 2018-08-10 03:00:16
End at: 2018-08-10 03:00:46
Local clock offset: -0.341 ms
Remote clock offset: -0.036 ms

# Below is generated by plot.py at 2018-08-10 07:24:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 465.43 Mbit/s
95th percentile per-packet one-way delay: 1.712 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 270.49 Mbit/s
95th percentile per-packet one-way delay: 1.599 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 216.78 Mbit/s
95th percentile per-packet one-way delay: 1.874 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 152.62 Mbit/s
95th percentile per-packet one-way delay: 1.848 ms
Loss rate: 0.11%
Run 4: Report of LEDBAT — Data Link
Run 5: Statistics of LEDBAT

Start at: 2018-08-10 03:27:23
End at: 2018-08-10 03:27:53
Local clock offset: -0.247 ms
Remote clock offset: 0.107 ms

# Below is generated by plot.py at 2018-08-10 07:25:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 504.95 Mbit/s
  95th percentile per-packet one-way delay: 1.747 ms
  Loss rate: 0.09%
-- Flow 1:
  Average throughput: 302.31 Mbit/s
  95th percentile per-packet one-way delay: 1.661 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 233.52 Mbit/s
  95th percentile per-packet one-way delay: 1.857 ms
  Loss rate: 0.04%
-- Flow 3:
  Average throughput: 142.74 Mbit/s
  95th percentile per-packet one-way delay: 1.795 ms
  Loss rate: 0.47%
Run 5: Report of LEDBAT — Data Link
Run 6: Statistics of LEDBAT

Start at: 2018-08-10 03:54:24
End at: 2018-08-10 03:54:54
Local clock offset: -0.206 ms
Remote clock offset: 0.141 ms

# Below is generated by plot.py at 2018-08-10 07:25:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 488.40 Mbit/s
95th percentile per-packet one-way delay: 1.898 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 287.52 Mbit/s
95th percentile per-packet one-way delay: 1.756 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 230.73 Mbit/s
95th percentile per-packet one-way delay: 2.123 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 142.66 Mbit/s
95th percentile per-packet one-way delay: 1.902 ms
Loss rate: 0.21%
Run 6: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 287.50 Mbit/s)
- Flow 1 egress (mean 287.52 Mbit/s)
- Flow 2 ingress (mean 230.70 Mbit/s)
- Flow 2 egress (mean 230.73 Mbit/s)
- Flow 3 ingress (mean 142.69 Mbit/s)
- Flow 3 egress (mean 142.66 Mbit/s)

![Graph showing packet delay and time](image)

- Flow 1 (95th percentile 1.76 ms)
- Flow 2 (95th percentile 2.12 ms)
- Flow 3 (95th percentile 1.90 ms)
Run 7: Statistics of LEDBAT

Start at: 2018-08-10 04:21:26
End at: 2018-08-10 04:21:56
Local clock offset: -0.215 ms
Remote clock offset: 0.042 ms

# Below is generated by plot.py at 2018-08-10 07:28:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 497.77 Mbit/s
95th percentile per-packet one-way delay: 1.665 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 305.87 Mbit/s
95th percentile per-packet one-way delay: 1.582 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 216.71 Mbit/s
95th percentile per-packet one-way delay: 1.823 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 143.30 Mbit/s
95th percentile per-packet one-way delay: 1.597 ms
Loss rate: 0.14%
Run 7: Report of LEDBAT — Data Link

Graph 1: Throughput (Mbps vs. Time (s))
- Flow 1 ingress (mean 305.77 Mbps)
- Flow 1 egress (mean 305.87 Mbps)
- Flow 2 ingress (mean 216.46 Mbps)
- Flow 2 egress (mean 216.71 Mbps)
- Flow 3 ingress (mean 143.22 Mbps)
- Flow 3 egress (mean 143.30 Mbps)

Graph 2: Per packet one-way delay (ms) vs. Time (s)
- Flow 1 (95th percentile 1.58 ms)
- Flow 2 (95th percentile 1.82 ms)
- Flow 3 (95th percentile 1.60 ms)
Run 8: Statistics of LEDBAT

Start at: 2018-08-10 04:48:24
End at: 2018-08-10 04:48:54
Local clock offset: -0.402 ms
Remote clock offset: -0.033 ms

# Below is generated by plot.py at 2018-08-10 07:28:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 512.29 Mbit/s
95th percentile per-packet one-way delay: 1.772 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 336.59 Mbit/s
95th percentile per-packet one-way delay: 1.701 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 263.92 Mbit/s
95th percentile per-packet one-way delay: 1.877 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1.380 ms
Loss rate: 0.00%
Run 8: Report of LEDBAT — Data Link

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

- Flow 1 (ingress mean 336.50 Mbit/s, egress mean 336.59 Mbit/s)
- Flow 2 (ingress mean 264.06 Mbit/s, egress mean 263.92 Mbit/s)
- Flow 3 (ingress mean 0.90 Mbit/s, egress mean 0.00 Mbit/s)

- Flow 1 (95th percentile 1.70 ms)
- Flow 2 (95th percentile 1.88 ms)
- Flow 3 (95th percentile 1.38 ms)
Run 9: Statistics of LEDBAT

Start at: 2018-08-10 05:15:31
End at: 2018-08-10 05:16:01
Local clock offset: -0.911 ms
Remote clock offset: -0.484 ms

# Below is generated by plot.py at 2018-08-10 07:28:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 455.92 Mbit/s
95th percentile per-packet one-way delay: 1.651 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 260.67 Mbit/s
95th percentile per-packet one-way delay: 1.586 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 221.35 Mbit/s
95th percentile per-packet one-way delay: 1.685 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 168.40 Mbit/s
95th percentile per-packet one-way delay: 1.839 ms
Loss rate: 0.52%
Run 9: Report of LEDBAT — Data Link
Run 10: Statistics of LEDBAT

Start at: 2018-08-10 05:42:23
End at: 2018-08-10 05:42:53
Local clock offset: -1.211 ms
Remote clock offset: 0.098 ms

# Below is generated by plot.py at 2018-08-10 07:28:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 486.84 Mbit/s
95th percentile per-packet one-way delay: 1.788 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 271.70 Mbit/s
95th percentile per-packet one-way delay: 1.684 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 237.39 Mbit/s
95th percentile per-packet one-way delay: 1.898 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 171.82 Mbit/s
95th percentile per-packet one-way delay: 1.900 ms
Loss rate: 0.35%
Run 10: Report of LEDBAT — Data Link

![Graph showing throughput and packet delay data for different flows](image.png)
Run 1: Statistics of PCC-Allegro

Start at: 2018-08-10 01:35:01
End at: 2018-08-10 01:35:31
Local clock offset: 0.111 ms
Remote clock offset: 0.222 ms

# Below is generated by plot.py at 2018-08-10 07:32:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 779.38 Mbit/s
95th percentile per-packet one-way delay: 2.059 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 721.54 Mbit/s
95th percentile per-packet one-way delay: 2.065 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 46.46 Mbit/s
95th percentile per-packet one-way delay: 1.478 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 82.58 Mbit/s
95th percentile per-packet one-way delay: 1.363 ms
Loss rate: 0.34%
Run 1: Report of PCC-Allegro — Data Link

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

- Flow 1 ingress (mean 721.20 Mbit/s) - Flow 1 egress (mean 721.54 Mbit/s)
- Flow 2 ingress (mean 45.48 Mbit/s) - Flow 2 egress (mean 45.46 Mbit/s)
- Flow 3 ingress (mean 82.74 Mbit/s) - Flow 3 egress (mean 82.58 Mbit/s)
Run 2: Statistics of PCC-Allegro

Start at: 2018-08-10 02:01:56
End at: 2018-08-10 02:02:26
Local clock offset: -0.172 ms
Remote clock offset: 0.414 ms

# Below is generated by plot.py at 2018-08-10 07:33:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 830.63 Mbit/s
  95th percentile per-packet one-way delay: 2.861 ms
  Loss rate: 0.04%
-- Flow 1:
  Average throughput: 597.62 Mbit/s
  95th percentile per-packet one-way delay: 2.770 ms
  Loss rate: 0.02%
-- Flow 2:
  Average throughput: 286.48 Mbit/s
  95th percentile per-packet one-way delay: 3.017 ms
  Loss rate: 0.06%
-- Flow 3:
  Average throughput: 130.49 Mbit/s
  95th percentile per-packet one-way delay: 2.206 ms
  Loss rate: 0.21%
Run 2: Report of PCC-Allegro — Data Link

Throughput (Mbps) vs. Time (s)

Flow 1 Ingress (mean 597.35 Mbps)  Flow 1 Egress (mean 597.62 Mbps)
Flow 2 Ingress (mean 286.35 Mbps)  Flow 2 Egress (mean 286.48 Mbps)
Flow 3 Ingress (mean 130.49 Mbps)  Flow 3 Egress (mean 130.49 Mbps)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 2.77 ms)  Flow 2 (95th percentile 3.02 ms)  Flow 3 (95th percentile 2.21 ms)
Run 3: Statistics of PCC-Allegro

Start at: 2018-08-10 02:28:59
End at: 2018-08-10 02:29:29
Local clock offset: -0.38 ms
Remote clock offset: 0.093 ms

# Below is generated by plot.py at 2018-08-10 07:34:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 842.50 Mbit/s
95th percentile per-packet one-way delay: 2.983 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 606.30 Mbit/s
95th percentile per-packet one-way delay: 2.888 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 265.87 Mbit/s
95th percentile per-packet one-way delay: 3.093 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 181.37 Mbit/s
95th percentile per-packet one-way delay: 3.315 ms
Loss rate: 0.18%
Run 3: Report of PCC-Allegro — Data Link
Run 4: Statistics of PCC-Allegro

Start at: 2018-08-10 02:55:56
End at: 2018-08-10 02:56:26
Local clock offset: -0.433 ms
Remote clock offset: -0.065 ms

# Below is generated by plot.py at 2018-08-10 07:35:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 858.13 Mbit/s
95th percentile per-packet one-way delay: 2.198 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 701.89 Mbit/s
95th percentile per-packet one-way delay: 2.184 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 143.28 Mbit/s
95th percentile per-packet one-way delay: 2.481 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 186.60 Mbit/s
95th percentile per-packet one-way delay: 2.444 ms
Loss rate: 0.18%
Run 4: Report of PCC-Allegro — Data Link
Run 5: Statistics of PCC-Allegro

Start at: 2018-08-10 03:23:04
End at: 2018-08-10 03:23:34
Local clock offset: -0.286 ms
Remote clock offset: 0.082 ms

# Below is generated by plot.py at 2018-08-10 07:37:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 804.80 Mbit/s
95th percentile per-packet one-way delay: 2.272 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 679.43 Mbit/s
95th percentile per-packet one-way delay: 2.299 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 177.14 Mbit/s
95th percentile per-packet one-way delay: 1.969 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 23.61 Mbit/s
95th percentile per-packet one-way delay: 1.698 ms
Loss rate: 0.27%
Run 5: Report of PCC-Allegro — Data Link
Run 6: Statistics of PCC-Allegro

Start at: 2018-08-10 03:50:07
End at: 2018-08-10 03:50:37
Local clock offset: -0.216 ms
Remote clock offset: 0.24 ms

# Below is generated by plot.py at 2018-08-10 07:37:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 793.78 Mbit/s
95th percentile per-packet one-way delay: 2.232 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 661.10 Mbit/s
95th percentile per-packet one-way delay: 2.261 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 162.84 Mbit/s
95th percentile per-packet one-way delay: 1.934 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 74.76 Mbit/s
95th percentile per-packet one-way delay: 1.546 ms
Loss rate: 0.25%
Run 6: Report of PCC-Allegro — Data Link
Run 7: Statistics of PCC-Allegro

Start at: 2018-08-10 04:17:09
End at: 2018-08-10 04:17:39
Local clock offset: -0.237 ms
Remote clock offset: 0.114 ms

# Below is generated by plot.py at 2018-08-10 07:37:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 773.15 Mbit/s
95th percentile per-packet one-way delay: 2.395 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 648.87 Mbit/s
95th percentile per-packet one-way delay: 2.355 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 184.58 Mbit/s
95th percentile per-packet one-way delay: 2.680 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 5.49 Mbit/s
95th percentile per-packet one-way delay: 1.561 ms
Loss rate: 0.23%
Run 7: Report of PCC-Allegro — Data Link

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

Legend:
- Flow 1 ingress (mean 648.53 Mbit/s)
- Flow 1 egress (mean 648.87 Mbit/s)
- Flow 2 ingress (mean 184.51 Mbit/s)
- Flow 2 egress (mean 184.58 Mbit/s)
- Flow 3 ingress (mean 5.50 Mbit/s)
- Flow 3 egress (mean 5.49 Mbit/s)
Run 8: Statistics of PCC-Allegro

Start at: 2018-08-10 04:44:07
End at: 2018-08-10 04:44:37
Local clock offset: -0.276 ms
Remote clock offset: 0.042 ms

# Below is generated by plot.py at 2018-08-10 07:37:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 777.13 Mbit/s
95th percentile per-packet one-way delay: 2.093 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 695.24 Mbit/s
95th percentile per-packet one-way delay: 2.104 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 85.76 Mbit/s
95th percentile per-packet one-way delay: 1.633 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 76.41 Mbit/s
95th percentile per-packet one-way delay: 1.519 ms
Loss rate: 0.25%
Run 8: Report of PCC-Allegro — Data Link

![Graph showing data link performance metrics over time.]
Run 9: Statistics of PCC-Allegro

Start at: 2018-08-10 05:11:14  
End at: 2018-08-10 05:11:44  
Local clock offset: -0.959 ms  
Remote clock offset: -0.47 ms

# Below is generated by plot.py at 2018-08-10 07:41:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 742.69 Mbit/s  
95th percentile per-packet one-way delay: 2.941 ms  
Loss rate: 0.04%  
-- Flow 1:
Average throughput: 527.79 Mbit/s  
95th percentile per-packet one-way delay: 2.930 ms  
Loss rate: 0.02%  
-- Flow 2:
Average throughput: 286.74 Mbit/s  
95th percentile per-packet one-way delay: 2.975 ms  
Loss rate: 0.07%  
-- Flow 3:
Average throughput: 74.97 Mbit/s  
95th percentile per-packet one-way delay: 1.395 ms  
Loss rate: 0.29%
Run 9: Report of PCC-Allegro — Data Link

Throughput (Mbps):

- Flow 1 Ingress (mean 527.46 Mbps)
- Flow 2 Ingress (mean 286.65 Mbps)
- Flow 3 Ingress (mean 75.03 Mbps)
- Flow 1 Egress (mean 527.79 Mbps)
- Flow 2 Egress (mean 286.74 Mbps)
- Flow 3 Egress (mean 74.97 Mbps)

Per-packet one-way delay (ms):

- Flow 1 (95th percentile 2.93 ms)
- Flow 2 (95th percentile 2.98 ms)
- Flow 3 (95th percentile 1.40 ms)
Run 10: Statistics of PCC-Allegro

Start at: 2018-08-10 05:38:05
End at: 2018-08-10 05:38:35
Local clock offset: -1.157 ms
Remote clock offset: 0.019 ms

# Below is generated by plot.py at 2018-08-10 07:43:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 812.10 Mbit/s
  95th percentile per-packet one-way delay: 2.190 ms
  Loss rate: 0.03%
-- Flow 1:
  Average throughput: 723.88 Mbit/s
  95th percentile per-packet one-way delay: 2.190 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 26.16 Mbit/s
  95th percentile per-packet one-way delay: 1.788 ms
  Loss rate: 0.23%
-- Flow 3:
  Average throughput: 215.74 Mbit/s
  95th percentile per-packet one-way delay: 2.408 ms
  Loss rate: 0.17%
Run 10: Report of PCC-Allegro — Data Link
Run 1: Statistics of PCC-Expr

Start at: 2018-08-10 01:30:06
End at: 2018-08-10 01:30:36
Local clock offset: 0.172 ms
Remote clock offset: 0.134 ms

# Below is generated by plot.py at 2018-08-10 07:43:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 289.62 Mbit/s
95th percentile per-packet one-way delay: 1.260 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 192.64 Mbit/s
95th percentile per-packet one-way delay: 1.416 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 111.10 Mbit/s
95th percentile per-packet one-way delay: 1.133 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 70.27 Mbit/s
95th percentile per-packet one-way delay: 1.051 ms
Loss rate: 0.22%
Run 1: Report of PCC-Expr — Data Link

![Graph of data link throughput and delay]

- Flow 1 ingress (mean 192.57 Mbit/s)
- Flow 1 egress (mean 192.64 Mbit/s)
- Flow 2 ingress (mean 111.09 Mbit/s)
- Flow 2 egress (mean 111.10 Mbit/s)
- Flow 3 ingress (mean 70.29 Mbit/s)
- Flow 3 egress (mean 70.27 Mbit/s)

![Graph of data link delay]

- Flow 1 (95th percentile 1.42 ms)
- Flow 2 (95th percentile 1.13 ms)
- Flow 3 (95th percentile 1.05 ms)
Run 2: Statistics of PCC-Expr

Start at: 2018-08-10 01:57:02
End at: 2018-08-10 01:57:32
Local clock offset: -0.096 ms
Remote clock offset: 0.782 ms

# Below is generated by plot.py at 2018-08-10 07:43:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 283.28 Mbit/s
95th percentile per-packet one-way delay: 1.122 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 214.70 Mbit/s
95th percentile per-packet one-way delay: 1.133 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 78.04 Mbit/s
95th percentile per-packet one-way delay: 1.081 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 50.86 Mbit/s
95th percentile per-packet one-way delay: 1.124 ms
Loss rate: 0.38%
Run 2: Report of PCC-Expr — Data Link

![Data Link Diagram]

- Flow 1 ingress (mean 214.64 Mbit/s)
- Flow 1 egress (mean 214.70 Mbit/s)
- Flow 2 ingress (mean 78.11 Mbit/s)
- Flow 2 egress (mean 78.04 Mbit/s)
- Flow 3 ingress (mean 50.04 Mbit/s)
- Flow 3 egress (mean 50.86 Mbit/s)

![End-to-End Delay Diagram]

- Flow 1 (95th percentile 1.13 ms)
- Flow 2 (95th percentile 1.08 ms)
- Flow 3 (95th percentile 1.12 ms)
Run 3: Statistics of PCC-Expr

Start at: 2018-08-10 02:24:04
End at: 2018-08-10 02:24:34
Local clock offset: -0.284 ms
Remote clock offset: 0.035 ms

# Below is generated by plot.py at 2018-08-10 07:44:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 347.63 Mbit/s
95th percentile per-packet one-way delay: 1.190 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 255.56 Mbit/s
95th percentile per-packet one-way delay: 1.161 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 107.25 Mbit/s
95th percentile per-packet one-way delay: 1.388 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 63.17 Mbit/s
95th percentile per-packet one-way delay: 1.123 ms
Loss rate: 0.20%
Run 3: Report of PCC-Expr — Data Link

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

- **Flow 1 ingress** (mean 255.48 Mbit/s)
- **Flow 1 egress** (mean 255.56 Mbit/s)
- **Flow 2 ingress** (mean 107.30 Mbit/s)
- **Flow 2 egress** (mean 107.25 Mbit/s)
- **Flow 3 ingress** (mean 63.16 Mbit/s)
- **Flow 3 egress** (mean 63.17 Mbit/s)
Run 4: Statistics of PCC-Expr

Start at: 2018-08-10 02:51:02
End at: 2018-08-10 02:51:32
Local clock offset: -0.346 ms
Remote clock offset: -0.083 ms

# Below is generated by plot.py at 2018-08-10 07:44:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 306.76 Mbit/s
95th percentile per-packet one-way delay: 1.233 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 200.60 Mbit/s
95th percentile per-packet one-way delay: 1.208 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 121.63 Mbit/s
95th percentile per-packet one-way delay: 1.271 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 76.73 Mbit/s
95th percentile per-packet one-way delay: 1.335 ms
Loss rate: 0.28%
Run 4: Report of PCC-Expr — Data Link
Run 5: Statistics of PCC-Expr

Start at: 2018-08-10 03:18:10
End at: 2018-08-10 03:18:40
Local clock offset: -0.438 ms
Remote clock offset: 0.024 ms

# Below is generated by plot.py at 2018-08-10 07:44:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 280.56 Mbit/s
95th percentile per-packet one-way delay: 1.028 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 227.45 Mbit/s
95th percentile per-packet one-way delay: 1.037 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 55.11 Mbit/s
95th percentile per-packet one-way delay: 1.000 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 50.02 Mbit/s
95th percentile per-packet one-way delay: 0.995 ms
Loss rate: 0.18%
Run 5: Report of PCC-Expr — Data Link
Run 6: Statistics of PCC-Expr

Start at: 2018-08-10 03:45:09
End at: 2018-08-10 03:45:39
Local clock offset: -0.299 ms
Remote clock offset: 0.229 ms

# Below is generated by plot.py at 2018-08-10 07:45:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 374.39 Mbit/s
95th percentile per-packet one-way delay: 1.130 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 245.82 Mbit/s
95th percentile per-packet one-way delay: 1.112 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 149.01 Mbit/s
95th percentile per-packet one-way delay: 1.159 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 89.73 Mbit/s
95th percentile per-packet one-way delay: 1.211 ms
Loss rate: 0.62%
Run 6: Report of PCC-Expr — Data Link

Throughput (Mbps)

0  5  10  15  20  25  30

Time (s)

Flow 1 ingress (mean 245.66 Mbps)  Flow 1 egress (mean 245.82 Mbps)
Flow 2 ingress (mean 148.94 Mbps)  Flow 2 egress (mean 149.01 Mbps)
Flow 3 ingress (mean 90.10 Mbps)   Flow 3 egress (mean 89.73 Mbps)

Per-packet one-way delay (ms)

0  2.5  5.0  7.5  10.0  12.5  15.0  17.5

Time (s)

Flow 1 (95th percentile 1.11 ms)  Flow 2 (95th percentile 1.16 ms)  Flow 3 (95th percentile 1.21 ms)
Run 7: Statistics of PCC-Expr

Start at: 2018-08-10 04:12:11
End at: 2018-08-10 04:12:41
Local clock offset: -0.25 ms
Remote clock offset: 0.366 ms

# Below is generated by plot.py at 2018-08-10 07:48:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 334.25 Mbit/s
95th percentile per-packet one-way delay: 1.051 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 225.48 Mbit/s
95th percentile per-packet one-way delay: 1.048 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 126.86 Mbit/s
95th percentile per-packet one-way delay: 1.080 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 74.34 Mbit/s
95th percentile per-packet one-way delay: 1.027 ms
Loss rate: 0.28%
Run 7: Report of PCC-Expr — Data Link
Run 8: Statistics of PCC-Expr

Start at: 2018-08-10 04:39:17
End at: 2018-08-10 04:39:47
Local clock offset: -0.263 ms
Remote clock offset: -0.044 ms

# Below is generated by plot.py at 2018-08-10 07:48:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 280.13 Mbit/s
95th percentile per-packet one-way delay: 1.172 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 218.11 Mbit/s
95th percentile per-packet one-way delay: 1.186 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 57.48 Mbit/s
95th percentile per-packet one-way delay: 1.119 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 72.29 Mbit/s
95th percentile per-packet one-way delay: 1.163 ms
Loss rate: 0.18%
Run 9: Statistics of PCC-Expr

Start at: 2018-08-10 05:06:14
End at: 2018-08-10 05:06:44
Local clock offset: -0.792 ms
Remote clock offset: -0.487 ms

# Below is generated by plot.py at 2018-08-10 07:49:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 353.54 Mbit/s
  95th percentile per-packet one-way delay: 1.180 ms
  Loss rate: 0.03%
-- Flow 1:
  Average throughput: 234.21 Mbit/s
  95th percentile per-packet one-way delay: 1.157 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 146.03 Mbit/s
  95th percentile per-packet one-way delay: 1.254 ms
  Loss rate: 0.05%
-- Flow 3:
  Average throughput: 67.69 Mbit/s
  95th percentile per-packet one-way delay: 1.116 ms
  Loss rate: 0.15%
Run 9: Report of PCC-Expr — Data Link

![Graph 1: Throughput (Mbps)]

Throughput (Mbps):
- Flow 1 Ingress (mean 234.07 Mbps)
- Flow 1 Egress (mean 234.21 Mbps)
- Flow 2 Ingress (mean 145.93 Mbps)
- Flow 2 Egress (mean 146.03 Mbps)
- Flow 3 Ingress (mean 67.63 Mbps)
- Flow 3 Egress (mean 67.69 Mbps)

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

Per-packet one-way delay (ms):
- Flow 1 (95th percentile 1.16 ms)
- Flow 2 (95th percentile 1.25 ms)
- Flow 3 (95th percentile 1.12 ms)
Run 10: Statistics of PCC-Expr

Start at: 2018-08-10 05:33:10
End at: 2018-08-10 05:33:40
Local clock offset: -1.096 ms
Remote clock offset: -0.069 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 322.48 Mbit/s
95th percentile per-packet one-way delay: 1.209 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 245.80 Mbit/s
95th percentile per-packet one-way delay: 1.228 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 85.99 Mbit/s
95th percentile per-packet one-way delay: 1.204 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 59.28 Mbit/s
95th percentile per-packet one-way delay: 1.124 ms
Loss rate: 0.22%
Run 10: Report of PCC-Expr — Data Link
Run 1: Statistics of QUIC Cubic

Start at: 2018-08-10 01:37:56
End at: 2018-08-10 01:38:26
Local clock offset: 0.207 ms
Remote clock offset: 0.317 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 134.48 Mbit/s
95th percentile per-packet one-way delay: 1.124 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 71.50 Mbit/s
95th percentile per-packet one-way delay: 1.120 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 67.63 Mbit/s
95th percentile per-packet one-way delay: 1.126 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 52.68 Mbit/s
95th percentile per-packet one-way delay: 1.139 ms
Loss rate: 0.22%
Run 1: Report of QUIC Cubic — Data Link
Run 2: Statistics of QUIC Cubic

Start at: 2018-08-10 02:04:53
End at: 2018-08-10 02:05:23
Local clock offset: -0.224 ms
Remote clock offset: 0.234 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 138.34 Mbit/s
95th percentile per-packet one-way delay: 1.072 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 77.43 Mbit/s
95th percentile per-packet one-way delay: 1.071 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 64.31 Mbit/s
95th percentile per-packet one-way delay: 1.074 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 55.06 Mbit/s
95th percentile per-packet one-way delay: 1.075 ms
Loss rate: 0.20%
Run 3: Statistics of QUIC Cubic

Start at: 2018-08-10 02:31:56
End at: 2018-08-10 02:32:26
Local clock offset: -0.408 ms
Remote clock offset: 0.077 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 137.00 Mbit/s
  95th percentile per-packet one-way delay: 0.976 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 75.89 Mbit/s
  95th percentile per-packet one-way delay: 0.978 ms
  Loss rate: 0.04%
-- Flow 2:
  Average throughput: 65.76 Mbit/s
  95th percentile per-packet one-way delay: 0.973 ms
  Loss rate: 0.09%
-- Flow 3:
  Average throughput: 52.68 Mbit/s
  95th percentile per-packet one-way delay: 0.968 ms
  Loss rate: 0.24%
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic

Start at: 2018-08-10 02:58:53
End at: 2018-08-10 02:59:23
Local clock offset: -0.36 ms
Remote clock offset: -0.03 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 139.21 Mbit/s
95th percentile per-packet one-way delay: 1.091 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 76.19 Mbit/s
95th percentile per-packet one-way delay: 1.091 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 68.19 Mbit/s
95th percentile per-packet one-way delay: 1.092 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 53.36 Mbit/s
95th percentile per-packet one-way delay: 1.091 ms
Loss rate: 0.22%
Run 4: Report of QUIC Cubic — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 76.17 Mbps)
  - Flow 1 egress (mean 76.19 Mbps)
  - Flow 2 ingress (mean 68.15 Mbps)
  - Flow 2 egress (mean 68.19 Mbps)
  - Flow 3 ingress (mean 53.34 Mbps)
  - Flow 3 egress (mean 53.36 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 1.09 ms)
  - Flow 2 (95th percentile 1.09 ms)
  - Flow 3 (95th percentile 1.09 ms)
Run 5: Statistics of QUIC Cubic

Start at: 2018-08-10 03:26:00
End at: 2018-08-10 03:26:30
Local clock offset: -0.264 ms
Remote clock offset: 0.173 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 137.15 Mbit/s
95th percentile per-packet one-way delay: 1.029 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 73.43 Mbit/s
95th percentile per-packet one-way delay: 1.029 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 68.73 Mbit/s
95th percentile per-packet one-way delay: 1.021 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 54.50 Mbit/s
95th percentile per-packet one-way delay: 1.038 ms
Loss rate: 0.19%
Run 5: Report of QUIC Cubic — Data Link
Run 6: Statistics of QUIC Cubic

Start at: 2018-08-10 03:53:02
End at: 2018-08-10 03:53:32
Local clock offset: -0.288 ms
Remote clock offset: 0.179 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 132.93 Mbit/s
95th percentile per-packet one-way delay: 0.958 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 71.04 Mbit/s
95th percentile per-packet one-way delay: 0.951 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 65.51 Mbit/s
95th percentile per-packet one-way delay: 0.964 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 55.51 Mbit/s
95th percentile per-packet one-way delay: 0.957 ms
Loss rate: 0.19%
Run 6: Report of QUIC Cubic — Data Link
Run 7: Statistics of QUIC Cubic

Start at: 2018-08-10 04:20:03
End at: 2018-08-10 04:20:33
Local clock offset: -0.22 ms
Remote clock offset: 0.126 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 136.03 Mbit/s
  95th percentile per-packet one-way delay: 0.992 ms
  Loss rate: 0.09%
-- Flow 1:
  Average throughput: 74.49 Mbit/s
  95th percentile per-packet one-way delay: 0.995 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 66.58 Mbit/s
  95th percentile per-packet one-way delay: 0.988 ms
  Loss rate: 0.09%
-- Flow 3:
  Average throughput: 52.24 Mbit/s
  95th percentile per-packet one-way delay: 0.982 ms
  Loss rate: 0.24%
Run 7: Report of QUIC Cubic — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 74.46 Mbps)
  - Flow 1 egress (mean 74.49 Mbps)
  - Flow 2 ingress (mean 66.54 Mbps)
  - Flow 2 egress (mean 66.55 Mbps)
  - Flow 3 ingress (mean 52.21 Mbps)
  - Flow 3 egress (mean 52.24 Mbps)

- **Packet Loss (one-way delay, ms):**
  - Flow 1 (95th percentile 0.99 ms)
  - Flow 2 (95th percentile 0.99 ms)
  - Flow 3 (95th percentile 0.98 ms)
Run 8: Statistics of QUIC Cubic

Start at: 2018-08-10 04:47:01
End at: 2018-08-10 04:47:31
Local clock offset: -0.353 ms
Remote clock offset: -0.029 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 137.73 Mbit/s
   95th percentile per-packet one-way delay: 1.143 ms
   Loss rate: 0.08%
-- Flow 1:
   Average throughput: 76.81 Mbit/s
   95th percentile per-packet one-way delay: 1.143 ms
   Loss rate: 0.05%
-- Flow 2:
   Average throughput: 64.45 Mbit/s
   95th percentile per-packet one-way delay: 1.143 ms
   Loss rate: 0.10%
-- Flow 3:
   Average throughput: 54.66 Mbit/s
   95th percentile per-packet one-way delay: 1.130 ms
   Loss rate: 0.13%
Run 9: Statistics of QUIC Cubic

Start at: 2018-08-10 05:14:08
End at: 2018-08-10 05:14:38
Local clock offset: -0.891 ms
Remote clock offset: -0.481 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 138.73 Mbit/s
95th percentile per-packet one-way delay: 1.064 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 77.06 Mbit/s
95th percentile per-packet one-way delay: 1.067 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 66.73 Mbit/s
95th percentile per-packet one-way delay: 1.059 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 52.38 Mbit/s
95th percentile per-packet one-way delay: 1.060 ms
Loss rate: 0.25%
Run 9: Report of QUIC Cubic — Data Link
Run 10: Statistics of QUIC Cubic

Start at: 2018-08-10 05:41:00
End at: 2018-08-10 05:41:30
Local clock offset: -1.204 ms
Remote clock offset: 0.068 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 137.96 Mbit/s
95th percentile per-packet one-way delay: 1.120 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 76.36 Mbit/s
95th percentile per-packet one-way delay: 1.115 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 65.08 Mbit/s
95th percentile per-packet one-way delay: 1.118 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 55.52 Mbit/s
95th percentile per-packet one-way delay: 1.131 ms
Loss rate: 0.16%
Run 10: Report of QUIC Cubic — Data Link

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

Legend:
- Flow 1 ingress (mean 76.37 Mbit/s)
- Flow 1 egress (mean 76.36 Mbit/s)
- Flow 2 ingress (mean 65.08 Mbit/s)
- Flow 2 egress (mean 65.08 Mbit/s)
- Flow 3 ingress (mean 55.51 Mbit/s)
- Flow 3 egress (mean 55.52 Mbit/s)
Run 1: Statistics of SCReAM

Start at: 2018-08-10 01:36:38
End at: 2018-08-10 01:37:08
Local clock offset: 0.188 ms
Remote clock offset: 0.343 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.152 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.153 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.148 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.147 ms
Loss rate: 0.36%
Run 1: Report of SCReAM — Data Link

Throughput (Mb/s)

Time (s)

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)

Per-packet-one-way delay (ms)

Time (s)

Flow 1 (95th percentile 1.15 ms)  Flow 2 (95th percentile 1.15 ms)  Flow 3 (95th percentile 1.15 ms)
Run 2: Statistics of SCReAM

Start at: 2018-08-10 02:03:35
End at: 2018-08-10 02:04:05
Local clock offset: -0.192 ms
Remote clock offset: 0.344 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.130 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.137 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.119 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.125 ms
Loss rate: 0.36%
Run 2: Report of SCReAM — Data Link

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

![Graph 2: Per-packet one way delay (ms)](image2)
Run 3: Statistics of SCReAM

Start at: 2018-08-10 02:30:38
End at: 2018-08-10 02:31:08
Local clock offset: -0.31 ms
Remote clock offset: 0.09 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.195 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.199 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.184 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.183 ms
Loss rate: 0.35%
Run 3: Report of SCReAM — Data Link
Run 4: Statistics of SCReAM

Start at: 2018-08-10 02:57:35
End at: 2018-08-10 02:58:05
Local clock offset: -0.342 ms
Remote clock offset: 0.036 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.141 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.146 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.126 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.136 ms
Loss rate: 0.36%
Run 4: Report of SCReAM — Data Link

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

- **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)

- **Packet Loss:**
  - Flow 1 (95th percentile 1.15 ms)
  - Flow 2 (95th percentile 1.13 ms)
  - Flow 3 (95th percentile 1.14 ms)
Run 5: Statistics of SCReAM

Start at: 2018-08-10 03:24:42
End at: 2018-08-10 03:25:12
Local clock offset: -0.355 ms
Remote clock offset: 0.071 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 1.141 ms
  Loss rate: 0.06%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 1.125 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 1.131 ms
  Loss rate: 0.19%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 1.155 ms
  Loss rate: 0.00%
Run 5: Report of SCReAM — Data Link

![Throughput Graph]

![Delay Graph]
Run 6: Statistics of SCReAM

Start at: 2018-08-10 03:51:44
End at: 2018-08-10 03:52:14
Local clock offset: -0.209 ms
Remote clock offset: 0.147 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 1.207 ms
  Loss rate: 0.19%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 1.216 ms
  Loss rate: 0.13%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 1.180 ms
  Loss rate: 0.19%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 1.187 ms
  Loss rate: 0.35%
Run 6: Report of SCReAM — Data Link

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

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

Flow 1 ingress (mean 0.22 Mbit/s), Flow 1 egress (mean 0.22 Mbit/s), Flow 2 ingress (mean 0.22 Mbit/s), Flow 2 egress (mean 0.22 Mbit/s), Flow 3 ingress (mean 0.22 Mbit/s), Flow 3 egress (mean 0.22 Mbit/s)
Run 7: Statistics of SCReAM

Start at: 2018-08-10 04:18:45
End at: 2018-08-10 04:19:15
Local clock offset: -0.306 ms
Remote clock offset: 0.08 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.088 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.090 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.086 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.087 ms
Loss rate: 0.36%
Run 7: Report of SCReAM — Data Link
Run 8: Statistics of SCReAM

Start at: 2018-08-10 04:45:44
End at: 2018-08-10 04:46:14
Local clock offset: -0.308 ms
Remote clock offset: 0.029 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 1.225 ms
  Loss rate: 0.19%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 1.219 ms
  Loss rate: 0.13%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 1.233 ms
  Loss rate: 0.19%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 1.222 ms
  Loss rate: 0.35%
Run 8: Report of SCReAM — Data Link

![Graph 1: Throughput](image)

![Graph 2: Packet One-Way Delay](image)
Run 9: Statistics of SCReAM

Start at: 2018-08-10 05:12:50
End at: 2018-08-10 05:13:20
Local clock offset: -0.968 ms
Remote clock offset: -0.521 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 1.122 ms
  Loss rate: 0.07%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 1.117 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 1.130 ms
  Loss rate: 0.20%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 1.107 ms
  Loss rate: 0.00%
Run 9: Report of SCReAM — Data Link

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

Legend:
- Flow 1 ingress (mean 0.22 Mbit/s)
- Flow 1 egress (mean 0.22 Mbit/s)
- Flow 2 ingress (mean 0.22 Mbit/s)
- Flow 2 egress (mean 0.22 Mbit/s)
- Flow 3 ingress (mean 0.22 Mbit/s)
- Flow 3 egress (mean 0.22 Mbit/s)
Run 10: Statistics of SCReAM

Start at: 2018-08-10 05:39:42
End at: 2018-08-10 05:40:12
Local clock offset: -1.266 ms
Remote clock offset: 0.1 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.096 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.099 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.084 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.101 ms
Loss rate: 0.36%
Run 1: Statistics of Sprout

Start at: 2018-08-10 01:40:58
End at: 2018-08-10 01:41:28
Local clock offset: 0.204 ms
Remote clock offset: 0.433 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.28 Mbit/s
95th percentile per-packet one-way delay: 1.119 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 20.71 Mbit/s
95th percentile per-packet one-way delay: 1.123 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 20.68 Mbit/s
95th percentile per-packet one-way delay: 1.114 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 20.83 Mbit/s
95th percentile per-packet one-way delay: 1.113 ms
Loss rate: 0.07%
Run 1: Report of Sprout — Data Link
Run 2: Statistics of Sprout

Start at: 2018-08-10 02:07:54
End at: 2018-08-10 02:08:24
Local clock offset: -0.324 ms
Remote clock offset: 0.206 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.45 Mbit/s
95th percentile per-packet one-way delay: 0.966 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 20.75 Mbit/s
95th percentile per-packet one-way delay: 0.972 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 20.79 Mbit/s
95th percentile per-packet one-way delay: 0.955 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 21.02 Mbit/s
95th percentile per-packet one-way delay: 0.950 ms
Loss rate: 0.49%
Run 2: Report of Sprout — Data Link
Run 3: Statistics of Sprout

Start at: 2018-08-10 02:34:57
End at: 2018-08-10 02:35:27
Local clock offset: -0.328 ms
Remote clock offset: 0.015 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 42.31 Mbit/s
95th percentile per-packet one-way delay: 1.113 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 21.50 Mbit/s
95th percentile per-packet one-way delay: 1.112 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 20.73 Mbit/s
95th percentile per-packet one-way delay: 1.115 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 21.57 Mbit/s
95th percentile per-packet one-way delay: 1.115 ms
Loss rate: 0.48%
Run 3: Report of Sprout — Data Link
Run 4: Statistics of Sprout

Start at: 2018-08-10 03:01:55
End at: 2018-08-10 03:02:25
Local clock offset: -0.445 ms
Remote clock offset: -0.02 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.51 Mbit/s
95th percentile per-packet one-way delay: 1.040 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 20.79 Mbit/s
95th percentile per-packet one-way delay: 1.039 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 20.84 Mbit/s
95th percentile per-packet one-way delay: 1.037 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 20.91 Mbit/s
95th percentile per-packet one-way delay: 1.047 ms
Loss rate: 0.08%
Run 4: Report of Sprout — Data Link

![Graphs showing network performance metrics.]

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 20.79 Mbps)
  - Flow 1 egress (mean 20.79 Mbps)
  - Flow 2 ingress (mean 20.84 Mbps)
  - Flow 2 egress (mean 20.84 Mbps)
  - Flow 3 ingress (mean 20.80 Mbps)
  - Flow 3 egress (mean 20.91 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 1.04 ms)
  - Flow 2 (95th percentile 1.04 ms)
  - Flow 3 (95th percentile 1.05 ms)
Run 5: Statistics of Sprout

Start at: 2018-08-10 03:29:02
End at: 2018-08-10 03:29:32
Local clock offset: -0.349 ms
Remote clock offset: 0.243 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.93 Mbit/s
95th percentile per-packet one-way delay: 0.920 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 20.91 Mbit/s
95th percentile per-packet one-way delay: 0.915 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 20.89 Mbit/s
95th percentile per-packet one-way delay: 0.924 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 21.68 Mbit/s
95th percentile per-packet one-way delay: 0.916 ms
Loss rate: 0.36%
Run 5: Report of Sprout — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 20.94 Mbit/s)
Flow 1 egress (mean 20.91 Mbit/s)
Flow 2 ingress (mean 20.89 Mbit/s)
Flow 2 egress (mean 20.89 Mbit/s)
Flow 3 ingress (mean 21.75 Mbit/s)
Flow 3 egress (mean 21.68 Mbit/s)

Packet latency (ms)

Time (s)

Flow 1 (95th percentile 0.92 ms)
Flow 2 (95th percentile 0.92 ms)
Flow 3 (95th percentile 0.92 ms)
Run 6: Statistics of Sprout

Start at: 2018-08-10 03:56:04
End at: 2018-08-10 03:56:34
Local clock offset: -0.281 ms
Remote clock offset: 0.15 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 41.97 Mbit/s
  95th percentile per-packet one-way delay: 1.022 ms
  Loss rate: 0.06%
-- Flow 1:
  Average throughput: 21.04 Mbit/s
  95th percentile per-packet one-way delay: 1.014 ms
  Loss rate: 0.11%
-- Flow 2:
  Average throughput: 21.19 Mbit/s
  95th percentile per-packet one-way delay: 1.027 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 20.87 Mbit/s
  95th percentile per-packet one-way delay: 1.024 ms
  Loss rate: 0.00%
Run 6: Report of Sprout — Data Link
Run 7: Statistics of Sprout

Start at: 2018-08-10 04:23:06
End at: 2018-08-10 04:23:36
Local clock offset: -0.217 ms
Remote clock offset: 0.019 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 42.11 Mbit/s
95th percentile per-packet one-way delay: 1.058 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 21.10 Mbit/s
95th percentile per-packet one-way delay: 1.060 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 21.24 Mbit/s
95th percentile per-packet one-way delay: 1.060 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 21.05 Mbit/s
95th percentile per-packet one-way delay: 1.041 ms
Loss rate: 0.49%
Run 7: Report of Sprout — Data Link

---

**Graph 1:**
- **Y-axis:** Throughput (Mbit/s)
- **X-axis:** Time (s)
- **Legend:**
  - Flow 1 ingress (mean 21.10 Mbit/s)
  - Flow 1 egress (mean 21.10 Mbit/s)
  - Flow 2 ingress (mean 21.24 Mbit/s)
  - Flow 2 egress (mean 21.24 Mbit/s)
  - Flow 3 ingress (mean 21.05 Mbit/s)
  - Flow 3 egress (mean 21.05 Mbit/s)

**Graph 2:**
- **Y-axis:** Percentile one-way delay (ms)
- **X-axis:** Time (s)
- **Legend:**
  - Flow 1 (95th percentile 1.06 ms)
  - Flow 2 (95th percentile 1.06 ms)
  - Flow 3 (95th percentile 1.04 ms)
Run 8: Statistics of Sprout

Start at: 2018-08-10 04:50:04
End at: 2018-08-10 04:50:34
Local clock offset: -0.454 ms
Remote clock offset: -0.179 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.89 Mbit/s
95th percentile per-packet one-way delay: 1.141 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 20.97 Mbit/s
95th percentile per-packet one-way delay: 1.144 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 21.10 Mbit/s
95th percentile per-packet one-way delay: 1.135 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 21.05 Mbit/s
95th percentile per-packet one-way delay: 1.136 ms
Loss rate: 0.34%
Run 8: Report of Sprout — Data Link

Throughput (Mb/s)

Time (s)

Flow 1 ingress (mean 20.97 Mb/s)
Flow 1 egress (mean 20.97 Mb/s)
Flow 2 ingress (mean 21.09 Mb/s)
Flow 2 egress (mean 21.10 Mb/s)
Flow 3 ingress (mean 21.04 Mb/s)
Flow 3 egress (mean 21.05 Mb/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 1.14 ms)
Flow 2 (95th percentile 1.14 ms)
Flow 3 (95th percentile 1.14 ms)
Run 9: Statistics of Sprout

Start at: 2018-08-10 05:17:08
End at: 2018-08-10 05:17:38
Local clock offset: -1.022 ms
Remote clock offset: -0.439 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 42.79 Mbit/s
95th percentile per-packet one-way delay: 0.936 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 21.72 Mbit/s
95th percentile per-packet one-way delay: 0.937 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 21.21 Mbit/s
95th percentile per-packet one-way delay: 0.941 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 21.23 Mbit/s
95th percentile per-packet one-way delay: 0.921 ms
Loss rate: 0.48%
Run 9: Report of Sprout — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 21.72 Mbps)
Flow 1 egress (mean 21.72 Mbps)
Flow 2 ingress (mean 21.21 Mbps)
Flow 2 egress (mean 21.21 Mbps)
Flow 3 ingress (mean 21.23 Mbps)
Flow 3 egress (mean 21.23 Mbps)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 0.94 ms)
Flow 2 (95th percentile 0.94 ms)
Flow 3 (95th percentile 0.92 ms)
Run 10: Statistics of Sprout

Start at: 2018-08-10 05:44:03
End at: 2018-08-10 05:44:33
Local clock offset: -1.241 ms
Remote clock offset: 0.09 ms

# Below is generated by plot.py at 2018-08-10 07:50:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 42.01 Mbit/s
  95th percentile per-packet one-way delay: 1.136 ms
  Loss rate: 0.09%
-- Flow 1:
  Average throughput: 21.09 Mbit/s
  95th percentile per-packet one-way delay: 1.134 ms
  Loss rate: 0.16%
-- Flow 2:
  Average throughput: 21.14 Mbit/s
  95th percentile per-packet one-way delay: 1.140 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 21.02 Mbit/s
  95th percentile per-packet one-way delay: 1.133 ms
  Loss rate: 0.07%
Run 10: Report of Sprout — Data Link
Run 1: Statistics of TaoVA-100x

Start at: 2018-08-10 01:20:18
End at: 2018-08-10 01:20:48
Local clock offset: 0.101 ms
Remote clock offset: -0.242 ms

# Below is generated by plot.py at 2018-08-10 07:57:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 401.20 Mbit/s
  95th percentile per-packet one-way delay: 1.155 ms
  Loss rate: 0.06%
-- Flow 1:
  Average throughput: 228.10 Mbit/s
  95th percentile per-packet one-way delay: 1.127 ms
  Loss rate: 0.04%
-- Flow 2:
  Average throughput: 197.86 Mbit/s
  95th percentile per-packet one-way delay: 1.157 ms
  Loss rate: 0.08%
-- Flow 3:
  Average throughput: 125.07 Mbit/s
  95th percentile per-packet one-way delay: 1.341 ms
  Loss rate: 0.08%
Run 1: Report of TaoVA-100x — Data Link

![Graphs of Throughput and Per-Packet One-Way Delay](image)

- Flow 1 ingress (mean 228.05 Mbit/s)
- Flow 1 egress (mean 228.10 Mbit/s)
- Flow 2 ingress (mean 197.84 Mbit/s)
- Flow 2 egress (mean 197.86 Mbit/s)
- Flow 3 ingress (mean 124.94 Mbit/s)
- Flow 3 egress (mean 125.07 Mbit/s)

- Flow 1 (95th percentile 1.13 ms)
- Flow 2 (95th percentile 1.16 ms)
- Flow 3 (95th percentile 1.34 ms)
Run 2: Statistics of TaoVA-100x

Start at: 2018-08-10 01:47:17
End at: 2018-08-10 01:47:47
Local clock offset: 0.043 ms
Remote clock offset: 0.676 ms

# Below is generated by plot.py at 2018-08-10 07:57:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 380.29 Mbit/s
95th percentile per-packet one-way delay: 0.971 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 214.29 Mbit/s
95th percentile per-packet one-way delay: 0.943 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 190.80 Mbit/s
95th percentile per-packet one-way delay: 0.984 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 117.76 Mbit/s
95th percentile per-packet one-way delay: 1.160 ms
Loss rate: 0.22%
Run 2: Report of TaoVA-100x — Data Link

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

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

- Flow 1 ingress (mean 214.22 Mbit/s)
- Flow 1 egress (mean 214.29 Mbit/s)
- Flow 2 ingress (mean 190.73 Mbit/s)
- Flow 2 egress (mean 190.88 Mbit/s)
- Flow 3 ingress (mean 117.80 Mbit/s)
- Flow 3 egress (mean 117.76 Mbit/s)
Run 3: Statistics of TaoVA-100x

Start at: 2018-08-10 02:14:17
End at: 2018-08-10 02:14:47
Local clock offset: -0.295 ms
Remote clock offset: 0.124 ms

# Below is generated by plot.py at 2018-08-10 07:57:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 382.28 Mbit/s
95th percentile per-packet one-way delay: 1.018 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 216.42 Mbit/s
95th percentile per-packet one-way delay: 0.998 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 196.58 Mbit/s
95th percentile per-packet one-way delay: 1.015 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 105.75 Mbit/s
95th percentile per-packet one-way delay: 1.229 ms
Loss rate: 0.30%
Run 3: Report of TaoVA-100x — Data Link
Run 4: Statistics of TaoVA-100x

Start at: 2018-08-10 02:41:17
End at: 2018-08-10 02:41:47
Local clock offset: -0.465 ms
Remote clock offset: 0.024 ms

# Below is generated by plot.py at 2018-08-10 07:57:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 384.08 Mbit/s
  95th percentile per-packet one-way delay: 0.906 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 214.90 Mbit/s
  95th percentile per-packet one-way delay: 0.900 ms
  Loss rate: 0.06%
-- Flow 2:
  Average throughput: 194.93 Mbit/s
  95th percentile per-packet one-way delay: 0.907 ms
  Loss rate: 0.08%
-- Flow 3:
  Average throughput: 119.02 Mbit/s
  95th percentile per-packet one-way delay: 0.980 ms
  Loss rate: 0.18%
Run 4: Report of TaoVA-100x — Data Link

[Graph showing throughput (Mbps) over time for different flows with mean rates and 95th percentile delays.]
Run 5: Statistics of TaoVA-100x

Start at: 2018-08-10 03:08:19  
End at: 2018-08-10 03:08:49  
Local clock offset: -0.394 ms  
Remote clock offset: 0.045 ms

# Below is generated by plot.py at 2018-08-10 07:57:24
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 388.97 Mbit/s
 95th percentile per-packet one-way delay: 0.992 ms
 Loss rate: 0.06%
-- Flow 1:
 Average throughput: 225.39 Mbit/s
 95th percentile per-packet one-way delay: 0.974 ms
 Loss rate: 0.03%
-- Flow 2:
 Average throughput: 190.51 Mbit/s
 95th percentile per-packet one-way delay: 0.975 ms
 Loss rate: 0.08%
-- Flow 3:
 Average throughput: 111.11 Mbit/s
 95th percentile per-packet one-way delay: 1.331 ms
 Loss rate: 0.23%
Run 5: Report of TaoVA-100x — Data Link
Run 6: Statistics of TaoVA-100x

Start at: 2018-08-10 03:35:26
End at: 2018-08-10 03:35:56
Local clock offset: -0.249 ms
Remote clock offset: 0.318 ms

# Below is generated by plot.py at 2018-08-10 07:57:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 374.35 Mbit/s
  95th percentile per-packet one-way delay: 0.990 ms
  Loss rate: 0.10%
-- Flow 1:
  Average throughput: 216.31 Mbit/s
  95th percentile per-packet one-way delay: 0.988 ms
  Loss rate: 0.04%
-- Flow 2:
  Average throughput: 182.51 Mbit/s
  95th percentile per-packet one-way delay: 0.988 ms
  Loss rate: 0.05%
-- Flow 3:
  Average throughput: 110.47 Mbit/s
  95th percentile per-packet one-way delay: 1.029 ms
  Loss rate: 0.58%
Run 6: Report of TaoVA-100x — Data Link
Run 7: Statistics of TaoVA-100x

Start at: 2018-08-10 04:02:24
End at: 2018-08-10 04:02:54
Local clock offset: -0.279 ms
Remote clock offset: 0.249 ms

# Below is generated by plot.py at 2018-08-10 07:57:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 390.66 Mbit/s
95th percentile per-packet one-way delay: 0.953 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 219.06 Mbit/s
95th percentile per-packet one-way delay: 0.933 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 202.57 Mbit/s
95th percentile per-packet one-way delay: 0.948 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 111.29 Mbit/s
95th percentile per-packet one-way delay: 1.030 ms
Loss rate: 0.08%
Run 7: Report of TaoVA-100x — Data Link

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

Flow 1 ingress (mean 218.99 Mbit/s) | Flow 1 egress (mean 219.06 Mbit/s)
Flow 2 ingress (mean 202.47 Mbit/s) | Flow 2 egress (mean 202.57 Mbit/s)
Flow 3 ingress (mean 111.11 Mbit/s) | Flow 3 egress (mean 111.29 Mbit/s)
Run 8: Statistics of TaoVA-100x

Start at: 2018-08-10 04:29:28
End at: 2018-08-10 04:29:58
Local clock offset: -0.286 ms
Remote clock offset: 0.048 ms

# Below is generated by plot.py at 2018-08-10 07:59:16
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 394.80 Mbit/s
  95th percentile per-packet one-way delay: 0.889 ms
  Loss rate: 0.06%
-- Flow 1:
  Average throughput: 227.20 Mbit/s
  95th percentile per-packet one-way delay: 0.885 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 196.64 Mbit/s
  95th percentile per-packet one-way delay: 0.887 ms
  Loss rate: 0.04%
-- Flow 3:
  Average throughput: 110.72 Mbit/s
  95th percentile per-packet one-way delay: 0.969 ms
  Loss rate: 0.21%
Run 9: Statistics of TaoVA-100x

Start at: 2018-08-10 04:56:26
End at: 2018-08-10 04:56:56
Local clock offset: -0.722 ms
Remote clock offset: -0.31 ms

# Below is generated by plot.py at 2018-08-10 08:04:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 381.99 Mbit/s
95th percentile per-packet one-way delay: 0.931 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 216.87 Mbit/s
95th percentile per-packet one-way delay: 0.908 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 190.72 Mbit/s
95th percentile per-packet one-way delay: 0.938 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 115.08 Mbit/s
95th percentile per-packet one-way delay: 1.128 ms
Loss rate: 0.32%
Run 9: Report of TaoVA-100x — Data Link
Run 10: Statistics of TaoVA-100x

Start at: 2018-08-10 05:23:24
End at: 2018-08-10 05:23:54
Local clock offset: -1.004 ms
Remote clock offset: -0.324 ms

# Below is generated by plot.py at 2018-08-10 08:04:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 381.67 Mbit/s
  95th percentile per-packet one-way delay: 1.039 ms
  Loss rate: 0.04%
-- Flow 1:
  Average throughput: 210.07 Mbit/s
  95th percentile per-packet one-way delay: 1.015 ms
  Loss rate: 0.03%
-- Flow 2:
  Average throughput: 201.38 Mbit/s
  95th percentile per-packet one-way delay: 1.042 ms
  Loss rate: 0.05%
-- Flow 3:
  Average throughput: 113.61 Mbit/s
  95th percentile per-packet one-way delay: 1.138 ms
  Loss rate: 0.06%
Run 10: Report of TaoVA-100x — Data Link
Run 1: Statistics of TCP Vegas

Start at: 2018-08-10 01:42:18
End at: 2018-08-10 01:42:48
Local clock offset: 0.202 ms
Remote clock offset: 0.472 ms

# Below is generated by plot.py at 2018-08-10 08:04:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 682.37 Mbit/s
95th percentile per-packet one-way delay: 2.114 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 278.67 Mbit/s
95th percentile per-packet one-way delay: 1.953 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 514.53 Mbit/s
95th percentile per-packet one-way delay: 2.407 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 184.01 Mbit/s
95th percentile per-packet one-way delay: 2.152 ms
Loss rate: 0.25%
Run 1: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 278.67 Mbit/s)
- Flow 1 egress (mean 278.67 Mbit/s)
- Flow 2 ingress (mean 514.47 Mbit/s)
- Flow 2 egress (mean 514.52 Mbit/s)
- Flow 3 ingress (mean 184.32 Mbit/s)
- Flow 3 egress (mean 184.01 Mbit/s)

- Flow 1 (95th percentile 1.95 ms)
- Flow 2 (95th percentile 2.41 ms)
- Flow 3 (95th percentile 2.15 ms)
Run 2: Statistics of TCP Vegas

Start at: 2018-08-10 02:09:14
End at: 2018-08-10 02:09:44
Local clock offset: -0.348 ms
Remote clock offset: 0.106 ms

# Below is generated by plot.py at 2018-08-10 08:04:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 586.01 Mbit/s
95th percentile per-packet one-way delay: 1.463 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 291.42 Mbit/s
95th percentile per-packet one-way delay: 1.425 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 247.28 Mbit/s
95th percentile per-packet one-way delay: 1.413 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 392.32 Mbit/s
95th percentile per-packet one-way delay: 1.546 ms
Loss rate: 0.22%
Run 2: Report of TCP Vegas — Data Link
Run 3: Statistics of TCP Vegas

Start at: 2018-08-10 02:36:17
End at: 2018-08-10 02:36:47
Local clock offset: -0.429 ms
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2018-08-10 08:04:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 557.49 Mbit/s
95th percentile per-packet one-way delay: 1.632 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 281.12 Mbit/s
95th percentile per-packet one-way delay: 1.559 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 228.68 Mbit/s
95th percentile per-packet one-way delay: 1.643 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 375.06 Mbit/s
95th percentile per-packet one-way delay: 1.731 ms
Loss rate: 0.20%
Run 3: Report of TCP Vegas — Data Link

![Graph of TCP Vegas Data Link]
Run 4: Statistics of TCP Vegas

Start at: 2018-08-10 03:03:15
End at: 2018-08-10 03:03:45
Local clock offset: -0.439 ms
Remote clock offset: -0.016 ms

# Below is generated by plot.py at 2018-08-10 08:04:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 667.65 Mbit/s
95th percentile per-packet one-way delay: 1.602 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 349.11 Mbit/s
95th percentile per-packet one-way delay: 1.581 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 335.13 Mbit/s
95th percentile per-packet one-way delay: 1.615 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 287.43 Mbit/s
95th percentile per-packet one-way delay: 1.634 ms
Loss rate: 0.23%
Run 5: Statistics of TCP Vegas

Start at: 2018-08-10 03:30:22
End at: 2018-08-10 03:30:52
Local clock offset: -0.262 ms
Remote clock offset: 0.157 ms

# Below is generated by plot.py at 2018-08-10 08:04:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 672.50 Mbit/s
  95th percentile per-packet one-way delay: 3.856 ms
  Loss rate: 0.09%
-- Flow 1:
  Average throughput: 372.72 Mbit/s
  95th percentile per-packet one-way delay: 4.063 ms
  Loss rate: 0.06%
-- Flow 2:
  Average throughput: 303.31 Mbit/s
  95th percentile per-packet one-way delay: 4.125 ms
  Loss rate: 0.09%
-- Flow 3:
  Average throughput: 294.57 Mbit/s
  95th percentile per-packet one-way delay: 2.652 ms
  Loss rate: 0.22%
Run 5: Report of TCP Vegas — Data Link
Run 6: Statistics of TCP Vegas

Start at: 2018-08-10 03:57:24
End at: 2018-08-10 03:57:54
Local clock offset: -0.194 ms
Remote clock offset: 0.151 ms

# Below is generated by plot.py at 2018-08-10 08:06:18
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 588.24 Mbit/s
  95th percentile per-packet one-way delay: 1.949 ms
  Loss rate: 0.10%
-- Flow 1:
  Average throughput: 293.23 Mbit/s
  95th percentile per-packet one-way delay: 1.803 ms
  Loss rate: 0.07%
-- Flow 2:
  Average throughput: 281.88 Mbit/s
  95th percentile per-packet one-way delay: 1.942 ms
  Loss rate: 0.10%
-- Flow 3:
  Average throughput: 323.21 Mbit/s
  95th percentile per-packet one-way delay: 2.251 ms
  Loss rate: 0.19%
Run 6: Report of TCP Vegas — Data Link

![Graph 1: Throughput vs Time](chart1.png)

- Flow 1 ingress (mean 293.26 Mbit/s)
- Flow 1 egress (mean 293.23 Mbit/s)
- Flow 2 ingress (mean 281.90 Mbit/s)
- Flow 2 egress (mean 281.88 Mbit/s)
- Flow 3 ingress (mean 323.19 Mbit/s)
- Flow 3 egress (mean 323.21 Mbit/s)

![Graph 2: Packet Delay vs Time](chart2.png)

- Flow 1 (95th percentile 1.80 ms)
- Flow 2 (95th percentile 1.94 ms)
- Flow 3 (95th percentile 2.25 ms)

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Run 7: Statistics of TCP Vegas

Start at: 2018-08-10 04:24:26
End at: 2018-08-10 04:24:56
Local clock offset: -0.287 ms
Remote clock offset: -0.019 ms

# Below is generated by plot.py at 2018-08-10 08:09:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 605.10 Mbit/s
95th percentile per-packet one-way delay: 1.512 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 322.59 Mbit/s
95th percentile per-packet one-way delay: 1.482 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 311.03 Mbit/s
95th percentile per-packet one-way delay: 1.519 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 227.72 Mbit/s
95th percentile per-packet one-way delay: 1.572 ms
Loss rate: 0.23%
Run 7: Report of TCP Vegas — Data Link

![Graph showing throughputs and delays over time for different flows.]

- Flow 1 ingress (mean 322.60 Mbit/s)
- Flow 1 egress (mean 322.59 Mbit/s)
- Flow 2 ingress (mean 311.06 Mbit/s)
- Flow 2 egress (mean 311.03 Mbit/s)
- Flow 3 ingress (mean 227.81 Mbit/s)
- Flow 3 egress (mean 227.72 Mbit/s)

![Graph showing percent one-way delay by time for different flows.]

- Flow 1 (95th percentile 1.48 ms)
- Flow 2 (95th percentile 1.52 ms)
- Flow 3 (95th percentile 1.57 ms)
Run 8: Statistics of TCP Vegas

Start at: 2018-08-10 04:51:24
End at: 2018-08-10 04:51:54
Local clock offset: -0.599 ms
Remote clock offset: -0.237 ms

# Below is generated by plot.py at 2018-08-10 08:10:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 665.86 Mbit/s
95th percentile per-packet one-way delay: 3.220 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 375.12 Mbit/s
95th percentile per-packet one-way delay: 3.828 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 286.76 Mbit/s
95th percentile per-packet one-way delay: 2.558 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 301.19 Mbit/s
95th percentile per-packet one-way delay: 3.527 ms
Loss rate: 0.22%
Run 8: Report of TCP Vegas — Data Link

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

- **Flow 1 ingress** (mean 375.11 Mbps)
- **Flow 1 egress** (mean 375.12 Mbps)
- **Flow 2 ingress** (mean 286.76 Mbps)
- **Flow 2 egress** (mean 286.76 Mbps)
- **Flow 3 ingress** (mean 301.23 Mbps)
- **Flow 3 egress** (mean 301.19 Mbps)

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

- **Flow 1** (95th percentile 3.83 ms)
- **Flow 2** (95th percentile 2.56 ms)
- **Flow 3** (95th percentile 3.53 ms)
Run 9: Statistics of TCP Vegas

Start at: 2018-08-10 05:18:28
End at: 2018-08-10 05:18:58
Local clock offset: -0.943 ms
Remote clock offset: -0.465 ms

# Below is generated by plot.py at 2018-08-10 08:10:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 466.40 Mbit/s
95th percentile per-packet one-way delay: 1.425 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 339.39 Mbit/s
95th percentile per-packet one-way delay: 1.409 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 102.76 Mbit/s
95th percentile per-packet one-way delay: 1.390 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 176.52 Mbit/s
95th percentile per-packet one-way delay: 1.516 ms
Loss rate: 0.09%
Run 9: Report of TCP Vegas — Data Link

![Graph of Throughput vs Time](image1)

![Graph of Packet Delay vs Time](image2)
Run 10: Statistics of TCP Vegas

Start at: 2018-08-10 05:45:23
End at: 2018-08-10 05:45:53
Local clock offset: -1.348 ms
Remote clock offset: 0.128 ms

# Below is generated by plot.py at 2018-08-10 08:11:16
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 628.48 Mbit/s
  95th percentile per-packet one-way delay: 3.901 ms
  Loss rate: 0.09%
-- Flow 1:
  Average throughput: 284.27 Mbit/s
  95th percentile per-packet one-way delay: 3.026 ms
  Loss rate: 0.06%
-- Flow 2:
  Average throughput: 372.43 Mbit/s
  95th percentile per-packet one-way delay: 4.101 ms
  Loss rate: 0.08%
-- Flow 3:
  Average throughput: 289.96 Mbit/s
  95th percentile per-packet one-way delay: 2.575 ms
  Loss rate: 0.21%
Run 10: Report of TCP Vegas — Data Link
Run 1: Statistics of Verus

Start at: 2018-08-10 01:33:28
End at: 2018-08-10 01:33:58
Local clock offset: 0.109 ms
Remote clock offset: 0.242 ms

# Below is generated by plot.py at 2018-08-10 08:11:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 353.01 Mbit/s
95th percentile per-packet one-way delay: 4.107 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 221.76 Mbit/s
95th percentile per-packet one-way delay: 4.807 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 147.81 Mbit/s
95th percentile per-packet one-way delay: 2.567 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 101.49 Mbit/s
95th percentile per-packet one-way delay: 2.166 ms
Loss rate: 0.00%
Run 1: Report of Verus — Data Link

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

- Flow 1 ingress (mean 221.61 Mbit/s) vs. egress (mean 221.76 Mbit/s)
- Flow 2 ingress (mean 147.80 Mbit/s) vs. egress (mean 147.81 Mbit/s)
- Flow 3 ingress (mean 101.51 Mbit/s) vs. egress (mean 101.49 Mbit/s)

Packet delay:
- Flow 1 (95th percentile 4.81 ms)
- Flow 2 (95th percentile 2.57 ms)
- Flow 3 (95th percentile 2.17 ms)
Run 2: Statistics of Verus

Start at: 2018-08-10 02:00:24
End at: 2018-08-10 02:00:54
Local clock offset: -0.176 ms
Remote clock offset: 0.457 ms

# Below is generated by plot.py at 2018-08-10 08:11:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 325.98 Mbit/s
95th percentile per-packet one-way delay: 5.383 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 191.80 Mbit/s
95th percentile per-packet one-way delay: 6.030 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 153.64 Mbit/s
95th percentile per-packet one-way delay: 2.847 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 109.66 Mbit/s
95th percentile per-packet one-way delay: 2.053 ms
Loss rate: 0.08%
Run 2: Report of Verus — Data Link
Run 3: Statistics of Verus

Start at: 2018-08-10 02:27:28
End at: 2018-08-10 02:27:58
Local clock offset: -0.374 ms
Remote clock offset: 0.066 ms

# Below is generated by plot.py at 2018-08-10 08:11:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 290.52 Mbit/s
95th percentile per-packet one-way delay: 2.762 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 165.36 Mbit/s
95th percentile per-packet one-way delay: 3.318 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 135.85 Mbit/s
95th percentile per-packet one-way delay: 2.141 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 106.56 Mbit/s
95th percentile per-packet one-way delay: 1.832 ms
Loss rate: 0.35%
Run 3: Report of Verus — Data Link

[Graphs showing throughput and per-packet one-way delay]
Run 4: Statistics of Verus

Start at: 2018-08-10 02:54:25
End at: 2018-08-10 02:54:55
Local clock offset: -0.343 ms
Remote clock offset: -0.029 ms

# Below is generated by plot.py at 2018-08-10 08:11:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 289.70 Mbit/s
95th percentile per-packet one-way delay: 3.475 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 177.68 Mbit/s
95th percentile per-packet one-way delay: 3.993 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 108.92 Mbit/s
95th percentile per-packet one-way delay: 2.244 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 119.19 Mbit/s
95th percentile per-packet one-way delay: 1.913 ms
Loss rate: 0.19%
Run 4: Report of Verus — Data Link
Run 5: Statistics of Verus

Start at: 2018-08-10 03:21:31
End at: 2018-08-10 03:22:01
Local clock offset: -0.309 ms
Remote clock offset: 0.113 ms

# Below is generated by plot.py at 2018-08-10 08:11:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 342.77 Mbit/s
95th percentile per-packet one-way delay: 4.972 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 229.15 Mbit/s
95th percentile per-packet one-way delay: 5.540 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 121.72 Mbit/s
95th percentile per-packet one-way delay: 3.591 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 101.21 Mbit/s
95th percentile per-packet one-way delay: 1.841 ms
Loss rate: 0.31%
Run 5: Report of Verus — Data Link

![Graph 1: Throughput vs. Time]

- **Flow 1 ingress (mean 229.15 Mbit/s)**
- **Flow 1 egress (mean 229.15 Mbit/s)**
- **Flow 2 ingress (mean 121.65 Mbit/s)**
- **Flow 2 egress (mean 121.72 Mbit/s)**
- **Flow 3 ingress (mean 101.35 Mbit/s)**
- **Flow 3 egress (mean 101.21 Mbit/s)**

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

- Flow 1 (95th percentile 5.54 ms)
- Flow 2 (95th percentile 3.59 ms)
- Flow 3 (95th percentile 1.84 ms)
Run 6: Statistics of Verus

Start at: 2018-08-10 03:48:34
End at: 2018-08-10 03:49:04
Local clock offset: -0.249 ms
Remote clock offset: 0.218 ms

# Below is generated by plot.py at 2018-08-10 08:12:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 335.26 Mbit/s
95th percentile per-packet one-way delay: 7.481 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 224.44 Mbit/s
95th percentile per-packet one-way delay: 8.143 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 143.60 Mbit/s
95th percentile per-packet one-way delay: 2.428 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 63.71 Mbit/s
95th percentile per-packet one-way delay: 2.046 ms
Loss rate: 0.50%
Run 6: Report of Verus — Data Link

![Graphs showing data link performance metrics](image-url)
Run 7: Statistics of Verus

Start at: 2018-08-10 04:15:35
End at: 2018-08-10 04:16:05
Local clock offset: -0.265 ms
Remote clock offset: 0.217 ms

# Below is generated by plot.py at 2018-08-10 08:12:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 350.11 Mbit/s
  95th percentile per-packet one-way delay: 5.224 ms
  Loss rate: 0.07%
-- Flow 1:
  Average throughput: 202.73 Mbit/s
  95th percentile per-packet one-way delay: 6.302 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 166.14 Mbit/s
  95th percentile per-packet one-way delay: 2.212 ms
  Loss rate: 0.09%
-- Flow 3:
  Average throughput: 113.02 Mbit/s
  95th percentile per-packet one-way delay: 2.053 ms
  Loss rate: 0.42%
Run 7: Report of Verus — Data Link

Graph 1: Throughput (Mbps) vs Time (s)
- Flow 1 ingress (mean 202.73 Mbps)
- Flow 1 egress (mean 202.73 Mbps)
- Flow 2 ingress (mean 166.11 Mbps)
- Flow 2 egress (mean 166.14 Mbps)
- Flow 3 ingress (mean 113.40 Mbps)
- Flow 3 egress (mean 113.02 Mbps)

Graph 2: Per-packet one-way delay (ms) vs Time (s)
- Flow 1 (95th percentile 6.30 ms)
- Flow 2 (95th percentile 2.21 ms)
- Flow 3 (95th percentile 2.05 ms)
Run 8: Statistics of Verus

Start at: 2018-08-10 04:42:37
End at: 2018-08-10 04:43:07
Local clock offset: -0.267 ms
Remote clock offset: 0.052 ms

# Below is generated by plot.py at 2018-08-10 08:12:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 276.50 Mbit/s
95th percentile per-packet one-way delay: 3.812 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 146.21 Mbit/s
95th percentile per-packet one-way delay: 5.329 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 129.38 Mbit/s
95th percentile per-packet one-way delay: 2.324 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 133.84 Mbit/s
95th percentile per-packet one-way delay: 1.618 ms
Loss rate: 0.16%
Run 8: Report of Verus — Data Link

![Graphs showing data link throughput and per-packet one-way delay over time.](image1)

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 146.21 Mbps)
  - Flow 2 ingress (mean 129.40 Mbps)
  - Flow 3 ingress (mean 133.72 Mbps)
  - Flow 1 egress (mean 146.21 Mbps)
  - Flow 2 egress (mean 129.38 Mbps)
  - Flow 3 egress (mean 133.64 Mbps)

- **Per-packet one-way delay (ms)**
  - Flow 1 (95th percentile 5.33 ms)
  - Flow 2 (95th percentile 2.32 ms)
  - Flow 3 (95th percentile 1.62 ms)
Run 9: Statistics of Verus

Start at: 2018-08-10 05:09:40
End at: 2018-08-10 05:10:10
Local clock offset: -0.94 ms
Remote clock offset: -0.515 ms

# Below is generated by plot.py at 2018-08-10 08:13:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 354.00 Mbit/s
95th percentile per-packet one-way delay: 4.817 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 219.88 Mbit/s
95th percentile per-packet one-way delay: 6.217 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 151.21 Mbit/s
95th percentile per-packet one-way delay: 1.837 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 100.88 Mbit/s
95th percentile per-packet one-way delay: 1.808 ms
Loss rate: 0.34%
Run 9: Report of Verus — Data Link

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

Throughput (Mbps):
- Flow 1 ingress (mean 219.80 Mbps)
- Flow 1 egress (mean 219.88 Mbps)
- Flow 2 ingress (mean 151.19 Mbps)
- Flow 2 egress (mean 151.21 Mbps)
- Flow 3 ingress (mean 101.02 Mbps)
- Flow 3 egress (mean 100.09 Mbps)

Delay (ms):
- Flow 1 (95th percentile 6.22 ms)
- Flow 2 (95th percentile 1.84 ms)
- Flow 3 (95th percentile 1.01 ms)
Run 10: Statistics of Verus

Start at: 2018-08-10 05:36:33
End at: 2018-08-10 05:37:03
Local clock offset: -1.149 ms
Remote clock offset: 0.001 ms

# Below is generated by plot.py at 2018-08-10 08:13:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 316.11 Mbit/s
95th percentile per-packet one-way delay: 4.931 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 188.87 Mbit/s
95th percentile per-packet one-way delay: 6.080 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 151.81 Mbit/s
95th percentile per-packet one-way delay: 2.399 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 79.78 Mbit/s
95th percentile per-packet one-way delay: 2.626 ms
Loss rate: 0.00%
Run 10: Report of Verus — Data Link

[Graph showing throughput and packet delays over time for different flows with statistical information.]
Run 1: Statistics of PCC-Vivace

Start at: 2018-08-10 01:43:58
End at: 2018-08-10 01:44:28
Local clock offset: 0.197 ms
Remote clock offset: 0.484 ms

# Below is generated by plot.py at 2018-08-10 08:13:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 236.61 Mbit/s
95th percentile per-packet one-way delay: 1.110 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 185.71 Mbit/s
95th percentile per-packet one-way delay: 1.108 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 54.64 Mbit/s
95th percentile per-packet one-way delay: 1.104 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 44.30 Mbit/s
95th percentile per-packet one-way delay: 1.120 ms
Loss rate: 0.28%
Run 1: Report of PCC-Vivace — Data Link
Run 2: Statistics of PCC-Vivace

Start at: 2018-08-10 02:10:52
End at: 2018-08-10 02:11:22
Local clock offset: -0.25 ms
Remote clock offset: 0.059 ms

# Below is generated by plot.py at 2018-08-10 08:15:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 363.48 Mbit/s
  95th percentile per-packet one-way delay: 1.115 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 249.09 Mbit/s
  95th percentile per-packet one-way delay: 1.119 ms
  Loss rate: 0.02%
-- Flow 2:
  Average throughput: 172.07 Mbit/s
  95th percentile per-packet one-way delay: 1.101 ms
  Loss rate: 0.12%
-- Flow 3:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 1.058 ms
  Loss rate: 0.00%
Run 2: Report of PCC-Vivace — Data Link
Run 3: Statistics of PCC-Vivace

Start at: 2018-08-10 02:37:53
End at: 2018-08-10 02:38:23
Local clock offset: -0.329 ms
Remote clock offset: 0.001 ms

# Below is generated by plot.py at 2018-08-10 08:16:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 345.74 Mbit/s
95th percentile per-packet one-way delay: 1.075 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 235.49 Mbit/s
95th percentile per-packet one-way delay: 1.068 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 129.11 Mbit/s
95th percentile per-packet one-way delay: 1.108 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 74.50 Mbit/s
95th percentile per-packet one-way delay: 1.107 ms
Loss rate: 0.34%
Run 3: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 235.37 Mbit/s)
- Flow 1 egress (mean 235.49 Mbit/s)
- Flow 2 ingress (mean 129.68 Mbit/s)
- Flow 2 egress (mean 129.11 Mbit/s)
- Flow 3 ingress (mean 74.58 Mbit/s)
- Flow 3 egress (mean 74.50 Mbit/s)

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

- Flow 1 (95th percentile 1.07 ms)
- Flow 2 (95th percentile 1.11 ms)
- Flow 3 (95th percentile 1.11 ms)
Run 4: Statistics of PCC-Vivace

Start at: 2018-08-10 03:04:55
End at: 2018-08-10 03:05:25
Local clock offset: -0.442 ms
Remote clock offset: 0.056 ms

# Below is generated by plot.py at 2018-08-10 08:16:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 312.75 Mbit/s
  95th percentile per-packet one-way delay: 0.933 ms
  Loss rate: 0.07%
-- Flow 1:
  Average throughput: 238.53 Mbit/s
  95th percentile per-packet one-way delay: 0.930 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 77.86 Mbit/s
  95th percentile per-packet one-way delay: 0.942 ms
  Loss rate: 0.27%
-- Flow 3:
  Average throughput: 68.21 Mbit/s
  95th percentile per-packet one-way delay: 0.950 ms
  Loss rate: 0.17%
Run 5: Statistics of PCC-Vivace

Start at: 2018-08-10 03:32:02
End at: 2018-08-10 03:32:32
Local clock offset: -0.336 ms
Remote clock offset: 0.217 ms

# Below is generated by plot.py at 2018-08-10 08:16:41
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 359.01 Mbit/s
  95th percentile per-packet one-way delay: 0.954 ms
  Loss rate: 0.04%
-- Flow 1:
  Average throughput: 241.53 Mbit/s
  95th percentile per-packet one-way delay: 0.952 ms
  Loss rate: 0.03%
-- Flow 2:
  Average throughput: 156.44 Mbit/s
  95th percentile per-packet one-way delay: 0.954 ms
  Loss rate: 0.06%
-- Flow 3:
  Average throughput: 40.81 Mbit/s
  95th percentile per-packet one-way delay: 0.965 ms
  Loss rate: 0.24%
Run 5: Report of PCC-Vivace — Data Link

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

- **Flow 1 ingress (mean 241.44 Mbit/s)**
- **Flow 1 egress (mean 241.53 Mbit/s)**
- **Flow 2 ingress (mean 156.36 Mbit/s)**
- **Flow 2 egress (mean 156.44 Mbit/s)**
- **Flow 3 ingress (mean 40.83 Mbit/s)**
- **Flow 3 egress (mean 40.81 Mbit/s)**

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

- **Flow 1 (95th percentile 0.95 ms)**
- **Flow 2 (95th percentile 0.95 ms)**
- **Flow 3 (95th percentile 0.96 ms)**
Run 6: Statistics of PCC-Vivace

Start at: 2018-08-10 03:59:01
End at: 2018-08-10 03:59:31
Local clock offset: -0.292 ms
Remote clock offset: 0.148 ms

# Below is generated by plot.py at 2018-08-10 08:16:41
# Datalink statistics
-- Total of 3 flows:
95th percentile per-packet one-way delay: 0.992 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 180.64 Mbit/s
95th percentile per-packet one-way delay: 0.983 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 156.51 Mbit/s
95th percentile per-packet one-way delay: 1.016 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 48.07 Mbit/s
95th percentile per-packet one-way delay: 0.994 ms
Loss rate: 0.38%
Run 6: Report of PCC-Vivace — Data Link

![Graph showing Throughput and Per-packet one-way delay](image)

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 180.55 Mbps)
  - Flow 1 egress (mean 180.64 Mbps)
  - Flow 2 ingress (mean 156.40 Mbps)
  - Flow 2 egress (mean 156.51 Mbps)
  - Flow 3 ingress (mean 48.16 Mbps)
  - Flow 3 egress (mean 48.07 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 0.98 ms)
  - Flow 2 (95th percentile 1.02 ms)
  - Flow 3 (95th percentile 0.99 ms)
Run 7: Statistics of PCC-Vivace

Start at: 2018-08-10 04:26:05
End at: 2018-08-10 04:26:35
Local clock offset: -0.186 ms
Remote clock offset: -0.046 ms

# Below is generated by plot.py at 2018-08-10 08:17:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 338.13 Mbit/s
95th percentile per-packet one-way delay: 1.105 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 210.46 Mbit/s
95th percentile per-packet one-way delay: 1.104 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 147.71 Mbit/s
95th percentile per-packet one-way delay: 1.107 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 89.51 Mbit/s
95th percentile per-packet one-way delay: 1.131 ms
Loss rate: 0.19%
Run 7: Report of PCC-Vivace — Data Link

[Graph showing throughput and packet delay over time for different flows with annotation of mean values for ingress and egress.]
Run 8: Statistics of PCC-Vivace

Start at: 2018-08-10 04:53:04
End at: 2018-08-10 04:53:34
Local clock offset: -0.648 ms
Remote clock offset: -0.209 ms

# Below is generated by plot.py at 2018-08-10 08:17:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 329.20 Mbit/s
95th percentile per-packet one-way delay: 0.922 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 237.13 Mbit/s
95th percentile per-packet one-way delay: 0.917 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 96.15 Mbit/s
95th percentile per-packet one-way delay: 0.926 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 85.43 Mbit/s
95th percentile per-packet one-way delay: 0.943 ms
Loss rate: 0.20%
Run 8: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 237.02 Mbit/s)
- Flow 1 egress (mean 237.13 Mbit/s)
- Flow 2 ingress (mean 96.13 Mbit/s)
- Flow 2 egress (mean 96.15 Mbit/s)
- Flow 3 ingress (mean 85.44 Mbit/s)
- Flow 3 egress (mean 85.43 Mbit/s)

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

- Flow 1 (95th percentile 0.92 ms)
- Flow 2 (95th percentile 0.93 ms)
- Flow 3 (95th percentile 0.94 ms)
Run 9: Statistics of PCC-Vivace

Start at: 2018-08-10 05:20:01
End at: 2018-08-10 05:20:31
Local clock offset: -1.052 ms
Remote clock offset: -0.55 ms

# Below is generated by plot.py at 2018-08-10 08:17:13
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 326.55 Mbit/s
  95th percentile per-packet one-way delay: 1.010 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 227.72 Mbit/s
  95th percentile per-packet one-way delay: 1.003 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 122.12 Mbit/s
  95th percentile per-packet one-way delay: 1.017 ms
  Loss rate: 0.06%
-- Flow 3:
  Average throughput: 53.52 Mbit/s
  95th percentile per-packet one-way delay: 1.018 ms
  Loss rate: 0.40%
Run 10: Statistics of PCC-Vivace

Start at: 2018-08-10 05:47:01
End at: 2018-08-10 05:47:31
Local clock offset: -1.102 ms
Remote clock offset: 0.107 ms

# Below is generated by plot.py at 2018-08-10 08:17:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 293.81 Mbit/s
95th percentile per-packet one-way delay: 1.035 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 206.76 Mbit/s
95th percentile per-packet one-way delay: 1.036 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 105.07 Mbit/s
95th percentile per-packet one-way delay: 1.020 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 52.31 Mbit/s
95th percentile per-packet one-way delay: 1.034 ms
Loss rate: 0.26%
Run 10: Report of PCC-Vivace — Data Link

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

- **Flow 1** ingress (mean 206.62 Mbit/s)
- **Flow 1** egress (mean 206.76 Mbit/s)
- **Flow 2** ingress (mean 105.04 Mbit/s)
- **Flow 2** egress (mean 105.07 Mbit/s)
- **Flow 3** ingress (mean 52.32 Mbit/s)
- **Flow 3** egress (mean 52.31 Mbit/s)

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

- **Flow 1** (95th percentile 1.04 ms)
- **Flow 2** (95th percentile 1.02 ms)
- **Flow 3** (95th percentile 1.03 ms)
Run 1: Statistics of WebRTC media

Start at: 2018-08-10 01:27:17
End at: 2018-08-10 01:27:47
Local clock offset: 0.172 ms
Remote clock offset: 0.016 ms

# Below is generated by plot.py at 2018-08-10 08:17:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.17 Mbit/s
95th percentile per-packet one-way delay: 1.127 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 1.108 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.14 Mbit/s
95th percentile per-packet one-way delay: 1.169 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 1.106 ms
Loss rate: 0.00%
Run 1: Report of WebRTC media — Data Link

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

![Graph 2: Per-packet one-way delay (ms)](image2)
Run 2: Statistics of WebRTC media

Start at: 2018-08-10 01:54:13
End at: 2018-08-10 01:54:43
Local clock offset: -0.143 ms
Remote clock offset: 0.819 ms

# Below is generated by plot.py at 2018-08-10 08:17:22
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.09 Mbit/s
  95th percentile per-packet one-way delay: 1.064 ms
  Loss rate: 0.15%
-- Flow 1:
  Average throughput: 1.52 Mbit/s
  95th percentile per-packet one-way delay: 1.047 ms
  Loss rate: 0.22%
-- Flow 2:
  Average throughput: 1.11 Mbit/s
  95th percentile per-packet one-way delay: 1.073 ms
  Loss rate: 0.11%
-- Flow 3:
  Average throughput: 0.48 Mbit/s
  95th percentile per-packet one-way delay: 1.069 ms
  Loss rate: 0.00%
Run 2: Report of WebRTC media — Data Link
Run 3: Statistics of WebRTC media

Start at: 2018-08-10 02:21:15
End at: 2018-08-10 02:21:45
Local clock offset: -0.269 ms
Remote clock offset: 0.029 ms

# Below is generated by plot.py at 2018-08-10 08:17:22
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.18 Mbit/s
  95th percentile per-packet one-way delay: 1.163 ms
  Loss rate: 0.11%
-- Flow 1:
  Average throughput: 1.56 Mbit/s
  95th percentile per-packet one-way delay: 1.156 ms
  Loss rate: 0.23%
-- Flow 2:
  Average throughput: 1.16 Mbit/s
  95th percentile per-packet one-way delay: 1.171 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.48 Mbit/s
  95th percentile per-packet one-way delay: 1.165 ms
  Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link

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

- **Flow 1 ingress (mean 1.56 Mbit/s)**
- **Flow 1 egress (mean 1.56 Mbit/s)**
- **Flow 2 ingress (mean 1.16 Mbit/s)**
- **Flow 2 egress (mean 1.16 Mbit/s)**
- **Flow 3 ingress (mean 0.48 Mbit/s)**
- **Flow 3 egress (mean 0.48 Mbit/s)**

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

- **Flow 1 (95th percentile 1.16 ms)**
- **Flow 2 (95th percentile 1.17 ms)**
- **Flow 3 (95th percentile 1.17 ms)**
Run 4: Statistics of WebRTC media

Start at: 2018-08-10 02:48:13
End at: 2018-08-10 02:48:43
Local clock offset: -0.454 ms
Remote clock offset: -0.081 ms

# Below is generated by plot.py at 2018-08-10 08:17:22
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.14 Mbit/s
  95th percentile per-packet one-way delay: 1.071 ms
  Loss rate: 0.25%
-- Flow 1:
  Average throughput: 1.51 Mbit/s
  95th percentile per-packet one-way delay: 1.071 ms
  Loss rate: 0.20%
-- Flow 2:
  Average throughput: 1.16 Mbit/s
  95th percentile per-packet one-way delay: 1.069 ms
  Loss rate: 0.28%
-- Flow 3:
  Average throughput: 0.48 Mbit/s
  95th percentile per-packet one-way delay: 1.074 ms
  Loss rate: 0.34%
Run 4: Report of WebRTC media — Data Link
Run 5: Statistics of WebRTC media

Start at: 2018-08-10 03:15:20
End at: 2018-08-10 03:15:50
Local clock offset: -0.419 ms
Remote clock offset: 0.069 ms

# Below is generated by plot.py at 2018-08-10 08:17:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.02 Mbit/s
95th percentile per-packet one-way delay: 1.051 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 1.044 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 1.15 Mbit/s
95th percentile per-packet one-way delay: 1.058 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 1.054 ms
Loss rate: 0.00%
Run 5: Report of WebRTC media — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 1.41 Mbit/s) - Flow 1 egress (mean 1.41 Mbit/s)
Flow 2 ingress (mean 1.15 Mbit/s) - Flow 2 egress (mean 1.15 Mbit/s)
Flow 3 ingress (mean 0.48 Mbit/s) - Flow 3 egress (mean 0.48 Mbit/s)

Packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 1.04 ms) - Flow 2 (95th percentile 1.06 ms) - Flow 3 (95th percentile 1.05 ms)
Run 6: Statistics of WebRTC media

Start at: 2018-08-10 03:42:20
End at: 2018-08-10 03:42:50
Local clock offset: -0.289 ms
Remote clock offset: 0.163 ms

# Below is generated by plot.py at 2018-08-10 08:17:22
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.16 Mbit/s
  95th percentile per-packet one-way delay: 1.140 ms
  Loss rate: 0.12%
-- Flow 1:
  Average throughput: 1.53 Mbit/s
  95th percentile per-packet one-way delay: 1.130 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.17 Mbit/s
  95th percentile per-packet one-way delay: 1.147 ms
  Loss rate: 0.31%
-- Flow 3:
  Average throughput: 0.47 Mbit/s
  95th percentile per-packet one-way delay: 1.146 ms
  Loss rate: 0.06%
Run 6: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 1.53 Mbit/s)
- Flow 1 egress (mean 1.53 Mbit/s)
- Flow 2 ingress (mean 1.17 Mbit/s)
- Flow 2 egress (mean 1.17 Mbit/s)
- Flow 3 ingress (mean 0.47 Mbit/s)
- Flow 3 egress (mean 0.47 Mbit/s)
Run 7: Statistics of WebRTC media

Start at: 2018-08-10 04:09:22
End at: 2018-08-10 04:09:52
Local clock offset: -0.234 ms
Remote clock offset: 0.293 ms

# Below is generated by plot.py at 2018-08-10 08:17:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.11 Mbit/s
95th percentile per-packet one-way delay: 1.095 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.52 Mbit/s
95th percentile per-packet one-way delay: 1.084 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.14 Mbit/s
95th percentile per-packet one-way delay: 1.106 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 1.090 ms
Loss rate: 0.00%
Run 7: Report of WebRTC media — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 1.52 Mbit/s)
Flow 1 egress (mean 1.52 Mbit/s)
Flow 2 ingress (mean 1.14 Mbit/s)
Flow 2 egress (mean 1.14 Mbit/s)
Flow 3 ingress (mean 0.47 Mbit/s)
Flow 3 egress (mean 0.47 Mbit/s)

Per packet round-trip delay (ms)

Time (s)

Flow 1 (95th percentile 1.08 ms)
Flow 2 (95th percentile 1.11 ms)
Flow 3 (95th percentile 1.09 ms)
Run 8: Statistics of WebRTC media

Start at: 2018-08-10 04:36:28
End at: 2018-08-10 04:36:58
Local clock offset: -0.34 ms
Remote clock offset: 0.033 ms

# Below is generated by plot.py at 2018-08-10 08:17:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.13 Mbit/s
95th percentile per-packet one-way delay: 0.963 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 1.54 Mbit/s
95th percentile per-packet one-way delay: 0.964 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 1.15 Mbit/s
95th percentile per-packet one-way delay: 0.961 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 0.961 ms
Loss rate: 0.00%
Run 9: Statistics of WebRTC media

Start at: 2018-08-10 05:03:25
End at: 2018-08-10 05:03:55
Local clock offset: -0.759 ms
Remote clock offset: -0.486 ms

# Below is generated by plot.py at 2018-08-10 08:17:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.15 Mbit/s
95th percentile per-packet one-way delay: 1.145 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 1.53 Mbit/s
95th percentile per-packet one-way delay: 1.138 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.17 Mbit/s
95th percentile per-packet one-way delay: 1.153 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 1.140 ms
Loss rate: 0.44%
Run 9: Report of WebRTC media — Data Link

Throughput (Mbit/s)

- Flow 1 ingress (mean 1.52 Mbit/s)
- Flow 1 egress (mean 1.53 Mbit/s)
- Flow 2 ingress (mean 1.17 Mbit/s)
- Flow 2 egress (mean 1.17 Mbit/s)
- Flow 3 ingress (mean 0.48 Mbit/s)
- Flow 3 egress (mean 0.48 Mbit/s)

Packet round-trip delay (ms)

- Flow 1 (95th percentile 1.14 ms)
- Flow 2 (95th percentile 1.15 ms)
- Flow 3 (95th percentile 1.14 ms)
Run 10: Statistics of WebRTC media

Start at: 2018-08-10 05:30:21
End at: 2018-08-10 05:30:51
Local clock offset: -1.172 ms
Remote clock offset: -0.137 ms

# Below is generated by plot.py at 2018-08-10 08:17:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 1.073 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 1.52 Mbit/s
95th percentile per-packet one-way delay: 1.061 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.14 Mbit/s
95th percentile per-packet one-way delay: 1.078 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 1.086 ms
Loss rate: 0.00%
Run 10: Report of WebRTC media — Data Link

![Graph showing throughput and packet delay over time for different flows. The graph illustrates the mean throughput and 95th percentile delay for each flow.]

- Flow 1 ingress (mean 1.52 Mbit/s)
- Flow 1 egress (mean 1.52 Mbit/s)
- Flow 2 ingress (mean 1.14 Mbit/s)
- Flow 2 egress (mean 1.14 Mbit/s)
- Flow 3 ingress (mean 0.55 Mbit/s)
- Flow 3 egress (mean 0.55 Mbit/s)