Pantheon Report

Generated at 2018-07-11 03:11:05 (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 @ 9250dbeec7f57193cdff1ba8c440b4e16a3ab30f0
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ 37162fe9af85249aeccac061c93e75640ef710b5
third_party/genericCC @ d0153f8e594aa89e93b032143cedbde58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dec4dfe0ecd9f90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ 6f038ed31259d366f9840f65b2c8fe8f464b1b39
third_party/pcc @ 1af9c958fa0d66d168b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08f92c4eb24f974ab
third_party/proto-quic @ 77961f1a8273a96b421bc8143ebc978f3cfe42
third_party/scream-reproduce @ f099118d1421a53131bf11ff1964974e1da3b5b2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35e6178b01e31d4a46ad18c74f9415f19a26
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2baf862121435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9d9e4735770d143a1fa2851
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>PCC-Allegro</td>
<td>10</td>
<td>596.16</td>
<td>181.56</td>
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<td>PCC-Expr</td>
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<td>208.12</td>
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<tr>
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<td>74.15</td>
<td>65.07</td>
<td>54.77</td>
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<tr>
<td>SCReAM</td>
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<td>0.22</td>
<td>0.22</td>
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<td>20.96</td>
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<td>10</td>
<td>218.07</td>
<td>192.77</td>
<td>118.02</td>
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<td>TCP Vegas</td>
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<td>237.39</td>
<td>295.57</td>
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<tr>
<td>Verus</td>
<td>10</td>
<td>182.47</td>
<td>133.92</td>
<td>104.76</td>
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<tr>
<td>PCC-Vivace</td>
<td>10</td>
<td>249.83</td>
<td>91.58</td>
<td>64.39</td>
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<tr>
<td>WebRTC media</td>
<td>10</td>
<td>1.70</td>
<td>1.21</td>
<td>0.53</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

Start at: 2018-07-10 20:33:29
End at: 2018-07-10 20:33:59
Local clock offset: 0.546 ms
Remote clock offset: 0.64 ms

# Below is generated by plot.py at 2018-07-11 01:12:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 903.92 Mbit/s
95th percentile per-packet one-way delay: 7.993 ms
Loss rate: 0.10%
-- Flow 1:
 Average throughput: 534.92 Mbit/s
 95th percentile per-packet one-way delay: 8.453 ms
 Loss rate: 0.06%
-- Flow 2:
 Average throughput: 391.79 Mbit/s
 95th percentile per-packet one-way delay: 4.604 ms
 Loss rate: 0.11%
-- Flow 3:
 Average throughput: 325.07 Mbit/s
 95th percentile per-packet one-way delay: 5.452 ms
 Loss rate: 0.25%
Run 1: Report of TCP BBR — Data Link
Run 2: Statistics of TCP BBR

Start at: 2018-07-10 21:00:26
End at: 2018-07-10 21:00:56
Local clock offset: 0.617 ms
Remote clock offset: 1.397 ms

# Below is generated by plot.py at 2018-07-11 01:12:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 895.24 Mbit/s
95th percentile per-packet one-way delay: 10.745 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 529.46 Mbit/s
95th percentile per-packet one-way delay: 11.387 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 387.82 Mbit/s
95th percentile per-packet one-way delay: 4.728 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 324.06 Mbit/s
95th percentile per-packet one-way delay: 5.567 ms
Loss rate: 0.25%
Run 2: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 529.34 Mbit/s)
- Flow 1 egress (mean 529.46 Mbit/s)
- Flow 2 ingress (mean 387.84 Mbit/s)
- Flow 2 egress (mean 387.82 Mbit/s)
- Flow 3 ingress (mean 324.20 Mbit/s)
- Flow 3 egress (mean 324.06 Mbit/s)
Run 3: Statistics of TCP BBR

End at: 2018-07-10 21:27:44
Local clock offset: 0.587 ms
Remote clock offset: 1.978 ms

# Below is generated by plot.py at 2018-07-11 01:12:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 892.82 Mbit/s
  95th percentile per-packet one-way delay: 8.707 ms
  Loss rate: 0.10%
-- Flow 1:
  Average throughput: 524.05 Mbit/s
  95th percentile per-packet one-way delay: 9.287 ms
  Loss rate: 0.06%
-- Flow 2:
  Average throughput: 392.33 Mbit/s
  95th percentile per-packet one-way delay: 4.322 ms
  Loss rate: 0.11%
-- Flow 3:
  Average throughput: 323.86 Mbit/s
  95th percentile per-packet one-way delay: 4.471 ms
  Loss rate: 0.24%
Run 3: Report of TCP BBR — Data Link

**Graph 1:**
- **Flow 1 Ingress (mean 524.03 Mbit/s)**
- **Flow 1 Egress (mean 524.05 Mbit/s)**
- **Flow 2 Ingress (mean 392.33 Mbit/s)**
- **Flow 2 Egress (mean 392.33 Mbit/s)**
- **Flow 3 Ingress (mean 323.93 Mbit/s)**
- **Flow 3 Egress (mean 323.96 Mbit/s)**

**Graph 2:**
- **Flow 1 (95th percentile 9.29 ms)**
- **Flow 2 (95th percentile 4.32 ms)**
- **Flow 3 (95th percentile 4.47 ms)**

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Run 4: Statistics of TCP BBR

Start at: 2018-07-10 21:54:19
End at: 2018-07-10 21:54:49
Local clock offset: 0.631 ms
Remote clock offset: 2.344 ms

# Below is generated by plot.py at 2018-07-11 01:12:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 908.15 Mbit/s
95th percentile per-packet one-way delay: 8.945 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 538.40 Mbit/s
95th percentile per-packet one-way delay: 9.589 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 393.40 Mbit/s
95th percentile per-packet one-way delay: 4.408 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 324.73 Mbit/s
95th percentile per-packet one-way delay: 4.447 ms
Loss rate: 0.22%
Run 4: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 538.30 Mb/s), Flow 1 egress (mean 538.40 Mb/s)
- Flow 2 ingress (mean 393.35 Mb/s), Flow 2 egress (mean 393.40 Mb/s)
- Flow 3 ingress (mean 324.79 Mb/s), Flow 3 egress (mean 324.73 Mb/s)

- Flow 1 (95th percentile 9.59 ms)
- Flow 2 (95th percentile 4.41 ms)
- Flow 3 (95th percentile 4.45 ms)
Run 5: Statistics of TCP BBR

End at: 2018-07-10 22:21:46
Local clock offset: 0.683 ms
Remote clock offset: 2.227 ms

# Below is generated by plot.py at 2018-07-11 01:12:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 896.32 Mbit/s
  95th percentile per-packet one-way delay: 12.449 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 524.51 Mbit/s
  95th percentile per-packet one-way delay: 13.098 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 396.00 Mbit/s
  95th percentile per-packet one-way delay: 4.335 ms
  Loss rate: 0.10%
-- Flow 3:
  Average throughput: 325.24 Mbit/s
  95th percentile per-packet one-way delay: 4.379 ms
  Loss rate: 0.23%
Run 5: Report of TCP BBR — Data Link
Run 6: Statistics of TCP BBR

End at: 2018-07-10 22:48:46
Local clock offset: 0.873 ms
Remote clock offset: 2.067 ms

# Below is generated by plot.py at 2018-07-11 01:12:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 908.31 Mbit/s
95th percentile per-packet one-way delay: 9.536 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 539.67 Mbit/s
95th percentile per-packet one-way delay: 9.980 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 391.47 Mbit/s
95th percentile per-packet one-way delay: 4.414 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 325.27 Mbit/s
95th percentile per-packet one-way delay: 4.422 ms
Loss rate: 0.22%
Run 6: Report of TCP BBR — Data Link

![Throughput Graph](image1)

![Delay Graph](image2)

Legend:
- Flow 1 ingress (mean 539.57 Mbit/s)
- Flow 1 egress (mean 539.67 Mbit/s)
- Flow 2 ingress (mean 391.46 Mbit/s)
- Flow 2 egress (mean 391.47 Mbit/s)
- Flow 3 ingress (mean 325.35 Mbit/s)
- Flow 3 egress (mean 325.27 Mbit/s)

Legend:
- Flow 1 (95th percentile 9.98 ms)
- Flow 2 (95th percentile 4.41 ms)
- Flow 3 (95th percentile 4.42 ms)
Run 7: Statistics of TCP BBR

Start at: 2018-07-10 23:15:13
End at: 2018-07-10 23:15:43
Local clock offset: 0.563 ms
Remote clock offset: 1.782 ms

# Below is generated by plot.py at 2018-07-11 01:12:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 905.89 Mbit/s
95th percentile per-packet one-way delay: 9.522 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 532.84 Mbit/s
95th percentile per-packet one-way delay: 9.962 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 398.39 Mbit/s
95th percentile per-packet one-way delay: 4.322 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 324.89 Mbit/s
95th percentile per-packet one-way delay: 4.349 ms
Loss rate: 0.22%
Run 7: Report of TCP BBR — Data Link

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**Throughput (Mbps)**

- **Flow 1 ingress (mean 532.64 Mbps)**
- **Flow 2 ingress (mean 398.24 Mbps)**
- **Flow 3 ingress (mean 224.81 Mbps)**
- **Flow 1 egress (mean 532.84 Mbps)**
- **Flow 2 egress (mean 398.39 Mbps)**
- **Flow 3 egress (mean 224.89 Mbps)**

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

- **Flow 1 (95th percentile 9.96 ms)**
- **Flow 2 (95th percentile 4.32 ms)**
- **Flow 3 (95th percentile 4.35 ms)**

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Run 8: Statistics of TCP BBR

Start at: 2018-07-10 23:41:56
End at: 2018-07-10 23:42:26
Local clock offset: 0.558 ms
Remote clock offset: 1.68 ms

# Below is generated by plot.py at 2018-07-11 01:12:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 889.19 Mbit/s
  95th percentile per-packet one-way delay: 12.228 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 518.24 Mbit/s
  95th percentile per-packet one-way delay: 12.485 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 395.54 Mbit/s
  95th percentile per-packet one-way delay: 4.447 ms
  Loss rate: 0.09%
-- Flow 3:
  Average throughput: 324.09 Mbit/s
  95th percentile per-packet one-way delay: 4.454 ms
  Loss rate: 0.22%
Run 8: Report of TCP BBR — Data Link

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

Legend:
- Flow 1 ingress (mean 518.15 Mbit/s)
- Flow 1 egress (mean 518.24 Mbit/s)
- Flow 2 ingress (mean 395.49 Mbit/s)
- Flow 2 egress (mean 395.56 Mbit/s)
- Flow 3 ingress (mean 324.16 Mbit/s)
- Flow 3 egress (mean 324.09 Mbit/s)
Run 9: Statistics of TCP BBR

Start at: 2018-07-11 00:08:51
End at: 2018-07-11 00:09:21
Local clock offset: 0.711 ms
Remote clock offset: 1.711 ms

# Below is generated by plot.py at 2018-07-11 01:21:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 891.66 Mbit/s
95th percentile per-packet one-way delay: 10.328 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 520.36 Mbit/s
95th percentile per-packet one-way delay: 10.787 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 396.67 Mbit/s
95th percentile per-packet one-way delay: 4.342 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 322.92 Mbit/s
95th percentile per-packet one-way delay: 4.568 ms
Loss rate: 0.23%
Run 9: Report of TCP BBR — Data Link

![Graph showing throughput over time for different flows]

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

Flow 1 ingress (mean 520.27 Mbit/s) - Flow 1 egress (mean 520.36 Mbit/s)
Flow 2 ingress (mean 396.67 Mbit/s) - Flow 2 egress (mean 396.67 Mbit/s)
Flow 3 ingress (mean 322.99 Mbit/s) - Flow 3 egress (mean 322.92 Mbit/s)

Flow 1 (95th percentile 10.79 ms) - Flow 2 (95th percentile 4.34 ms) - Flow 3 (95th percentile 4.57 ms)
Run 10: Statistics of TCP BBR

Start at: 2018-07-11 00:35:47
End at: 2018-07-11 00:36:17
Local clock offset: 0.721 ms
Remote clock offset: 1.364 ms

# Below is generated by plot.py at 2018-07-11 01:22:06
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 898.80 Mbit/s
  95th percentile per-packet one-way delay: 9.447 ms
  Loss rate: 0.07%
-- Flow 1:
  Average throughput: 529.67 Mbit/s
  95th percentile per-packet one-way delay: 9.868 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 392.99 Mbit/s
  95th percentile per-packet one-way delay: 4.360 ms
  Loss rate: 0.13%
-- Flow 3:
  Average throughput: 323.75 Mbit/s
  95th percentile per-packet one-way delay: 4.372 ms
  Loss rate: 0.31%
Run 10: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 529.32 Mbit/s)
- Flow 1 egress (mean 529.67 Mbit/s)
- Flow 2 ingress (mean 393.13 Mbit/s)
- Flow 2 egress (mean 392.99 Mbit/s)
- Flow 3 ingress (mean 324.12 Mbit/s)
- Flow 3 egress (mean 323.75 Mbit/s)

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

- Flow 1 (95th percentile 9.87 ms)
- Flow 2 (95th percentile 4.36 ms)
- Flow 3 (95th percentile 4.37 ms)
Run 1: Statistics of Copa

Start at: 2018-07-10 20:36:57
End at: 2018-07-10 20:37:27
Local clock offset: 0.596 ms
Remote clock offset: 0.769 ms

# Below is generated by plot.py at 2018-07-11 01:22:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 504.69 Mbit/s
95th percentile per-packet one-way delay: 1.286 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 292.76 Mbit/s
95th percentile per-packet one-way delay: 1.242 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 241.09 Mbit/s
95th percentile per-packet one-way delay: 1.364 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 155.39 Mbit/s
95th percentile per-packet one-way delay: 1.304 ms
Loss rate: 0.20%
Run 1: Report of Copa — Data Link
Run 2: Statistics of Copa

Start at: 2018-07-10 21:03:51
End at: 2018-07-10 21:04:21
Local clock offset: 0.642 ms
Remote clock offset: 1.462 ms

# Below is generated by plot.py at 2018-07-11 01:22:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 482.31 Mbit/s
95th percentile per-packet one-way delay: 1.191 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 293.52 Mbit/s
95th percentile per-packet one-way delay: 1.186 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 226.64 Mbit/s
95th percentile per-packet one-way delay: 1.181 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 113.83 Mbit/s
95th percentile per-packet one-way delay: 1.282 ms
Loss rate: 0.21%
Run 2: Report of Copa — Data Link

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

Legend:
- Flow 1 ingress (mean 293.40 Mbit/s)
- Flow 1 egress (mean 293.52 Mbit/s)
- Flow 2 ingress (mean 226.63 Mbit/s)
- Flow 2 egress (mean 226.64 Mbit/s)
- Flow 3 ingress (mean 113.85 Mbit/s)
- Flow 3 egress (mean 113.83 Mbit/s)
Run 3: Statistics of Copa

Start at: 2018-07-10 21:30:40
End at: 2018-07-10 21:31:10
Local clock offset: 0.659 ms
Remote clock offset: 1.973 ms

# Below is generated by plot.py at 2018-07-11 01:22:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 515.16 Mbit/s
95th percentile per-packet one-way delay: 1.279 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 304.75 Mbit/s
95th percentile per-packet one-way delay: 1.371 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 244.39 Mbit/s
95th percentile per-packet one-way delay: 1.184 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 144.02 Mbit/s
95th percentile per-packet one-way delay: 1.206 ms
Loss rate: 0.21%
Run 3: Report of Copa — Data Link

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

- Flow 1 ingress (mean 304.60 Mbit/s)
- Flow 1 egress (mean 304.75 Mbit/s)
- Flow 2 ingress (mean 244.26 Mbit/s)
- Flow 2 egress (mean 244.39 Mbit/s)
- Flow 3 ingress (mean 143.99 Mbit/s)
- Flow 3 egress (mean 144.02 Mbit/s)
Run 4: Statistics of Copa

Start at: 2018-07-10 21:57:44
End at: 2018-07-10 21:58:14
Local clock offset: 0.541 ms
Remote clock offset: 2.335 ms

# Below is generated by plot.py at 2018-07-11 01:22:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 506.80 Mbit/s
95th percentile per-packet one-way delay: 1.072 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 316.61 Mbit/s
95th percentile per-packet one-way delay: 1.075 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 233.26 Mbit/s
95th percentile per-packet one-way delay: 1.050 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 105.23 Mbit/s
95th percentile per-packet one-way delay: 1.157 ms
Loss rate: 0.21%
Run 4: Report of Copa — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 316.48 Mbit/s)
Flow 1 egress (mean 316.61 Mbit/s)
Flow 2 ingress (mean 233.18 Mbit/s)
Flow 2 egress (mean 233.26 Mbit/s)
Flow 3 ingress (mean 105.25 Mbit/s)
Flow 3 egress (mean 105.23 Mbit/s)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 1.07 ms)
Flow 2 (95th percentile 1.05 ms)
Flow 3 (95th percentile 1.16 ms)
Run 5: Statistics of Copa

Start at: 2018-07-10 22:24:42
End at: 2018-07-10 22:25:12
Local clock offset: 0.721 ms
Remote clock offset: 2.264 ms

# Below is generated by plot.py at 2018-07-11 01:22:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 492.40 Mbit/s
  95th percentile per-packet one-way delay: 1.038 ms
  Loss rate: 0.04%
-- Flow 1:
  Average throughput: 294.33 Mbit/s
  95th percentile per-packet one-way delay: 1.029 ms
  Loss rate: 0.02%
-- Flow 2:
  Average throughput: 220.70 Mbit/s
  95th percentile per-packet one-way delay: 1.029 ms
  Loss rate: 0.02%
-- Flow 3:
  Average throughput: 154.42 Mbit/s
  95th percentile per-packet one-way delay: 1.128 ms
  Loss rate: 0.24%
Run 5: Report of Copa — Data Link

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

- Flow 1 ingress (mean 294.20 Mbit/s)
- Flow 1 egress (mean 294.33 Mbit/s)
- Flow 2 ingress (mean 220.51 Mbit/s)
- Flow 2 egress (mean 220.70 Mbit/s)
- Flow 3 ingress (mean 154.50 Mbit/s)
- Flow 3 egress (mean 154.42 Mbit/s)

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

- Blue: Flow 1 (95th percentile 1.03 ms)
- Green: Flow 2 (95th percentile 1.03 ms)
- Red: Flow 3 (95th percentile 1.13 ms)
Run 6: Statistics of Copa

Start at: 2018-07-10 22:51:44  
End at: 2018-07-10 22:52:14  
Local clock offset: 0.841 ms  
Remote clock offset: 2.034 ms

# Below is generated by plot.py at 2018-07-11 01:22:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 467.86 Mbit/s  
95th percentile per-packet one-way delay: 1.386 ms  
Loss rate: 0.04\%

-- Flow 1:
Average throughput: 271.48 Mbit/s  
95th percentile per-packet one-way delay: 1.288 ms  
Loss rate: 0.02\%

-- Flow 2:
Average throughput: 228.82 Mbit/s  
95th percentile per-packet one-way delay: 1.784 ms  
Loss rate: 0.05\%

-- Flow 3:
Average throughput: 132.99 Mbit/s  
95th percentile per-packet one-way delay: 1.218 ms  
Loss rate: 0.12\%
Run 6: Report of Copa — Data Link
Run 7: Statistics of Copa

Start at: 2018-07-10 23:18:38
End at: 2018-07-10 23:19:08
Local clock offset: 0.614 ms
Remote clock offset: 1.777 ms

# Below is generated by plot.py at 2018-07-11 01:31:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 470.71 Mbit/s
  95th percentile per-packet one-way delay: 1.154 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 279.37 Mbit/s
  95th percentile per-packet one-way delay: 1.157 ms
  Loss rate: 0.04%
-- Flow 2:
  Average throughput: 212.40 Mbit/s
  95th percentile per-packet one-way delay: 1.122 ms
  Loss rate: 0.07%
-- Flow 3:
  Average throughput: 150.26 Mbit/s
  95th percentile per-packet one-way delay: 1.235 ms
  Loss rate: 0.11%
Run 7: Report of Copa — Data Link
Run 8: Statistics of Copa

Start at: 2018-07-10 23:45:21
End at: 2018-07-10 23:45:51
Local clock offset: 0.581 ms
Remote clock offset: 1.698 ms

# Below is generated by plot.py at 2018-07-11 01:32:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 487.50 Mbit/s
95th percentile per-packet one-way delay: 1.160 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 280.57 Mbit/s
95th percentile per-packet one-way delay: 1.159 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 238.45 Mbit/s
95th percentile per-packet one-way delay: 1.122 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 145.44 Mbit/s
95th percentile per-packet one-way delay: 1.330 ms
Loss rate: 0.41%
Run 8: Report of Copa — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 280.44 Mbps)
- Flow 1 egress (mean 280.57 Mbps)
- Flow 2 ingress (mean 238.35 Mbps)
- Flow 2 egress (mean 238.45 Mbps)
- Flow 3 ingress (mean 145.73 Mbps)
- Flow 3 egress (mean 145.44 Mbps)

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

- Flow 1 (95th percentile 1.16 ms)
- Flow 2 (95th percentile 1.12 ms)
- Flow 3 (95th percentile 1.33 ms)
Run 9: Statistics of Copa

Start at: 2018-07-11 00:12:18
End at: 2018-07-11 00:12:48
Local clock offset: 0.748 ms
Remote clock offset: 1.636 ms

# Below is generated by plot.py at 2018-07-11 01:32:03
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 483.87 Mbit/s
  95th percentile per-packet one-way delay: 1.174 ms
  Loss rate: 0.06%
-- Flow 1:
  Average throughput: 291.40 Mbit/s
  95th percentile per-packet one-way delay: 1.175 ms
  Loss rate: 0.02%
-- Flow 2:
  Average throughput: 226.58 Mbit/s
  95th percentile per-packet one-way delay: 1.135 ms
  Loss rate: 0.01%
-- Flow 3:
  Average throughput: 125.66 Mbit/s
  95th percentile per-packet one-way delay: 1.280 ms
  Loss rate: 0.46%
Run 9: Report of Copa — Data Link
Run 10: Statistics of Copa

Start at: 2018-07-11 00:39:13
End at: 2018-07-11 00:39:43
Local clock offset: 0.698 ms
Remote clock offset: 1.359 ms

# Below is generated by plot.py at 2018-07-11 01:32:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 518.76 Mbit/s
  95th percentile per-packet one-way delay: 1.202 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 308.66 Mbit/s
  95th percentile per-packet one-way delay: 1.209 ms
  Loss rate: 0.03%
-- Flow 2:
  Average throughput: 253.33 Mbit/s
  95th percentile per-packet one-way delay: 1.170 ms
  Loss rate: 0.06%
-- Flow 3:
  Average throughput: 124.99 Mbit/s
  95th percentile per-packet one-way delay: 1.238 ms
  Loss rate: 0.24%
Run 10: Report of Copa — Data Link

Throughput vs Time

- Flow 1 ingress (mean 308.53 Mbit/s)
- Flow 1 egress (mean 308.66 Mbit/s)
- Flow 2 ingress (mean 253.25 Mbit/s)
- Flow 2 egress (mean 253.33 Mbit/s)
- Flow 3 ingress (mean 126.07 Mbit/s)
- Flow 3 egress (mean 124.99 Mbit/s)

Packet Delay vs Time

- Flow 1 (95th percentile 1.21 ms)
- Flow 2 (95th percentile 1.17 ms)
- Flow 3 (95th percentile 1.24 ms)
Run 1: Statistics of TCP Cubic

Start at: 2018-07-10 20:26:50
End at: 2018-07-10 20:27:20
Local clock offset: 0.705 ms
Remote clock offset: 0.431 ms

# Below is generated by plot.py at 2018-07-11 01:32:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 708.96 Mbit/s
95th percentile per-packet one-way delay: 4.598 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 380.28 Mbit/s
95th percentile per-packet one-way delay: 4.437 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 343.93 Mbit/s
95th percentile per-packet one-way delay: 4.607 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 299.41 Mbit/s
95th percentile per-packet one-way delay: 4.760 ms
Loss rate: 0.21%
Run 1: Report of TCP Cubic — Data Link

![Throughput Graph]

![One-Way Delay Graph]

Legend:
- Flow 1 ingress (mean 380.26 Mbit/s)
- Flow 1 egress (mean 380.28 Mbit/s)
- Flow 2 ingress (mean 343.94 Mbit/s)
- Flow 2 egress (mean 343.93 Mbit/s)
- Flow 3 ingress (mean 299.45 Mbit/s)
- Flow 3 egress (mean 299.41 Mbit/s)

- Flow 1 (95th percentile 4.44 ms)
- Flow 2 (95th percentile 4.61 ms)
- Flow 3 (95th percentile 4.76 ms)
Run 2: Statistics of TCP Cubic

Start at: 2018-07-10 20:53:48
End at: 2018-07-10 20:54:18
Local clock offset: 0.584 ms
Remote clock offset: 1.216 ms

# Below is generated by plot.py at 2018-07-11 01:32:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 772.71 Mbit/s
95th percentile per-packet one-way delay: 9.412 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 402.15 Mbit/s
95th percentile per-packet one-way delay: 10.845 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 379.50 Mbit/s
95th percentile per-packet one-way delay: 4.393 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 354.00 Mbit/s
95th percentile per-packet one-way delay: 4.447 ms
Loss rate: 0.23%
Run 2: Report of TCP Cubic — Data Link

![Graph 1: Throughput over time]

- Flow 1 ingress (mean 402.04 Mbit/s)
- Flow 1 egress (mean 402.15 Mbit/s)
- Flow 2 ingress (mean 379.49 Mbit/s)
- Flow 2 egress (mean 379.50 Mbit/s)
- Flow 3 ingress (mean 354.13 Mbit/s)
- Flow 3 egress (mean 354.00 Mbit/s)

![Graph 2: Per packet one way delay over time]

- Flow 1 (95th percentile 10.85 ms)
- Flow 2 (95th percentile 4.39 ms)
- Flow 3 (95th percentile 4.45 ms)
Run 3: Statistics of TCP Cubic

Start at: 2018-07-10 21:20:35
End at: 2018-07-10 21:21:05
Local clock offset: 0.593 ms
Remote clock offset: 1.825 ms

# Below is generated by plot.py at 2018-07-11 01:32:53
# Datalink statistics
-- Total of 3 flows:  
Average throughput: 809.34 Mbit/s
95th percentile per-packet one-way delay: 4.311 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 451.90 Mbit/s
95th percentile per-packet one-way delay: 6.407 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 377.44 Mbit/s
95th percentile per-packet one-way delay: 4.288 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 318.67 Mbit/s
95th percentile per-packet one-way delay: 4.301 ms
Loss rate: 0.24%
Run 3: Report of TCP Cubic — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 451.84 Mbps)
Flow 1 egress (mean 451.90 Mbps)
Flow 2 ingress (mean 377.45 Mbps)
Flow 2 egress (mean 377.44 Mbps)
Flow 3 ingress (mean 318.72 Mbps)
Flow 3 egress (mean 318.67 Mbps)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 6.41 ms)
Flow 2 (95th percentile 4.29 ms)
Flow 3 (95th percentile 4.30 ms)
Run 4: Statistics of TCP Cubic

Start at: 2018-07-10 21:47:40
End at: 2018-07-10 21:48:10
Local clock offset: 0.639 ms
Remote clock offset: 2.326 ms

# Below is generated by plot.py at 2018-07-11 01:32:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 806.01 Mbit/s
95th percentile per-packet one-way delay: 4.350 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 428.75 Mbit/s
95th percentile per-packet one-way delay: 4.315 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 401.45 Mbit/s
95th percentile per-packet one-way delay: 4.358 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 331.44 Mbit/s
95th percentile per-packet one-way delay: 4.417 ms
Loss rate: 0.24%
Run 4: Report of TCP Cubic — Data Link

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

Legend: Flow 1 ingress (mean 428.67 Mbps), Flow 1 egress (mean 428.75 Mbps), Flow 2 ingress (mean 401.46 Mbps), Flow 2 egress (mean 401.45 Mbps), Flow 3 ingress (mean 331.56 Mbps), Flow 3 egress (mean 331.44 Mbps).
Run 5: Statistics of TCP Cubic

Start at: 2018-07-10 22:14:33
End at: 2018-07-10 22:15:03
Local clock offset: 0.743 ms
Remote clock offset: 2.271 ms

# Below is generated by plot.py at 2018-07-11 01:39:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 848.20 Mbit/s
95th percentile per-packet one-way delay: 9.708 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 477.16 Mbit/s
95th percentile per-packet one-way delay: 10.203 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 404.54 Mbit/s
95th percentile per-packet one-way delay: 4.362 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 304.93 Mbit/s
95th percentile per-packet one-way delay: 4.358 ms
Loss rate: 0.25%
Run 5: Report of TCP Cubic — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 476.99 Mbps)
Flow 1 egress (mean 477.16 Mbps)
Flow 2 ingress (mean 404.39 Mbps)
Flow 2 egress (mean 404.54 Mbps)
Flow 3 ingress (mean 304.91 Mbps)
Flow 3 egress (mean 304.93 Mbps)

Packet end-to-end delay (ms)

Time (s)

Flow 1 (95th percentile 10.20 ms)
Flow 2 (95th percentile 4.36 ms)
Flow 3 (95th percentile 4.36 ms)
Run 6: Statistics of TCP Cubic

Start at: 2018-07-10 22:41:35
End at: 2018-07-10 22:42:05
Local clock offset: 0.901 ms
Remote clock offset: 2.122 ms

# Below is generated by plot.py at 2018-07-11 01:40:08
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 861.10 Mbit/s
  95th percentile per-packet one-way delay: 10.797 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 494.94 Mbit/s
  95th percentile per-packet one-way delay: 11.220 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 391.31 Mbit/s
  95th percentile per-packet one-way delay: 4.400 ms
  Loss rate: 0.10%
-- Flow 3:
  Average throughput: 318.76 Mbit/s
  95th percentile per-packet one-way delay: 4.412 ms
  Loss rate: 0.22%
Run 6: Report of TCP Cubic — Data Link
Run 7: Statistics of TCP Cubic

Start at: 2018-07-10 23:08:33
End at: 2018-07-10 23:09:03
Local clock offset: 0.714 ms
Remote clock offset: 1.924 ms

# Below is generated by plot.py at 2018-07-11 01:40:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 812.13 Mbit/s
95th percentile per-packet one-way delay: 4.363 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 446.40 Mbit/s
95th percentile per-packet one-way delay: 4.415 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 390.56 Mbit/s
95th percentile per-packet one-way delay: 4.327 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 318.54 Mbit/s
95th percentile per-packet one-way delay: 4.375 ms
Loss rate: 0.23%
Run 7: Report of TCP Cubic — Data Link
Run 8: Statistics of TCP Cubic

Start at: 2018-07-10 23:35:21
End at: 2018-07-10 23:35:51
Local clock offset: 0.538 ms
Remote clock offset: 1.824 ms

# Below is generated by plot.py at 2018-07-11 01:40:08
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 811.00 Mbit/s
  95th percentile per-packet one-way delay: 4.293 ms
  Loss rate: 0.09%
-- Flow 1:
  Average throughput: 439.57 Mbit/s
  95th percentile per-packet one-way delay: 4.274 ms
  Loss rate: 0.06%
-- Flow 2:
  Average throughput: 398.49 Mbit/s
  95th percentile per-packet one-way delay: 4.302 ms
  Loss rate: 0.09%
-- Flow 3:
  Average throughput: 318.38 Mbit/s
  95th percentile per-packet one-way delay: 4.308 ms
  Loss rate: 0.24%
Run 8: Report of TCP Cubic — Data Link

![Graph of Throughput vs. Time]

![Graph of Per-packet End-to-end Delay vs. Time]

Legend:
- Flow 1 ingress (mean 439.53 Mbit/s)
- Flow 1 egress (mean 439.57 Mbit/s)
- Flow 2 ingress (mean 398.47 Mbit/s)
- Flow 2 egress (mean 398.49 Mbit/s)
- Flow 3 ingress (mean 318.43 Mbit/s)
- Flow 3 egress (mean 318.38 Mbit/s)
Run 9: Statistics of TCP Cubic

Start at: 2018-07-11 00:02:10
End at: 2018-07-11 00:02:40
Local clock offset: 0.625 ms
Remote clock offset: 1.652 ms

# Below is generated by plot.py at 2018-07-11 01:40:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 853.09 Mbit/s
95th percentile per-packet one-way delay: 4.398 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 482.75 Mbit/s
95th percentile per-packet one-way delay: 4.384 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 397.49 Mbit/s
95th percentile per-packet one-way delay: 4.407 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 318.77 Mbit/s
95th percentile per-packet one-way delay: 4.406 ms
Loss rate: 0.22%
Run 9: Report of TCP Cubic — Data Link

![Throughput Graph](image1)

![Packet Delay Graph](image2)

- Flow 1 ingress (mean 482.73 Mbit/s)
- Flow 1 egress (mean 482.75 Mbit/s)
- Flow 2 ingress (mean 397.44 Mbit/s)
- Flow 2 egress (mean 397.49 Mbit/s)
- Flow 3 ingress (mean 318.85 Mbit/s)
- Flow 3 egress (mean 318.77 Mbit/s)

Flow 1 (95th percentile 4.38 ms)
Flow 2 (95th percentile 4.41 ms)
Flow 3 (95th percentile 4.41 ms)
Run 10: Statistics of TCP Cubic

Start at: 2018-07-11 00:29:10  
End at: 2018-07-11 00:29:40  
Local clock offset: 0.849 ms  
Remote clock offset: 1.556 ms

# Below is generated by plot.py at 2018-07-11 01:40:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 818.76 Mbit/s
95th percentile per-packet one-way delay: 4.346 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 446.09 Mbit/s
95th percentile per-packet one-way delay: 4.373 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 400.79 Mbit/s
95th percentile per-packet one-way delay: 4.324 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 318.70 Mbit/s
95th percentile per-packet one-way delay: 4.353 ms
Loss rate: 0.23%
Run 10: Report of TCP Cubic — Data Link

![Graph showing throughput and packet delay over time for different flows.]
Run 1: Statistics of FillP

Start at: 2018-07-10 20:31:46
End at: 2018-07-10 20:32:16
Local clock offset: 0.624 ms
Remote clock offset: 0.566 ms

# Below is generated by plot.py at 2018-07-11 01:44:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 937.50 Mbit/s
95th percentile per-packet one-way delay: 4.617 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 580.05 Mbit/s
95th percentile per-packet one-way delay: 4.244 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 396.44 Mbit/s
95th percentile per-packet one-way delay: 4.687 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 283.92 Mbit/s
95th percentile per-packet one-way delay: 4.980 ms
Loss rate: 0.30%
Run 1: Report of FillP — Data Link

Graph showing throughput and packet delay over time for different flows.
Run 2: Statistics of FillP

Start at: 2018-07-10 20:58:44
End at: 2018-07-10 20:59:14
Local clock offset: 0.606 ms
Remote clock offset: 1.369 ms

# Below is generated by plot.py at 2018-07-11 01:44:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 883.15 Mbit/s
95th percentile per-packet one-way delay: 4.845 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 521.52 Mbit/s
95th percentile per-packet one-way delay: 4.661 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 394.74 Mbit/s
95th percentile per-packet one-way delay: 4.862 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 300.01 Mbit/s
95th percentile per-packet one-way delay: 5.019 ms
Loss rate: 0.40%
Run 2: Report of FillP — Data Link

Throughput (Mbps)

Time (s)

0 5 10 15 20 25 30

Flow 1 ingress (mean 521.58 Mbps) — Flow 1 egress (mean 521.52 Mbps)
Flow 2 ingress (mean 394.97 Mbps) — Flow 2 egress (mean 394.74 Mbps)
Flow 3 ingress (mean 300.58 Mbps) — Flow 3 egress (mean 300.03 Mbps)

Per-packet one-way delay (ms)

Time (s)

0 5 10 15 20 25 30

Flow 1 (95th percentile 4.66 ms) — Flow 2 (95th percentile 4.86 ms) — Flow 3 (95th percentile 5.02 ms)
Run 3: Statistics of FillP

Start at: 2018-07-10 21:25:30
End at: 2018-07-10 21:26:00
Local clock offset: 0.588 ms
Remote clock offset: 1.956 ms

# Below is generated by plot.py at 2018-07-11 01:52:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 938.31 Mbit/s
95th percentile per-packet one-way delay: 4.787 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 587.48 Mbit/s
95th percentile per-packet one-way delay: 4.583 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 386.85 Mbit/s
95th percentile per-packet one-way delay: 4.838 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 282.98 Mbit/s
95th percentile per-packet one-way delay: 4.949 ms
Loss rate: 0.35%
Run 3: Report of FillP — Data Link

![Graph of throughput and packet size over time](image)

- **Throughput** (Mbps):
  - Flow 1 ingress (mean 587.60 Mbps)
  - Flow 1 egress (mean 587.48 Mbps)
  - Flow 2 ingress (mean 387.11 Mbps)
  - Flow 2 egress (mean 386.85 Mbps)
  - Flow 3 ingress (mean 283.38 Mbps)
  - Flow 3 egress (mean 282.98 Mbps)

- **Per-packet size (ms):**
  - Flow 1 (95th percentile 4.58 ms)
  - Flow 2 (95th percentile 4.84 ms)
  - Flow 3 (95th percentile 4.95 ms)
Run 4: Statistics of FillP

Start at: 2018-07-10 21:52:36
End at: 2018-07-10 21:53:06
Local clock offset: 0.525 ms
Remote clock offset: 2.326 ms

# Below is generated by plot.py at 2018-07-11 01:52:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 938.48 Mbit/s
95th percentile per-packet one-way delay: 3.804 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 586.05 Mbit/s
95th percentile per-packet one-way delay: 3.825 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 379.21 Mbit/s
95th percentile per-packet one-way delay: 3.790 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 302.28 Mbit/s
95th percentile per-packet one-way delay: 3.795 ms
Loss rate: 0.24%
Run 4: Report of FillP — Data Link

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

Legend:
- Blue dashed line: Flow 1 ingress (mean 585.99 Mbps) and egress (mean 586.00 Mbps)
- Green dotted line: Flow 2 ingress (mean 579.24 Mbps) and egress (mean 379.21 Mbps)
- Red dotted line: Flow 3 ingress (mean 302.38 Mbps) and egress (mean 302.28 Mbps)

- Flow 1 (95th percentile 3.83 ms)
- Flow 2 (95th percentile 3.79 ms)
- Flow 3 (95th percentile 3.79 ms)
Run 5: Statistics of FillP

End at: 2018-07-10 22:20:02
Local clock offset: 0.758 ms
Remote clock offset: 2.239 ms

# Below is generated by plot.py at 2018-07-11 01:52:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 927.87 Mbit/s
  95th percentile per-packet one-way delay: 18.791 ms
  Loss rate: 0.74%
-- Flow 1:
  Average throughput: 571.23 Mbit/s
  95th percentile per-packet one-way delay: 29.389 ms
  Loss rate: 1.12%
-- Flow 2:
  Average throughput: 388.86 Mbit/s
  95th percentile per-packet one-way delay: 3.844 ms
  Loss rate: 0.09%
-- Flow 3:
  Average throughput: 296.35 Mbit/s
  95th percentile per-packet one-way delay: 3.867 ms
  Loss rate: 0.24%
Run 5: Report of FillP — Data Link

![Graph of Throughput vs Time]

- Flow 1 Ingress (mean 577.18 Mbit/s)
- Flow 1 Egress (mean 571.23 Mbit/s)
- Flow 2 Ingress (mean 388.71 Mbit/s)
- Flow 2 Egress (mean 388.86 Mbit/s)
- Flow 3 Ingress (mean 296.29 Mbit/s)
- Flow 3 Egress (mean 296.35 Mbit/s)

![Graph of Per-packet round trip delays vs Time]

- Flow 1 (95th percentile 29.39 ms)
- Flow 2 (95th percentile 3.84 ms)
- Flow 3 (95th percentile 3.87 ms)
Run 6: Statistics of FillP

Start at: 2018-07-10 22:46:34
End at: 2018-07-10 22:47:04
Local clock offset: 0.893 ms
Remote clock offset: 2.071 ms

# Below is generated by plot.py at 2018-07-11 01:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 879.38 Mbit/s
95th percentile per-packet one-way delay: 3.834 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 520.20 Mbit/s
95th percentile per-packet one-way delay: 3.744 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 389.76 Mbit/s
95th percentile per-packet one-way delay: 3.825 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 302.19 Mbit/s
95th percentile per-packet one-way delay: 3.941 ms
Loss rate: 0.22%
Run 6: Report of FillP — Data Link

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

- Flow 1 Ingress (mean 520.10 Mbit/s)
- Flow 1 Egress (mean 520.20 Mbit/s)
- Flow 2 Ingress (mean 389.72 Mbit/s)
- Flow 2 Egress (mean 389.76 Mbit/s)
- Flow 3 Ingress (mean 302.30 Mbit/s)
- Flow 3 Egress (mean 302.19 Mbit/s)

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

- Flow 1 (95th percentile 3.74 ms)
- Flow 2 (95th percentile 3.83 ms)
- Flow 3 (95th percentile 3.94 ms)
Run 7: Statistics of FillP

Start at: 2018-07-10 23:13:30
End at: 2018-07-10 23:14:00
Local clock offset: 0.653 ms
Remote clock offset: 1.794 ms

# Below is generated by plot.py at 2018-07-11 01:53:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 938.79 Mbit/s
95th percentile per-packet one-way delay: 3.839 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 580.08 Mbit/s
95th percentile per-packet one-way delay: 3.798 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 393.52 Mbit/s
95th percentile per-packet one-way delay: 3.807 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 293.02 Mbit/s
95th percentile per-packet one-way delay: 3.926 ms
Loss rate: 0.22%
Run 7: Report of FillP — Data Link

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

- Flow 1 ingress (mean 579.92 Mbit/s)
- Flow 1 egress (mean 580.98 Mbit/s)
- Flow 2 ingress (mean 393.47 Mbit/s)
- Flow 2 egress (mean 393.52 Mbit/s)
- Flow 3 ingress (mean 293.13 Mbit/s)
- Flow 3 egress (mean 293.02 Mbit/s)
Run 8: Statistics of FillP

Start at: 2018-07-10 23:40:14
End at: 2018-07-10 23:40:44
Local clock offset: 0.453 ms
Remote clock offset: 1.697 ms

# Below is generated by plot.py at 2018-07-11 01:53:32
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 878.09 Mbit/s
  95th percentile per-packet one-way delay: 5.285 ms
  Loss rate: 0.09%
-- Flow 1:
  Average throughput: 516.86 Mbit/s
  95th percentile per-packet one-way delay: 6.626 ms
  Loss rate: 0.06%
-- Flow 2:
  Average throughput: 390.68 Mbit/s
  95th percentile per-packet one-way delay: 3.697 ms
  Loss rate: 0.09%
-- Flow 3:
  Average throughput: 304.71 Mbit/s
  95th percentile per-packet one-way delay: 4.013 ms
  Loss rate: 0.22%
Run 8: Report of FillP — Data Link

**Graph 1:**
- X-axis: Time (s)
- Y-axis: Throughput (Mbps)
- Legend:
  - Flow 1 ingress (mean 516.63 Mbps)
  - Flow 1 egress (mean 516.66 Mbps)
  - Flow 2 ingress (mean 590.61 Mbps)
  - Flow 2 egress (mean 590.66 Mbps)
  - Flow 3 ingress (mean 304.73 Mbps)
  - Flow 3 egress (mean 304.71 Mbps)

**Graph 2:**
- X-axis: Time (s)
- Y-axis: Per-packet one-way delay (ms)
- Legend:
  - Flow 1 (95th percentile 6.63 ms)
  - Flow 2 (95th percentile 3.70 ms)
  - Flow 3 (95th percentile 4.01 ms)
Run 9: Statistics of FillP

Start at: 2018-07-11 00:07:07
End at: 2018-07-11 00:07:37
Local clock offset: 0.696 ms
Remote clock offset: 1.699 ms

# Below is generated by plot.py at 2018-07-11 01:57:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 935.71 Mbit/s
95th percentile per-packet one-way delay: 3.867 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 577.52 Mbit/s
95th percentile per-packet one-way delay: 3.860 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 391.05 Mbit/s
95th percentile per-packet one-way delay: 3.789 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 297.24 Mbit/s
95th percentile per-packet one-way delay: 4.109 ms
Loss rate: 0.24%
Run 9: Report of FillP — Data Link

Throughput (Mbps):

- Flow 1 ingress (mean 577.37 Mbps)
- Flow 1 egress (mean 577.52 Mbps)
- Flow 2 ingress (mean 390.92 Mbps)
- Flow 2 egress (mean 390.05 Mbps)
- Flow 3 ingress (mean 297.23 Mbps)
- Flow 3 egress (mean 297.24 Mbps)

Per-packet one-way delay (ms):

- Flow 1 (95th percentile 3.86 ms)
- Flow 2 (95th percentile 3.79 ms)
- Flow 3 (95th percentile 4.11 ms)
Run 10: Statistics of FillP

Start at: 2018-07-11 00:34:04
End at: 2018-07-11 00:34:34
Local clock offset: 0.843 ms
Remote clock offset: 1.404 ms

# Below is generated by plot.py at 2018-07-11 01:58:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 938.40 Mbit/s
95th percentile per-packet one-way delay: 3.850 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 578.33 Mbit/s
95th percentile per-packet one-way delay: 3.791 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 390.96 Mbit/s
95th percentile per-packet one-way delay: 3.890 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 301.58 Mbit/s
95th percentile per-packet one-way delay: 3.894 ms
Loss rate: 0.23%
Run 10: Report of FillIP — Data Link

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

- Flow 1 ingress (mean 578.25 Mbps)
- Flow 1 egress (mean 578.33 Mbps)
- Flow 2 ingress (mean 390.88 Mbps)
- Flow 2 egress (mean 390.96 Mbps)
- Flow 3 ingress (mean 301.69 Mbps)
- Flow 3 egress (mean 303.58 Mbps)

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

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

Start at: 2018-07-10 20:21:57
End at: 2018-07-10 20:22:27
Local clock offset: 0.71 ms
Remote clock offset: 0.278 ms

# Below is generated by plot.py at 2018-07-11 02:04:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 936.28 Mbit/s
95th percentile per-packet one-way delay: 4.778 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 568.23 Mbit/s
95th percentile per-packet one-way delay: 4.840 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 395.59 Mbit/s
95th percentile per-packet one-way delay: 4.632 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 315.55 Mbit/s
95th percentile per-packet one-way delay: 4.867 ms
Loss rate: 0.32%
Run 1: Report of FillP-Sheep — Data Link

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

Legend:
- Blue dashed line: Flow 1 ingress (mean 568.30 Mbps)
- Blue solid line: Flow 1 egress (mean 568.23 Mbps)
- Gray dashed-dotted line: Flow 2 ingress (mean 395.72 Mbps)
- Gray solid line: Flow 2 egress (mean 395.59 Mbps)
- Red dashed line: Flow 3 ingress (mean 315.85 Mbps)
- Red solid line: Flow 3 egress (mean 315.55 Mbps)

Legend for delay:
- Flow 1: 95th percentile 4.84 ms
- Flow 2: 95th percentile 4.63 ms
- Flow 3: 95th percentile 4.87 ms
Run 2: Statistics of FillP-Sheep

Start at: 2018-07-10 20:48:58
End at: 2018-07-10 20:49:28
Local clock offset: 0.57 ms
Remote clock offset: 1.088 ms

# Below is generated by plot.py at 2018-07-11 02:04:48
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 913.81 Mbit/s
  95th percentile per-packet one-way delay: 37.523 ms
  Loss rate: 1.84%
-- Flow 1:
  Average throughput: 543.19 Mbit/s
  95th percentile per-packet one-way delay: 41.656 ms
  Loss rate: 2.92%
-- Flow 2:
  Average throughput: 398.70 Mbit/s
  95th percentile per-packet one-way delay: 4.891 ms
  Loss rate: 0.18%
-- Flow 3:
  Average throughput: 318.66 Mbit/s
  95th percentile per-packet one-way delay: 22.091 ms
  Loss rate: 0.33%
Run 2: Report of FillP-Sheep — Data Link
Run 3: Statistics of FillP-Sheep

Start at: 2018-07-10 21:15:46
End at: 2018-07-10 21:16:16
Local clock offset: 0.688 ms
Remote clock offset: 1.693 ms

# Below is generated by plot.py at 2018-07-11 02:05:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 936.91 Mbit/s
95th percentile per-packet one-way delay: 4.787 ms
Loss rate: 0.14%

-- Flow 1:
Average throughput: 567.31 Mbit/s
95th percentile per-packet one-way delay: 4.572 ms
Loss rate: 0.09%

-- Flow 2:
Average throughput: 397.40 Mbit/s
95th percentile per-packet one-way delay: 4.816 ms
Loss rate: 0.20%

-- Flow 3:
Average throughput: 316.66 Mbit/s
95th percentile per-packet one-way delay: 5.005 ms
Loss rate: 0.27%
Run 3: Report of FillP-Sheep — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 567.43 Mbps)
  - Flow 1 egress (mean 567.31 Mbps)
  - Flow 2 ingress (mean 397.75 Mbps)
  - Flow 2 egress (mean 397.40 Mbps)
  - Flow 3 ingress (mean 316.82 Mbps)
  - Flow 3 egress (mean 316.66 Mbps)

- **Delay (ms):**
  - Flow 1 (99th percentile 4.57 ms)
  - Flow 2 (99th percentile 4.82 ms)
  - Flow 3 (99th percentile 5.00 ms)
Run 4: Statistics of FillP-Sheep

End at: 2018-07-10 21:43:18
Local clock offset: 0.553 ms
Remote clock offset: 2.199 ms

# Below is generated by plot.py at 2018-07-11 02:05:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 936.27 Mbit/s
95th percentile per-packet one-way delay: 3.749 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 566.72 Mbit/s
95th percentile per-packet one-way delay: 3.620 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 398.20 Mbit/s
95th percentile per-packet one-way delay: 3.671 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 316.56 Mbit/s
95th percentile per-packet one-way delay: 7.648 ms
Loss rate: 0.23%
Run 4: Report of FillP-Sheep — Data Link

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

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 366.39 Mbps)
  - Flow 1 egress (mean 566.72 Mbps)
  - Flow 2 ingress (mean 398.13 Mbps)
  - Flow 2 egress (mean 398.20 Mbps)
  - Flow 3 ingress (mean 316.60 Mbps)
  - Flow 3 egress (mean 316.56 Mbps)

- **Per-packet one-way delay (ms)**
  - Flow 1 (95th percentile 3.62 ms)
  - Flow 2 (95th percentile 3.67 ms)
  - Flow 3 (95th percentile 7.65 ms)
Run 5: Statistics of FillP-Sheep

Start at: 2018-07-10 22:09:42  
End at: 2018-07-10 22:10:12  
Local clock offset: 0.715 ms  
Remote clock offset: 2.269 ms

# Below is generated by plot.py at 2018-07-11 02:05:32  
# Datalink statistics
-- Total of 3 flows:
Average throughput: 936.49 Mbit/s
95th percentile per-packet one-way delay: 3.970 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 568.24 Mbit/s
95th percentile per-packet one-way delay: 4.377 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 395.97 Mbit/s
95th percentile per-packet one-way delay: 3.916 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 316.89 Mbit/s
95th percentile per-packet one-way delay: 3.889 ms
Loss rate: 0.22%
Run 5: Report of FillP-Sheep — Data Link

![Graph of throughput and delay over time for different flows, showing varying performance metrics such as mean throughput and 95th percentile delay.](image-url)
Run 6: Statistics of FillP-Sheep

Start at: 2018-07-10 22:36:43
Local clock offset: 0.892 ms
Remote clock offset: 2.169 ms

# Below is generated by plot.py at 2018-07-11 02:06:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 939.64 Mbit/s
95th percentile per-packet one-way delay: 5.746 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 570.39 Mbit/s
95th percentile per-packet one-way delay: 30.895 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 398.54 Mbit/s
95th percentile per-packet one-way delay: 5.036 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 315.61 Mbit/s
95th percentile per-packet one-way delay: 5.166 ms
Loss rate: 0.46%
Run 6: Report of FillP-Sheep — Data Link

[Graph showing throughput and per-packet round-trip delay over time for different flows with specified mean speeds and 95th percentiles.]
Run 7: Statistics of FillP-Sheep

Start at: 2018-07-10 23:03:40
End at: 2018-07-10 23:04:10
Local clock offset: 0.75 ms
Remote clock offset: 1.943 ms

# Below is generated by plot.py at 2018-07-11 02:12:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 945.89 Mbit/s
  95th percentile per-packet one-way delay: 29.971 ms
  Loss rate: 0.37%
-- Flow 1:
  Average throughput: 577.80 Mbit/s
  95th percentile per-packet one-way delay: 30.779 ms
  Loss rate: 0.47%
-- Flow 2:
  Average throughput: 397.41 Mbit/s
  95th percentile per-packet one-way delay: 4.819 ms
  Loss rate: 0.16%
-- Flow 3:
  Average throughput: 313.89 Mbit/s
  95th percentile per-packet one-way delay: 4.967 ms
  Loss rate: 0.34%
Run 7: Report of FillP-Sheep — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 380.68 Mbit/s) — Flow 1 egress (mean 577.80 Mbit/s)
Flow 2 ingress (mean 397.51 Mbit/s) — Flow 2 egress (mean 397.41 Mbit/s)
Flow 3 ingress (mean 314.43 Mbit/s) — Flow 3 egress (mean 313.89 Mbit/s)

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 30.78 ms) — Flow 2 (95th percentile 4.82 ms) — Flow 3 (95th percentile 4.97 ms)
Run 8: Statistics of FillP-Sheep

Start at: 2018-07-10 23:30:29
End at: 2018-07-10 23:30:59
Local clock offset: 0.548 ms
Remote clock offset: 1.766 ms

# Below is generated by plot.py at 2018-07-11 02:12:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 947.84 Mbit/s
95th percentile per-packet one-way delay: 3.912 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 580.72 Mbit/s
95th percentile per-packet one-way delay: 3.954 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 394.83 Mbit/s
95th percentile per-packet one-way delay: 3.870 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 316.32 Mbit/s
95th percentile per-packet one-way delay: 3.918 ms
Loss rate: 0.23%
Run 8: Report of FillP-Sheep — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 580.91 Mbps)
  - Flow 1 egress (mean 580.72 Mbps)
  - Flow 2 ingress (mean 394.79 Mbps)
  - Flow 2 egress (mean 394.83 Mbps)
  - Flow 3 ingress (mean 316.39 Mbps)
  - Flow 3 egress (mean 316.32 Mbps)

- **Packet Loss (ms):**
  - Flow 1 (95th percentile 3.95 ms)
  - Flow 2 (95th percentile 3.87 ms)
  - Flow 3 (95th percentile 3.92 ms)
Run 9: Statistics of FillP-Sheep

Start at: 2018-07-10 23:57:21
End at: 2018-07-10 23:57:51
Local clock offset: 0.563 ms
Remote clock offset: 1.665 ms

# Below is generated by plot.py at 2018-07-11 02:17:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 936.73 Mbit/s
95th percentile per-packet one-way delay: 3.719 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 567.89 Mbit/s
95th percentile per-packet one-way delay: 3.541 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 397.39 Mbit/s
95th percentile per-packet one-way delay: 3.777 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 316.36 Mbit/s
95th percentile per-packet one-way delay: 3.860 ms
Loss rate: 0.22%
Run 9: Report of FillP-Sheep — Data Link
Run 10: Statistics of FillP-Sheep

Start at: 2018-07-11 00:24:14
End at: 2018-07-11 00:24:44
Local clock offset: 0.816 ms
Remote clock offset: 1.528 ms

# Below is generated by plot.py at 2018-07-11 02:18:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 944.63 Mbit/s
95th percentile per-packet one-way delay: 24.924 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 575.54 Mbit/s
95th percentile per-packet one-way delay: 31.069 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 397.26 Mbit/s
95th percentile per-packet one-way delay: 3.771 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 315.90 Mbit/s
95th percentile per-packet one-way delay: 3.926 ms
Loss rate: 0.23%
Run 10: Report of FillIP-Sheep — Data Link
Run 1: Statistics of Indigo

Start at: 2018-07-10 20:25:18
End at: 2018-07-10 20:25:48
Local clock offset: 0.656 ms
Remote clock offset: 0.421 ms

# Below is generated by plot.py at 2018-07-11 02:18:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 313.15 Mbit/s
95th percentile per-packet one-way delay: 1.007 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 179.84 Mbit/s
95th percentile per-packet one-way delay: 0.979 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 154.74 Mbit/s
95th percentile per-packet one-way delay: 1.036 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 91.65 Mbit/s
95th percentile per-packet one-way delay: 1.053 ms
Loss rate: 0.15%
Run 1: Report of Indigo — Data Link
Run 2: Statistics of Indigo

Start at: 2018-07-10 20:52:18
End at: 2018-07-10 20:52:48
Local clock offset: 0.5 ms
Remote clock offset: 1.184 ms

# Below is generated by plot.py at 2018-07-11 02:18:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 276.66 Mbit/s
95th percentile per-packet one-way delay: 1.036 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 146.75 Mbit/s
95th percentile per-packet one-way delay: 1.031 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 155.14 Mbit/s
95th percentile per-packet one-way delay: 1.039 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 81.67 Mbit/s
95th percentile per-packet one-way delay: 1.059 ms
Loss rate: 0.18%
Run 2: Report of Indigo — Data Link
Run 3: Statistics of Indigo

Start at: 2018-07-10 21:19:05
End at: 2018-07-10 21:19:35
Local clock offset: 0.665 ms
Remote clock offset: 1.819 ms

# Below is generated by plot.py at 2018-07-11 02:18:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 288.80 Mbit/s
95th percentile per-packet one-way delay: 1.052 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 156.93 Mbit/s
95th percentile per-packet one-way delay: 1.037 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 154.95 Mbit/s
95th percentile per-packet one-way delay: 1.063 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 87.78 Mbit/s
95th percentile per-packet one-way delay: 1.090 ms
Loss rate: 0.19%
Run 3: Report of Indigo — Data Link

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

- Flow 1 ingress (mean 156.92 Mbit/s)
- Flow 1 egress (mean 156.93 Mbit/s)
- Flow 2 ingress (mean 154.92 Mbit/s)
- Flow 2 egress (mean 154.95 Mbit/s)
- Flow 3 ingress (mean 87.71 Mbit/s)
- Flow 3 egress (mean 87.78 Mbit/s)
Run 4: Statistics of Indigo

Start at: 2018-07-10 21:46:08
End at: 2018-07-10 21:46:38
Local clock offset: 0.629 ms
Remote clock offset: 2.25 ms

# Below is generated by plot.py at 2018-07-11 02:18:12
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 303.28 Mbit/s
  95th percentile per-packet one-way delay: 1.117 ms
  Loss rate: 0.07%
-- Flow 1:
  Average throughput: 163.05 Mbit/s
  95th percentile per-packet one-way delay: 1.092 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 153.57 Mbit/s
  95th percentile per-packet one-way delay: 1.133 ms
  Loss rate: 0.07%
-- Flow 3:
  Average throughput: 115.97 Mbit/s
  95th percentile per-packet one-way delay: 1.186 ms
  Loss rate: 0.19%
Run 4: Report of Indigo — Data Link

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

- Flow 1 ingress (mean 163.02 Mbit/s)
- Flow 1 egress (mean 163.05 Mbit/s)
- Flow 2 ingress (mean 153.52 Mbit/s)
- Flow 2 egress (mean 153.57 Mbit/s)
- Flow 3 ingress (mean 115.99 Mbit/s)
- Flow 3 egress (mean 115.97 Mbit/s)
Run 5: Statistics of Indigo

Start at: 2018-07-10 22:13:02
Local clock offset: 0.726 ms
Remote clock offset: 2.247 ms

# Below is generated by plot.py at 2018-07-11 02:18:12
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 302.48 Mbit/s
  95th percentile per-packet one-way delay: 1.129 ms
  Loss rate: 0.10%
-- Flow 1:
  Average throughput: 153.50 Mbit/s
  95th percentile per-packet one-way delay: 1.108 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 155.40 Mbit/s
  95th percentile per-packet one-way delay: 1.145 ms
  Loss rate: 0.09%
-- Flow 3:
  Average throughput: 138.42 Mbit/s
  95th percentile per-packet one-way delay: 1.194 ms
  Loss rate: 0.27%
Run 5: Report of Indigo — Data Link
Run 6: Statistics of Indigo

Start at: 2018-07-10 22:40:03
End at: 2018-07-10 22:40:33
Local clock offset: 0.816 ms
Remote clock offset: 2.125 ms

# Below is generated by plot.py at 2018-07-11 02:18:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 300.99 Mbit/s
95th percentile per-packet one-way delay: 1.047 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 163.81 Mbit/s
95th percentile per-packet one-way delay: 1.029 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 157.44 Mbit/s
95th percentile per-packet one-way delay: 1.071 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 98.97 Mbit/s
95th percentile per-packet one-way delay: 1.080 ms
Loss rate: 0.19%
Run 6: Report of Indigo — Data Link

![Graphs showing throughput and packet delay]
Run 7: Statistics of Indigo

Start at: 2018-07-10 23:07:02
End at: 2018-07-10 23:07:32
Local clock offset: 0.725 ms
Remote clock offset: 1.859 ms

# Below is generated by plot.py at 2018-07-11 02:18:12
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 305.73 Mbit/s
  95th percentile per-packet one-way delay: 1.141 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 164.34 Mbit/s
  95th percentile per-packet one-way delay: 1.120 ms
  Loss rate: 0.06%
-- Flow 2:
  Average throughput: 146.59 Mbit/s
  95th percentile per-packet one-way delay: 1.158 ms
  Loss rate: 0.08%
-- Flow 3:
  Average throughput: 133.63 Mbit/s
  95th percentile per-packet one-way delay: 1.194 ms
  Loss rate: 0.17%
Run 7: Report of Indigo — Data Link
Run 8: Statistics of Indigo

Start at: 2018-07-10 23:33:50
End at: 2018-07-10 23:34:20
Local clock offset: 0.443 ms
Remote clock offset: 1.774 ms

# Below is generated by plot.py at 2018-07-11 02:18:12
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 288.39 Mbit/s
  95th percentile per-packet one-way delay: 0.974 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 154.63 Mbit/s
  95th percentile per-packet one-way delay: 0.966 ms
  Loss rate: 0.04%
-- Flow 2:
  Average throughput: 152.06 Mbit/s
  95th percentile per-packet one-way delay: 0.988 ms
  Loss rate: 0.09%
-- Flow 3:
  Average throughput: 99.74 Mbit/s
  95th percentile per-packet one-way delay: 0.999 ms
  Loss rate: 0.23%
Run 8: Report of Indigo — Data Link

![Graph showing network performance metrics over time]

- **Throughput (Mbps)**: The throughput is represented over time, showing fluctuations for different flows.
  - Flow 1 ingress (mean 154.58 Mbps)
  - Flow 1 egress (mean 154.63 Mbps)
  - Flow 2 ingress (mean 152.64 Mbps)
  - Flow 2 egress (mean 152.06 Mbps)
  - Flow 3 ingress (mean 99.74 Mbps)
  - Flow 3 egress (mean 99.74 Mbps)

- **Per-packet one-way delay (ms)**: The per-packet delay is shown over time, with different markers for each flow.
  - Flow 1 (99th percentile 0.97 ms)
  - Flow 2 (99th percentile 0.99 ms)
  - Flow 3 (99th percentile 1.00 ms)
Run 9: Statistics of Indigo

Start at: 2018-07-11 00:00:39
End at: 2018-07-11 00:01:10
Local clock offset: 0.518 ms
Remote clock offset: 1.632 ms

# Below is generated by plot.py at 2018-07-11 02:18:12
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 278.55 Mbit/s
  95th percentile per-packet one-way delay: 1.054 ms
  Loss rate: 0.06%
-- Flow 1:
  Average throughput: 146.70 Mbit/s
  95th percentile per-packet one-way delay: 1.041 ms
  Loss rate: 0.02%
-- Flow 2:
  Average throughput: 159.06 Mbit/s
  95th percentile per-packet one-way delay: 1.073 ms
  Loss rate: 0.11%
-- Flow 3:
  Average throughput: 79.59 Mbit/s
  95th percentile per-packet one-way delay: 1.061 ms
  Loss rate: 0.10%
Run 9: Report of Indigo — Data Link

![Diagram of network throughput and delay over time]

- Flow 1 ingress (mean 146.64 Mbit/s)
- Flow 1 egress (mean 146.70 Mbit/s)
- Flow 2 ingress (mean 159.03 Mbit/s)
- Flow 2 egress (mean 159.06 Mbit/s)
- Flow 3 ingress (mean 79.53 Mbit/s)
- Flow 3 egress (mean 79.59 Mbit/s)

![Diagram of network delay over time]

- Flow 1 (95th percentile 1.04 ms)
- Flow 2 (95th percentile 1.07 ms)
- Flow 3 (95th percentile 1.06 ms)
Run 10: Statistics of Indigo

Start at: 2018-07-11 00:27:38
End at: 2018-07-11 00:28:08
Local clock offset: 0.741 ms
Remote clock offset: 1.57 ms

# Below is generated by plot.py at 2018-07-11 02:18:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 298.83 Mbit/s
95th percentile per-packet one-way delay: 0.961 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 162.64 Mbit/s
95th percentile per-packet one-way delay: 0.948 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 157.20 Mbit/s
95th percentile per-packet one-way delay: 0.975 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 96.32 Mbit/s
95th percentile per-packet one-way delay: 0.995 ms
Loss rate: 0.14%
Run 10: Report of Indigo — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 162.62 Mbit/s)
Flow 1 egress (mean 162.64 Mbit/s)
Flow 2 ingress (mean 157.18 Mbit/s)
Flow 2 egress (mean 157.20 Mbit/s)
Flow 3 ingress (mean 96.17 Mbit/s)
Flow 3 egress (mean 96.32 Mbit/s)

Packet one-way delay (ms)

Time (s)

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

Start at: 2018-07-10 20:28:32
End at: 2018-07-10 20:29:02
Local clock offset: 0.589 ms
Remote clock offset: 0.469 ms

# Below is generated by plot.py at 2018-07-11 02:18:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 497.11 Mbit/s
95th percentile per-packet one-way delay: 1.701 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 297.60 Mbit/s
95th percentile per-packet one-way delay: 1.629 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 220.15 Mbit/s
95th percentile per-packet one-way delay: 1.764 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 158.95 Mbit/s
95th percentile per-packet one-way delay: 1.879 ms
Loss rate: 0.16%
Run 1: Report of LEDBAT — Data Link

![Graph 1](chart1.png)

![Graph 2](chart2.png)
Run 2: Statistics of LEDBAT

End at: 2018-07-10 20:56:02
Local clock offset: 0.53 ms
Remote clock offset: 1.319 ms

# Below is generated by plot.py at 2018-07-11 02:18:12
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 496.88 Mbit/s
  95th percentile per-packet one-way delay: 1.696 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 299.62 Mbit/s
  95th percentile per-packet one-way delay: 1.586 ms
  Loss rate: 0.03%
-- Flow 2:
  Average throughput: 218.87 Mbit/s
  95th percentile per-packet one-way delay: 1.862 ms
  Loss rate: 0.05%
-- Flow 3:
  Average throughput: 155.64 Mbit/s
  95th percentile per-packet one-way delay: 1.707 ms
  Loss rate: 0.21%
Run 2: Report of LEDBAT — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 299.52 Mbps)  Flow 1 egress (mean 299.62 Mbps)
Flow 2 ingress (mean 218.77 Mbps)  Flow 2 egress (mean 218.87 Mbps)
Flow 3 ingress (mean 155.63 Mbps)  Flow 3 egress (mean 155.64 Mbps)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 1.59 ms)  Flow 2 (95th percentile 1.86 ms)  Flow 3 (95th percentile 1.71 ms)
Run 3: Statistics of LEDBAT

End at: 2018-07-10 21:22:50
Local clock offset: 0.691 ms
Remote clock offset: 1.822 ms

# Below is generated by plot.py at 2018-07-11 02:18:12
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 482.26 Mbit/s
  95th percentile per-packet one-way delay: 1.865 ms
  Loss rate: 0.07%
-- Flow 1:
  Average throughput: 283.59 Mbit/s
  95th percentile per-packet one-way delay: 1.751 ms
  Loss rate: 0.04%
-- Flow 2:
  Average throughput: 222.35 Mbit/s
  95th percentile per-packet one-way delay: 2.048 ms
  Loss rate: 0.07%
-- Flow 3:
  Average throughput: 152.49 Mbit/s
  95th percentile per-packet one-way delay: 1.800 ms
  Loss rate: 0.21%
Run 3: Report of LEDBAT — Data Link
Run 4: Statistics of LEDBAT

Start at: 2018-07-10 21:49:25
End at: 2018-07-10 21:49:55
Local clock offset: 0.541 ms
Remote clock offset: 2.263 ms

# Below is generated by plot.py at 2018-07-11 02:19:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 491.35 Mbit/s
95th percentile per-packet one-way delay: 1.872 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 289.68 Mbit/s
95th percentile per-packet one-way delay: 1.725 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 224.74 Mbit/s
95th percentile per-packet one-way delay: 2.029 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 156.84 Mbit/s
95th percentile per-packet one-way delay: 2.059 ms
Loss rate: 0.33%
Run 4: Report of LEDBAT — Data Link
Run 5: Statistics of LEDBAT

Start at: 2018-07-10 22:16:20
End at: 2018-07-10 22:16:50
Local clock offset: 0.741 ms
Remote clock offset: 2.258 ms

# Below is generated by plot.py at 2018-07-11 02:20:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 488.27 Mbit/s
95th percentile per-packet one-way delay: 1.891 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 289.44 Mbit/s
95th percentile per-packet one-way delay: 1.806 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 224.40 Mbit/s
95th percentile per-packet one-way delay: 2.014 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 149.30 Mbit/s
95th percentile per-packet one-way delay: 1.899 ms
Loss rate: 0.22%
Run 5: Report of LEDBAT — Data Link

![Graph showing throughput over time for different flows with various statistics]

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

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Run 6: Statistics of LEDBAT

Start at: 2018-07-10 22:43:21
End at: 2018-07-10 22:43:51
Local clock offset: 0.815 ms
Remote clock offset: 2.106 ms

# Below is generated by plot.py at 2018-07-11 02:20:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 468.26 Mbit/s
95th percentile per-packet one-way delay: 1.702 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 268.46 Mbit/s
95th percentile per-packet one-way delay: 1.571 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 225.06 Mbit/s
95th percentile per-packet one-way delay: 1.856 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 150.83 Mbit/s
95th percentile per-packet one-way delay: 1.842 ms
Loss rate: 0.35%
Run 6: Report of LEDBAT — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 268.34 Mbit/s) — Flow 1 egress (mean 268.46 Mbit/s)
Flow 2 ingress (mean 225.12 Mbit/s) — Flow 2 egress (mean 225.06 Mbit/s)
Flow 3 ingress (mean 151.04 Mbit/s) — Flow 3 egress (mean 150.83 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 1.57 ms) — Flow 2 (95th percentile 1.86 ms) — Flow 3 (95th percentile 1.84 ms)
Run 7: Statistics of LEDBAT

Start at: 2018-07-10 23:10:19
End at: 2018-07-10 23:10:49
Local clock offset: 0.683 ms
Remote clock offset: 1.821 ms

# Below is generated by plot.py at 2018-07-11 02:23:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 480.01 Mbit/s
95th percentile per-packet one-way delay: 1.754 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 286.67 Mbit/s
95th percentile per-packet one-way delay: 1.701 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 219.70 Mbit/s
95th percentile per-packet one-way delay: 1.832 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 141.42 Mbit/s
95th percentile per-packet one-way delay: 1.806 ms
Loss rate: 0.29%
Run 7: Report of LEDBAT — Data Link

![Throughput vs Time Graph]

- Flow 1 ingress (mean 286.50 Mbit/s)
- Flow 1 egress (mean 286.67 Mbit/s)
- Flow 2 ingress (mean 219.61 Mbit/s)
- Flow 2 egress (mean 219.70 Mbit/s)
- Flow 3 ingress (mean 141.56 Mbit/s)
- Flow 3 egress (mean 141.42 Mbit/s)

![Packet End-to-End Delay Graph]

- Flow 1 (95th percentile 1.70 ms)
- Flow 2 (95th percentile 1.83 ms)
- Flow 3 (95th percentile 1.81 ms)
Run 8: Statistics of LEDBAT

Start at: 2018-07-10 23:37:06
End at: 2018-07-10 23:37:36
Local clock offset: 0.526 ms
Remote clock offset: 1.709 ms

# Below is generated by plot.py at 2018-07-11 02:23:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 485.48 Mbit/s
95th percentile per-packet one-way delay: 1.897 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 284.23 Mbit/s
95th percentile per-packet one-way delay: 1.811 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 225.16 Mbit/s
95th percentile per-packet one-way delay: 2.025 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 153.80 Mbit/s
95th percentile per-packet one-way delay: 1.963 ms
Loss rate: 0.27%
Run 8: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 284.14 Mbps)
- Flow 1 egress (mean 284.23 Mbps)
- Flow 2 ingress (mean 225.13 Mbps)
- Flow 2 egress (mean 225.16 Mbps)
- Flow 3 ingress (mean 153.92 Mbps)
- Flow 3 egress (mean 153.99 Mbps)
Run 9: Statistics of LEDBAT

Start at: 2018-07-11 00:03:56
End at: 2018-07-11 00:04:26
Local clock offset: 0.628 ms
Remote clock offset: 1.636 ms

# Below is generated by plot.py at 2018-07-11 02:23:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 504.38 Mbit/s
95th percentile per-packet one-way delay: 1.787 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 321.72 Mbit/s
95th percentile per-packet one-way delay: 1.751 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 191.39 Mbit/s
95th percentile per-packet one-way delay: 1.860 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 166.06 Mbit/s
95th percentile per-packet one-way delay: 1.800 ms
Loss rate: 0.22%
Run 9: Report of LEDBAT — Data Link

![Data Link Diagram]
Run 10: Statistics of LEDBAT

Start at: 2018-07-11 00:30:55
End at: 2018-07-11 00:31:25
Local clock offset: 0.852 ms
Remote clock offset: 1.445 ms

# Below is generated by plot.py at 2018-07-11 02:23:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 483.01 Mbit/s
  95th percentile per-packet one-way delay: 1.817 ms
  Loss rate: 0.06%
-- Flow 1:
  Average throughput: 288.49 Mbit/s
  95th percentile per-packet one-way delay: 1.679 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 221.50 Mbit/s
  95th percentile per-packet one-way delay: 2.062 ms
  Loss rate: 0.05%
-- Flow 3:
  Average throughput: 141.97 Mbit/s
  95th percentile per-packet one-way delay: 1.739 ms
  Loss rate: 0.20%
Run 10: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 288.45 Mbit/s)
- Flow 1 egress (mean 288.49 Mbit/s)
- Flow 2 ingress (mean 221.38 Mbit/s)
- Flow 2 egress (mean 221.59 Mbit/s)
- Flow 3 ingress (mean 141.98 Mbit/s)
- Flow 3 egress (mean 141.97 Mbit/s)
Run 1: Statistics of PCC-Allegro

Start at: 2018-07-10 20:35:19
End at: 2018-07-10 20:35:49
Local clock offset: 0.579 ms
Remote clock offset: 0.797 ms

# Below is generated by plot.py at 2018-07-11 02:27:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 796.59 Mbit/s
95th percentile per-packet one-way delay: 2.030 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 715.63 Mbit/s
95th percentile per-packet one-way delay: 2.039 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 85.72 Mbit/s
95th percentile per-packet one-way delay: 1.519 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 73.51 Mbit/s
95th percentile per-packet one-way delay: 1.469 ms
Loss rate: 0.24%
Run 1: Report of PCC-Allegro — Data Link
Run 2: Statistics of PCC-Allegro

Start at: 2018-07-10 21:02:16
End at: 2018-07-10 21:02:46
Local clock offset: 0.634 ms
Remote clock offset: 1.525 ms

# Below is generated by plot.py at 2018-07-11 02:27:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 703.69 Mbit/s
95th percentile per-packet one-way delay: 3.033 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 482.76 Mbit/s
95th percentile per-packet one-way delay: 3.012 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 298.12 Mbit/s
95th percentile per-packet one-way delay: 3.061 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 69.89 Mbit/s
95th percentile per-packet one-way delay: 1.484 ms
Loss rate: 0.19%
Run 2: Report of PCC-Allegro — Data Link

Throughput (Mbit/s)

0 5 10 15 20 25 30
Time (s)

Flow 1 Ingress (mean 482.53 Mbit/s)
Flow 1 Egress (mean 482.76 Mbit/s)
Flow 2 Ingress (mean 297.99 Mbit/s)
Flow 2 Egress (mean 298.12 Mbit/s)
Flow 3 Ingress (mean 69.93 Mbit/s)
Flow 3 Egress (mean 69.89 Mbit/s)

Per-packet one way delay (ms)

0 5 10 15 20 25 30
Time (s)

Flow 1 (95th percentile 3.01 ms)
Flow 2 (95th percentile 3.06 ms)
Flow 3 (95th percentile 1.48 ms)
Run 3: Statistics of PCC-Allegro

Start at: 2018-07-10 21:29:04
End at: 2018-07-10 21:29:34
Local clock offset: 0.683 ms
Remote clock offset: 2.069 ms

# Below is generated by plot.py at 2018-07-11 02:29:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 742.92 Mbit/s
95th percentile per-packet one-way delay: 2.768 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 507.74 Mbit/s
95th percentile per-packet one-way delay: 2.433 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 292.76 Mbit/s
95th percentile per-packet one-way delay: 2.972 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 124.27 Mbit/s
95th percentile per-packet one-way delay: 1.831 ms
Loss rate: 0.29%
Run 3: Report of PCC-Allegro — Data Link
Run 4: Statistics of PCC-Allegro

Start at: 2018-07-10 21:56:09
End at: 2018-07-10 21:56:39
Local clock offset: 0.529 ms
Remote clock offset: 2.453 ms

# Below is generated by plot.py at 2018-07-11 02:29:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 690.31 Mbit/s
95th percentile per-packet one-way delay: 1.840 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 608.72 Mbit/s
95th percentile per-packet one-way delay: 1.855 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 46.35 Mbit/s
95th percentile per-packet one-way delay: 1.302 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 154.94 Mbit/s
95th percentile per-packet one-way delay: 1.692 ms
Loss rate: 0.22%
Run 4: Report of PCC-Allegro — Data Link
Run 5: Statistics of PCC-Allegro

Start at: 2018-07-10 22:23:05
Local clock offset: 0.782 ms
Remote clock offset: 2.339 ms

# Below is generated by plot.py at 2018-07-11 02:31:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 780.87 Mbit/s
  95th percentile per-packet one-way delay: 2.782 ms
  Loss rate: 0.04%
-- Flow 1:
  Average throughput: 544.50 Mbit/s
  95th percentile per-packet one-way delay: 2.729 ms
  Loss rate: 0.02%
-- Flow 2:
  Average throughput: 324.30 Mbit/s
  95th percentile per-packet one-way delay: 2.874 ms
  Loss rate: 0.06%
-- Flow 3:
  Average throughput: 64.12 Mbit/s
  95th percentile per-packet one-way delay: 1.811 ms
  Loss rate: 0.27%
Run 5: Report of PCC-Allegro — Data Link
Run 6: Statistics of PCC-Allegro

Start at: 2018-07-10 22:50:06
End at: 2018-07-10 22:50:36
Local clock offset: 0.782 ms
Remote clock offset: 2.15 ms

# Below is generated by plot.py at 2018-07-11 02:32:16
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 808.31 Mbit/s
  95th percentile per-packet one-way delay: 2.942 ms
  Loss rate: 0.04%
-- Flow 1:
  Average throughput: 608.67 Mbit/s
  95th percentile per-packet one-way delay: 2.883 ms
  Loss rate: 0.02%
-- Flow 2:
  Average throughput: 272.86 Mbit/s
  95th percentile per-packet one-way delay: 3.015 ms
  Loss rate: 0.08%
-- Flow 3:
  Average throughput: 55.88 Mbit/s
  95th percentile per-packet one-way delay: 1.261 ms
  Loss rate: 0.31%
Run 6: Report of PCC-Allegro — Data Link

![Graph showing Throughput vs Time for different flows with their corresponding ingress and egress rates.]
Run 7: Statistics of PCC-Allegro

Start at: 2018-07-10 23:17:03
End at: 2018-07-10 23:17:33
Local clock offset: 0.631 ms
Remote clock offset: 1.892 ms

# Below is generated by plot.py at 2018-07-11 02:32:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 708.87 Mbit/s
95th percentile per-packet one-way delay: 1.542 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 595.54 Mbit/s
95th percentile per-packet one-way delay: 1.457 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 87.04 Mbit/s
95th percentile per-packet one-way delay: 1.591 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 169.06 Mbit/s
95th percentile per-packet one-way delay: 1.991 ms
Loss rate: 0.16%
Run 7: Report of PCC-Allegro — Data Link

![Graph showing throughput and packet one-way delay over time for different flows.]
Run 8: Statistics of PCC-Allegro

Start at: 2018-07-10 23:43:45
End at: 2018-07-10 23:44:15
Local clock offset: 0.452 ms
Remote clock offset: 1.795 ms

# Below is generated by plot.py at 2018-07-11 02:32:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 740.57 Mbit/s
95th percentile per-packet one-way delay: 1.873 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 640.69 Mbit/s
95th percentile per-packet one-way delay: 1.891 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 114.86 Mbit/s
95th percentile per-packet one-way delay: 1.374 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 72.30 Mbit/s
95th percentile per-packet one-way delay: 1.330 ms
Loss rate: 0.23%
Run 9: Statistics of PCC-Allegro

Start at: 2018-07-11 00:10:40  
End at: 2018-07-11 00:11:10  
Local clock offset: 0.727 ms  
Remote clock offset: 1.719 ms  

# Below is generated by plot.py at 2018-07-11 02:36:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 798.92 Mbit/s  
95th percentile per-packet one-way delay: 2.750 ms  
Loss rate: 0.04%  
-- Flow 1:  
Average throughput: 586.96 Mbit/s  
95th percentile per-packet one-way delay: 2.779 ms  
Loss rate: 0.02%  
-- Flow 2:  
Average throughput: 247.29 Mbit/s  
95th percentile per-packet one-way delay: 2.681 ms  
Loss rate: 0.05%  
-- Flow 3:  
Average throughput: 145.69 Mbit/s  
95th percentile per-packet one-way delay: 2.814 ms  
Loss rate: 0.21%
Run 9: Report of PCC-Allegro — Data Link
Run 10: Statistics of PCC-Allegro

Start at: 2018-07-11 00:37:37
End at: 2018-07-11 00:38:07
Local clock offset: 0.755 ms
Remote clock offset: 1.47 ms

# Below is generated by plot.py at 2018-07-11 02:37:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 755.40 Mbit/s
95th percentile per-packet one-way delay: 1.946 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 670.36 Mbit/s
95th percentile per-packet one-way delay: 1.962 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 46.33 Mbit/s
95th percentile per-packet one-way delay: 1.288 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 165.23 Mbit/s
95th percentile per-packet one-way delay: 1.580 ms
Loss rate: 0.14%
Run 10: Report of PCC-Allegro — Data Link

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

Legend:
- Flow 1 Ingress (mean 670.14 Mbit/s)
- Flow 1 Egress (mean 670.96 Mbit/s)
- Flow 2 Ingress (mean 46.38 Mbit/s)
- Flow 2 Egress (mean 46.33 Mbit/s)
- Flow 3 Ingress (mean 165.17 Mbit/s)
- Flow 3 Egress (mean 165.23 Mbit/s)

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Run 1: Statistics of PCC-Expr

Start at: 2018-07-10 20:23:41
End at: 2018-07-10 20:24:11
Local clock offset: 0.778 ms
Remote clock offset: 0.291 ms

# Below is generated by plot.py at 2018-07-11 02:37:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 315.60 Mbit/s
95th percentile per-packet one-way delay: 1.198 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 224.11 Mbit/s
95th percentile per-packet one-way delay: 1.194 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 116.80 Mbit/s
95th percentile per-packet one-way delay: 1.218 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 41.94 Mbit/s
95th percentile per-packet one-way delay: 1.162 ms
Loss rate: 0.38%
Run 1: Report of PCC-Expr — Data Link
Run 2: Statistics of PCC-Expr

Start at: 2018-07-10 20:50:41
End at: 2018-07-10 20:51:11
Local clock offset: 0.584 ms
Remote clock offset: 1.136 ms

# Below is generated by plot.py at 2018-07-11 02:37:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 303.06 Mbit/s
95th percentile per-packet one-way delay: 1.175 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 221.15 Mbit/s
95th percentile per-packet one-way delay: 1.177 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 97.10 Mbit/s
95th percentile per-packet one-way delay: 1.192 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 52.89 Mbit/s
95th percentile per-packet one-way delay: 1.112 ms
Loss rate: 0.25%
Run 2: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 221.12 Mb/s)
- Flow 1 egress (mean 221.15 Mb/s)
- Flow 2 ingress (mean 97.05 Mb/s)
- Flow 2 egress (mean 97.10 Mb/s)
- Flow 3 ingress (mean 52.92 Mb/s)
- Flow 3 egress (mean 52.89 Mb/s)
Run 3: Statistics of PCC-Expr

Start at: 2018-07-10 21:17:30
End at: 2018-07-10 21:18:00
Local clock offset: 0.662 ms
Remote clock offset: 1.818 ms

# Below is generated by plot.py at 2018-07-11 02:37:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 267.14 Mbit/s
95th percentile per-packet one-way delay: 1.026 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 181.43 Mbit/s
95th percentile per-packet one-way delay: 1.021 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 99.69 Mbit/s
95th percentile per-packet one-way delay: 1.051 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 58.92 Mbit/s
95th percentile per-packet one-way delay: 1.006 ms
Loss rate: 0.28%
Run 3: Report of PCC-Expr — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 181.33 Mbps)
- Flow 1 egress (mean 181.43 Mbps)
- Flow 2 ingress (mean 99.65 Mbps)
- Flow 2 egress (mean 99.69 Mbps)
- Flow 3 ingress (mean 58.97 Mbps)
- Flow 3 egress (mean 58.92 Mbps)

**Per-packet one-way delay (ms):**
- Flow 1 (95th percentile 1.02 ms)
- Flow 2 (95th percentile 1.05 ms)
- Flow 3 (95th percentile 1.01 ms)
Run 4: Statistics of PCC-Expr

Start at: 2018-07-10 21:44:32
End at: 2018-07-10 21:45:02
Local clock offset: 0.535 ms
Remote clock offset: 2.238 ms

# Below is generated by plot.py at 2018-07-11 02:38:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 292.84 Mbit/s
95th percentile per-packet one-way delay: 1.045 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 188.68 Mbit/s
95th percentile per-packet one-way delay: 1.018 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 128.31 Mbit/s
95th percentile per-packet one-way delay: 1.139 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 56.92 Mbit/s
95th percentile per-packet one-way delay: 0.994 ms
Loss rate: 0.37%
Run 4: Report of PCC-Expr — Data Link

---

**Graph 1:**
- **Y-axis:** Throughput (Mbps)
- **X-axis:** Time (s)
- Legend:
  - Flow 1 ingress (mean 188.61 Mbps)
  - Flow 1 egress (mean 188.68 Mbps)
  - Flow 2 ingress (mean 128.32 Mbps)
  - Flow 2 egress (mean 128.31 Mbps)
  - Flow 3 ingress (mean 56.98 Mbps)
  - Flow 3 egress (mean 56.92 Mbps)

**Graph 2:**
- **Y-axis:** Per-packet one-way delay (ms)
- **X-axis:** Time (s)
- Legend:
  - Flow 1 (95th percentile 1.02 ms)
  - Flow 2 (95th percentile 1.14 ms)
  - Flow 3 (95th percentile 0.99 ms)
Run 5: Statistics of PCC-Expr

Start at: 2018-07-10 22:11:26  
End at: 2018-07-10 22:11:56  
Local clock offset: 0.625 ms  
Remote clock offset: 2.258 ms

# Below is generated by plot.py at 2018-07-11 02:38:17  
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 283.50 Mbit/s
  95th percentile per-packet one-way delay: 1.064 ms
  Loss rate: 0.03%
-- Flow 1:
  Average throughput: 207.84 Mbit/s
  95th percentile per-packet one-way delay: 1.089 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 88.91 Mbit/s
  95th percentile per-packet one-way delay: 1.019 ms
  Loss rate: 0.09%
-- Flow 3:
  Average throughput: 50.30 Mbit/s
  95th percentile per-packet one-way delay: 1.002 ms
  Loss rate: 0.11%
Run 5: Report of PCC-Expr — Data Link

![Graph showing throughput and packet delay over time for different flows, with legends indicating mean data rates.]
Run 6: Statistics of PCC-Expr

End at: 2018-07-10 22:38:58
Local clock offset: 0.926 ms
Remote clock offset: 2.145 ms

# Below is generated by plot.py at 2018-07-11 02:38:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 282.85 Mbit/s
95th percentile per-packet one-way delay: 1.192 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 214.79 Mbit/s
95th percentile per-packet one-way delay: 1.207 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 68.17 Mbit/s
95th percentile per-packet one-way delay: 1.175 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 68.95 Mbit/s
95th percentile per-packet one-way delay: 1.156 ms
Loss rate: 0.24%
Run 6: Report of PCC-Expr — Data Link

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

![Graph 2: Per packet one-way delay (ms)](image2)
Run 7: Statistics of PCC-Expr

Start at: 2018-07-10 23:05:24
End at: 2018-07-10 23:05:54
Local clock offset: 0.73 ms
Remote clock offset: 1.934 ms

# Below is generated by plot.py at 2018-07-11 02:42:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 317.23 Mbit/s
95th percentile per-packet one-way delay: 1.104 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 220.94 Mbit/s
95th percentile per-packet one-way delay: 1.094 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 120.79 Mbit/s
95th percentile per-packet one-way delay: 1.174 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 48.74 Mbit/s
95th percentile per-packet one-way delay: 1.047 ms
Loss rate: 0.27%
Run 7: Report of PCC-Expr — Data Link
Run 8: Statistics of PCC-Expr

End at: 2018-07-10 23:32:43
Local clock offset: 0.505 ms
Remote clock offset: 1.701 ms

# Below is generated by plot.py at 2018-07-11 02:43:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 317.73 Mbit/s
95th percentile per-packet one-way delay: 1.123 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 214.74 Mbit/s
95th percentile per-packet one-way delay: 1.118 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 125.05 Mbit/s
95th percentile per-packet one-way delay: 1.153 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 60.55 Mbit/s
95th percentile per-packet one-way delay: 1.097 ms
Loss rate: 0.17%
Run 8: Report of PCC-Expr — Data Link

![Throughput Graph]

Throughput (Mbps)

Time (s)

- Flow 1 ingress (mean 214.61 Mbps)
- Flow 1 egress (mean 214.74 Mbps)
- Flow 2 ingress (mean 124.99 Mbps)
- Flow 2 egress (mean 125.05 Mbps)
- Flow 3 ingress (mean 60.33 Mbps)
- Flow 3 egress (mean 60.55 Mbps)

![Per-packet one way delay graph]

Per-packet one way delay (ms)

Time (s)

- Flow 1 (95th percentile 1.12 ms)
- Flow 2 (95th percentile 1.15 ms)
- Flow 3 (95th percentile 1.10 ms)
Run 9: Statistics of PCC-Expr

Start at: 2018-07-10 23:59:05
End at: 2018-07-10 23:59:35
Local clock offset: 0.588 ms
Remote clock offset: 1.75 ms

# Below is generated by plot.py at 2018-07-11 02:43:02
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 271.12 Mbit/s
  95th percentile per-packet one-way delay: 1.047 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 175.10 Mbit/s
  95th percentile per-packet one-way delay: 1.043 ms
  Loss rate: 0.02%
-- Flow 2:
  Average throughput: 112.68 Mbit/s
  95th percentile per-packet one-way delay: 1.077 ms
  Loss rate: 0.06%
-- Flow 3:
  Average throughput: 64.11 Mbit/s
  95th percentile per-packet one-way delay: 0.976 ms
  Loss rate: 0.27%
Run 9: Report of PCC-Expr — Data Link

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

- **Flow 1 ingress (mean 175.02 Mbps)**
- **Flow 1 egress (mean 175.10 Mbps)**
- **Flow 2 ingress (mean 112.64 Mbps)**
- **Flow 2 egress (mean 112.68 Mbps)**
- **Flow 3 ingress (mean 64.15 Mbps)**
- **Flow 3 egress (mean 64.11 Mbps)**

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

- **Flow 1 (95th percentile 1.04 ms)**
- **Flow 2 (95th percentile 1.08 ms)**
- **Flow 3 (95th percentile 0.98 ms)**
Run 10: Statistics of PCC-Expr

Start at: 2018-07-11 00:25:58
End at: 2018-07-11 00:26:28
Local clock offset: 0.737 ms
Remote clock offset: 1.531 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 362.84 Mbit/s
95th percentile per-packet one-way delay: 1.180 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 232.39 Mbit/s
95th percentile per-packet one-way delay: 1.148 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 164.87 Mbit/s
95th percentile per-packet one-way delay: 1.295 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 63.33 Mbit/s
95th percentile per-packet one-way delay: 1.042 ms
Loss rate: 0.22%
Run 10: Report of PCC-Expr — Data Link
Run 1: Statistics of QUIC Cubic

Start at: 2018-07-10 20:38:46
End at: 2018-07-10 20:39:16
Local clock offset: 0.479 ms
Remote clock offset: 0.81 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 137.33 Mbit/s
  95th percentile per-packet one-way delay: 1.042 ms
  Loss rate: 0.09%
-- Flow 1:
  Average throughput: 77.21 Mbit/s
  95th percentile per-packet one-way delay: 1.034 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 63.58 Mbit/s
  95th percentile per-packet one-way delay: 1.041 ms
  Loss rate: 0.10%
-- Flow 3:
  Average throughput: 52.66 Mbit/s
  95th percentile per-packet one-way delay: 1.059 ms
  Loss rate: 0.21%
Run 1: Report of QUIC Cubic — Data Link
Run 2: Statistics of QUIC Cubic

Start at: 2018-07-10 21:05:38
End at: 2018-07-10 21:06:08
Local clock offset: 0.631 ms
Remote clock offset: 1.587 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 133.09 Mbit/s
  95th percentile per-packet one-way delay: 1.008 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 71.38 Mbit/s
  95th percentile per-packet one-way delay: 1.004 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 65.11 Mbit/s
  95th percentile per-packet one-way delay: 1.012 ms
  Loss rate: 0.09%
-- Flow 3:
  Average throughput: 55.79 Mbit/s
  95th percentile per-packet one-way delay: 1.017 ms
  Loss rate: 0.21%
Run 2: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 71.36 Mbit/s)
- Flow 1 egress (mean 71.38 Mbit/s)
- Flow 2 ingress (mean 65.11 Mbit/s)
- Flow 2 egress (mean 65.11 Mbit/s)
- Flow 3 ingress (mean 55.83 Mbit/s)
- Flow 3 egress (mean 55.79 Mbit/s)
Run 3: Statistics of QUIC Cubic

Start at: 2018-07-10 21:32:30
End at: 2018-07-10 21:33:00
Local clock offset: 0.683 ms
Remote clock offset: 2.05 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 135.83 Mbit/s
95th percentile per-packet one-way delay: 1.127 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 73.39 Mbit/s
95th percentile per-packet one-way delay: 1.126 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 67.10 Mbit/s
95th percentile per-packet one-way delay: 1.117 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 53.86 Mbit/s
95th percentile per-packet one-way delay: 1.140 ms
Loss rate: 0.22%
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic

Start at: 2018-07-10 21:59:32
End at: 2018-07-10 22:00:02
Local clock offset: 0.542 ms
Remote clock offset: 2.396 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 135.54 Mbit/s
  95th percentile per-packet one-way delay: 0.946 ms
  Loss rate: 0.09%
-- Flow 1:
  Average throughput: 74.83 Mbit/s
  95th percentile per-packet one-way delay: 0.946 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 65.95 Mbit/s
  95th percentile per-packet one-way delay: 0.947 ms
  Loss rate: 0.08%
-- Flow 3:
  Average throughput: 50.96 Mbit/s
  95th percentile per-packet one-way delay: 0.948 ms
  Loss rate: 0.26%
Run 4: Report of QUIC Cubic — Data Link

![Graph showing throughput over time for different flows]

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

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Run 5: Statistics of QUIC Cubic

Start at: 2018-07-10 22:26:31
End at: 2018-07-10 22:27:01
Local clock offset: 0.822 ms
Remote clock offset: 2.301 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 137.79 Mbit/s
95th percentile per-packet one-way delay: 1.044 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 76.05 Mbit/s
95th percentile per-packet one-way delay: 1.038 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 65.05 Mbit/s
95th percentile per-packet one-way delay: 1.042 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 55.99 Mbit/s
95th percentile per-packet one-way delay: 1.056 ms
Loss rate: 0.20%
Run 5: Report of QUIC Cubic — Data Link

![Graph 1: Throughput (Mbps)]
- Blue dashed line: Flow 1 ingress (mean 76.02 Mbps)
- Blue solid line: Flow 1 egress (mean 76.05 Mbps)
- Green dashed line: Flow 2 ingress (mean 65.02 Mbps)
- Green solid line: Flow 2 egress (mean 65.05 Mbps)
- Red dashed line: Flow 3 ingress (mean 56.00 Mbps)
- Red solid line: Flow 3 egress (mean 55.99 Mbps)

![Graph 2: Per-packet one-way delay (ms)]
- Blue line: Flow 1 (95th percentile 1.04 ms)
- Green line: Flow 2 (95th percentile 1.04 ms)
- Red line: Flow 3 (95th percentile 1.06 ms)
Run 6: Statistics of QUIC Cubic

End at: 2018-07-10 22:54:01
Local clock offset: 0.74 ms
Remote clock offset: 2.043 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 134.51 Mbit/s
95th percentile per-packet one-way delay: 0.996 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 74.14 Mbit/s
95th percentile per-packet one-way delay: 0.988 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 64.15 Mbit/s
95th percentile per-packet one-way delay: 0.999 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 53.67 Mbit/s
95th percentile per-packet one-way delay: 1.009 ms
Loss rate: 0.23%
Run 6: Report of QUIC Cubic — Data Link
Run 7: Statistics of QUIC Cubic

Start at: 2018-07-10 23:20:24
End at: 2018-07-10 23:20:54
Local clock offset: 0.609 ms
Remote clock offset: 1.771 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 135.87 Mbit/s
95th percentile per-packet one-way delay: 1.125 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 72.47 Mbit/s
95th percentile per-packet one-way delay: 1.120 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 67.46 Mbit/s
95th percentile per-packet one-way delay: 1.135 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 56.09 Mbit/s
95th percentile per-packet one-way delay: 1.123 ms
Loss rate: 0.21%
Run 7: Report of QUIC Cubic — Data Link
Run 8: Statistics of QUIC Cubic

Start at: 2018-07-10 23:47:09
End at: 2018-07-10 23:47:39
Local clock offset: 0.585 ms
Remote clock offset: 1.816 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 135.48 Mbit/s
  95th percentile per-packet one-way delay: 0.979 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 73.56 Mbit/s
  95th percentile per-packet one-way delay: 0.972 ms
  Loss rate: 0.03%
-- Flow 2:
  Average throughput: 64.57 Mbit/s
  95th percentile per-packet one-way delay: 0.976 ms
  Loss rate: 0.09%
-- Flow 3:
  Average throughput: 57.44 Mbit/s
  95th percentile per-packet one-way delay: 0.995 ms
  Loss rate: 0.25%
Run 8: Report of QUIC Cubic — Data Link
Run 9: Statistics of QUIC Cubic

Start at: 2018-07-11 00:14:05
End at: 2018-07-11 00:14:35
Local clock offset: 0.755 ms
Remote clock offset: 1.657 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 136.88 Mbit/s
  95th percentile per-packet one-way delay: 1.073 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 77.74 Mbit/s
  95th percentile per-packet one-way delay: 1.069 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 61.93 Mbit/s
  95th percentile per-packet one-way delay: 1.066 ms
  Loss rate: 0.12%
-- Flow 3:
  Average throughput: 55.37 Mbit/s
  95th percentile per-packet one-way delay: 1.088 ms
  Loss rate: 0.30%
Run 10: Statistics of QUIC Cubic

Start at: 2018-07-11 00:41:03
End at: 2018-07-11 00:41:33
Local clock offset: 0.683 ms
Remote clock offset: 1.381 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 132.85 Mbit/s
95th percentile per-packet one-way delay: 1.074 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 70.68 Mbit/s
95th percentile per-packet one-way delay: 1.067 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 65.77 Mbit/s
95th percentile per-packet one-way delay: 1.083 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 55.83 Mbit/s
95th percentile per-packet one-way delay: 1.075 ms
Loss rate: 0.24%
Run 10: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

Start at: 2018-07-10 20:19:21
End at: 2018-07-10 20:19:51
Local clock offset: 0.837 ms
Remote clock offset: 0.242 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 1.194 ms
  Loss rate: 0.12%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 1.192 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 1.197 ms
  Loss rate: 0.19%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 1.193 ms
  Loss rate: 0.35%
Run 2: Statistics of SCReAM

Start at: 2018-07-10 20:46:21
End at: 2018-07-10 20:46:51
Local clock offset: 0.559 ms
Remote clock offset: 1.035 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.214 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.214 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.220 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.202 ms
Loss rate: 0.35%
Run 2: Report of SCReAM — Data Link
Run 3: Statistics of SCReAM

Start at: 2018-07-10 21:13:10
End at: 2018-07-10 21:13:40
Local clock offset: 0.572 ms
Remote clock offset: 1.656 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.114 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.112 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.110 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.120 ms
Loss rate: 0.35%
Run 3: Report of SCReAM — Data Link

![Graphs showing throughput and per-packet one-way delay over time for different flows.](image-url)
Run 4: Statistics of SCReAM

Start at: 2018-07-10 21:40:11
End at: 2018-07-10 21:40:41
Local clock offset: 0.646 ms
Remote clock offset: 2.249 ms

# Below is generated by plot.py at 2018-07-11 02:45:00

# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 1.132 ms
  Loss rate: 0.06%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 1.126 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 1.133 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 1.139 ms
  Loss rate: 0.35%
Run 5: Statistics of SCReAM

Start at: 2018-07-10 22:07:06
End at: 2018-07-10 22:07:36
Local clock offset: 0.698 ms
Remote clock offset: 2.268 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.226 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.220 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.221 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.235 ms
Loss rate: 0.35%
Run 5: Report of SCReAM — Data Link

![Graph showing throughput and packet loss](image-url)
Run 6: Statistics of SCReAM

Start at: 2018-07-10 22:34:06
End at: 2018-07-10 22:34:36
Local clock offset: 0.887 ms
Remote clock offset: 2.208 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 1.177 ms
  Loss rate: 0.12%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 1.175 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 1.181 ms
  Loss rate: 0.19%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 1.170 ms
  Loss rate: 0.36%
Run 6: Report of SCReAM — Data Link

![Graph of throughput over time](image1)

![Graph of packet delay over time](image2)

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)

Flow 1 (95th percentile 1.18 ms) — Flow 2 (95th percentile 1.18 ms) — Flow 3 (95th percentile 1.17 ms)
Run 7: Statistics of SCReAM

Start at: 2018-07-10 23:01:04
End at: 2018-07-10 23:01:34
Local clock offset: 0.785 ms
Remote clock offset: 1.985 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.176 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.171 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.166 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.207 ms
Loss rate: 0.00%
Run 7: Report of SCReAM — Data Link

Throughput (Mbit/s)

Time (s)

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)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (99th percentile 1.17 ms)
Flow 2 (99th percentile 1.17 ms)
Flow 3 (99th percentile 1.21 ms)
Run 8: Statistics of SCReAM

End at: 2018-07-10 23:28:23
Local clock offset: 0.551 ms
Remote clock offset: 1.731 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.213 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.218 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.204 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.186 ms
Loss rate: 0.00%
Run 8: Report of SCReAM — Data Link

Throughput (Mbps)

Time (s)

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

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 1.22 ms) — Flow 2 (95th percentile 1.20 ms) — Flow 3 (95th percentile 1.19 ms)
Run 9: Statistics of SCReAM

Start at: 2018-07-10 23:54:44
Local clock offset: 0.652 ms
Remote clock offset: 1.67 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 1.189 ms
  Loss rate: 0.12%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 1.193 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 1.182 ms
  Loss rate: 0.19%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 1.185 ms
  Loss rate: 0.36%
Run 9: Report of SCReAM — Data Link

![Graph of Throughput and Delay Over Time](image)

**Throughput Graph**
- 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)

**Delay Graph**
- Flow 1 (95th percentile 1.19 ms)
- Flow 2 (95th percentile 1.18 ms)
- Flow 3 (95th percentile 1.19 ms)
Run 10: Statistics of SCReAM

Start at: 2018-07-11 00:21:38
End at: 2018-07-11 00:22:08
Local clock offset: 0.812 ms
Remote clock offset: 1.605 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.170 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.169 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.175 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.161 ms
Loss rate: 0.35%
Run 10: Report of SCReAM — Data Link

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

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

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

- Flow 1 (95th percentile 1.17 ms)
- Flow 2 (95th percentile 1.18 ms)
- Flow 3 (95th percentile 1.16 ms)
Run 1: Statistics of Sprout

Start at: 2018-07-10 20:40:09
End at: 2018-07-10 20:40:39
Local clock offset: 0.57 ms
Remote clock offset: 0.856 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 42.30 Mbit/s
95th percentile per-packet one-way delay: 1.157 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 21.14 Mbit/s
95th percentile per-packet one-way delay: 1.147 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 21.30 Mbit/s
95th percentile per-packet one-way delay: 1.166 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 21.44 Mbit/s
95th percentile per-packet one-way delay: 1.150 ms
Loss rate: 0.00%
Run 1: Report of Sprout — Data Link

![Graph of Throughput (Mbit/s) over Time (s)]

- **Flow 1 ingress (mean 21.14 Mbit/s)**
- **Flow 1 egress (mean 21.14 Mbit/s)**
- **Flow 2 ingress (mean 21.30 Mbit/s)**
- **Flow 2 egress (mean 21.30 Mbit/s)**
- **Flow 3 ingress (mean 21.43 Mbit/s)**
- **Flow 3 egress (mean 21.44 Mbit/s)**

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

- **Flow 1 (95th percentile 1.15 ms)**
- **Flow 2 (95th percentile 1.17 ms)**
- **Flow 3 (95th percentile 1.15 ms)**
Run 2: Statistics of Sprout

Start at: 2018-07-10 21:07:01
End at: 2018-07-10 21:07:31
Local clock offset: 0.635 ms
Remote clock offset: 1.555 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 42.51 Mbit/s
95th percentile per-packet one-way delay: 1.091 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 21.37 Mbit/s
95th percentile per-packet one-way delay: 1.092 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 21.41 Mbit/s
95th percentile per-packet one-way delay: 1.088 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 21.02 Mbit/s
95th percentile per-packet one-way delay: 1.096 ms
Loss rate: 0.49%
Run 2: Report of Sprout — Data Link

Graph 1: Throughput (Mbps)

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

Legend:
- Flow 1 ingress (mean 21.37 Mbps)
- Flow 1 egress (mean 21.37 Mbps)
- Flow 2 ingress (mean 21.41 Mbps)
- Flow 2 egress (mean 21.41 Mbps)
- Flow 3 ingress (mean 21.03 Mbps)
- Flow 3 egress (mean 21.02 Mbps)
Run 3: Statistics of Sprout

Start at: 2018-07-10 21:33:53
End at: 2018-07-10 21:34:23
Local clock offset: 0.664 ms
Remote clock offset: 2.068 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 41.68 Mbit/s
  95th percentile per-packet one-way delay: 1.141 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 20.91 Mbit/s
  95th percentile per-packet one-way delay: 1.140 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 21.17 Mbit/s
  95th percentile per-packet one-way delay: 1.134 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 20.50 Mbit/s
  95th percentile per-packet one-way delay: 1.155 ms
  Loss rate: 0.50%
Run 3: Report of Sprout — Data Link

![Graph showing data link performance metrics over time.](image)

![Graph showing per-packet one-way delay over time.](image)
Run 4: Statistics of Sprout

Start at: 2018-07-10 22:00:55
End at: 2018-07-10 22:01:25
Local clock offset: 0.55 ms
Remote clock offset: 2.401 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 42.02 Mbit/s
95th percentile per-packet one-way delay: 0.959 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 21.46 Mbit/s
95th percentile per-packet one-way delay: 0.959 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 20.79 Mbit/s
95th percentile per-packet one-way delay: 0.952 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 20.45 Mbit/s
95th percentile per-packet one-way delay: 0.970 ms
Loss rate: 0.00%
Run 4: Report of Sprout — Data Link
Run 5: Statistics of Sprout

Start at: 2018-07-10 22:27:54
Local clock offset: 0.83 ms
Remote clock offset: 2.247 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.73 Mbit/s
95th percentile per-packet one-way delay: 1.121 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 20.87 Mbit/s
95th percentile per-packet one-way delay: 1.116 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 21.15 Mbit/s
95th percentile per-packet one-way delay: 1.129 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 20.83 Mbit/s
95th percentile per-packet one-way delay: 1.121 ms
Loss rate: 0.00%
Run 5: Report of Sprout — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 Ingress (mean 20.87 Mbps)
  - Flow 1 Egress (mean 20.87 Mbps)
  - Flow 2 Ingress (mean 21.15 Mbps)
  - Flow 2 Egress (mean 21.15 Mbps)
  - Flow 3 Ingress (mean 20.83 Mbps)
  - Flow 3 Egress (mean 20.83 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 1.12 ms)
  - Flow 2 (95th percentile 1.13 ms)
  - Flow 3 (95th percentile 1.12 ms)
Run 6: Statistics of Sprout

Start at: 2018-07-10 22:54:54
Local clock offset: 0.814 ms
Remote clock offset: 2.056 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.59 Mbit/s
95th percentile per-packet one-way delay: 1.075 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 21.08 Mbit/s
95th percentile per-packet one-way delay: 1.081 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 20.71 Mbit/s
95th percentile per-packet one-way delay: 1.065 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 20.70 Mbit/s
95th percentile per-packet one-way delay: 1.068 ms
Loss rate: 0.00%
Run 6: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 21.08 Mbps)
- Flow 1 egress (mean 21.08 Mbps)
- Flow 2 ingress (mean 20.71 Mbps)
- Flow 2 egress (mean 20.71 Mbps)
- Flow 3 ingress (mean 20.70 Mbps)
- Flow 3 egress (mean 20.70 Mbps)

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

- Flow 1 (95th percentile 1.08 ms)
- Flow 2 (95th percentile 1.06 ms)
- Flow 3 (95th percentile 1.07 ms)
Run 7: Statistics of Sprout

End at: 2018-07-10 23:22:17
Local clock offset: 0.508 ms
Remote clock offset: 1.859 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.37 Mbit/s
95th percentile per-packet one-way delay: 0.951 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 20.75 Mbit/s
95th percentile per-packet one-way delay: 0.947 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 20.82 Mbit/s
95th percentile per-packet one-way delay: 0.945 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 20.70 Mbit/s
95th percentile per-packet one-way delay: 0.963 ms
Loss rate: 0.48%
Run 7: Report of Sprout — Data Link

Graph 1: Throughput (Mbps)

Graph 2: Packet delivery one-way delay (ms)
Run 8: Statistics of Sprout

End at: 2018-07-10 23:49:02
Local clock offset: 0.587 ms
Remote clock offset: 1.744 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.35 Mbit/s
95th percentile per-packet one-way delay: 1.064 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 20.61 Mbit/s
95th percentile per-packet one-way delay: 1.057 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 21.06 Mbit/s
95th percentile per-packet one-way delay: 1.070 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 20.65 Mbit/s
95th percentile per-packet one-way delay: 1.063 ms
Loss rate: 0.00%
Run 8: Report of Sprout — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 20.60 Mbps)
  - Flow 1 egress (mean 20.61 Mbps)
  - Flow 2 ingress (mean 21.09 Mbps)
  - Flow 2 egress (mean 21.06 Mbps)
  - Flow 3 ingress (mean 20.65 Mbps)
  - Flow 3 egress (mean 20.65 Mbps)

- **Delay (ms):**
  - Flow 1 (95th percentile 1.06 ms)
  - Flow 2 (95th percentile 1.07 ms)
  - Flow 3 (95th percentile 1.06 ms)
Run 9: Statistics of Sprout

Start at: 2018-07-11 00:15:28
End at: 2018-07-11 00:15:58
Local clock offset: 0.76 ms
Remote clock offset: 1.669 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.29 Mbit/s
95th percentile per-packet one-way delay: 1.080 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 20.63 Mbit/s
95th percentile per-packet one-way delay: 1.082 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 20.99 Mbit/s
95th percentile per-packet one-way delay: 1.072 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 20.53 Mbit/s
95th percentile per-packet one-way delay: 1.084 ms
Loss rate: 0.08%
Run 9: Report of Sprout — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 20.63 Mbps)
- Flow 1 egress (mean 20.63 Mbps)
- Flow 2 ingress (mean 20.99 Mbps)
- Flow 2 egress (mean 20.99 Mbps)
- Flow 3 ingress (mean 20.45 Mbps)
- Flow 3 egress (mean 20.53 Mbps)

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

- Flow 1 (95th percentile 1.08 ms)
- Flow 2 (95th percentile 1.07 ms)
- Flow 3 (95th percentile 1.08 ms)
Run 10: Statistics of Sprout

Start at: 2018-07-11 00:42:26
End at: 2018-07-11 00:42:56
Local clock offset: 0.679 ms
Remote clock offset: 1.456 ms

# Below is generated by plot.py at 2018-07-11 02:45:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 41.29 Mbit/s
  95th percentile per-packet one-way delay: 1.016 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 20.77 Mbit/s
  95th percentile per-packet one-way delay: 1.014 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 20.73 Mbit/s
  95th percentile per-packet one-way delay: 1.018 ms
  Loss rate: 0.24%
-- Flow 3:
  Average throughput: 20.61 Mbit/s
  95th percentile per-packet one-way delay: 1.017 ms
  Loss rate: 0.00%
Run 10: Report of Sprout — Data Link
Run 1: Statistics of TaoVA-100x

Start at: 2018-07-10 20:16:07  
End at: 2018-07-10 20:16:37 
Local clock offset: 0.907 ms 
Remote clock offset: 0.12 ms

# Below is generated by plot.py at 2018-07-11 02:51:15 
# Datalink statistics 

-- Total of 3 flows: 
Average throughput: 393.94 Mbit/s 
95th percentile per-packet one-way delay: 1.184 ms 
Loss rate: 0.06% 

-- Flow 1: 
Average throughput: 224.50 Mbit/s 
95th percentile per-packet one-way delay: 1.136 ms 
Loss rate: 0.03% 

-- Flow 2: 
Average throughput: 195.40 Mbit/s 
95th percentile per-packet one-way delay: 1.213 ms 
Loss rate: 0.05% 

-- Flow 3: 
Average throughput: 118.84 Mbit/s 
95th percentile per-packet one-way delay: 1.380 ms 
Loss rate: 0.28%
Run 1: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 224.41 Mbit/s)
- Flow 1 egress (mean 224.50 Mbit/s)
- Flow 2 ingress (mean 195.31 Mbit/s)
- Flow 2 egress (mean 195.40 Mbit/s)
- Flow 3 ingress (mean 118.94 Mbit/s)
- Flow 3 egress (mean 118.84 Mbit/s)

<table>
<thead>
<tr>
<th>Time (s)</th>
<th>Throughput (Mbit/s)</th>
<th>Packet Delay (ms)</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

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Run 2: Statistics of TaoVA-100x

Start at: 2018-07-10 20:43:06
End at: 2018-07-10 20:43:36
Local clock offset: 0.556 ms
Remote clock offset: 0.956 ms

# Below is generated by plot.py at 2018-07-11 02:51:17
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 393.86 Mbit/s
  95th percentile per-packet one-way delay: 1.160 ms
  Loss rate: 0.07%
-- Flow 1:
  Average throughput: 222.31 Mbit/s
  95th percentile per-packet one-way delay: 1.111 ms
  Loss rate: 0.03%
-- Flow 2:
  Average throughput: 201.32 Mbit/s
  95th percentile per-packet one-way delay: 1.189 ms
  Loss rate: 0.09%
-- Flow 3:
  Average throughput: 113.22 Mbit/s
  95th percentile per-packet one-way delay: 1.338 ms
  Loss rate: 0.19%
Run 2: Report of TaoVA-100x — Data Link

**Throughput (Mbps):**

- Flow 1 ingress (mean 222.23 Mbps)
- Flow 1 egress (mean 222.31 Mbps)
- Flow 2 ingress (mean 201.15 Mbps)
- Flow 2 egress (mean 201.32 Mbps)
- Flow 3 ingress (mean 113.20 Mbps)
- Flow 3 egress (mean 113.22 Mbps)

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

- Flow 1 (95th percentile 1.11 ms)
- Flow 2 (95th percentile 1.19 ms)
- Flow 3 (95th percentile 1.34 ms)
Run 3: Statistics of TaoVA-100x

Start at: 2018-07-10 21:09:54
End at: 2018-07-10 21:10:24
Local clock offset: 0.653 ms
Remote clock offset: 1.626 ms

# Below is generated by plot.py at 2018-07-11 02:51:17
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 389.43 Mbit/s
  95th percentile per-packet one-way delay: 1.090 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 221.31 Mbit/s
  95th percentile per-packet one-way delay: 1.060 ms
  Loss rate: 0.02%
-- Flow 2:
  Average throughput: 193.91 Mbit/s
  95th percentile per-packet one-way delay: 1.102 ms
  Loss rate: 0.05%
-- Flow 3:
  Average throughput: 117.82 Mbit/s
  95th percentile per-packet one-way delay: 1.323 ms
  Loss rate: 0.20%
Run 3: Report of TaoVA-100x — Data Link
Run 4: Statistics of TaoVA-100x

Start at: 2018-07-10 21:36:54
End at: 2018-07-10 21:37:24
Local clock offset: 0.665 ms
Remote clock offset: 2.124 ms

# Below is generated by plot.py at 2018-07-11 02:51:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 375.48 Mbit/s
95th percentile per-packet one-way delay: 1.182 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 208.01 Mbit/s
95th percentile per-packet one-way delay: 1.124 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 192.64 Mbit/s
95th percentile per-packet one-way delay: 1.198 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 118.27 Mbit/s
95th percentile per-packet one-way delay: 1.493 ms
Loss rate: 0.36%
Run 4: Report of TaoVA-100x — Data Link

![Diagram](image1.png)  

![Diagram](image2.png)
Run 5: Statistics of TaoVA-100x

Start at: 2018-07-10 22:03:53
End at: 2018-07-10 22:04:23
Local clock offset: 0.664 ms
Remote clock offset: 2.289 ms

# Below is generated by plot.py at 2018-07-11 02:51:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 388.75 Mbit/s
  95th percentile per-packet one-way delay: 1.137 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 216.93 Mbit/s
  95th percentile per-packet one-way delay: 1.111 ms
  Loss rate: 0.02%
-- Flow 2:
  Average throughput: 197.49 Mbit/s
  95th percentile per-packet one-way delay: 1.110 ms
  Loss rate: 0.08%
-- Flow 3:
  Average throughput: 121.84 Mbit/s
  95th percentile per-packet one-way delay: 1.419 ms
  Loss rate: 0.16%
Run 5: Report of TaoVA-100x — Data Link

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

Throughput (Mbps)

Time (s)

- Flow 1 ingress (mean 216.79 Mbps)
- Flow 1 egress (mean 216.93 Mbps)
- Flow 2 ingress (mean 197.44 Mbps)
- Flow 2 egress (mean 197.49 Mbps)
- Flow 3 ingress (mean 121.69 Mbps)
- Flow 3 egress (mean 121.64 Mbps)

Packet one-way delay (ms)

Time (s)

- Flow 1 (95th percentile 1.11 ms)
- Flow 2 (95th percentile 1.11 ms)
- Flow 3 (95th percentile 1.42 ms)
Run 6: Statistics of TaoVA-100x

Start at: 2018-07-10 22:30:50
End at: 2018-07-10 22:31:20
Local clock offset: 0.766 ms
Remote clock offset: 2.289 ms

# Below is generated by plot.py at 2018-07-11 02:51:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 382.78 Mbit/s
95th percentile per-packet one-way delay: 0.976 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 215.95 Mbit/s
95th percentile per-packet one-way delay: 0.949 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 195.08 Mbit/s
95th percentile per-packet one-way delay: 0.970 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 111.58 Mbit/s
95th percentile per-packet one-way delay: 1.121 ms
Loss rate: 0.22%
Run 6: Report of TaoVA-100x — Data Link
Run 7: Statistics of TaoVA-100x

Start at: 2018-07-10 22:57:50
End at: 2018-07-10 22:58:20
Local clock offset: 0.812 ms
Remote clock offset: 1.977 ms

# Below is generated by plot.py at 2018-07-11 02:51:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 380.09 Mbit/s
95th percentile per-packet one-way delay: 1.167 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 211.88 Mbit/s
95th percentile per-packet one-way delay: 1.148 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 192.84 Mbit/s
95th percentile per-packet one-way delay: 1.137 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 120.36 Mbit/s
95th percentile per-packet one-way delay: 1.386 ms
Loss rate: 0.11%
Run 7: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 211.82 Mbit/s)
- Flow 1 egress (mean 211.88 Mbit/s)
- Flow 2 ingress (mean 192.78 Mbit/s)
- Flow 2 egress (mean 192.84 Mbit/s)
- Flow 3 ingress (mean 120.23 Mbit/s)
- Flow 3 egress (mean 120.36 Mbit/s)
Run 8: Statistics of TaoVA-100x

Start at: 2018-07-10 23:24:36
End at: 2018-07-10 23:25:06
Local clock offset: 0.59 ms
Remote clock offset: 1.74 ms

# Below is generated by plot.py at 2018-07-11 02:53:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 390.46 Mbit/s
95th percentile per-packet one-way delay: 1.159 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 225.56 Mbit/s
95th percentile per-packet one-way delay: 1.148 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 186.18 Mbit/s
95th percentile per-packet one-way delay: 1.147 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 123.58 Mbit/s
95th percentile per-packet one-way delay: 1.256 ms
Loss rate: 0.19%
Run 8: Report of TaoVA-100x — Data Link

![Graph](#)

![Graph](#)
Run 9: Statistics of TaoVA-100x

Start at: 2018-07-10 23:51:29
End at: 2018-07-10 23:51:59
Local clock offset: 0.619 ms
Remote clock offset: 1.732 ms

# Below is generated by plot.py at 2018-07-11 02:59:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 387.45 Mbit/s
95th percentile per-packet one-way delay: 1.064 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 220.61 Mbit/s
95th percentile per-packet one-way delay: 1.028 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 193.26 Mbit/s
95th percentile per-packet one-way delay: 1.077 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 114.85 Mbit/s
95th percentile per-packet one-way delay: 1.461 ms
Loss rate: 0.20%
Run 9: Report of TaoVA-100x — Data Link
Run 10: Statistics of TaoVA-100x

Start at: 2018-07-11 00:18:24
End at: 2018-07-11 00:18:54
Local clock offset: 0.701 ms
Remote clock offset: 1.595 ms

# Below is generated by plot.py at 2018-07-11 02:59:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 372.98 Mbit/s
  95th percentile per-packet one-way delay: 1.048 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 213.65 Mbit/s
  95th percentile per-packet one-way delay: 1.021 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 179.62 Mbit/s
  95th percentile per-packet one-way delay: 1.052 ms
  Loss rate: 0.07%
-- Flow 3:
  Average throughput: 119.87 Mbit/s
  95th percentile per-packet one-way delay: 1.136 ms
  Loss rate: 0.26%
Run 10: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 213.54 Mbps)
- Flow 1 egress (mean 213.65 Mbps)
- Flow 2 ingress (mean 179.56 Mbps)
- Flow 2 egress (mean 179.62 Mbps)
- Flow 3 ingress (mean 119.89 Mbps)
- Flow 3 egress (mean 119.87 Mbps)

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

- Flow 1 (95th percentile 1.02 ms)
- Flow 2 (95th percentile 1.05 ms)
- Flow 3 (95th percentile 1.14 ms)
Run 1: Statistics of TCP Vegas

Start at: 2018-07-10 20:41:29
End at: 2018-07-10 20:41:59
Local clock offset: 0.538 ms
Remote clock offset: 0.891 ms

# Below is generated by plot.py at 2018-07-11 02:59:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 569.62 Mbit/s
95th percentile per-packet one-way delay: 1.709 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 272.98 Mbit/s
95th percentile per-packet one-way delay: 1.659 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 262.97 Mbit/s
95th percentile per-packet one-way delay: 1.671 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 367.07 Mbit/s
95th percentile per-packet one-way delay: 1.808 ms
Loss rate: 0.20%
Run 1: Report of TCP Vegas — Data Link

![Graph showing network performance metrics over time.]

Legend:
- Flow 1 ingress (mean 272.97 Mbit/s)
- Flow 1 egress (mean 272.98 Mbit/s)
- Flow 2 ingress (mean 263.06 Mbit/s)
- Flow 2 egress (mean 262.97 Mbit/s)
- Flow 3 ingress (mean 367.08 Mbit/s)
- Flow 3 egress (mean 367.07 Mbit/s)

![Graph showing per-queue one-way delays.]

Legend:
- Flow 1 (95th percentile 1.66 ms)
- Flow 2 (95th percentile 1.67 ms)
- Flow 3 (95th percentile 1.81 ms)
Run 2: Statistics of TCP Vegas

Start at: 2018-07-10 21:08:21
End at: 2018-07-10 21:08:51
Local clock offset: 0.653 ms
Remote clock offset: 1.586 ms

# Below is generated by plot.py at 2018-07-11 02:59:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 464.49 Mbit/s
95th percentile per-packet one-way delay: 1.546 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 106.37 Mbit/s
95th percentile per-packet one-way delay: 1.278 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 351.18 Mbit/s
95th percentile per-packet one-way delay: 1.530 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 374.52 Mbit/s
95th percentile per-packet one-way delay: 1.631 ms
Loss rate: 0.19%
Run 3: Statistics of TCP Vegas

Start at: 2018-07-10 21:35:13  
End at: 2018-07-10 21:35:43  
Local clock offset: 0.568 ms  
Remote clock offset: 2.088 ms

# Below is generated by plot.py at 2018-07-11 02:59:01  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 685.53 Mbit/s  
95th percentile per-packet one-way delay: 3.380 ms  
Loss rate: 0.08%  
-- Flow 1:  
Average throughput: 377.84 Mbit/s  
95th percentile per-packet one-way delay: 3.265 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 311.08 Mbit/s  
95th percentile per-packet one-way delay: 3.389 ms  
Loss rate: 0.08%  
-- Flow 3:  
Average throughput: 302.97 Mbit/s  
95th percentile per-packet one-way delay: 3.427 ms  
Loss rate: 0.19%
Run 3: Report of TCP Vegas — Data Link
Run 4: Statistics of TCP Vegas

Start at: 2018-07-10 22:02:15
End at: 2018-07-10 22:02:45
Local clock offset: 0.642 ms
Remote clock offset: 2.323 ms

# Below is generated by plot.py at 2018-07-11 02:59:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 597.29 Mbit/s
95th percentile per-packet one-way delay: 1.769 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 272.30 Mbit/s
95th percentile per-packet one-way delay: 1.669 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 342.07 Mbit/s
95th percentile per-packet one-way delay: 1.793 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 292.75 Mbit/s
95th percentile per-packet one-way delay: 2.030 ms
Loss rate: 0.20%
Run 4: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 272.30 Mbit/s)
- Flow 1 egress (mean 272.30 Mbit/s)
- Flow 2 ingress (mean 342.04 Mbit/s)
- Flow 2 egress (mean 342.07 Mbit/s)
- Flow 3 ingress (mean 292.76 Mbit/s)
- Flow 3 egress (mean 292.75 Mbit/s)

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

- Flow 1 (95th percentile 1.67 ms)
- Flow 2 (95th percentile 1.79 ms)
- Flow 3 (95th percentile 2.03 ms)
Run 5: Statistics of TCP Vegas

End at: 2018-07-10 22:29:44
Local clock offset: 0.757 ms
Remote clock offset: 2.229 ms

# Below is generated by plot.py at 2018-07-11 02:59:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 540.22 Mbit/s
95th percentile per-packet one-way delay: 1.514 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 256.07 Mbit/s
95th percentile per-packet one-way delay: 1.502 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 333.21 Mbit/s
95th percentile per-packet one-way delay: 1.494 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 186.46 Mbit/s
95th percentile per-packet one-way delay: 1.581 ms
Loss rate: 0.27%
Run 5: Report of TCP Vegas — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 256.09 Mbps)
  - Flow 1 egress (mean 256.07 Mbps)
  - Flow 2 ingress (mean 333.21 Mbps)
  - Flow 2 egress (mean 333.21 Mbps)
  - Flow 3 ingress (mean 186.81 Mbps)
  - Flow 3 egress (mean 186.46 Mbps)

- **Packet one-way delay (ms):**
  - Flow 1 (95th percentile 1.50 ms)
  - Flow 2 (95th percentile 1.49 ms)
  - Flow 3 (95th percentile 1.58 ms)
Run 6: Statistics of TCP Vegas

End at: 2018-07-10 22:56:43
Local clock offset: 0.821 ms
Remote clock offset: 2.018 ms

# Below is generated by plot.py at 2018-07-11 03:00:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 571.56 Mbit/s
95th percentile per-packet one-way delay: 1.715 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 270.15 Mbit/s
95th percentile per-packet one-way delay: 1.659 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 285.15 Mbit/s
95th percentile per-packet one-way delay: 1.706 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 336.71 Mbit/s
95th percentile per-packet one-way delay: 1.808 ms
Loss rate: 0.18%
Run 6: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 270.18 Mbit/s)
- Flow 1 egress (mean 270.13 Mbit/s)
- Flow 2 ingress (mean 285.13 Mbit/s)
- Flow 2 egress (mean 285.13 Mbit/s)
- Flow 3 ingress (mean 336.74 Mbit/s)
- Flow 3 egress (mean 336.71 Mbit/s)
Run 7: Statistics of TCP Vegas

Start at: 2018-07-10 23:23:07
End at: 2018-07-10 23:23:37
Local clock offset: 0.576 ms
Remote clock offset: 1.764 ms

# Below is generated by plot.py at 2018-07-11 03:00:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 334.90 Mbit/s
95th percentile per-packet one-way delay: 1.333 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 117.74 Mbit/s
95th percentile per-packet one-way delay: 1.234 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 136.69 Mbit/s
95th percentile per-packet one-way delay: 1.242 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 380.62 Mbit/s
95th percentile per-packet one-way delay: 1.474 ms
Loss rate: 0.13%
Run 7: Report of TCP Vegas — Data Link

![Graph showing throughput and packet delay over time for different flows.](image-url)
Run 8: Statistics of TCP Vegas

Start at: 2018-07-10 23:49:52
End at: 2018-07-10 23:50:22
Local clock offset: 0.512 ms
Remote clock offset: 1.749 ms

# Below is generated by plot.py at 2018-07-11 03:03:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 559.08 Mbit/s
95th percentile per-packet one-way delay: 1.644 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 270.91 Mbit/s
95th percentile per-packet one-way delay: 1.525 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 279.75 Mbit/s
95th percentile per-packet one-way delay: 1.660 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 307.46 Mbit/s
95th percentile per-packet one-way delay: 1.795 ms
Loss rate: 0.18%
Run 8: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 270.93 Mbit/s)
- Flow 1 egress (mean 270.91 Mbit/s)
- Flow 2 ingress (mean 279.77 Mbit/s)
- Flow 2 egress (mean 279.75 Mbit/s)
- Flow 3 ingress (mean 307.45 Mbit/s)
- Flow 3 egress (mean 307.46 Mbit/s)

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

- Flow 1 (95th percentile 1.52 ms)
- Flow 2 (95th percentile 1.66 ms)
- Flow 3 (95th percentile 1.79 ms)

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Run 9: Statistics of TCP Vegas

Start at: 2018-07-11 00:16:48
End at: 2018-07-11 00:17:18
Local clock offset: 0.773 ms
Remote clock offset: 1.624 ms

# Below is generated by plot.py at 2018-07-11 03:03:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 534.73 Mbit/s
95th percentile per-packet one-way delay: 1.719 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 180.49 Mbit/s
95th percentile per-packet one-way delay: 1.594 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 348.00 Mbit/s
95th percentile per-packet one-way delay: 1.687 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 370.88 Mbit/s
95th percentile per-packet one-way delay: 1.906 ms
Loss rate: 0.18%
Run 9: Report of TCP Vegas — Data Link
Run 10: Statistics of TCP Vegas

Start at: 2018-07-11 00:43:46
End at: 2018-07-11 00:44:16
Local clock offset: 0.673 ms
Remote clock offset: 1.325 ms

# Below is generated by plot.py at 2018-07-11 03:04:48
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 601.26 Mbit/s
  95th percentile per-packet one-way delay: 3.456 ms
  Loss rate: 0.10%
-- Flow 1:
  Average throughput: 249.04 Mbit/s
  95th percentile per-packet one-way delay: 2.091 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 305.64 Mbit/s
  95th percentile per-packet one-way delay: 2.296 ms
  Loss rate: 0.08%
-- Flow 3:
  Average throughput: 448.77 Mbit/s
  95th percentile per-packet one-way delay: 4.186 ms
  Loss rate: 0.20%
Run 10: Report of TCP Vegas — Data Link

![Graph of throughput and packet delay over time]

- Flow 1 ingress (mean 249.02 Mbit/s)
- Flow 1 egress (mean 249.04 Mbit/s)
- Flow 2 ingress (mean 305.63 Mbit/s)
- Flow 2 egress (mean 305.64 Mbit/s)
- Flow 3 ingress (mean 448.75 Mbit/s)
- Flow 3 egress (mean 448.77 Mbit/s)

![Graph of packet delay over time]

- Flow 1 (95th percentile 2.09 ms)
- Flow 2 (95th percentile 2.30 ms)
- Flow 3 (95th percentile 4.19 ms)
Run 1: Statistics of Verus

Start at: 2018-07-10 20:30:11
End at: 2018-07-10 20:30:41
Local clock offset: 0.565 ms
Remote clock offset: 0.506 ms

# Below is generated by plot.py at 2018-07-11 03:04:48
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 357.79 Mbit/s
  95th percentile per-packet one-way delay: 3.391 ms
  Loss rate: 0.06%
-- Flow 1:
  Average throughput: 212.81 Mbit/s
  95th percentile per-packet one-way delay: 3.824 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 149.12 Mbit/s
  95th percentile per-packet one-way delay: 2.309 ms
  Loss rate: 0.05%
-- Flow 3:
  Average throughput: 137.92 Mbit/s
  95th percentile per-packet one-way delay: 1.431 ms
  Loss rate: 0.28%
Run 1: Report of Verus — Data Link

![Graph of data link performance over time]

The graphs show the throughput and per-packet one-way delay for different flows. The throughput graph indicates variability in data transfer rates, whereas the per-packet delay graph visualizes the latency associated with data packets. The graphs are labeled with mean values for each flow's ingress and egress throughput.
Run 2: Statistics of Verus

Start at: 2018-07-10 20:57:11
End at: 2018-07-10 20:57:41
Local clock offset: 0.621 ms
Remote clock offset: 1.315 ms

# Below is generated by plot.py at 2018-07-11 03:04:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 337.90 Mbit/s
95th percentile per-packet one-way delay: 6.617 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 214.27 Mbit/s
95th percentile per-packet one-way delay: 7.624 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 133.92 Mbit/s
95th percentile per-packet one-way delay: 2.996 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 104.29 Mbit/s
95th percentile per-packet one-way delay: 2.079 ms
Loss rate: 0.15%
Run 2: Report of Verus — Data Link

![Graph showing throughput and delay over time for different flows.]
Run 3: Statistics of Verus

End at: 2018-07-10 21:24:29
Local clock offset: 0.676 ms
Remote clock offset: 1.853 ms

# Below is generated by plot.py at 2018-07-11 03:04:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 272.57 Mbit/s
95th percentile per-packet one-way delay: 3.877 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 151.78 Mbit/s
95th percentile per-packet one-way delay: 5.076 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 148.20 Mbit/s
95th percentile per-packet one-way delay: 1.898 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 67.18 Mbit/s
95th percentile per-packet one-way delay: 3.128 ms
Loss rate: 0.00%
Run 3: Report of Verus — Data Link
Run 4: Statistics of Verus

Start at: 2018-07-10 21:51:05
End at: 2018-07-10 21:51:35
Local clock offset: 0.594 ms
Remote clock offset: 2.292 ms

# Below is generated by plot.py at 2018-07-11 03:04:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 298.29 Mbit/s
95th percentile per-packet one-way delay: 5.164 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 180.01 Mbit/s
95th percentile per-packet one-way delay: 4.950 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 129.01 Mbit/s
95th percentile per-packet one-way delay: 6.592 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 105.76 Mbit/s
95th percentile per-packet one-way delay: 1.869 ms
Loss rate: 0.64%
Run 4: Report of Verus — Data Link

![Graph of throughput and packet delay over time for different flow ingress and egress rates and 95th percentile delays.]

Throughput (Mbps)

Time (s)

0 5 10 15 20 25 30

Flow 1 ingress (mean 178.00 Mbps)
Flow 1 egress (mean 180.01 Mbps)
Flow 2 ingress (mean 129.01 Mbps)
Flow 2 egress (mean 129.01 Mbps)
Flow 3 ingress (mean 106.11 Mbps)
Flow 3 egress (mean 105.76 Mbps)

Packet delay (ms)

Time (s)

0 5 10 15 20 25 30

Flow 1 (95th percentile 4.95 ms)
Flow 2 (95th percentile 6.59 ms)
Flow 3 (95th percentile 1.87 ms)
Run 5: Statistics of Verus

Start at: 2018-07-10 22:17:59
End at: 2018-07-10 22:18:29
Local clock offset: 0.762 ms
Remote clock offset: 2.215 ms

# Below is generated by plot.py at 2018-07-11 03:04:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 319.80 Mbit/s
95th percentile per-packet one-way delay: 4.662 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 212.30 Mbit/s
95th percentile per-packet one-way delay: 5.732 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 92.90 Mbit/s
95th percentile per-packet one-way delay: 2.639 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 137.86 Mbit/s
95th percentile per-packet one-way delay: 2.230 ms
Loss rate: 0.11%
Run 5: Report of Verus — Data Link
Run 6: Statistics of Verus

Start at: 2018-07-10 22:45:00
End at: 2018-07-10 22:45:30
Local clock offset: 0.803 ms
Remote clock offset: 2.113 ms

# Below is generated by plot.py at 2018-07-11 03:06:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 354.76 Mbit/s
  95th percentile per-packet one-way delay: 3.849 ms
  Loss rate: 0.07%
-- Flow 1:
  Average throughput: 209.34 Mbit/s
  95th percentile per-packet one-way delay: 4.801 ms
  Loss rate: 0.04%
-- Flow 2:
  Average throughput: 158.95 Mbit/s
  95th percentile per-packet one-way delay: 2.359 ms
  Loss rate: 0.06%
-- Flow 3:
  Average throughput: 119.55 Mbit/s
  95th percentile per-packet one-way delay: 2.038 ms
  Loss rate: 0.23%
Run 6: Report of Verus — Data Link
Run 7: Statistics of Verus

Start at: 2018-07-10 23:11:58
End at: 2018-07-10 23:12:28
Local clock offset: 0.682 ms
Remote clock offset: 1.815 ms

# Below is generated by plot.py at 2018-07-11 03:06:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 323.04 Mbit/s
95th percentile per-packet one-way delay: 6.390 ms
Loss rate: 0.12%

-- Flow 1:
Average throughput: 186.11 Mbit/s
95th percentile per-packet one-way delay: 7.643 ms
Loss rate: 0.11%

-- Flow 2:
Average throughput: 149.26 Mbit/s
95th percentile per-packet one-way delay: 1.701 ms
Loss rate: 0.06%

-- Flow 3:
Average throughput: 113.53 Mbit/s
95th percentile per-packet one-way delay: 1.933 ms
Loss rate: 0.36%
Run 7: Report of Verus — Data Link
Run 8: Statistics of Verus

Start at: 2018-07-10 23:38:45
End at: 2018-07-10 23:39:15
Local clock offset: 0.45 ms
Remote clock offset: 1.728 ms

# Below is generated by plot.py at 2018-07-11 03:06:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 251.85 Mbit/s
95th percentile per-packet one-way delay: 3.763 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 140.57 Mbit/s
95th percentile per-packet one-way delay: 4.715 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 114.81 Mbit/s
95th percentile per-packet one-way delay: 2.194 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 105.71 Mbit/s
95th percentile per-packet one-way delay: 2.033 ms
Loss rate: 0.00%
Run 8: Report of Verus — Data Link
Run 9: Statistics of Verus

Start at: 2018-07-11 00:05:36
End at: 2018-07-11 00:06:06
Local clock offset: 0.575 ms
Remote clock offset: 1.636 ms

# Below is generated by plot.py at 2018-07-11 03:06:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 284.56 Mbit/s
95th percentile per-packet one-way delay: 3.749 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 155.41 Mbit/s
95th percentile per-packet one-way delay: 4.502 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 139.21 Mbit/s
95th percentile per-packet one-way delay: 2.601 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 112.61 Mbit/s
95th percentile per-packet one-way delay: 2.295 ms
Loss rate: 0.22%
Run 9: Report of Verus — Data Link

![Graph 1: Throughput vs Time]

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

Legend:
- Flow 1 ingress (mean 135.41 Mbit/s)
- Flow 1 egress (mean 135.41 Mbit/s)
- Flow 2 ingress (mean 139.22 Mbit/s)
- Flow 2 egress (mean 139.21 Mbit/s)
- Flow 3 ingress (mean 112.67 Mbit/s)
- Flow 3 egress (mean 112.61 Mbit/s)

Legend for Per-packet one-way delay:
- Flow 1 (95th percentile 4.50 ms)
- Flow 2 (95th percentile 2.60 ms)
- Flow 3 (95th percentile 2.29 ms)
Run 10: Statistics of Verus

Start at: 2018-07-11 00:32:34
End at: 2018-07-11 00:33:04
Local clock offset: 0.756 ms
Remote clock offset: 1.429 ms

# Below is generated by plot.py at 2018-07-11 03:06:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 258.78 Mbit/s
  95th percentile per-packet one-way delay: 6.368 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 162.12 Mbit/s
  95th percentile per-packet one-way delay: 7.234 ms
  Loss rate: 0.06%
-- Flow 2:
  Average throughput: 123.85 Mbit/s
  95th percentile per-packet one-way delay: 2.031 ms
  Loss rate: 0.13%
-- Flow 3:
  Average throughput: 43.23 Mbit/s
  95th percentile per-packet one-way delay: 3.048 ms
  Loss rate: 0.01%
Run 10: Report of Verus — Data Link
Run 1: Statistics of PCC-Vivace

Start at: 2018-07-10 20:17:49
End at: 2018-07-10 20:18:19
Local clock offset: 0.779 ms
Remote clock offset: 0.257 ms

# Below is generated by plot.py at 2018-07-11 03:07:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 304.67 Mbit/s
95th percentile per-packet one-way delay: 0.950 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 253.94 Mbit/s
95th percentile per-packet one-way delay: 0.946 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 52.28 Mbit/s
95th percentile per-packet one-way delay: 0.969 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 48.42 Mbit/s
95th percentile per-packet one-way delay: 0.957 ms
Loss rate: 0.14%
Run 1: Report of PCC-Vivace — Data Link

![Throughput Graph]

![Packet Delay Graph]

Legend:
- Flow 1 ingress (mean 253.80 Mbit/s)
- Flow 1 egress (mean 253.94 Mbit/s)
- Flow 2 ingress (mean 52.30 Mbit/s)
- Flow 2 egress (mean 52.28 Mbit/s)
- Flow 3 ingress (mean 48.40 Mbit/s)
- Flow 3 egress (mean 48.42 Mbit/s)
Run 2: Statistics of PCC-Vivace

Start at: 2018-07-10 20:44:48
End at: 2018-07-10 20:45:18
Local clock offset: 0.561 ms
Remote clock offset: 1.03 ms

# Below is generated by plot.py at 2018-07-11 03:08:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 330.98 Mbit/s
95th percentile per-packet one-way delay: 1.103 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 233.45 Mbit/s
95th percentile per-packet one-way delay: 1.097 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 119.91 Mbit/s
95th percentile per-packet one-way delay: 1.122 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 54.11 Mbit/s
95th percentile per-packet one-way delay: 1.098 ms
Loss rate: 0.24%
Run 2: Report of PCC-Vivace — Data Link

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

**Throughput (Mbps)**

- **Flow 1 ingress (mean 233.37 Mbps)**
- **Flow 1 egress (mean 233.45 Mbps)**
- **Flow 2 ingress (mean 119.91 Mbps)**
- **Flow 2 egress (mean 119.91 Mbps)**
- **Flow 3 ingress (mean 54.13 Mbps)**
- **Flow 3 egress (mean 54.11 Mbps)**

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

- **Flow 1 (95th percentile 1.10 ms)**
- **Flow 2 (95th percentile 1.12 ms)**
- **Flow 3 (95th percentile 1.10 ms)**

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Run 3: Statistics of PCC-Vivace

Start at: 2018-07-10 21:11:36
End at: 2018-07-10 21:12:06
Local clock offset: 0.578 ms
Remote clock offset: 1.706 ms

# Below is generated by plot.py at 2018-07-11 03:08:54
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 340.36 Mbit/s
 95th percentile per-packet one-way delay: 0.938 ms
 Loss rate: 0.06%
-- Flow 1:
 Average throughput: 259.46 Mbit/s
 95th percentile per-packet one-way delay: 0.937 ms
 Loss rate: 0.03%
-- Flow 2:
 Average throughput: 79.20 Mbit/s
 95th percentile per-packet one-way delay: 0.938 ms
 Loss rate: 0.15%
-- Flow 3:
 Average throughput: 85.79 Mbit/s
 95th percentile per-packet one-way delay: 0.958 ms
 Loss rate: 0.13%
Run 3: Report of PCC-Vivace — Data Link

![Graph showing data link throughput and packet delay for flows 1, 2, and 3 over time.]
Run 4: Statistics of PCC-Vivace

Start at: 2018-07-10 21:38:35
End at: 2018-07-10 21:39:05
Local clock offset: 0.662 ms
Remote clock offset: 2.177 ms

# Below is generated by plot.py at 2018-07-11 03:10:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 395.60 Mbit/s
95th percentile per-packet one-way delay: 1.084 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 365.17 Mbit/s
95th percentile per-packet one-way delay: 1.080 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1.093 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 92.40 Mbit/s
95th percentile per-packet one-way delay: 1.104 ms
Loss rate: 0.14%
Run 4: Report of PCC-Vivace — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 365.07 Mbit/s)  Flow 2 ingress (mean 0.00 Mbit/s)
Flow 1 egress (mean 365.17 Mbit/s)  Flow 2 egress (mean 0.00 Mbit/s)
Flow 3 ingress (mean 92.37 Mbit/s)  Flow 3 egress (mean 92.40 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 1.08 ms)  Flow 2 (95th percentile 1.09 ms)  Flow 3 (95th percentile 1.10 ms)
Run 5: Statistics of PCC-Vivace

Start at: 2018-07-10 22:05:35
End at: 2018-07-10 22:06:05
Local clock offset: 0.671 ms
Remote clock offset: 2.306 ms

# Below is generated by plot.py at 2018-07-11 03:10:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 285.52 Mbit/s
95th percentile per-packet one-way delay: 1.082 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 196.01 Mbit/s
95th percentile per-packet one-way delay: 1.082 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 103.31 Mbit/s
95th percentile per-packet one-way delay: 1.078 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 63.09 Mbit/s
95th percentile per-packet one-way delay: 1.090 ms
Loss rate: 0.09%
Run 5: Report of PCC-Vivace — Data Link

![Graph showing network traffic and delay over time.](image)

**Throughput (Mbps)** vs **Time (s)**
- **Flow 1 ingress (mean 195.94 Mbps)**
- **Flow 1 egress (mean 196.01 Mbps)**
- **Flow 2 ingress (mean 103.31 Mbps)**
- **Flow 2 egress (mean 103.31 Mbps)**
- **Flow 3 ingress (mean 63.04 Mbps)**
- **Flow 3 egress (mean 63.09 Mbps)**

**Percent one-way delay (ms)** vs **Time (s)**
- Flow 1 (95th percentile 1.08 ms)
- Flow 2 (95th percentile 1.08 ms)
- Flow 3 (95th percentile 1.09 ms)
Run 6: Statistics of PCC-Vivace

Start at: 2018-07-10 22:32:32
End at: 2018-07-10 22:33:02
Local clock offset: 0.868 ms
Remote clock offset: 2.296 ms

# Below is generated by plot.py at 2018-07-11 03:10:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 349.13 Mbit/s
95th percentile per-packet one-way delay: 1.014 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 251.74 Mbit/s
95th percentile per-packet one-way delay: 1.015 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 112.87 Mbit/s
95th percentile per-packet one-way delay: 1.016 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 67.80 Mbit/s
95th percentile per-packet one-way delay: 0.999 ms
Loss rate: 0.14%
Run 6: Report of PCC-Vivace — Data Link

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

Legend:
- Flow 1 ingress (mean 251.59 Mbit/s)
- Flow 1 egress (mean 251.74 Mbit/s)
- Flow 2 ingress (mean 112.80 Mbit/s)
- Flow 2 egress (mean 112.87 Mbit/s)
- Flow 3 ingress (mean 67.76 Mbit/s)
- Flow 3 egress (mean 67.80 Mbit/s)
Run 7: Statistics of PCC-Vivace

Start at: 2018-07-10 22:59:31
End at: 2018-07-10 23:00:01
Local clock offset: 0.789 ms
Remote clock offset: 1.966 ms

# Below is generated by plot.py at 2018-07-11 03:10:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 315.85 Mbit/s
95th percentile per-packet one-way delay: 1.090 ms
Loss rate: 0.06%

-- Flow 1:
Average throughput: 227.58 Mbit/s
95th percentile per-packet one-way delay: 1.079 ms
Loss rate: 0.03%

-- Flow 2:
Average throughput: 99.90 Mbit/s
95th percentile per-packet one-way delay: 1.130 ms
Loss rate: 0.06%

-- Flow 3:
Average throughput: 66.13 Mbit/s
95th percentile per-packet one-way delay: 1.085 ms
Loss rate: 0.36%
Run 7: Report of PCC-Vivace — Data Link
Run 8: Statistics of PCC-Vivace

Start at: 2018-07-10 23:26:18
End at: 2018-07-10 23:26:48
Local clock offset: 0.556 ms
Remote clock offset: 1.798 ms

# Below is generated by plot.py at 2018-07-11 03:10:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 347.00 Mbit/s
95th percentile per-packet one-way delay: 1.058 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 270.84 Mbit/s
95th percentile per-packet one-way delay: 1.059 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 93.06 Mbit/s
95th percentile per-packet one-way delay: 1.061 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 43.29 Mbit/s
95th percentile per-packet one-way delay: 1.037 ms
Loss rate: 0.19%
Run 8: Report of PCC-Vivace — Data Link

![Graph showing throughput and delay over time for different flows with different colors and labels](image)

![Graph showing per-packet one-way delay over time for different flows with different colors and labels](image)
Run 9: Statistics of PCC-Vivace

Start at: 2018-07-10 23:53:10
End at: 2018-07-10 23:53:40
Local clock offset: 0.634 ms
Remote clock offset: 1.683 ms

# Below is generated by plot.py at 2018-07-11 03:10:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 339.07 Mbit/s
95th percentile per-packet one-way delay: 1.107 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 250.18 Mbit/s
95th percentile per-packet one-way delay: 1.091 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 100.13 Mbit/s
95th percentile per-packet one-way delay: 1.193 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 67.89 Mbit/s
95th percentile per-packet one-way delay: 1.088 ms
Loss rate: 0.28%
Run 9: Report of PCC-Vivace — Data Link

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

- **Flow 1 ingress (mean 250.02 Mbit/s)**
- **Flow 1 egress (mean 250.18 Mbit/s)**
- **Flow 2 ingress (mean 100.14 Mbit/s)**
- **Flow 2 egress (mean 100.13 Mbit/s)**
- **Flow 3 ingress (mean 67.03 Mbit/s)**
- **Flow 3 egress (mean 67.89 Mbit/s)**

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

- **Flow 1 (95th percentile 1.09 ms)**
- **Flow 2 (95th percentile 1.19 ms)**
- **Flow 3 (95th percentile 1.09 ms)**

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Run 10: Statistics of PCC-Vivace

Start at: 2018-07-11 00:20:05
End at: 2018-07-11 00:20:35
Local clock offset: 0.806 ms
Remote clock offset: 1.598 ms

# Below is generated by plot.py at 2018-07-11 03:11:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 311.24 Mbit/s
95th percentile per-packet one-way delay: 1.090 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 189.98 Mbit/s
95th percentile per-packet one-way delay: 1.086 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 155.13 Mbit/s
95th percentile per-packet one-way delay: 1.098 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 54.94 Mbit/s
95th percentile per-packet one-way delay: 1.106 ms
Loss rate: 0.26%
Run 10: Report of PCC-Vivace — Data Link

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

Legend:
- Flow 1 ingress (mean 189.89 Mbit/s)
- Flow 1 egress (mean 189.98 Mbit/s)
- Flow 2 ingress (mean 155.68 Mbit/s)
- Flow 2 egress (mean 155.13 Mbit/s)
- Flow 3 ingress (mean 54.98 Mbit/s)
- Flow 3 egress (mean 54.94 Mbit/s)
Run 1: Statistics of WebRTC media

Start at: 2018-07-10 20:20:38
End at: 2018-07-10 20:21:08
Local clock offset: 0.728 ms
Remote clock offset: 0.204 ms

# Below is generated by plot.py at 2018-07-11 03:11:03
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.41 Mbit/s
  95th percentile per-packet one-way delay: 1.111 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 1.73 Mbit/s
  95th percentile per-packet one-way delay: 1.114 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.17 Mbit/s
  95th percentile per-packet one-way delay: 1.102 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.53 Mbit/s
  95th percentile per-packet one-way delay: 1.120 ms
  Loss rate: 0.00%
Run 1: Report of WebRTC media — Data Link
Run 2: Statistics of WebRTC media

Start at: 2018-07-10 20:47:40
End at: 2018-07-10 20:48:10
Local clock offset: 0.484 ms
Remote clock offset: 1.122 ms

# Below is generated by plot.py at 2018-07-11 03:11:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.41 Mbit/s
95th percentile per-packet one-way delay: 1.026 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 1.66 Mbit/s
95th percentile per-packet one-way delay: 1.024 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 1.030 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 1.023 ms
Loss rate: 0.01%
Run 2: Report of WebRTC media — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 1.66 Mbps)
- Flow 1 egress (mean 1.66 Mbps)
- Flow 2 ingress (mean 1.20 Mbps)
- Flow 2 egress (mean 1.20 Mbps)
- Flow 3 ingress (mean 0.56 Mbps)
- Flow 3 egress (mean 0.56 Mbps)

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

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

Start at: 2018-07-10 21:14:28
End at: 2018-07-10 21:14:58
Local clock offset: 0.689 ms
Remote clock offset: 1.774 ms

# Below is generated by plot.py at 2018-07-11 03:11:03
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.41 Mbit/s
  95th percentile per-packet one-way delay: 1.073 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 1.68 Mbit/s
  95th percentile per-packet one-way delay: 1.080 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.20 Mbit/s
  95th percentile per-packet one-way delay: 1.070 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.54 Mbit/s
  95th percentile per-packet one-way delay: 1.055 ms
  Loss rate: 0.01%
Run 3: Report of WebRTC media — Data Link

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

**Throughput (Mbps)**
- Flow 1 ingress (mean 1.68 Mbit/s)
- Flow 1 egress (mean 1.68 Mbit/s)
- Flow 2 ingress (mean 1.20 Mbit/s)
- Flow 2 egress (mean 1.20 Mbit/s)
- Flow 3 ingress (mean 0.54 Mbit/s)
- Flow 3 egress (mean 0.54 Mbit/s)

**Packet delay (ms)**
- Flow 1 (95th percentile 1.08 ms)
- Flow 2 (95th percentile 1.07 ms)
- Flow 3 (95th percentile 1.05 ms)
Run 4: Statistics of WebRTC media

Start at: 2018-07-10 21:41:30
End at: 2018-07-10 21:42:00
Local clock offset: 0.625 ms
Remote clock offset: 2.206 ms

# Below is generated by plot.py at 2018-07-11 03:11:03
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.49 Mbit/s
  95th percentile per-packet one-way delay: 1.109 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 1.72 Mbit/s
  95th percentile per-packet one-way delay: 1.099 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.25 Mbit/s
  95th percentile per-packet one-way delay: 1.118 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.53 Mbit/s
  95th percentile per-packet one-way delay: 1.118 ms
  Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link

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

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

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Run 5: Statistics of WebRTC media

Start at: 2018-07-10 22:08:24
End at: 2018-07-10 22:08:54
Local clock offset: 0.607 ms
Remote clock offset: 2.322 ms

# Below is generated by plot.py at 2018-07-11 03:11:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.45 Mbit/s
95th percentile per-packet one-way delay: 1.006 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.70 Mbit/s
95th percentile per-packet one-way delay: 1.002 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 1.012 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 0.996 ms
Loss rate: 0.00%
Run 5: Report of WebRTC media — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 1.70 Mbit/s)
Flow 1 egress (mean 1.70 Mbit/s)
Flow 2 ingress (mean 1.22 Mbit/s)
Flow 2 egress (mean 1.22 Mbit/s)
Flow 3 ingress (mean 0.53 Mbit/s)
Flow 3 egress (mean 0.53 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 1.00 ms)
Flow 2 (95th percentile 1.01 ms)
Flow 3 (95th percentile 1.00 ms)
Run 6: Statistics of WebRTC media

Start at: 2018-07-10 22:35:25
End at: 2018-07-10 22:35:55
Local clock offset: 0.909 ms
Remote clock offset: 2.219 ms

# Below is generated by plot.py at 2018-07-11 03:11:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.46 Mbit/s
95th percentile per-packet one-way delay: 1.099 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 1.73 Mbit/s
95th percentile per-packet one-way delay: 1.092 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 1.098 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 1.117 ms
Loss rate: 0.45%
Run 6: Report of WebRTC media — Data Link

![Graph of WebRTC media data](image1)

![Graph of packet round-trip time](image2)
Run 7: Statistics of WebRTC media

Start at: 2018-07-10 23:02:22
End at: 2018-07-10 23:02:52
Local clock offset: 0.772 ms
Remote clock offset: 1.919 ms

# Below is generated by plot.py at 2018-07-11 03:11:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.42 Mbit/s
95th percentile per-packet one-way delay: 1.145 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 1.70 Mbit/s
95th percentile per-packet one-way delay: 1.147 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.21 Mbit/s
95th percentile per-packet one-way delay: 1.143 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 1.142 ms
Loss rate: 0.65%
Run 7: Report of WebRTC media — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 1.70 Mbps)
  - Flow 1 egress (mean 1.70 Mbps)
  - Flow 2 ingress (mean 1.20 Mbps)
  - Flow 2 egress (mean 1.21 Mbps)
  - Flow 3 ingress (mean 0.53 Mbps)
  - Flow 3 egress (mean 0.52 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (99th percentile 1.15 ms)
  - Flow 2 (99th percentile 1.14 ms)
  - Flow 3 (99th percentile 1.14 ms)
Run 8: Statistics of WebRTC media

Start at: 2018-07-10 23:29:11
End at: 2018-07-10 23:29:41
Local clock offset: 0.55 ms
Remote clock offset: 1.758 ms

# Below is generated by plot.py at 2018-07-11 03:11:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.41 Mbit/s
95th percentile per-packet one-way delay: 1.113 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 1.117 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 1.100 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 1.126 ms
Loss rate: 0.00%
Run 9: Statistics of WebRTC media

Start at: 2018-07-10 23:56:03
End at: 2018-07-10 23:56:33
Local clock offset: 0.664 ms
Remote clock offset: 1.755 ms

# Below is generated by plot.py at 2018-07-11 03:11:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.44 Mbit/s
95th percentile per-packet one-way delay: 1.054 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 1.70 Mbit/s
95th percentile per-packet one-way delay: 1.051 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 1.054 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 1.062 ms
Loss rate: 0.22%
Run 9: Report of WebRTC media — Data Link

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

Throughput (Mbps)

- Flow 1 ingress (mean 1.70 Mbps)
- Flow 1 egress (mean 1.70 Mbps)
- Flow 2 ingress (mean 1.23 Mbps)
- Flow 2 egress (mean 1.23 Mbps)
- Flow 3 ingress (mean 0.53 Mbps)
- Flow 3 egress (mean 0.53 Mbps)

Per-packet one-way delay (ms)

- Flow 1 (95th percentile 1.05 ms)
- Flow 2 (95th percentile 1.05 ms)
- Flow 3 (95th percentile 1.06 ms)
Run 10: Statistics of WebRTC media

Start at: 2018-07-11 00:22:56
End at: 2018-07-11 00:23:26
Local clock offset: 0.711 ms
Remote clock offset: 1.556 ms

# Below is generated by plot.py at 2018-07-11 03:11:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.42 Mbit/s
95th percentile per-packet one-way delay: 1.034 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 1.033 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 1.036 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 1.023 ms
Loss rate: 0.63%
Run 10: Report of WebRTC media — Data Link

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

- **Throughput** (Mbps):
  - Flow 1 ingress (mean 1.71 Mbps)
  - Flow 1 egress (mean 1.71 Mbps)
  - Flow 2 ingress (mean 1.18 Mbps)
  - Flow 2 egress (mean 1.18 Mbps)
  - Flow 3 ingress (mean 0.54 Mbps)
  - Flow 3 egress (mean 0.54 Mbps)

- **Packet loss** (ms):
  - Flow 1 (95th percentile 1.03 ms)
  - Flow 2 (95th percentile 1.04 ms)
  - Flow 3 (95th percentile 1.02 ms)