Pantheon Report

Generated at 2018-08-12 05:12:00 (UTC).
Data path: GCE Tokyo Ethernet (remote) → GCE Iowa 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.
NTP offsets were measured against time.google.com and have been applied to correct the timestamps in logs.

System info:
Linux 4.15.0-1014-gcp
net.core.default_qdisc = fq_codel
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

Git summary:
branch: master @ 7719b900495aa706f706f8452ab7d4a94dd562e9296e
time_party/fillp @ a47f4fa1be45a5e3f037115c5a28436dbd4b834
time_party/fillp-sheep @ daed0c84f9853171251b4231f43ec6901114ffe
time_party/genericCC @ d0153f8e594aa89e9b3b032143cedbfe58e562f4
time_party/indigo @ 2601c92e4a9d58ed38cd44fe0ecdfbf90c077e64d
time_party/libutp @ b3465b942e2826f2b179eaab4a906e66b73f3c
third_party/pantheon-tunnel @ 6f038ed31259d366f9840f65b82cbe8f464b1b39
third_party/pcc @ 1af9c55f8a0d66d18b623c091a55f8c872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8ac0d8fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a8273a86b42f1bc8143ebc978f30f42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3b6b2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366a35c6178b01e31d4a46ad18c74f9415f19a26
third_party/verus @ d4b447ea74c6c60a261149af262956293ff94a94
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2bad8ed211435ae071a32f96b7d8c504587f5d7f4
third_party/web rtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
test from GCE Tokyo to GCE Iowa, 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>
</tr>
</thead>
<tbody>
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<td>flow 2</td>
<td>flow 3</td>
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<td>421.29</td>
<td>351.53</td>
<td>158.19</td>
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<td>192.66</td>
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<td>709.12</td>
<td>660.12</td>
<td>555.73</td>
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<td>LEDBAT</td>
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<td>PCC-Allegro</td>
<td>10</td>
<td>503.37</td>
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<td>PCC-Expr</td>
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<td>222.43</td>
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<td>QUIC Cubic</td>
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<td>223.10</td>
<td>207.85</td>
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<td>TCP Vegas</td>
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<td>95.20</td>
<td>112.78</td>
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<tr>
<td>Verus</td>
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<td>193.77</td>
<td>179.23</td>
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<td>290.00</td>
<td>120.58</td>
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<td>1.86</td>
<td>1.18</td>
<td>0.47</td>
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</table>
Run 1: Statistics of TCP BBR

Start at: 2018-08-11 20:54:05
End at: 2018-08-11 20:54:35
Local clock offset: 0.127 ms
Remote clock offset: -0.081 ms

# Below is generated by plot.py at 2018-08-12 01:51:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 727.94 Mbit/s
95th percentile per-packet one-way delay: 211.524 ms
Loss rate: 4.20%
-- Flow 1:
Average throughput: 416.97 Mbit/s
95th percentile per-packet one-way delay: 230.941 ms
Loss rate: 4.35%
-- Flow 2:
Average throughput: 376.27 Mbit/s
95th percentile per-packet one-way delay: 170.546 ms
Loss rate: 3.01%
-- Flow 3:
Average throughput: 184.19 Mbit/s
95th percentile per-packet one-way delay: 144.737 ms
Loss rate: 7.80%
Run 1: Report of TCP BBR — Data Link

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**Throughput (Mbps)**

- **Flow 1 ingress** (mean 434.16 Mbps)
- **Flow 2 ingress** (mean 385.52 Mbps)
- **Flow 3 ingress** (mean 197.29 Mbps)
- **Flow 1 egress** (mean 416.97 Mbps)
- **Flow 2 egress** (mean 376.27 Mbps)
- **Flow 3 egress** (mean 184.19 Mbps)

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

- **Flow 1** (95th percentile 230.94 ms)
- **Flow 2** (95th percentile 170.55 ms)
- **Flow 3** (95th percentile 144.74 ms)
Run 2: Statistics of TCP BBR

Start at: 2018-08-11 21:20:43
End at: 2018-08-11 21:21:13
Local clock offset: 0.089 ms
Remote clock offset: 1.113 ms

# Below is generated by plot.py at 2018-08-12 01:51:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 672.53 Mbit/s
95th percentile per-packet one-way delay: 200.485 ms
Loss rate: 5.24%
-- Flow 1:
Average throughput: 426.56 Mbit/s
95th percentile per-packet one-way delay: 202.160 ms
Loss rate: 5.18%
-- Flow 2:
Average throughput: 289.35 Mbit/s
95th percentile per-packet one-way delay: 200.796 ms
Loss rate: 4.50%
-- Flow 3:
Average throughput: 162.75 Mbit/s
95th percentile per-packet one-way delay: 149.521 ms
Loss rate: 8.35%
Run 2: Report of TCP BBR — Data Link

![Throughput Graph](Image)

![Delay Graph](Image)

Legend:
- Flow 1 ingress (mean 448.01 Mbit/s)
- Flow 1 egress (mean 428.56 Mbit/s)
- Flow 2 ingress (mean 301.12 Mbit/s)
- Flow 2 egress (mean 289.35 Mbit/s)
- Flow 3 ingress (mean 175.39 Mbit/s)
- Flow 3 egress (mean 162.75 Mbit/s)

Legend:
- Flow 1 (95th percentile 202.16 ms)
- Flow 2 (95th percentile 200.80 ms)
- Flow 3 (95th percentile 149.52 ms)
Run 3: Statistics of TCP BBR

Start at: 2018-08-11 21:47:29
End at: 2018-08-11 21:47:59
Local clock offset: -0.126 ms
Remote clock offset: -0.088 ms

# Below is generated by plot.py at 2018-08-12 01:51:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 721.58 Mbit/s
  95th percentile per-packet one-way delay: 202.402 ms
  Loss rate: 4.25%
-- Flow 1:
  Average throughput: 405.16 Mbit/s
  95th percentile per-packet one-way delay: 178.025 ms
  Loss rate: 2.69%
-- Flow 2:
  Average throughput: 362.00 Mbit/s
  95th percentile per-packet one-way delay: 225.462 ms
  Loss rate: 5.93%
-- Flow 3:
  Average throughput: 229.93 Mbit/s
  95th percentile per-packet one-way delay: 150.323 ms
  Loss rate: 6.97%
Run 3: Report of TCP BBR — Data Link
Run 4: Statistics of TCP BBR

Start at: 2018-08-11 22:14:22
End at: 2018-08-11 22:14:52
Local clock offset: -0.041 ms
Remote clock offset: -0.689 ms

# Below is generated by plot.py at 2018-08-12 01:51:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 715.78 Mbit/s
  95th percentile per-packet one-way delay: 229.249 ms
  Loss rate: 3.17%
-- Flow 1:
  Average throughput: 423.45 Mbit/s
  95th percentile per-packet one-way delay: 241.589 ms
  Loss rate: 2.75%
-- Flow 2:
  Average throughput: 376.22 Mbit/s
  95th percentile per-packet one-way delay: 198.634 ms
  Loss rate: 3.55%
-- Flow 3:
  Average throughput: 128.04 Mbit/s
  95th percentile per-packet one-way delay: 145.995 ms
  Loss rate: 5.05%
Run 4: Report of TCP BBR — Data Link

The first graph shows the throughput (in Mb/s) over time for different flows, with the following labels:
- Flow 1 ingress (mean 433.65 Mb/s)
- Flow 1 egress (mean 423.45 Mb/s)
- Flow 2 ingress (mean 387.88 Mb/s)
- Flow 2 egress (mean 376.22 Mb/s)
- Flow 3 ingress (mean 333.39 Mb/s)
- Flow 3 egress (mean 126.04 Mb/s)

The second graph displays the per-packet one-way delay (in ms) over time for the same flows, with the following labels:
- Flow 1 (95th percentile 241.59 ms)
- Flow 2 (95th percentile 198.63 ms)
- Flow 3 (95th percentile 146.00 ms)
Run 5: Statistics of TCP BBR

Start at: 2018-08-11 22:41:20
End at: 2018-08-11 22:41:50
Local clock offset: -0.004 ms
Remote clock offset: -0.26 ms

# Below is generated by plot.py at 2018-08-12 01:51:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 718.46 Mbit/s
95th percentile per-packet one-way delay: 201.760 ms
Loss rate: 3.08%
-- Flow 1:
Average throughput: 442.79 Mbit/s
95th percentile per-packet one-way delay: 176.027 ms
Loss rate: 2.72%
-- Flow 2:
Average throughput: 361.28 Mbit/s
95th percentile per-packet one-way delay: 218.631 ms
Loss rate: 3.56%
-- Flow 3:
Average throughput: 107.60 Mbit/s
95th percentile per-packet one-way delay: 145.053 ms
Loss rate: 4.34%
Run 5: Report of TCP BBR — Data Link

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

Legend:
- Flow 1 ingress (mean 453.32 Mbit/s)
- Flow 1 egress (mean 442.79 Mbit/s)
- Flow 2 ingress (mean 372.30 Mbit/s)
- Flow 2 egress (mean 361.28 Mbit/s)
- Flow 3 ingress (mean 110.99 Mbit/s)
- Flow 3 egress (mean 107.69 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 176.03 ms)
- Flow 2 (95th percentile 218.63 ms)
- Flow 3 (95th percentile 145.05 ms)
Run 6: Statistics of TCP BBR

Start at: 2018-08-11 23:08:19
End at: 2018-08-11 23:08:49
Local clock offset: -0.065 ms
Remote clock offset: 0.214 ms

# Below is generated by plot.py at 2018-08-12 01:51:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 727.27 Mbit/s
95th percentile per-packet one-way delay: 192.541 ms
Loss rate: 3.95%
-- Flow 1:
Average throughput: 416.62 Mbit/s
95th percentile per-packet one-way delay: 184.643 ms
Loss rate: 2.75%
-- Flow 2:
Average throughput: 340.26 Mbit/s
95th percentile per-packet one-way delay: 233.925 ms
Loss rate: 4.73%
-- Flow 3:
Average throughput: 256.06 Mbit/s
95th percentile per-packet one-way delay: 174.121 ms
Loss rate: 7.56%
Run 6: Report of TCP BBR — Data Link

[Graph 1: Throughput vs Time for different flows]

[Graph 2: Per-packet one-way delay vs Time for different flows]

Flow 1 ingress (mean 426.63 Mbit/s)  
Flow 1 egress (mean 416.62 Mbit/s)  
Flow 2 ingress (mean 354.93 Mbit/s)  
Flow 2 egress (mean 340.26 Mbit/s)  
Flow 3 ingress (mean 273.58 Mbit/s)  
Flow 3 egress (mean 256.06 Mbit/s)  

Flow 1 (95th percentile 184.64 ms)  
Flow 2 (95th percentile 233.93 ms)  
Flow 3 (95th percentile 174.12 ms)
Run 7: Statistics of TCP BBR

Start at: 2018-08-11 23:35:10
End at: 2018-08-11 23:35:40
Local clock offset: -0.012 ms
Remote clock offset: -0.036 ms

# Below is generated by plot.py at 2018-08-12 01:51:38
# Datalink statistics
  -- Total of 3 flows:
    Average throughput: 697.69 Mbit/s
    95th percentile per-packet one-way delay: 215.277 ms
    Loss rate: 3.78%
  -- Flow 1:
    Average throughput: 446.60 Mbit/s
    95th percentile per-packet one-way delay: 217.057 ms
    Loss rate: 4.03%
  -- Flow 2:
    Average throughput: 337.76 Mbit/s
    95th percentile per-packet one-way delay: 196.624 ms
    Loss rate: 2.85%
  -- Flow 3:
    Average throughput: 82.02 Mbit/s
    95th percentile per-packet one-way delay: 152.446 ms
    Loss rate: 7.10%
Run 7: Report of TCP BBR — Data Link
Run 8: Statistics of TCP BBR

Start at: 2018-08-12 00:01:56
End at: 2018-08-12 00:02:26
Local clock offset: -0.056 ms
Remote clock offset: 0.747 ms

# Below is generated by plot.py at 2018-08-12 01:51:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 702.50 Mbit/s
95th percentile per-packet one-way delay: 221.114 ms
Loss rate: 5.80%
-- Flow 1:
Average throughput: 399.52 Mbit/s
95th percentile per-packet one-way delay: 222.851 ms
Loss rate: 6.05%
-- Flow 2:
Average throughput: 331.09 Mbit/s
95th percentile per-packet one-way delay: 223.783 ms
Loss rate: 4.14%
-- Flow 3:
Average throughput: 251.54 Mbit/s
95th percentile per-packet one-way delay: 163.723 ms
Loss rate: 8.86%
Run 8: Report of TCP BBR — Data Link

![Graph of Throughput (Mbps) over time]

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

Legend:
- Flow 1 ingress (mean 423.50 Mbps)
- Flow 1 egress (mean 399.52 Mbps)
- Flow 2 ingress (mean 340.95 Mbps)
- Flow 2 egress (mean 331.09 Mbps)
- Flow 3 ingress (mean 272.61 Mbps)
- Flow 3 egress (mean 251.54 Mbps)

Legend for delay graph:
- Flow 1 (95th percentile 222.85 ms)
- Flow 2 (95th percentile 223.78 ms)
- Flow 3 (95th percentile 163.72 ms)
Run 9: Statistics of TCP BBR

Start at: 2018-08-12 00:28:47
End at: 2018-08-12 00:29:17
Local clock offset: -0.045 ms
Remote clock offset: -0.12 ms

# Below is generated by plot.py at 2018-08-12 02:03:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 676.74 Mbit/s
95th percentile per-packet one-way delay: 196.292 ms
Loss rate: 5.72%
-- Flow 1:
Average throughput: 399.92 Mbit/s
95th percentile per-packet one-way delay: 199.844 ms
Loss rate: 4.69%
-- Flow 2:
Average throughput: 355.42 Mbit/s
95th percentile per-packet one-way delay: 197.272 ms
Loss rate: 5.95%
-- Flow 3:
Average throughput: 123.14 Mbit/s
95th percentile per-packet one-way delay: 152.392 ms
Loss rate: 13.76%
Run 9: Report of TCP BBR — Data Link

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

Flow 1 ingress (mean 417.87 Mbit/s)  Flow 1 egress (mean 399.92 Mbit/s)
Flow 2 ingress (mean 375.56 Mbit/s)  Flow 2 egress (mean 355.42 Mbit/s)
Flow 3 ingress (mean 141.03 Mbit/s)  Flow 3 egress (mean 123.14 Mbit/s)

Flow 1 (95th percentile 199.94 ms)  Flow 2 (95th percentile 197.27 ms)  Flow 3 (95th percentile 152.39 ms)
Run 10: Statistics of TCP BBR

Start at: 2018-08-12 00:55:21
End at: 2018-08-12 00:55:51
Local clock offset: -0.074 ms
Remote clock offset: 0.098 ms

# Below is generated by plot.py at 2018-08-12 02:03:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 710.34 Mbit/s
95th percentile per-packet one-way delay: 231.017 ms
Loss rate: 4.20%
-- Flow 1:
Average throughput: 435.35 Mbit/s
95th percentile per-packet one-way delay: 235.232 ms
Loss rate: 3.63%
-- Flow 2:
Average throughput: 385.69 Mbit/s
95th percentile per-packet one-way delay: 227.576 ms
Loss rate: 5.08%
-- Flow 3:
Average throughput: 56.59 Mbit/s
95th percentile per-packet one-way delay: 138.487 ms
Loss rate: 4.94%
Run 10: Report of TCP BBR — Data Link
Run 1: Statistics of Copa

Start at: 2018-08-11 20:47:32
End at: 2018-08-11 20:48:02
Local clock offset: 0.056 ms
Remote clock offset: -0.231 ms

# Below is generated by plot.py at 2018-08-12 02:03:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 385.56 Mbit/s
95th percentile per-packet one-way delay: 71.163 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 204.32 Mbit/s
95th percentile per-packet one-way delay: 67.552 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 159.01 Mbit/s
95th percentile per-packet one-way delay: 70.789 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 229.49 Mbit/s
95th percentile per-packet one-way delay: 80.323 ms
Loss rate: 1.40%
Run 1: Report of Copa — Data Link

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

Start at: 2018-08-11 21:14:14
End at: 2018-08-11 21:14:44
Local clock offset: 0.049 ms
Remote clock offset: -1.536 ms

# Below is generated by plot.py at 2018-08-12 02:03:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 352.11 Mbit/s
95th percentile per-packet one-way delay: 66.503 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 175.22 Mbit/s
95th percentile per-packet one-way delay: 65.086 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 171.45 Mbit/s
95th percentile per-packet one-way delay: 68.159 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 190.84 Mbit/s
95th percentile per-packet one-way delay: 66.160 ms
Loss rate: 1.08%
Run 2: Report of Copa — Data Link

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**Throughput (Mbit/s):**

- **Flow 1 ingress (mean 174.98 Mbit/s)**
- **Flow 1 egress (mean 175.22 Mbit/s)**
- **Flow 2 ingress (mean 171.64 Mbit/s)**
- **Flow 2 egress (mean 171.45 Mbit/s)**
- **Flow 3 ingress (mean 190.55 Mbit/s)**
- **Flow 3 egress (mean 190.84 Mbit/s)**

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

- **Flow 1 (95th percentile 65.09 ms)**
- **Flow 2 (95th percentile 68.16 ms)**
- **Flow 3 (95th percentile 66.16 ms)**

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Run 3: Statistics of Copa

Start at: 2018-08-11 21:40:55
End at: 2018-08-11 21:41:25
Local clock offset: -0.1 ms
Remote clock offset: 0.177 ms

# Below is generated by plot.py at 2018-08-12 02:03:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 328.83 Mbit/s
95th percentile per-packet one-way delay: 103.258 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 179.12 Mbit/s
95th percentile per-packet one-way delay: 62.626 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 142.52 Mbit/s
95th percentile per-packet one-way delay: 117.240 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 166.96 Mbit/s
95th percentile per-packet one-way delay: 67.368 ms
Loss rate: 1.37%
Run 3: Report of Copa — Data Link

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

- Flow 1 ingress (mean 178.81 Mbit/s)
- Flow 1 egress (mean 179.12 Mbit/s)
- Flow 2 ingress (mean 142.24 Mbit/s)
- Flow 2 egress (mean 142.52 Mbit/s)
- Flow 3 ingress (mean 167.20 Mbit/s)
- Flow 3 egress (mean 166.96 Mbit/s)

![Graph showing packet delay](image-url)

- Flow 1 (95th percentile 62.63 ms)
- Flow 2 (95th percentile 117.24 ms)
- Flow 3 (95th percentile 67.37 ms)
Run 4: Statistics of Copa

Start at: 2018-08-11 22:07:34
End at: 2018-08-11 22:08:04
Local clock offset: -0.073 ms
Remote clock offset: 0.129 ms

# Below is generated by plot.py at 2018-08-12 02:03:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 343.03 Mbit/s
95th percentile per-packet one-way delay: 67.192 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 153.61 Mbit/s
95th percentile per-packet one-way delay: 62.580 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 177.55 Mbit/s
95th percentile per-packet one-way delay: 71.989 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 216.64 Mbit/s
95th percentile per-packet one-way delay: 65.871 ms
Loss rate: 1.36%
Run 4: Report of Copa — Data Link
Run 5: Statistics of Copa

Start at: 2018-08-11 22:34:41
End at: 2018-08-11 22:35:11
Local clock offset: -0.024 ms
Remote clock offset: 0.034 ms

# Below is generated by plot.py at 2018-08-12 02:03:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 373.49 Mbit/s
95th percentile per-packet one-way delay: 81.071 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 196.34 Mbit/s
95th percentile per-packet one-way delay: 65.837 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 191.76 Mbit/s
95th percentile per-packet one-way delay: 86.853 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 150.93 Mbit/s
95th percentile per-packet one-way delay: 124.518 ms
Loss rate: 1.41%
Run 5: Report of Copa — Data Link

![Graph showing throughput and delay over time for different flows.](image-url)
Run 6: Statistics of Copa

Start at: 2018-08-11 23:01:41
End at: 2018-08-11 23:02:11
Local clock offset: -0.042 ms
Remote clock offset: -0.182 ms

# Below is generated by plot.py at 2018-08-12 02:04:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 386.60 Mbit/s
  95th percentile per-packet one-way delay: 65.698 ms
  Loss rate: 0.43%
-- Flow 1:
  Average throughput: 224.14 Mbit/s
  95th percentile per-packet one-way delay: 64.055 ms
  Loss rate: 0.43%
-- Flow 2:
  Average throughput: 176.95 Mbit/s
  95th percentile per-packet one-way delay: 67.532 ms
  Loss rate: 0.23%
-- Flow 3:
  Average throughput: 136.33 Mbit/s
  95th percentile per-packet one-way delay: 76.503 ms
  Loss rate: 0.93%
Run 6: Report of Copa — Data Link

[Graph showing throughput and per-packet round-trip delay for different flows over time]
Run 7: Statistics of Copa

Start at: 2018-08-11 23:28:31
End at: 2018-08-11 23:29:01
Local clock offset: 0.014 ms
Remote clock offset: -0.584 ms

# Below is generated by plot.py at 2018-08-12 02:16:03
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 406.50 Mbit/s
  95th percentile per-packet one-way delay: 74.307 ms
  Loss rate: 0.36%
-- Flow 1:
  Average throughput: 259.02 Mbit/s
  95th percentile per-packet one-way delay: 67.816 ms
  Loss rate: 0.21%
-- Flow 2:
  Average throughput: 139.17 Mbit/s
  95th percentile per-packet one-way delay: 72.362 ms
  Loss rate: 0.36%
-- Flow 3:
  Average throughput: 166.91 Mbit/s
  95th percentile per-packet one-way delay: 95.740 ms
  Loss rate: 1.08%
Run 7: Report of Copa — Data Link
Run 8: Statistics of Copa

End at: 2018-08-11 23:55:50
Local clock offset: -0.076 ms
Remote clock offset: -0.127 ms

# Below is generated by plot.py at 2018-08-12 02:16:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 314.14 Mbit/s
95th percentile per-packet one-way delay: 73.168 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 167.49 Mbit/s
95th percentile per-packet one-way delay: 67.057 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 132.34 Mbit/s
95th percentile per-packet one-way delay: 65.292 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 178.04 Mbit/s
95th percentile per-packet one-way delay: 87.551 ms
Loss rate: 0.80%
Run 8: Report of Copa — Data Link

![Graph showing network throughput and latency over time]
Run 9: Statistics of Copa

Start at: 2018-08-12 00:22:12
End at: 2018-08-12 00:22:42
Local clock offset: -0.088 ms
Remote clock offset: -0.032 ms

# Below is generated by plot.py at 2018-08-12 02:16:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 345.60 Mbit/s
95th percentile per-packet one-way delay: 66.704 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 185.32 Mbit/s
95th percentile per-packet one-way delay: 67.394 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 144.31 Mbit/s
95th percentile per-packet one-way delay: 62.023 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 195.34 Mbit/s
95th percentile per-packet one-way delay: 73.444 ms
Loss rate: 1.65%
Run 9: Report of Copa — Data Link
Run 10: Statistics of Copa

Start at: 2018-08-12 00:48:50
End at: 2018-08-12 00:49:20
Local clock offset: -0.091 ms
Remote clock offset: -0.067 ms

# Below is generated by plot.py at 2018-08-12 02:16:03
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 328.58 Mbit/s
  95th percentile per-packet one-way delay: 69.217 ms
  Loss rate: 0.59%
-- Flow 1:
  Average throughput: 182.03 Mbit/s
  95th percentile per-packet one-way delay: 64.968 ms
  Loss rate: 0.21%
-- Flow 2:
  Average throughput: 141.23 Mbit/s
  95th percentile per-packet one-way delay: 72.347 ms
  Loss rate: 0.91%
-- Flow 3:
  Average throughput: 159.85 Mbit/s
  95th percentile per-packet one-way delay: 74.880 ms
  Loss rate: 1.29%
Run 10: Report of Copa — Data Link
Run 1: Statistics of TCP Cubic

Start at: 2018-08-11 20:50:51
End at: 2018-08-11 20:51:21
Local clock offset: 0.112 ms
Remote clock offset: -0.266 ms

# Below is generated by plot.py at 2018-08-12 02:16:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 304.76 Mbit/s
95th percentile per-packet one-way delay: 63.299 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 274.32 Mbit/s
95th percentile per-packet one-way delay: 63.404 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 43.74 Mbit/s
95th percentile per-packet one-way delay: 62.702 ms
Loss rate: 2.76%
-- Flow 3:
Average throughput: 4.18 Mbit/s
95th percentile per-packet one-way delay: 62.138 ms
Loss rate: 4.36%
Run 1: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 274.11 Mbit/s)
- Flow 1 egress (mean 274.32 Mbit/s)
- Flow 2 ingress (mean 44.71 Mbit/s)
- Flow 2 egress (mean 43.74 Mbit/s)
- Flow 3 ingress (mean 4.32 Mbit/s)
- Flow 3 egress (mean 4.18 Mbit/s)

- Flow 1 (95th percentile 63.40 ms)
- Flow 2 (95th percentile 62.70 ms)
- Flow 3 (95th percentile 62.14 ms)
Run 2: Statistics of TCP Cubic

Start at: 2018-08-11 21:17:25
End at: 2018-08-11 21:17:55
Local clock offset: 0.055 ms
Remote clock offset: -0.26 ms

# Below is generated by plot.py at 2018-08-12 02:16:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 357.67 Mbit/s
95th percentile per-packet one-way delay: 62.723 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 327.35 Mbit/s
95th percentile per-packet one-way delay: 62.718 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 43.64 Mbit/s
95th percentile per-packet one-way delay: 62.822 ms
Loss rate: 2.75%
-- Flow 3:
Average throughput: 4.00 Mbit/s
95th percentile per-packet one-way delay: 62.055 ms
Loss rate: 4.80%
Run 2: Report of TCP Cubic — Data Link
Run 3: Statistics of TCP Cubic

Start at: 2018-08-11 21:44:11
End at: 2018-08-11 21:44:41
Local clock offset: -0.025 ms
Remote clock offset: 0.379 ms

# Below is generated by plot.py at 2018-08-12 02:16:03
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 370.26 Mbit/s
  95th percentile per-packet one-way delay: 62.873 ms
  Loss rate: 0.70%
-- Flow 1:
  Average throughput: 242.35 Mbit/s
  95th percentile per-packet one-way delay: 62.635 ms
  Loss rate: 0.66%
-- Flow 2:
  Average throughput: 190.18 Mbit/s
  95th percentile per-packet one-way delay: 64.236 ms
  Loss rate: 0.72%
-- Flow 3:
  Average throughput: 4.34 Mbit/s
  95th percentile per-packet one-way delay: 61.528 ms
  Loss rate: 4.25%
Run 3: Report of TCP Cubic — Data Link

![Graph](image)

**Throughput (Mbps)**
- Flow 1 ingress (mean 242.97 Mbps)
- Flow 1 egress (mean 242.35 Mbps)
- Flow 2 ingress (mean 190.39 Mbps)
- Flow 2 egress (mean 190.18 Mbps)
- Flow 3 ingress (mean 4.48 Mbps)
- Flow 3 egress (mean 4.34 Mbps)

**Per-packet one way delay (ms)**
- Flow 1 (95th percentile 62.63 ms)
- Flow 2 (95th percentile 64.24 ms)
- Flow 3 (95th percentile 61.53 ms)
Run 4: Statistics of TCP Cubic

Start at: 2018-08-11 22:10:52
End at: 2018-08-11 22:11:22
Local clock offset: -0.023 ms
Remote clock offset: 0.067 ms

# Below is generated by plot.py at 2018-08-12 02:16:03
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 566.58 Mbit/s
  95th percentile per-packet one-way delay: 85.629 ms
  Loss rate: 0.69%
-- Flow 1:
  Average throughput: 438.29 Mbit/s
  95th percentile per-packet one-way delay: 85.373 ms
  Loss rate: 0.47%
-- Flow 2:
  Average throughput: 41.82 Mbit/s
  95th percentile per-packet one-way delay: 77.547 ms
  Loss rate: 2.87%
-- Flow 3:
  Average throughput: 304.94 Mbit/s
  95th percentile per-packet one-way delay: 90.856 ms
  Loss rate: 1.02%
Run 5: Statistics of TCP Cubic

Start at: 2018-08-11 22:37:58
End at: 2018-08-11 22:38:28
Local clock offset: 0.011 ms
Remote clock offset: -0.048 ms

# Below is generated by plot.py at 2018-08-12 02:17:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 432.71 Mbit/s
  95th percentile per-packet one-way delay: 66.775 ms
  Loss rate: 0.79%
-- Flow 1:
  Average throughput: 233.25 Mbit/s
  95th percentile per-packet one-way delay: 76.895 ms
  Loss rate: 0.70%
-- Flow 2:
  Average throughput: 204.43 Mbit/s
  95th percentile per-packet one-way delay: 63.516 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 192.82 Mbit/s
  95th percentile per-packet one-way delay: 64.980 ms
  Loss rate: 1.52%
Run 5: Report of TCP Cubic — Data Link

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

![Graph showing per-packet one-way delay over time for different flows.](image)
Run 6: Statistics of TCP Cubic

Start at: 2018-08-11 23:05:01
End at: 2018-08-11 23:05:31
Local clock offset: -0.084 ms
Remote clock offset: -0.793 ms

# Below is generated by plot.py at 2018-08-12 02:17:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 288.86 Mbit/s
95th percentile per-packet one-way delay: 64.885 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 191.40 Mbit/s
95th percentile per-packet one-way delay: 64.896 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 42.41 Mbit/s
95th percentile per-packet one-way delay: 63.819 ms
Loss rate: 2.76%
-- Flow 3:
Average throughput: 210.07 Mbit/s
95th percentile per-packet one-way delay: 65.534 ms
Loss rate: 1.49%
Run 6: Report of TCP Cubic — Data Link
Run 7: Statistics of TCP Cubic

Start at: 2018-08-11 23:31:53
End at: 2018-08-11 23:32:23
Local clock offset: 0.045 ms
Remote clock offset: 0.111 ms

# Below is generated by plot.py at 2018-08-12 02:17:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 294.01 Mbit/s
95th percentile per-packet one-way delay: 63.232 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 220.88 Mbit/s
95th percentile per-packet one-way delay: 63.058 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 43.67 Mbit/s
95th percentile per-packet one-way delay: 62.456 ms
Loss rate: 2.75%
-- Flow 3:
Average throughput: 134.02 Mbit/s
95th percentile per-packet one-way delay: 66.275 ms
Loss rate: 1.43%
Run 7: Report of TCP Cubic — Data Link
Run 8: Statistics of TCP Cubic

Start at: 2018-08-11 23:58:33
End at: 2018-08-11 23:59:03
Local clock offset: -0.037 ms
Remote clock offset: -0.532 ms

# Below is generated by plot.py at 2018-08-12 02:20:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 419.64 Mbit/s
95th percentile per-packet one-way delay: 63.730 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 247.05 Mbit/s
95th percentile per-packet one-way delay: 63.695 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 257.95 Mbit/s
95th percentile per-packet one-way delay: 63.859 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 3.43 Mbit/s
95th percentile per-packet one-way delay: 62.393 ms
Loss rate: 5.36%
Run 8: Report of TCP Cubic — Data Link

Graph 1: Throughput vs Time

Graph 2: Per-packet size vs time

Legend:
- Flow 1 ingress (mean 247.72 Mbit/s)
- Flow 1 egress (mean 247.05 Mbit/s)
- Flow 2 ingress (mean 258.17 Mbit/s)
- Flow 2 egress (mean 257.95 Mbit/s)
- Flow 3 ingress (mean 3.58 Mbit/s)
- Flow 3 egress (mean 3.43 Mbit/s)
Run 9: Statistics of TCP Cubic

Start at: 2018-08-12 00:25:25
End at: 2018-08-12 00:25:55
Local clock offset: -0.032 ms
Remote clock offset: -0.026 ms

# Below is generated by plot.py at 2018-08-12 02:21:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 411.76 Mbit/s
95th percentile per-packet one-way delay: 70.634 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 266.15 Mbit/s
95th percentile per-packet one-way delay: 76.455 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 216.99 Mbit/s
95th percentile per-packet one-way delay: 63.346 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 4.10 Mbit/s
95th percentile per-packet one-way delay: 62.281 ms
Loss rate: 4.47%
Run 9: Report of TCP Cubic — Data Link
Run 10: Statistics of TCP Cubic

Start at: 2018-08-12 00:52:04
End at: 2018-08-12 00:52:35
Local clock offset: -0.04 ms
Remote clock offset: -0.12 ms

# Below is generated by plot.py at 2018-08-12 02:21:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 314.42 Mbit/s
95th percentile per-packet one-way delay: 63.853 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 232.59 Mbit/s
95th percentile per-packet one-way delay: 63.645 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 42.32 Mbit/s
95th percentile per-packet one-way delay: 63.986 ms
Loss rate: 2.75%
-- Flow 3:
Average throughput: 162.98 Mbit/s
95th percentile per-packet one-way delay: 64.399 ms
Loss rate: 1.55%
Run 10: Report of TCP Cubic — Data Link

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

- **Flow 1 ingress** (mean 233.30 Mbit/s)
- **Flow 1 egress** (mean 232.59 Mbit/s)
- **Flow 2 ingress** (mean 43.25 Mbit/s)
- **Flow 2 egress** (mean 42.32 Mbit/s)
- **Flow 3 ingress** (mean 163.51 Mbit/s)
- **Flow 3 egress** (mean 162.98 Mbit/s)

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

- **Flow 1** (95th percentile 63.65 ms)
- **Flow 2** (95th percentile 63.99 ms)
- **Flow 3** (95th percentile 64.40 ms)
Run 1: Statistics of FillP

Start at: 2018-08-11 21:07:31
End at: 2018-08-11 21:08:01
Local clock offset: 0.034 ms
Remote clock offset: 1.152 ms

# Below is generated by plot.py at 2018-08-12 02:46:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1422.88 Mbit/s
95th percentile per-packet one-way delay: 131.680 ms
Loss rate: 2.89%
-- Flow 1:
Average throughput: 743.61 Mbit/s
95th percentile per-packet one-way delay: 135.408 ms
Loss rate: 3.53%
-- Flow 2:
Average throughput: 717.12 Mbit/s
95th percentile per-packet one-way delay: 125.039 ms
Loss rate: 1.58%
-- Flow 3:
Average throughput: 617.69 Mbit/s
95th percentile per-packet one-way delay: 134.956 ms
Loss rate: 3.55%
Run 1: Report of FillP — Data Link

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

- Flow 1 ingress (mean 767.69 Mbit/s)
- Flow 1 egress (mean 743.61 Mbit/s)
- Flow 2 ingress (mean 724.25 Mbit/s)
- Flow 2 egress (mean 717.12 Mbit/s)
- Flow 3 ingress (mean 632.53 Mbit/s)
- Flow 3 egress (mean 617.69 Mbit/s)

![Graph showing per-packet delay distribution for three flows.]

- Flow 1 (95th percentile 135.41 ms)
- Flow 2 (95th percentile 125.04 ms)
- Flow 3 (95th percentile 134.96 ms)
Run 2: Statistics of FillP

Start at: 2018-08-11 21:34:11
End at: 2018-08-11 21:34:41
Local clock offset: 0.042 ms
Remote clock offset: -1.471 ms

# Below is generated by plot.py at 2018-08-12 02:46:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1398.96 Mbit/s
95th percentile per-packet one-way delay: 149.644 ms
Loss rate: 5.72%
-- Flow 1:
Average throughput: 739.47 Mbit/s
95th percentile per-packet one-way delay: 144.479 ms
Loss rate: 5.11%
-- Flow 2:
Average throughput: 698.23 Mbit/s
95th percentile per-packet one-way delay: 147.782 ms
Loss rate: 5.44%
-- Flow 3:
Average throughput: 594.59 Mbit/s
95th percentile per-packet one-way delay: 167.861 ms
Loss rate: 8.54%
Run 2: Report of FillP — Data Link

[Graph 1: Throughput (Mbps)]

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

Legend:
- Flow 1 ingress (mean 776.10 Mbps)
- Flow 1 egress (mean 739.47 Mbps)
- Flow 2 ingress (mean 733.87 Mbps)
- Flow 2 egress (mean 698.23 Mbps)
- Flow 3 ingress (mean 642.03 Mbps)
- Flow 3 egress (mean 594.59 Mbps)
Run 3: Statistics of FillP

Start at: 2018-08-11 22:00:56
End at: 2018-08-11 22:01:26
Local clock offset: -0.094 ms
Remote clock offset: -0.296 ms

# Below is generated by plot.py at 2018-08-12 02:46:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1369.08 Mbit/s
95th percentile per-packet one-way delay: 184.489 ms
Loss rate: 4.54%
-- Flow 1:
Average throughput: 698.74 Mbit/s
95th percentile per-packet one-way delay: 140.905 ms
Loss rate: 5.30%
-- Flow 2:
Average throughput: 723.06 Mbit/s
95th percentile per-packet one-way delay: 157.252 ms
Loss rate: 3.34%
-- Flow 3:
Average throughput: 578.85 Mbit/s
95th percentile per-packet one-way delay: 227.040 ms
Loss rate: 4.74%
Run 3: Report of FillP — Data Link
Run 4: Statistics of FillP

Local clock offset: -0.021 ms
Remote clock offset: -0.25 ms

# Below is generated by plot.py at 2018-08-12 02:47:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1420.75 Mbit/s
95th percentile per-packet one-way delay: 138.607 ms
Loss rate: 3.31%
-- Flow 1:
Average throughput: 713.42 Mbit/s
95th percentile per-packet one-way delay: 143.229 ms
Loss rate: 4.06%
-- Flow 2:
Average throughput: 754.75 Mbit/s
95th percentile per-packet one-way delay: 137.301 ms
Loss rate: 2.31%
-- Flow 3:
Average throughput: 626.67 Mbit/s
95th percentile per-packet one-way delay: 122.077 ms
Loss rate: 3.10%
Run 4: Report of FillP — Data Link

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

![Graph 2: Packets per second vs Time](image2)
Run 5: Statistics of FillP

Start at: 2018-08-11 22:54:53  
Local clock offset: -0.031 ms  
Remote clock offset: -0.105 ms

# Below is generated by plot.py at 2018-08-12 02:49:41  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 1440.34 Mbit/s  
95th percentile per-packet one-way delay: 157.884 ms  
Loss rate: 2.90%  
-- Flow 1:  
Average throughput: 793.55 Mbit/s  
95th percentile per-packet one-way delay: 130.484 ms  
Loss rate: 2.63%  
-- Flow 2:  
Average throughput: 726.71 Mbit/s  
95th percentile per-packet one-way delay: 169.875 ms  
Loss rate: 3.54%  
-- Flow 3:  
Average throughput: 500.89 Mbit/s  
95th percentile per-packet one-way delay: 167.027 ms  
Loss rate: 2.33%
Run 5: Report of FillP — Data Link
Run 6: Statistics of FillP

Start at: 2018-08-11 23:21:49
End at: 2018-08-11 23:22:19
Local clock offset: 0.023 ms
Remote clock offset: -0.575 ms

# Below is generated by plot.py at 2018-08-12 02:51:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1419.80 Mbit/s
95th percentile per-packet one-way delay: 134.566 ms
Loss rate: 3.62%
-- Flow 1:
Average throughput: 749.07 Mbit/s
95th percentile per-packet one-way delay: 135.691 ms
Loss rate: 3.48%
-- Flow 2:
Average throughput: 702.25 Mbit/s
95th percentile per-packet one-way delay: 135.406 ms
Loss rate: 4.58%
-- Flow 3:
Average throughput: 621.52 Mbit/s
95th percentile per-packet one-way delay: 122.344 ms
Loss rate: 1.87%
Run 6: Report of FillP — Data Link

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

![Graph 2: Per-packet one-way delay vs Time](image)
Run 7: Statistics of FillP

Start at: 2018-08-11 23:48:34
End at: 2018-08-11 23:49:04
Local clock offset: 0.006 ms
Remote clock offset: -0.156 ms

# Below is generated by plot.py at 2018-08-12 02:53:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1466.81 Mbit/s
95th percentile per-packet one-way delay: 129.812 ms
Loss rate: 2.30%
-- Flow 1:
Average throughput: 789.12 Mbit/s
95th percentile per-packet one-way delay: 122.594 ms
Loss rate: 1.97%
-- Flow 2:
Average throughput: 722.07 Mbit/s
95th percentile per-packet one-way delay: 121.555 ms
Loss rate: 1.63%
-- Flow 3:
Average throughput: 602.62 Mbit/s
95th percentile per-packet one-way delay: 155.068 ms
Loss rate: 5.12%
Run 7: Report of FillP — Data Link
Run 8: Statistics of FillP

Start at: 2018-08-12 00:15:29
End at: 2018-08-12 00:15:59
Local clock offset: -0.066 ms
Remote clock offset: -0.728 ms

# Below is generated by plot.py at 2018-08-12 02:53:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1362.88 Mbit/s
95th percentile per-packet one-way delay: 208.861 ms
Loss rate: 3.26%
-- Flow 1:
Average throughput: 726.53 Mbit/s
95th percentile per-packet one-way delay: 194.198 ms
Loss rate: 2.92%
-- Flow 2:
Average throughput: 647.05 Mbit/s
95th percentile per-packet one-way delay: 231.590 ms
Loss rate: 4.76%
-- Flow 3:
Average throughput: 628.33 Mbit/s
95th percentile per-packet one-way delay: 114.145 ms
Loss rate: 1.26%
Run 8: Report of FillP — Data Link

![Graph of data link performance](image)

- **Throughput (Mbps)**
  - Flow 1 Ingress (mean 745.29 Mbps)
  - Flow 1 Egress (mean 726.53 Mbps)
  - Flow 2 Ingress (mean 675.28 Mbps)
  - Flow 2 Egress (mean 647.05 Mbps)
  - Flow 3 Ingress (mean 629.60 Mbps)
  - Flow 3 Egress (mean 628.33 Mbps)

![Graph of packet delay](image)

- **Per-packet delay (ms)**
  - Flow 1 (95th percentile 194.20 ms)
  - Flow 2 (95th percentile 231.59 ms)
  - Flow 3 (95th percentile 114.14 ms)
Run 9: Statistics of FillP

Start at: 2018-08-12 00:42:06
End at: 2018-08-12 00:42:36
Local clock offset: -0.033 ms
Remote clock offset: -0.981 ms

# Below is generated by plot.py at 2018-08-12 03:17:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1390.65 Mbit/s
95th percentile per-packet one-way delay: 146.934 ms
Loss rate: 3.53%
-- Flow 1:
Average throughput: 734.32 Mbit/s
95th percentile per-packet one-way delay: 142.667 ms
Loss rate: 3.93%
-- Flow 2:
Average throughput: 686.42 Mbit/s
95th percentile per-packet one-way delay: 149.647 ms
Loss rate: 3.13%
-- Flow 3:
Average throughput: 610.30 Mbit/s
95th percentile per-packet one-way delay: 149.565 ms
Loss rate: 2.91%
Run 9: Report of FillP — Data Link

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

- Flow 1 Ingress (mean 761.43 Mb/s)
- Flow 1 Egress (mean 734.32 Mb/s)
- Flow 2 Ingress (mean 704.23 Mb/s)
- Flow 2 Egress (mean 686.42 Mb/s)
- Flow 3 Ingress (mean 620.78 Mb/s)
- Flow 3 Egress (mean 610.30 Mb/s)

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

- Flow 1 (95th percentile 142.67 ms)
- Flow 2 (95th percentile 149.65 ms)
- Flow 3 (95th percentile 149.56 ms)
Run 10: Statistics of FillP

Start at: 2018-08-12 01:08:40
End at: 2018-08-12 01:09:10
Local clock offset: -0.058 ms
Remote clock offset: 0.022 ms

# Below is generated by plot.py at 2018-08-12 03:17:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1269.11 Mbit/s
95th percentile per-packet one-way delay: 206.954 ms
Loss rate: 4.18%
-- Flow 1:
Average throughput: 659.72 Mbit/s
95th percentile per-packet one-way delay: 217.065 ms
Loss rate: 4.90%
-- Flow 2:
Average throughput: 633.42 Mbit/s
95th percentile per-packet one-way delay: 206.630 ms
Loss rate: 3.25%
-- Flow 3:
Average throughput: 574.54 Mbit/s
95th percentile per-packet one-way delay: 118.875 ms
Loss rate: 3.70%
Run 10: Report of FillIP — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 690.80 Mbps) — Flow 1 egress (mean 659.72 Mbps)
Flow 2 ingress (mean 650.70 Mbps) — Flow 2 egress (mean 633.42 Mbps)
Flow 3 ingress (mean 589.17 Mbps) — Flow 3 egress (mean 574.54 Mbps)

Packet per-byte delay (ms)

Time (s)

Flow 1 (95th percentile 217.06 ms) — Flow 2 (95th percentile 206.63 ms) — Flow 3 (95th percentile 118.88 ms)

83
Run 1: Statistics of FillP-Sheep

Start at: 2018-08-11 21:05:28
End at: 2018-08-11 21:05:58
Local clock offset: 0.046 ms
Remote clock offset: -1.358 ms

# Below is generated by plot.py at 2018-08-12 03:17:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1302.33 Mbit/s
  95th percentile per-packet one-way delay: 130.615 ms
  Loss rate: 1.37%
-- Flow 1:
  Average throughput: 697.16 Mbit/s
  95th percentile per-packet one-way delay: 125.087 ms
  Loss rate: 0.92%
-- Flow 2:
  Average throughput: 633.83 Mbit/s
  95th percentile per-packet one-way delay: 148.101 ms
  Loss rate: 2.14%
-- Flow 3:
  Average throughput: 560.28 Mbit/s
  95th percentile per-packet one-way delay: 118.367 ms
  Loss rate: 1.32%

84
Run 1: Report of FillP-Sheep — Data Link

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

- **Flow 1 Ingress** (mean 700.77 Mbps)  
- **Flow 1 Egress** (mean 697.16 Mbps)  
- **Flow 2 Ingress** (mean 643.29 Mbps)  
- **Flow 2 Egress** (mean 633.83 Mbps)  
- **Flow 3 Ingress** (mean 561.15 Mbps)  
- **Flow 3 Egress** (mean 560.28 Mbps)

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

- **Flow 1** (95th percentile 125.09 ms)  
- **Flow 2** (95th percentile 148.10 ms)  
- **Flow 3** (95th percentile 118.37 ms)

85
Run 2: Statistics of FillP-Sheep

Start at: 2018-08-11 21:32:05
End at: 2018-08-11 21:32:35
Local clock offset: -0.017 ms
Remote clock offset: -0.171 ms

# Below is generated by plot.py at 2018-08-12 03:18:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1374.29 Mbit/s
  95th percentile per-packet one-way delay: 103.927 ms
  Loss rate: 0.63%
-- Flow 1:
  Average throughput: 759.03 Mbit/s
  95th percentile per-packet one-way delay: 107.351 ms
  Loss rate: 0.51%
-- Flow 2:
  Average throughput: 661.07 Mbit/s
  95th percentile per-packet one-way delay: 103.916 ms
  Loss rate: 0.53%
-- Flow 3:
  Average throughput: 537.09 Mbit/s
  95th percentile per-packet one-way delay: 77.002 ms
  Loss rate: 1.37%
Run 2: Report of FillP-Sheep — Data Link

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

- Flow 1 Ingress (mean 760.23 Mbit/s)
- Flow 1 Egress (mean 759.03 Mbit/s)
- Flow 2 Ingress (mean 660.45 Mbit/s)
- Flow 2 Egress (mean 662.07 Mbit/s)
- Flow 3 Ingress (mean 537.70 Mbit/s)
- Flow 3 Egress (mean 537.09 Mbit/s)
Run 3: Statistics of FillP-Sheep

Start at: 2018-08-11 21:58:50
End at: 2018-08-11 21:59:20
Local clock offset: -0.12 ms
Remote clock offset: -0.135 ms

# Below is generated by plot.py at 2018-08-12 03:20:20
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1371.29 Mbit/s
  95th percentile per-packet one-way delay: 119.806 ms
  Loss rate: 1.07%
-- Flow 1:
  Average throughput: 720.41 Mbit/s
  95th percentile per-packet one-way delay: 123.790 ms
  Loss rate: 1.07%
-- Flow 2:
  Average throughput: 704.21 Mbit/s
  95th percentile per-packet one-way delay: 96.774 ms
  Loss rate: 0.76%
-- Flow 3:
  Average throughput: 560.02 Mbit/s
  95th percentile per-packet one-way delay: 119.939 ms
  Loss rate: 1.83%
Run 3: Report of FillP-Sheep — Data Link

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

- Flow 1 Ingress (mean 725.06 Mbps)
- Flow 1 Egress (mean 720.41 Mbps)
- Flow 2 Ingress (mean 705.13 Mbps)
- Flow 2 Egress (mean 704.23 Mbps)
- Flow 3 Ingress (mean 563.25 Mbps)
- Flow 3 Egress (mean 560.02 Mbps)

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

- Flow 1 (95th percentile 123.79 ms)
- Flow 2 (95th percentile 96.77 ms)
- Flow 3 (95th percentile 119.94 ms)
Run 4: Statistics of FillP-Sheep

Start at: 2018-08-11 22:25:49
End at: 2018-08-11 22:26:19
Local clock offset: 0.013 ms
Remote clock offset: -0.614 ms

# Below is generated by plot.py at 2018-08-12 03:22:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1357.17 Mbit/s
95th percentile per-packet one-way delay: 135.608 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 747.83 Mbit/s
95th percentile per-packet one-way delay: 123.664 ms
Loss rate: 1.34%
-- Flow 2:
Average throughput: 657.89 Mbit/s
95th percentile per-packet one-way delay: 135.881 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 524.94 Mbit/s
95th percentile per-packet one-way delay: 149.939 ms
Loss rate: 2.50%
Run 4: Report of FillP-Sheep — Data Link
Run 5: Statistics of FillP-Sheep

Start at: 2018-08-11 22:52:45
End at: 2018-08-11 22:53:15
Local clock offset: -0.076 ms
Remote clock offset: -0.286 ms

# Below is generated by plot.py at 2018-08-12 03:22:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1367.22 Mbit/s
95th percentile per-packet one-way delay: 120.957 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 706.24 Mbit/s
95th percentile per-packet one-way delay: 128.114 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 700.51 Mbit/s
95th percentile per-packet one-way delay: 116.485 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 597.24 Mbit/s
95th percentile per-packet one-way delay: 95.074 ms
Loss rate: 1.68%
Run 5: Report of FillP-Sheep — Data Link

Throughput vs Time

Flow 1 ingress (mean 710.47 Mbit/s) — Flow 1 egress (mean 706.24 Mbit/s)
Flow 2 ingress (mean 695.50 Mbit/s) — Flow 2 egress (mean 700.53 Mbit/s)
Flow 3 ingress (mean 599.87 Mbit/s) — Flow 3 egress (mean 597.24 Mbit/s)

Packet Loss vs Time

Flow 1 (95th percentile 128.11 ms) — Flow 2 (95th percentile 116.48 ms) — Flow 3 (95th percentile 95.07 ms)
Run 6: Statistics of FillP-Sheep

Start at: 2018-08-11 23:19:44
End at: 2018-08-11 23:20:14
Local clock offset: -0.009 ms
Remote clock offset: 0.257 ms

# Below is generated by plot.py at 2018-08-12 03:23:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1322.30 Mbit/s
95th percentile per-packet one-way delay: 127.321 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 697.65 Mbit/s
95th percentile per-packet one-way delay: 130.794 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 678.91 Mbit/s
95th percentile per-packet one-way delay: 115.206 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 529.56 Mbit/s
95th percentile per-packet one-way delay: 129.787 ms
Loss rate: 1.35%
Run 6: Report of FillP-Sheep — Data Link

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

- Flow 1 Ingress (mean 700.85 Mbps/s)
- Flow 1 Egress (mean 697.05 Mbps/s)
- Flow 2 Ingress (mean 682.61 Mbps/s)
- Flow 2 Egress (mean 678.91 Mbps/s)
- Flow 3 Ingress (mean 531.03 Mbps/s)
- Flow 3 Egress (mean 529.56 Mbps/s)

![Graph 2: Throughput (Mbps/s) vs. Delay (ms) over Time (s)]

- Flow 1 (95th percentile 130.79 ms)
- Flow 2 (95th percentile 115.21 ms)
- Flow 3 (95th percentile 129.79 ms)
Run 7: Statistics of FillP-Sheep

Start at: 2018-08-11 23:46:30
End at: 2018-08-11 23:47:00
Local clock offset: 0.014 ms
Remote clock offset: -0.388 ms

# Below is generated by plot.py at 2018-08-12 03:45:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1309.58 Mbit/s
95th percentile per-packet one-way delay: 128.550 ms
Loss rate: 1.41%
-- Flow 1:
Average throughput: 716.39 Mbit/s
95th percentile per-packet one-way delay: 128.075 ms
Loss rate: 1.28%
-- Flow 2:
Average throughput: 627.47 Mbit/s
95th percentile per-packet one-way delay: 131.830 ms
Loss rate: 1.78%
-- Flow 3:
Average throughput: 537.26 Mbit/s
95th percentile per-packet one-way delay: 83.933 ms
Loss rate: 1.07%
Run 7: Report of FillP-Sheep — Data Link

![Graph 1: Throughput vs Time]

- Flow 1 Ingress (mean 722.69 Mbit/s)
- Flow 1 Egress (mean 716.59 Mbit/s)
- Flow 2 Ingress (mean 634.82 Mbit/s)
- Flow 2 Egress (mean 627.47 Mbit/s)
- Flow 3 Ingress (mean 536.94 Mbit/s)
- Flow 3 Egress (mean 537.26 Mbit/s)

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

- Flow 1 (95th percentile 128.07 ms)
- Flow 2 (95th percentile 131.83 ms)
- Flow 3 (95th percentile 83.93 ms)
Run 8: Statistics of FillP-Sheep

Start at: 2018-08-12 00:13:22
End at: 2018-08-12 00:13:52
Local clock offset: -0.032 ms
Remote clock offset: 0.739 ms

# Below is generated by plot.py at 2018-08-12 03:47:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1342.14 Mbit/s
95th percentile per-packet one-way delay: 115.542 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 712.09 Mbit/s
95th percentile per-packet one-way delay: 120.606 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 662.03 Mbit/s
95th percentile per-packet one-way delay: 102.083 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 580.57 Mbit/s
95th percentile per-packet one-way delay: 98.037 ms
Loss rate: 1.07%
Run 8: Report of FillP-Sheep — Data Link

Throughput (Mbps/s)

Time (s)

Flow 1 ingress (mean 712.25 Mbps/s)
Flow 1 egress (mean 712.09 Mbps/s)
Flow 2 ingress (mean 654.49 Mbps/s)
Flow 2 egress (mean 662.03 Mbps/s)
Flow 3 ingress (mean 579.86 Mbps/s)
Flow 3 egress (mean 580.57 Mbps/s)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 120.61 ms)
Flow 2 (95th percentile 102.08 ms)
Flow 3 (95th percentile 98.04 ms)
Run 9: Statistics of FillP-Sheep

Start at: 2018-08-12 00:40:03
End at: 2018-08-12 00:40:33
Local clock offset: -0.062 ms
Remote clock offset: 0.253 ms

# Below is generated by plot.py at 2018-08-12 03:47:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1259.82 Mbit/s
95th percentile per-packet one-way delay: 149.966 ms
Loss rate: 1.66%
-- Flow 1:
Average throughput: 660.44 Mbit/s
95th percentile per-packet one-way delay: 152.628 ms
Loss rate: 1.68%
-- Flow 2:
Average throughput: 613.23 Mbit/s
95th percentile per-packet one-way delay: 160.442 ms
Loss rate: 1.37%
-- Flow 3:
Average throughput: 583.79 Mbit/s
95th percentile per-packet one-way delay: 113.426 ms
Loss rate: 2.25%
Run 9: Report of FillP-Sheep — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 Ingress (mean 668.94 Mbps)
- Flow 1 Egress (mean 660.44 Mbps)
- Flow 2 Ingress (mean 617.98 Mbps)
- Flow 2 Egress (mean 613.23 Mbps)
- Flow 3 Ingress (mean 589.77 Mbps)
- Flow 3 Egress (mean 583.79 Mbps)

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

- Flow 1 (95th percentile 152.63 ms)
- Flow 2 (95th percentile 160.44 ms)
- Flow 3 (95th percentile 113.43 ms)
Run 10: Statistics of FillP-Sheep

Start at: 2018-08-12 01:06:36
End at: 2018-08-12 01:07:06
Local clock offset: -0.128 ms
Remote clock offset: -0.266 ms

# Below is generated by plot.py at 2018-08-12 03:48:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1293.53 Mbit/s
  95th percentile per-packet one-way delay: 124.815 ms
  Loss rate: 1.33%
-- Flow 1:
  Average throughput: 673.97 Mbit/s
  95th percentile per-packet one-way delay: 128.609 ms
  Loss rate: 1.12%
-- Flow 2:
  Average throughput: 662.01 Mbit/s
  95th percentile per-packet one-way delay: 120.018 ms
  Loss rate: 1.54%
-- Flow 3:
  Average throughput: 546.51 Mbit/s
  95th percentile per-packet one-way delay: 83.090 ms
  Loss rate: 1.62%
Run 10: Report of FillIP-Sheep — Data Link
Run 1: Statistics of Indigo

Start at: 2018-08-11 20:55:57
End at: 2018-08-11 20:56:27
Local clock offset: 0.109 ms
Remote clock offset: -0.084 ms

# Below is generated by plot.py at 2018-08-12 03:48:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 363.64 Mbit/s
95th percentile per-packet one-way delay: 61.577 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 189.60 Mbit/s
95th percentile per-packet one-way delay: 61.561 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 178.29 Mbit/s
95th percentile per-packet one-way delay: 61.734 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 151.88 Mbit/s
95th percentile per-packet one-way delay: 61.301 ms
Loss rate: 1.48%
Run 1: Report of Indigo — Data Link
Run 2: Statistics of Indigo

End at: 2018-08-11 21:23:03
Local clock offset: 0.067 ms
Remote clock offset: -0.488 ms

# Below is generated by plot.py at 2018-08-12 03:48:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 364.72 Mbit/s
95th percentile per-packet one-way delay: 62.250 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 197.85 Mbit/s
95th percentile per-packet one-way delay: 62.197 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 177.53 Mbit/s
95th percentile per-packet one-way delay: 62.542 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 150.81 Mbit/s
95th percentile per-packet one-way delay: 61.828 ms
Loss rate: 1.47%
Run 2: Report of Indigo — Data Link
Run 3: Statistics of Indigo

Start at: 2018-08-11 21:49:21
End at: 2018-08-11 21:49:51
Local clock offset: −0.14 ms
Remote clock offset: −0.628 ms

# Below is generated by plot.py at 2018-08-12 03:48:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 359.50 Mbit/s
95th percentile per-packet one-way delay: 62.348 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 195.52 Mbit/s
95th percentile per-packet one-way delay: 62.238 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 176.51 Mbit/s
95th percentile per-packet one-way delay: 62.469 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 144.89 Mbit/s
95th percentile per-packet one-way delay: 62.532 ms
Loss rate: 1.41%
Run 3: Report of Indigo — Data Link
Run 4: Statistics of Indigo

Start at: 2018-08-11 22:16:14
End at: 2018-08-11 22:16:44
Local clock offset: -0.004 ms
Remote clock offset: -0.912 ms

# Below is generated by plot.py at 2018-08-12 03:48:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 373.69 Mbit/s
95th percentile per-packet one-way delay: 62.889 ms
Loss rate: 0.66%

-- Flow 1:
Average throughput: 197.26 Mbit/s
95th percentile per-packet one-way delay: 62.844 ms
Loss rate: 0.45%

-- Flow 2:
Average throughput: 188.58 Mbit/s
95th percentile per-packet one-way delay: 62.895 ms
Loss rate: 0.68%

-- Flow 3:
Average throughput: 146.80 Mbit/s
95th percentile per-packet one-way delay: 63.031 ms
Loss rate: 1.47%
Run 4: Report of Indigo — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 197.33 Mbps)
  - Flow 1 egress (mean 197.26 Mbps)
  - Flow 2 ingress (mean 188.84 Mbps)
  - Flow 2 egress (mean 188.58 Mbps)
  - Flow 3 ingress (mean 147.13 Mbps)
  - Flow 3 egress (mean 146.80 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 62.84 ms)
  - Flow 2 (95th percentile 62.90 ms)
  - Flow 3 (95th percentile 63.03 ms)
Run 5: Statistics of Indigo

Start at: 2018-08-11 22:43:11
End at: 2018-08-11 22:43:41
Local clock offset: -0.054 ms
Remote clock offset: 0.572 ms

# Below is generated by plot.py at 2018-08-12 03:48:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 375.75 Mbit/s
  95th percentile per-packet one-way delay: 61.323 ms
  Loss rate: 0.65%
-- Flow 1:
  Average throughput: 206.12 Mbit/s
  95th percentile per-packet one-way delay: 61.188 ms
  Loss rate: 0.40%
-- Flow 2:
  Average throughput: 181.66 Mbit/s
  95th percentile per-packet one-way delay: 61.445 ms
  Loss rate: 0.70%
-- Flow 3:
  Average throughput: 151.70 Mbit/s
  95th percentile per-packet one-way delay: 61.560 ms
  Loss rate: 1.54%
Run 5: Report of Indigo — Data Link

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

- Flow 1 ingress (mean 206.08 Mbit/s)
- Flow 1 egress (mean 206.12 Mbit/s)
- Flow 2 ingress (mean 181.80 Mbit/s)
- Flow 2 egress (mean 181.66 Mbit/s)
- Flow 3 ingress (mean 152.13 Mbit/s)
- Flow 3 egress (mean 151.70 Mbit/s)
Run 6: Statistics of Indigo

Start at: 2018-08-11 23:10:13
End at: 2018-08-11 23:10:43
Local clock offset: -0.015 ms
Remote clock offset: -0.012 ms

# Below is generated by plot.py at 2018-08-12 03:48:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 374.78 Mbit/s
  95th percentile per-packet one-way delay: 62.292 ms
  Loss rate: 0.63%
-- Flow 1:
  Average throughput: 206.36 Mbit/s
  95th percentile per-packet one-way delay: 62.097 ms
  Loss rate: 0.43%
-- Flow 2:
  Average throughput: 177.72 Mbit/s
  95th percentile per-packet one-way delay: 62.611 ms
  Loss rate: 0.57%
-- Flow 3:
  Average throughput: 158.33 Mbit/s
  95th percentile per-packet one-way delay: 62.326 ms
  Loss rate: 1.59%
Run 6: Report of Indigo — Data Link

![Graph of throughput and packet loss over time for three flows](image-url)
Run 7: Statistics of Indigo

Start at: 2018-08-11 23:37:00
End at: 2018-08-11 23:37:30
Local clock offset: -0.005 ms
Remote clock offset: 0.226 ms

# Below is generated by plot.py at 2018-08-12 03:48:27
# Datalink statistics
# Total of 3 flows:
# Average throughput: 369.82 Mbit/s
# 95th percentile per-packet one-way delay: 61.978 ms
# Loss rate: 0.62%
# Flow 1:
# Average throughput: 197.16 Mbit/s
# 95th percentile per-packet one-way delay: 61.878 ms
# Loss rate: 0.42%
# Flow 2:
# Average throughput: 186.34 Mbit/s
# 95th percentile per-packet one-way delay: 62.109 ms
# Loss rate: 0.60%
# Flow 3:
# Average throughput: 152.31 Mbit/s
# 95th percentile per-packet one-way delay: 62.002 ms
# Loss rate: 1.46%
Run 7: Report of Indigo — Data Link
Run 8: Statistics of Indigo

Start at: 2018-08-12 00:03:49
End at: 2018-08-12 00:04:19
Local clock offset: -0.02 ms
Remote clock offset: 0.805 ms

# Below is generated by plot.py at 2018-08-12 03:48:27
# DataLink statistics
-- Total of 3 flows:
Average throughput: 359.48 Mbit/s
95th percentile per-packet one-way delay: 60.787 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 191.09 Mbit/s
95th percentile per-packet one-way delay: 60.714 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 173.89 Mbit/s
95th percentile per-packet one-way delay: 60.884 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 164.87 Mbit/s
95th percentile per-packet one-way delay: 60.842 ms
Loss rate: 1.53%
Run 8: Report of Indigo — Data Link

[Graph showing throughput and packet loss over time for different flows, with legend indicating flow details and performance metrics.]
Run 9: Statistics of Indigo

Start at: 2018-08-12 00:30:38
End at: 2018-08-12 00:31:08
Local clock offset: -0.107 ms
Remote clock offset: -0.025 ms

# Below is generated by plot.py at 2018-08-12 03:48:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 341.27 Mbit/s
95th percentile per-packet one-way delay: 61.974 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 182.21 Mbit/s
95th percentile per-packet one-way delay: 61.739 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 165.52 Mbit/s
95th percentile per-packet one-way delay: 62.014 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 154.35 Mbit/s
95th percentile per-packet one-way delay: 62.779 ms
Loss rate: 1.46%
Run 9: Report of Indigo — Data Link

![Graph of throughput and packet delay](image-url)
Run 10: Statistics of Indigo

Start at: 2018-08-12 00:57:12
End at: 2018-08-12 00:57:42
Local clock offset: -0.042 ms
Remote clock offset: -0.082 ms

# Below is generated by plot.py at 2018-08-12 03:48:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 386.07 Mbit/s
95th percentile per-packet one-way delay: 62.287 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 205.31 Mbit/s
95th percentile per-packet one-way delay: 62.071 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 187.16 Mbit/s
95th percentile per-packet one-way delay: 62.330 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 175.97 Mbit/s
95th percentile per-packet one-way delay: 62.789 ms
Loss rate: 1.50%
Run 10: Report of Indigo — Data Link

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

- Flow 1 ingress (mean 205.35 Mbit/s)
- Flow 1 egress (mean 205.31 Mbit/s)
- Flow 2 ingress (mean 187.19 Mbit/s)
- Flow 2 egress (mean 187.16 Mbit/s)
- Flow 3 ingress (mean 176.34 Mbit/s)
- Flow 3 egress (mean 175.97 Mbit/s)
Run 1: Statistics of LEDBAT

Start at: 2018-08-11 20:58:44
End at: 2018-08-11 20:59:14
Local clock offset: 0.061 ms
Remote clock offset: -0.238 ms

# Below is generated by plot.py at 2018-08-12 03:48:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.86 Mbit/s
95th percentile per-packet one-way delay: 62.735 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 23.86 Mbit/s
95th percentile per-packet one-way delay: 62.782 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 15.82 Mbit/s
95th percentile per-packet one-way delay: 62.624 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 7.77 Mbit/s
95th percentile per-packet one-way delay: 62.139 ms
Loss rate: 2.50%
Run 1: Report of LEDBAT — Data Link
Run 2: Statistics of LEDBAT

Start at: 2018-08-11 21:25:21
End at: 2018-08-11 21:25:51
Local clock offset: 0.131 ms
Remote clock offset: -0.095 ms

# Below is generated by plot.py at 2018-08-12 03:48:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.32 Mbit/s
95th percentile per-packet one-way delay: 62.712 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 11.60 Mbit/s
95th percentile per-packet one-way delay: 62.750 ms
Loss rate: 1.15%
-- Flow 2:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 62.251 ms
Loss rate: 2.96%
-- Flow 3:
Average throughput: 7.10 Mbit/s
95th percentile per-packet one-way delay: 62.775 ms
Loss rate: 2.59%
Run 2: Report of LEDBAT — Data Link

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

**Graph Details:**
- **Throughput:**
  - Flow 1 ingress: mean 11.69 Mbit/s
  - Flow 1 egress: mean 11.60 Mbit/s
  - Flow 2 ingress: mean 2.19 Mbit/s
  - Flow 2 egress: mean 2.14 Mbit/s
  - Flow 3 ingress: mean 7.20 Mbit/s
  - Flow 3 egress: mean 7.10 Mbit/s
- **Delay:**
  - Flow 1 (95th percentile: 62.75 ms)
  - Flow 2 (95th percentile: 62.25 ms)
  - Flow 3 (95th percentile: 62.77 ms)
Run 3: Statistics of LEDBAT

Start at: 2018-08-11 21:52:09
End at: 2018-08-11 21:52:39
Local clock offset: ~0.015 ms
Remote clock offset: ~0.309 ms

# Below is generated by plot.py at 2018-08-12 03:48:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 33.12 Mbit/s
95th percentile per-packet one-way delay: 62.492 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 22.00 Mbit/s
95th percentile per-packet one-way delay: 62.555 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 15.96 Mbit/s
95th percentile per-packet one-way delay: 62.235 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 1.76 Mbit/s
95th percentile per-packet one-way delay: 61.705 ms
Loss rate: 4.10%
Run 3: Report of LEDBAT — Data Link

![Graph 1: Throughput over time for different flows]

![Graph 2: Packet loss rate over time for different flows]

- Flow 1 ingress (mean 22.10 Mbit/s)
- Flow 1 egress (mean 22.00 Mbit/s)
- Flow 2 ingress (mean 16.06 Mbit/s)
- Flow 2 egress (mean 15.96 Mbit/s)
- Flow 3 ingress (mean 1.81 Mbit/s)
- Flow 3 egress (mean 1.76 Mbit/s)
Run 4: Statistics of LEDBAT

Start at: 2018-08-11 22:19:04
End at: 2018-08-11 22:19:34
Local clock offset: -0.019 ms
Remote clock offset: -0.044 ms

# Below is generated by plot.py at 2018-08-12 03:48:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 35.74 Mbit/s
95th percentile per-packet one-way delay: 62.735 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 23.97 Mbit/s
95th percentile per-packet one-way delay: 62.710 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 13.83 Mbit/s
95th percentile per-packet one-way delay: 62.909 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 7.82 Mbit/s
95th percentile per-packet one-way delay: 62.556 ms
Loss rate: 2.48%
Run 4: Report of LEDBAT — Data Link
Run 5: Statistics of LEDBAT

Start at: 2018-08-11 22:45:58
Local clock offset: -0.054 ms
Remote clock offset: -0.117 ms

# Below is generated by plot.py at 2018-08-12 03:48:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 26.94 Mbit/s
95th percentile per-packet one-way delay: 62.267 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 18.52 Mbit/s
95th percentile per-packet one-way delay: 62.231 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 8.80 Mbit/s
95th percentile per-packet one-way delay: 62.418 ms
Loss rate: 1.63%
-- Flow 3:
Average throughput: 7.89 Mbit/s
95th percentile per-packet one-way delay: 62.250 ms
Loss rate: 2.48%
Run 6: Statistics of LEDBAT

Start at: 2018-08-11 23:13:01
End at: 2018-08-11 23:13:31
Local clock offset: -0.037 ms
Remote clock offset: -0.626 ms

# Below is generated by plot.py at 2018-08-12 03:48:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 34.12 Mbit/s
  95th percentile per-packet one-way delay: 62.770 ms
  Loss rate: 1.05%
-- Flow 1:
  Average throughput: 23.96 Mbit/s
  95th percentile per-packet one-way delay: 62.891 ms
  Loss rate: 0.81%
-- Flow 2:
  Average throughput: 13.11 Mbit/s
  95th percentile per-packet one-way delay: 62.604 ms
  Loss rate: 1.35%
-- Flow 3:
  Average throughput: 4.49 Mbit/s
  95th percentile per-packet one-way delay: 62.386 ms
  Loss rate: 3.17%
Run 6: Report of LEDBAT — Data Link
Run 7: Statistics of LEDBAT

Start at: 2018-08-11 23:39:49
End at: 2018-08-11 23:40:19
Local clock offset: 0.003 ms
Remote clock offset: -1.244 ms

# Below is generated by plot.py at 2018-08-12 03:48:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 28.51 Mbit/s
  95th percentile per-packet one-way delay: 63.351 ms
  Loss rate: 1.22%
-- Flow 1:
  Average throughput: 16.67 Mbit/s
  95th percentile per-packet one-way delay: 63.404 ms
  Loss rate: 0.97%
-- Flow 2:
  Average throughput: 13.98 Mbit/s
  95th percentile per-packet one-way delay: 63.236 ms
  Loss rate: 1.31%
-- Flow 3:
  Average throughput: 7.78 Mbit/s
  95th percentile per-packet one-way delay: 63.130 ms
  Loss rate: 2.46%
Run 7: Report of LEDBAT — Data Link
Run 8: Statistics of LEDBAT

Start at: 2018-08-12 00:06:37
End at: 2018-08-12 00:07:07
Local clock offset: 0.013 ms
Remote clock offset: -1.204 ms

# Below is generated by plot.py at 2018-08-12 03:48:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 33.44 Mbit/s
95th percentile per-packet one-way delay: 63.860 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 22.43 Mbit/s
95th percentile per-packet one-way delay: 63.907 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 12.74 Mbit/s
95th percentile per-packet one-way delay: 63.863 ms
Loss rate: 1.37%
-- Flow 3:
Average throughput: 7.79 Mbit/s
95th percentile per-packet one-way delay: 63.340 ms
Loss rate: 2.50%
Run 8: Report of LEDBAT — Data Link

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

- **Flow 1** (ingress: 22.53 Mbit/s, egress: 22.43 Mbit/s)
- **Flow 2** (ingress: 12.84 Mbit/s, egress: 12.74 Mbit/s)
- **Flow 3** (ingress: 7.89 Mbit/s, egress: 7.79 Mbit/s)

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

- **Flow 1** (95th percentile: 63.91 ms)
- **Flow 2** (95th percentile: 63.86 ms)
- **Flow 3** (95th percentile: 63.34 ms)
Run 9: Statistics of LEDBAT

Start at: 2018-08-12 00:33:22
End at: 2018-08-12 00:33:52
Local clock offset: -0.106 ms
Remote clock offset: -0.121 ms

# Below is generated by plot.py at 2018-08-12 03:48:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.93 Mbit/s
95th percentile per-packet one-way delay: 62.291 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 23.83 Mbit/s
95th percentile per-packet one-way delay: 62.274 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 15.97 Mbit/s
95th percentile per-packet one-way delay: 62.393 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 7.80 Mbit/s
95th percentile per-packet one-way delay: 61.888 ms
Loss rate: 2.50%
Run 9: Report of LEDBAT — Data Link
Run 10: Statistics of LEDBAT

Start at: 2018-08-12 01:00:01
End at: 2018-08-12 01:00:31
Local clock offset: -0.069 ms
Remote clock offset: -0.868 ms

# Below is generated by plot.py at 2018-08-12 03:48:28
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 36.85 Mbit/s
   95th percentile per-packet one-way delay: 63.340 ms
   Loss rate: 1.06%
-- Flow 1:
   Average throughput: 23.81 Mbit/s
   95th percentile per-packet one-way delay: 63.414 ms
   Loss rate: 0.82%
-- Flow 2:
   Average throughput: 15.82 Mbit/s
   95th percentile per-packet one-way delay: 63.270 ms
   Loss rate: 1.24%
-- Flow 3:
   Average throughput: 7.76 Mbit/s
   95th percentile per-packet one-way delay: 62.759 ms
   Loss rate: 2.51%
Run 10: Report of LEDBAT — Data Link

The diagrams show the throughput (Mbps/s) and per-packet one-way delay (ms) over time (s) for different flows.

- **Throughput Diagram**
  - Flow 1 Ingress (mean 23.91 Mbps/s)
  - Flow 1 Egress (mean 23.81 Mbps/s)
  - Flow 2 Ingress (mean 15.92 Mbps/s)
  - Flow 2 Egress (mean 15.82 Mbps/s)
  - Flow 3 Ingress (mean 7.86 Mbps/s)
  - Flow 3 Egress (mean 7.76 Mbps/s)

- **Delay Diagram**
  - Flow 1 (95th percentile 63.41 ms)
  - Flow 2 (95th percentile 63.27 ms)
  - Flow 3 (95th percentile 62.76 ms)
Run 1: Statistics of PCC-Allegro

Start at: 2018-08-11 21:09:40
End at: 2018-08-11 21:10:10
Local clock offset: 0.14 ms
Remote clock offset: -0.892 ms

# Below is generated by plot.py at 2018-08-12 03:53:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 658.14 Mbit/s
95th percentile per-packet one-way delay: 214.913 ms
Loss rate: 10.19%
-- Flow 1:
Average throughput: 564.48 Mbit/s
95th percentile per-packet one-way delay: 219.166 ms
Loss rate: 11.58%
-- Flow 2:
Average throughput: 125.84 Mbit/s
95th percentile per-packet one-way delay: 133.300 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 31.18 Mbit/s
95th percentile per-packet one-way delay: 138.461 ms
Loss rate: 1.41%
Run 1: Report of PCC-Allegro — Data Link

![Graph of Throughput](image1)

- Flow 1 ingress (mean 635.77 Mbit/s)
- Flow 1 egress (mean 564.48 Mbit/s)
- Flow 2 ingress (mean 125.99 Mbit/s)
- Flow 2 egress (mean 125.84 Mbit/s)
- Flow 3 ingress (mean 31.23 Mbit/s)
- Flow 3 egress (mean 31.18 Mbit/s)

![Graph of Per-packet One-Way Delay](image2)

- Flow 1 (95th percentile 219.17 ms)
- Flow 2 (95th percentile 133.30 ms)
- Flow 3 (95th percentile 138.46 ms)

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Run 2: Statistics of PCC-Allegro

Start at: 2018-08-11 21:36:20
End at: 2018-08-11 21:36:50
Local clock offset: -0.034 ms
Remote clock offset: -0.075 ms

# Below is generated by plot.py at 2018-08-12 03:54:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 720.94 Mbit/s
95th percentile per-packet one-way delay: 182.420 ms
Loss rate: 5.88%
-- Flow 1:
Average throughput: 541.36 Mbit/s
95th percentile per-packet one-way delay: 186.184 ms
Loss rate: 6.84%
-- Flow 2:
Average throughput: 239.82 Mbit/s
95th percentile per-packet one-way delay: 143.757 ms
Loss rate: 3.05%
-- Flow 3:
Average throughput: 62.66 Mbit/s
95th percentile per-packet one-way delay: 94.247 ms
Loss rate: 1.35%
Run 2: Report of PCC-Allegro — Data Link

![Graph of Throughput vs Time](image1)

- Flow 1 ingress (mean 578.67 Mbit/s)
- Flow 1 egress (mean 341.36 Mbit/s)
- Flow 2 ingress (mean 245.79 Mbit/s)
- Flow 2 egress (mean 239.82 Mbit/s)
- Flow 3 ingress (mean 62.73 Mbit/s)
- Flow 3 egress (mean 62.66 Mbit/s)

![Graph of RTT vs Time](image2)

- Flow 1 (95th percentile 186.18 ms)
- Flow 2 (95th percentile 143.76 ms)
- Flow 3 (95th percentile 94.25 ms)
Run 3: Statistics of PCC-Allegro

Start at: 2018-08-11 22:03:03
End at: 2018-08-11 22:03:34
Local clock offset: -0.088 ms
Remote clock offset: 1.126 ms

# Below is generated by plot.py at 2018-08-12 03:54:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 687.60 Mbit/s
95th percentile per-packet one-way delay: 197.859 ms
Loss rate: 5.07%
-- Flow 1:
Average throughput: 514.85 Mbit/s
95th percentile per-packet one-way delay: 202.311 ms
Loss rate: 6.12%
-- Flow 2:
Average throughput: 245.12 Mbit/s
95th percentile per-packet one-way delay: 144.128 ms
Loss rate: 1.84%
-- Flow 3:
Average throughput: 31.07 Mbit/s
95th percentile per-packet one-way delay: 87.490 ms
Loss rate: 1.26%
Run 3: Report of PCC-Allegro — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 546.14 Mbps)
  - Flow 1 egress (mean 514.85 Mbps)
  - Flow 2 ingress (mean 248.16 Mbps)
  - Flow 2 egress (mean 245.12 Mbps)
  - Flow 3 ingress (mean 31.09 Mbps)
  - Flow 3 egress (mean 31.07 Mbps)

- **Packet Loss (ms):**
  - Flow 1 (95th percentile 202.31 ms)
  - Flow 2 (95th percentile 144.13 ms)
  - Flow 3 (95th percentile 87.49 ms)
Run 4: Statistics of PCC-Allegro

Start at: 2018-08-11 22:30:05
End at: 2018-08-11 22:30:35
Local clock offset: 0.01 ms
Remote clock offset: 1.236 ms

# Below is generated by plot.py at 2018-08-12 03:57:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 710.76 Mbit/s
95th percentile per-packet one-way delay: 221.965 ms
Loss rate: 5.83%
-- Flow 1:
Average throughput: 538.30 Mbit/s
95th percentile per-packet one-way delay: 226.887 ms
Loss rate: 6.80%
-- Flow 2:
Average throughput: 244.78 Mbit/s
95th percentile per-packet one-way delay: 142.771 ms
Loss rate: 2.61%
-- Flow 3:
Average throughput: 30.80 Mbit/s
95th percentile per-packet one-way delay: 143.033 ms
Loss rate: 3.83%
Run 4: Report of PCC-Allegro — Data Link
Run 5: Statistics of PCC-Allegro

Start at: 2018-08-11 22:57:03
End at: 2018-08-11 22:57:33
Local clock offset: -0.025 ms
Remote clock offset: -0.753 ms

# Below is generated by plot.py at 2018-08-12 03:59:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 671.32 Mbit/s
95th percentile per-packet one-way delay: 253.462 ms
Loss rate: 5.16%
-- Flow 1:
Average throughput: 491.79 Mbit/s
95th percentile per-packet one-way delay: 258.853 ms
Loss rate: 6.40%
-- Flow 2:
Average throughput: 268.47 Mbit/s
95th percentile per-packet one-way delay: 148.135 ms
Loss rate: 1.60%
-- Flow 3:
Average throughput: 4.09 Mbit/s
95th percentile per-packet one-way delay: 145.004 ms
Loss rate: 2.62%
Run 5: Report of PCC-Allegro — Data Link
Run 6: Statistics of PCC-Allegro

End at: 2018-08-11 23:24:28
Local clock offset: -0.069 ms
Remote clock offset: -0.47 ms

# Below is generated by plot.py at 2018-08-12 04:00:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 690.35 Mbit/s
95th percentile per-packet one-way delay: 245.026 ms
Loss rate: 3.92%
-- Flow 1:
Average throughput: 481.28 Mbit/s
95th percentile per-packet one-way delay: 252.480 ms
Loss rate: 4.77%
-- Flow 2:
Average throughput: 255.10 Mbit/s
95th percentile per-packet one-way delay: 141.489 ms
Loss rate: 1.66%
-- Flow 3:
Average throughput: 121.93 Mbit/s
95th percentile per-packet one-way delay: 142.165 ms
Loss rate: 2.95%
Run 6: Report of PCC-Allegro — Data Link
Run 7: Statistics of PCC-Allegro

Start at: 2018-08-11 23:50:45
End at: 2018-08-11 23:51:15
Local clock offset: -0.044 ms
Remote clock offset: -0.621 ms

# Below is generated by plot.py at 2018-08-12 04:00:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 689.98 Mbit/s
  95th percentile per-packet one-way delay: 215.953 ms
  Loss rate: 5.46%
-- Flow 1:
  Average throughput: 533.59 Mbit/s
  95th percentile per-packet one-way delay: 221.424 ms
  Loss rate: 5.92%
-- Flow 2:
  Average throughput: 219.99 Mbit/s
  95th percentile per-packet one-way delay: 148.690 ms
  Loss rate: 4.06%
-- Flow 3:
  Average throughput: 32.03 Mbit/s
  95th percentile per-packet one-way delay: 137.330 ms
  Loss rate: 1.44%
Run 7: Report of PCC-Allegro — Data Link

---

**Graph 1:**

Throughput (Mbps)

<table>
<thead>
<tr>
<th>Time (s)</th>
<th>Flow 1 ingress (mean 564.80 Mbps)</th>
<th>Flow 1 egress (mean 533.59 Mbps)</th>
<th>Flow 2 ingress (mean 227.87 Mbps)</th>
<th>Flow 2 egress (mean 219.99 Mbps)</th>
<th>Flow 3 ingress (mean 32.09 Mbps)</th>
<th>Flow 3 egress (mean 32.03 Mbps)</th>
</tr>
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</table>

**Graph 2:**

Per-packet one-way delay (ms)

<table>
<thead>
<tr>
<th>Time (s)</th>
<th>Flow 1 (95th percentile 221.42 ms)</th>
<th>Flow 2 (95th percentile 148.69 ms)</th>
<th>Flow 3 (95th percentile 137.33 ms)</th>
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<tr>
<td>30</td>
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<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
Run 8: Statistics of PCC-Allegro

Start at: 2018-08-12 00:17:36
End at: 2018-08-12 00:18:06
Local clock offset: -0.09 ms
Remote clock offset: 0.069 ms

# Below is generated by plot.py at 2018-08-12 04:02:22
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 706.13 Mbit/s
  95th percentile per-packet one-way delay: 155.865 ms
  Loss rate: 1.95%
-- Flow 1:
  Average throughput: 491.41 Mbit/s
  95th percentile per-packet one-way delay: 166.185 ms
  Loss rate: 1.88%
-- Flow 2:
  Average throughput: 307.36 Mbit/s
  95th percentile per-packet one-way delay: 144.606 ms
  Loss rate: 2.08%
-- Flow 3:
  Average throughput: 33.10 Mbit/s
  95th percentile per-packet one-way delay: 144.110 ms
  Loss rate: 2.44%
Run 8: Report of PCC-Allegro — Data Link

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

- Flow 1 ingress (mean 498.76 Mb/s)
- Flow 1 egress (mean 491.41 Mb/s)
- Flow 2 ingress (mean 311.95 Mb/s)
- Flow 2 egress (mean 307.36 Mb/s)
- Flow 3 ingress (mean 33.50 Mb/s)
- Flow 3 egress (mean 33.10 Mb/s)

![Graph 2: One-way delay (ms)]

- Flow 1 (95th percentile 166.19 ms)
- Flow 2 (95th percentile 144.61 ms)
- Flow 3 (95th percentile 144.11 ms)
Run 9: Statistics of PCC-Allegro

Start at: 2018-08-12 00:44:15
End at: 2018-08-12 00:44:45
Local clock offset: -0.032 ms
Remote clock offset: 0.514 ms

# Below is generated by plot.py at 2018-08-12 04:06:41
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 703.43 Mbit/s
  95th percentile per-packet one-way delay: 178.484 ms
  Loss rate: 2.98%
-- Flow 1:
  Average throughput: 523.21 Mbit/s
  95th percentile per-packet one-way delay: 187.728 ms
  Loss rate: 3.25%
-- Flow 2:
  Average throughput: 268.31 Mbit/s
  95th percentile per-packet one-way delay: 145.694 ms
  Loss rate: 2.18%
-- Flow 3:
  Average throughput: 6.83 Mbit/s
  95th percentile per-packet one-way delay: 117.297 ms
  Loss rate: 3.61%
Run 10: Statistics of PCC-Allegro

Start at: 2018-08-12 01:10:44
End at: 2018-08-12 01:11:14
Local clock offset: -0.063 ms
Remote clock offset: -1.338 ms

# Below is generated by plot.py at 2018-08-12 04:06:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 599.24 Mbit/s
95th percentile per-packet one-way delay: 151.979 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 353.39 Mbit/s
95th percentile per-packet one-way delay: 154.765 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 340.33 Mbit/s
95th percentile per-packet one-way delay: 151.762 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 61.42 Mbit/s
95th percentile per-packet one-way delay: 142.834 ms
Loss rate: 1.82%
Run 10: Report of PCC-Allegro — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 354.87 Mbps)
Flow 1 egress (mean 353.39 Mbps)
Flow 2 ingress (mean 343.13 Mbps)
Flow 2 egress (mean 340.33 Mbps)
Flow 3 ingress (mean 61.79 Mbps)
Flow 3 egress (mean 61.42 Mbps)

Delay (ms)

Time (s)

Flow 1 (95th percentile 154.76 ms)
Flow 2 (95th percentile 151.76 ms)
Flow 3 (95th percentile 142.83 ms)
Run 1: Statistics of PCC-Expr

Start at: 2018-08-11 21:02:25
End at: 2018-08-11 21:02:55
Local clock offset: 0.077 ms
Remote clock offset: -0.206 ms

# Below is generated by plot.py at 2018-08-12 04:11:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 484.91 Mbit/s
95th percentile per-packet one-way delay: 153.315 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 294.85 Mbit/s
95th percentile per-packet one-way delay: 170.599 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 195.34 Mbit/s
95th percentile per-packet one-way delay: 67.997 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 184.69 Mbit/s
95th percentile per-packet one-way delay: 130.635 ms
Loss rate: 1.47%
Run 1: Report of PCC-Expr — Data Link

**Throughput (Mbps):**
- **Flow 1 ingress (mean 295.70 Mbps):**
- **Flow 1 egress (mean 294.85 Mbps):**
- **Flow 2 ingress (mean 195.48 Mbps):**
- **Flow 2 egress (mean 195.36 Mbps):**
- **Flow 3 ingress (mean 185.10 Mbps):**
- **Flow 3 egress (mean 184.69 Mbps):**

**Per-packet one-way delay (ms):**
- **Flow 1 (95th percentile 170.60 ms):**
- **Flow 2 (95th percentile 68.00 ms):**
- **Flow 3 (95th percentile 130.63 ms):**

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Run 2: Statistics of PCC-Expr

Start at: 2018-08-11 21:29:02
End at: 2018-08-11 21:29:32
Local clock offset: 0.022 ms
Remote clock offset: -0.68 ms

# Below is generated by plot.py at 2018-08-12 04:13:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 467.25 Mbit/s
95th percentile per-packet one-way delay: 244.408 ms
Loss rate: 5.73%
-- Flow 1:
Average throughput: 311.11 Mbit/s
95th percentile per-packet one-way delay: 258.875 ms
Loss rate: 7.14%
-- Flow 2:
Average throughput: 205.97 Mbit/s
95th percentile per-packet one-way delay: 173.981 ms
Loss rate: 2.93%
-- Flow 3:
Average throughput: 59.53 Mbit/s
95th percentile per-packet one-way delay: 62.448 ms
Loss rate: 1.66%
Run 2: Report of PCC-Expr — Data Link

![Graph](image1)

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

End at: 2018-08-11 21:56:17
Local clock offset: -0.093 ms
Remote clock offset: -0.182 ms

# Below is generated by plot.py at 2018-08-12 04:15:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 469.20 Mbit/s
95th percentile per-packet one-way delay: 179.575 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 307.01 Mbit/s
95th percentile per-packet one-way delay: 181.378 ms
Loss rate: 1.09%
-- Flow 2:
Average throughput: 209.30 Mbit/s
95th percentile per-packet one-way delay: 74.573 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 71.17 Mbit/s
95th percentile per-packet one-way delay: 62.136 ms
Loss rate: 2.09%
Run 3: Report of PCC-Expr — Data Link

![Graph of throughput](image1)

- Flow 1 ingress (mean 309.11 Mbit/s)
- Flow 1 egress (mean 307.01 Mbit/s)
- Flow 2 ingress (mean 209.98 Mbit/s)
- Flow 2 egress (mean 209.39 Mbit/s)
- Flow 3 ingress (mean 71.77 Mbit/s)
- Flow 3 egress (mean 71.17 Mbit/s)

![Graph of packet delay](image2)

- Flow 1 (95th percentile 181.38 ms)
- Flow 2 (95th percentile 74.57 ms)
- Flow 3 (95th percentile 62.14 ms)
Run 4: Statistics of PCC-Expr

End at: 2018-08-11 22:23:19
Local clock offset: 0.001 ms
Remote clock offset: 0.09 ms

# Below is generated by plot.py at 2018-08-12 04:16:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 432.10 Mbit/s
95th percentile per-packet one-way delay: 223.014 ms
Loss rate: 1.81%
-- Flow 1:
Average throughput: 256.33 Mbit/s
95th percentile per-packet one-way delay: 116.179 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 219.61 Mbit/s
95th percentile per-packet one-way delay: 247.437 ms
Loss rate: 4.23%
-- Flow 3:
Average throughput: 91.70 Mbit/s
95th percentile per-packet one-way delay: 62.068 ms
Loss rate: 1.49%
Run 4: Report of PCC-Expr — Data Link
Run 5: Statistics of PCC-Expr

End at: 2018-08-11 22:50:09
Local clock offset: -0.07 ms
Remote clock offset: -0.379 ms

# Below is generated by plot.py at 2018-08-12 04:19:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 508.47 Mbit/s
95th percentile per-packet one-way delay: 242.304 ms
Loss rate: 4.46%
-- Flow 1:
Average throughput: 290.86 Mbit/s
95th percentile per-packet one-way delay: 252.810 ms
Loss rate: 3.70%
-- Flow 2:
Average throughput: 279.85 Mbit/s
95th percentile per-packet one-way delay: 194.004 ms
Loss rate: 6.10%
-- Flow 3:
Average throughput: 97.34 Mbit/s
95th percentile per-packet one-way delay: 63.123 ms
Loss rate: 1.54%
Run 5: Report of PCC-Expr — Data Link
Run 6: Statistics of PCC-Expr

Start at: 2018-08-11 23:16:38
End at: 2018-08-11 23:17:08
Local clock offset: 0.057 ms
Remote clock offset: -0.722 ms

# Below is generated by plot.py at 2018-08-12 04:21:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 505.78 Mbit/s
  95th percentile per-packet one-way delay: 217.199 ms
  Loss rate: 2.74%
-- Flow 1:
  Average throughput: 318.50 Mbit/s
  95th percentile per-packet one-way delay: 209.144 ms
  Loss rate: 2.81%
-- Flow 2:
  Average throughput: 235.08 Mbit/s
  95th percentile per-packet one-way delay: 231.946 ms
  Loss rate: 2.77%
-- Flow 3:
  Average throughput: 95.62 Mbit/s
  95th percentile per-packet one-way delay: 67.936 ms
  Loss rate: 1.92%
Run 6: Report of PCC-Expr — Data Link

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

- Blue dashed line: Flow 1 ingress (mean 326.36 Mbps)
- Blue solid line: Flow 1 egress (mean 318.50 Mbps)
- Green dashed line: Flow 2 ingress (mean 240.28 Mbps)
- Green solid line: Flow 2 egress (mean 235.08 Mbps)
- Red dashed line: Flow 3 ingress (mean 96.28 Mbps)
- Red solid line: Flow 3 egress (mean 95.62 Mbps)

![Graph 2: RTT vs Time (ms)]

- Blue markers: Flow 1 (95th percentile 209.14 ms)
- Green markers: Flow 2 (95th percentile 231.95 ms)
- Red markers: Flow 3 (95th percentile 67.94 ms)
Run 7: Statistics of PCC-Expr

Start at: 2018-08-11 23:43:31
End at: 2018-08-11 23:44:01
Local clock offset: -0.022 ms
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2018-08-12 04:21:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 412.25 Mbit/s
  95th percentile per-packet one-way delay: 211.196 ms
  Loss rate: 4.07%
-- Flow 1:
  Average throughput: 261.52 Mbit/s
  95th percentile per-packet one-way delay: 215.765 ms
  Loss rate: 5.83%
-- Flow 2:
  Average throughput: 196.13 Mbit/s
  95th percentile per-packet one-way delay: 63.927 ms
  Loss rate: 0.70%
-- Flow 3:
  Average throughput: 62.82 Mbit/s
  95th percentile per-packet one-way delay: 61.821 ms
  Loss rate: 1.84%
Run 7: Report of PCC-Expr — Data Link

Throughput (Mb/s)

Time (s)

Flow 1 ingress (mean 276.56 Mb/s)  
Flow 1 egress (mean 261.52 Mb/s)  
Flow 2 ingress (mean 196.27 Mb/s)  
Flow 2 egress (mean 196.13 Mb/s)  
Flow 3 ingress (mean 63.17 Mb/s)  
Flow 3 egress (mean 62.82 Mb/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 215.76 ms)  
Flow 2 (95th percentile 63.93 ms)  
Flow 3 (95th percentile 61.82 ms)
Run 8: Statistics of PCC-Expr

Start at: 2018-08-12 00:10:16
End at: 2018-08-12 00:10:46
Local clock offset: -0.003 ms
Remote clock offset: 1.074 ms

# Below is generated by plot.py at 2018-08-12 04:25:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 497.60 Mbit/s
  95th percentile per-packet one-way delay: 201.438 ms
  Loss rate: 3.05%
-- Flow 1:
  Average throughput: 282.91 Mbit/s
  95th percentile per-packet one-way delay: 213.329 ms
  Loss rate: 3.66%
-- Flow 2:
  Average throughput: 227.40 Mbit/s
  95th percentile per-packet one-way delay: 187.529 ms
  Loss rate: 2.49%
-- Flow 3:
  Average throughput: 194.96 Mbit/s
  95th percentile per-packet one-way delay: 82.098 ms
  Loss rate: 1.62%
Run 8: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 292.45 Mbit/s)
- Flow 1 egress (mean 282.91 Mbit/s)
- Flow 2 ingress (mean 231.75 Mbit/s)
- Flow 2 egress (mean 227.40 Mbit/s)
- Flow 3 ingress (mean 196.72 Mbit/s)
- Flow 3 egress (mean 194.96 Mbit/s)

- Flow 1 (95th percentile 213.33 ms)
- Flow 2 (95th percentile 187.53 ms)
- Flow 3 (95th percentile 82.10 ms)
Run 9: Statistics of PCC-Expr

Start at: 2018-08-12 00:37:01
End at: 2018-08-12 00:37:31
Local clock offset: -0.09 ms
Remote clock offset: 1.116 ms

# Below is generated by plot.py at 2018-08-12 04:28:34
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 462.89 Mbit/s
   95th percentile per-packet one-way delay: 205.761 ms
   Loss rate: 6.39%
-- Flow 1:
   Average throughput: 303.55 Mbit/s
   95th percentile per-packet one-way delay: 210.909 ms
   Loss rate: 8.92%
-- Flow 2:
   Average throughput: 224.96 Mbit/s
   95th percentile per-packet one-way delay: 119.935 ms
   Loss rate: 1.10%
-- Flow 3:
   Average throughput: 30.79 Mbit/s
   95th percentile per-packet one-way delay: 62.458 ms
   Loss rate: 1.60%
Run 9: Report of PCC-Expr — Data Link

- Flow 1 ingress (mean 331.92 Mbit/s)
- Flow 1 egress (mean 303.55 Mbit/s)
- Flow 2 ingress (mean 226.66 Mbit/s)
- Flow 2 egress (mean 224.96 Mbit/s)
- Flow 3 ingress (mean 30.99 Mbit/s)
- Flow 3 egress (mean 30.79 Mbit/s)

- Flow 1 (95th percentile 210.91 ms)
- Flow 2 (95th percentile 119.94 ms)
- Flow 3 (95th percentile 62.46 ms)
Run 10: Statistics of PCC-Expr

Start at: 2018-08-12 01:03:39
End at: 2018-08-12 01:04:09
Local clock offset: -0.025 ms
Remote clock offset: -0.568 ms

# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 424.20 Mbit/s
95th percentile per-packet one-way delay: 173.720 ms
Loss rate: 1.10%

-- Flow 1:
Average throughput: 240.03 Mbit/s
95th percentile per-packet one-way delay: 186.543 ms
Loss rate: 1.20%

-- Flow 2:
Average throughput: 230.65 Mbit/s
95th percentile per-packet one-way delay: 140.399 ms
Loss rate: 0.87%

-- Flow 3:
Average throughput: 95.58 Mbit/s
95th percentile per-packet one-way delay: 62.803 ms
Loss rate: 1.41%
Run 10: Report of PCC-Expr — Data Link
Run 1: Statistics of QUIC Cubic

Start at: 2018-08-11 20:57:30
End at: 2018-08-11 20:58:00
Local clock offset: 0.076 ms
Remote clock offset: -0.142 ms

# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 95.58 Mbit/s
  95th percentile per-packet one-way delay: 61.490 ms
  Loss rate: 0.55%
-- Flow 1:
  Average throughput: 59.98 Mbit/s
  95th percentile per-packet one-way delay: 61.302 ms
  Loss rate: 0.74%
-- Flow 2:
  Average throughput: 41.24 Mbit/s
  95th percentile per-packet one-way delay: 61.588 ms
  Loss rate: 0.15%
-- Flow 3:
  Average throughput: 18.43 Mbit/s
  95th percentile per-packet one-way delay: 61.145 ms
  Loss rate: 0.57%
Run 1: Report of QUIC Cubic — Data Link
Run 2: Statistics of QUIC Cubic

Start at: 2018-08-11 21:24:07
End at: 2018-08-11 21:24:37
Local clock offset: 0.083 ms
Remote clock offset: -1.386 ms

# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 91.71 Mbit/s
  95th percentile per-packet one-way delay: 62.540 ms
  Loss rate: 0.97%
-- Flow 1:
  Average throughput: 58.06 Mbit/s
  95th percentile per-packet one-way delay: 62.566 ms
  Loss rate: 0.56%
-- Flow 2:
  Average throughput: 39.08 Mbit/s
  95th percentile per-packet one-way delay: 62.492 ms
  Loss rate: 1.29%
-- Flow 3:
  Average throughput: 23.55 Mbit/s
  95th percentile per-packet one-way delay: 62.300 ms
  Loss rate: 2.97%
Run 2: Report of QUIC Cubic — Data Link

[Graph showing throughput and per-packet one-way delay over time for different flows with annotations for mean and 95th percentile values]

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Run 3: Statistics of QUIC Cubic

Start at: 2018-08-11 21:50:55
End at: 2018-08-11 21:51:25
Local clock offset: -0.045 ms
Remote clock offset: -0.397 ms

# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.02 Mbit/s
95th percentile per-packet one-way delay: 61.719 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 45.03 Mbit/s
95th percentile per-packet one-way delay: 61.730 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 47.18 Mbit/s
95th percentile per-packet one-way delay: 61.704 ms
Loss rate: 1.16%
-- Flow 3:
Average throughput: 17.27 Mbit/s
95th percentile per-packet one-way delay: 61.652 ms
Loss rate: 0.59%
Run 3: Report of QUIC Cubic — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 45.23 Mbps)
  - Flow 1 egress (mean 45.03 Mbps)
  - Flow 2 ingress (mean 47.44 Mbps)
  - Flow 2 egress (mean 47.18 Mbps)
  - Flow 3 ingress (mean 17.18 Mbps)
  - Flow 3 egress (mean 17.27 Mbps)

- **Packet Delay (ms):**
  - Flow 1 (95th percentile 61.73 ms)
  - Flow 2 (95th percentile 61.70 ms)
  - Flow 3 (95th percentile 61.65 ms)
Run 4: Statistics of QUIC Cubic

Start at: 2018-08-11 22:17:49
End at: 2018-08-11 22:18:19
Local clock offset: -0.045 ms
Remote clock offset: 0.001 ms

# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 103.24 Mbit/s
95th percentile per-packet one-way delay: 61.459 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 55.52 Mbit/s
95th percentile per-packet one-way delay: 61.250 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 48.22 Mbit/s
95th percentile per-packet one-way delay: 61.190 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 47.66 Mbit/s
95th percentile per-packet one-way delay: 61.639 ms
Loss rate: 1.78%
Run 4: Report of QUIC Cubic — Data Link
Run 5: Statistics of QUIC Cubic

Start at: 2018-08-11 22:44:46
End at: 2018-08-11 22:45:16
Local clock offset: -0.047 ms
Remote clock offset: 0.606 ms

# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 41.21 Mbit/s
  95th percentile per-packet one-way delay: 60.584 ms
  Loss rate: 1.16%
-- Flow 1:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 60.755 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 50.98 Mbit/s
  95th percentile per-packet one-way delay: 60.595 ms
  Loss rate: 1.16%
-- Flow 3:
  Average throughput: 22.24 Mbit/s
  95th percentile per-packet one-way delay: 60.469 ms
  Loss rate: 1.16%
Run 5: Report of QUIC Cubic — Data Link
Run 6: Statistics of QUIC Cubic

Start at: 2018-08-11 23:11:48
End at: 2018-08-11 23:12:18
Local clock offset: -0.085 ms
Remote clock offset: 0.07 ms

# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 75.52 Mbit/s
  95th percentile per-packet one-way delay: 61.117 ms
  Loss rate: 0.93%
-- Flow 1:
  Average throughput: 44.37 Mbit/s
  95th percentile per-packet one-way delay: 61.131 ms
  Loss rate: 0.72%
-- Flow 2:
  Average throughput: 38.39 Mbit/s
  95th percentile per-packet one-way delay: 61.091 ms
  Loss rate: 1.50%
-- Flow 3:
  Average throughput: 17.34 Mbit/s
  95th percentile per-packet one-way delay: 61.086 ms
  Loss rate: 0.00%
Run 6: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 44.51 Mbit/s)
- Flow 1 egress (mean 44.37 Mbit/s)
- Flow 2 ingress (mean 38.73 Mbit/s)
- Flow 2 egress (mean 38.39 Mbit/s)
- Flow 3 ingress (mean 17.11 Mbit/s)
- Flow 3 egress (mean 17.34 Mbit/s)
Run 7: Statistics of QUIC Cubic

Start at: 2018-08-11 23:38:35
End at: 2018-08-11 23:39:05
Local clock offset: 0.061 ms
Remote clock offset: 0.503 ms

# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.51 Mbit/s
95th percentile per-packet one-way delay: 61.000 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 53.00 Mbit/s
95th percentile per-packet one-way delay: 61.028 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 48.50 Mbit/s
95th percentile per-packet one-way delay: 60.788 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 19.13 Mbit/s
95th percentile per-packet one-way delay: 61.022 ms
Loss rate: 1.33%
Run 7: Report of QUIC Cubic — Data Link
Run 8: Statistics of QUIC Cubic

Start at: 2018-08-12 00:05:23
End at: 2018-08-12 00:05:53
Local clock offset: -0.055 ms
Remote clock offset: -0.716 ms

# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.96 Mbit/s
95th percentile per-packet one-way delay: 62.130 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 50.80 Mbit/s
95th percentile per-packet one-way delay: 62.060 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 28.85 Mbit/s
95th percentile per-packet one-way delay: 62.207 ms
Loss rate: 1.72%
-- Flow 3:
Average throughput: 21.31 Mbit/s
95th percentile per-packet one-way delay: 61.820 ms
Loss rate: 0.44%
Run 8: Report of QUIC Cubic — Data Link
Run 9: Statistics of QUIC Cubic

Start at: 2018-08-12 00:32:11
End at: 2018-08-12 00:32:41
Local clock offset: -0.074 ms
Remote clock offset: -0.193 ms

# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 37.93 Mbit/s
  95th percentile per-packet one-way delay: 61.396 ms
  Loss rate: 1.18%
-- Flow 1:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 61.465 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 40.70 Mbit/s
  95th percentile per-packet one-way delay: 61.382 ms
  Loss rate: 1.42%
-- Flow 3:
  Average throughput: 33.13 Mbit/s
  95th percentile per-packet one-way delay: 61.435 ms
  Loss rate: 0.58%
Run 9: Report of QUIC Cubic — Data Link
Run 10: Statistics of QUIC Cubic

Start at: 2018-08-12 00:58:48
End at: 2018-08-12 00:59:18
Local clock offset: -0.026 ms
Remote clock offset: 0.054 ms

# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 81.62 Mbit/s
  95th percentile per-packet one-way delay: 61.293 ms
  Loss rate: 0.97%
-- Flow 1:
  Average throughput: 51.00 Mbit/s
  95th percentile per-packet one-way delay: 61.319 ms
  Loss rate: 0.47%
-- Flow 2:
  Average throughput: 35.23 Mbit/s
  95th percentile per-packet one-way delay: 61.237 ms
  Loss rate: 1.17%
-- Flow 3:
  Average throughput: 22.00 Mbit/s
  95th percentile per-packet one-way delay: 61.073 ms
  Loss rate: 3.76%
Run 1: Statistics of SCReAM

Start at: 2018-08-11 21:01:16
End at: 2018-08-11 21:01:46
Local clock offset: 0.037 ms
Remote clock offset: -1.371 ms

# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 62.729 ms
  Loss rate: 0.58%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 62.776 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 62.609 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 62.454 ms
  Loss rate: 1.10%
Run 1: Report of SCReAM — Data Link

![Graph 1: Throughput (Mbps)]

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

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

- Flow 1 (95th percentile 62.78 ms)
- Flow 2 (95th percentile 62.61 ms)
- Flow 3 (95th percentile 62.45 ms)
Run 2: Statistics of SCReAM

End at: 2018-08-11 21:28:23
Local clock offset: 0.075 ms
Remote clock offset: 0.043 ms

# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 61.374 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.402 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.208 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.232 ms
  Loss rate: 1.08%
Run 2: Report of SCReAM — Data Link

![Graph showing network throughput and packet delay over time.](image-url)
Run 3: Statistics of SCReAM

Start at: 2018-08-11 21:54:39
End at: 2018-08-11 21:55:09
Local clock offset: -0.119 ms
Remote clock offset: -1.453 ms

# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 63.013 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.056 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.943 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.441 ms
Loss rate: 1.45%
Run 3: Report of SCReAM — Data Link
Run 4: Statistics of SCReAM

Start at: 2018-08-11 22:21:40
End at: 2018-08-11 22:22:10
Local clock offset: -0.069 ms
Remote clock offset: -0.119 ms

# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 61.507 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.554 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.387 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.337 ms
Loss rate: 1.08%
Run 4: Report of SCReAM — Data Link

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

- **Flow 1 ingress (mean 0.22 Mb/s)**
- **Flow 1 egress (mean 0.22 Mb/s)**
- **Flow 2 ingress (mean 0.22 Mb/s)**
- **Flow 2 egress (mean 0.22 Mb/s)**
- **Flow 3 ingress (mean 0.22 Mb/s)**
- **Flow 3 egress (mean 0.22 Mb/s)**

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

- **Flow 1 (95th percentile 61.55 ms)**
- **Flow 2 (95th percentile 61.39 ms)**
- **Flow 3 (95th percentile 61.34 ms)**

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Run 5: Statistics of SCReAM

Start at: 2018-08-11 22:48:30
End at: 2018-08-11 22:49:00
Local clock offset: -0.034 ms
Remote clock offset: -0.062 ms

# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 61.649 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.691 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.239 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.326 ms
Loss rate: 1.08%
Run 5: Report of SCReAM — Data Link

[Graph showing throughput and per-packet one-way delay over time for different flows with corresponding mean and 95th percentile delays.]
Run 6: Statistics of SCReAM

Start at: 2018-08-11 23:15:29
End at: 2018-08-11 23:15:59
Local clock offset: -0.017 ms
Remote clock offset: 0.384 ms

# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 61.296 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.343 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.120 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 60.819 ms
  Loss rate: 1.08%
Run 6: Report of SCReAM — Data Link

[Graphs showing throughput and packet loss over time for different flows]
Run 7: Statistics of SCReAM

Start at: 2018-08-11 23:42:22
End at: 2018-08-11 23:42:52
Local clock offset: -0.035 ms
Remote clock offset: 0.251 ms

# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 61.309 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.314 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.314 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.243 ms
  Loss rate: 1.08%
Run 7: Report of SCReAM — Data Link

![Graph](image)

![Graph](image)
Run 8: Statistics of SCReAM

Start at: 2018-08-12 00:09:08
End at: 2018-08-12 00:09:38
Local clock offset: -0.059 ms
Remote clock offset: 0.727 ms

# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 60.925 ms
Loss rate: 0.57%

-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.018 ms
Loss rate: 0.38%

-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.700 ms
Loss rate: 0.61%

-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.688 ms
Loss rate: 1.08%
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)

One-packet-one-way delay (ms)

Time (s)

Flow 1 (95th percentile 61.02 ms)  Flow 2 (95th percentile 60.70 ms)  Flow 3 (95th percentile 60.69 ms)
Run 9: Statistics of SCReAM

Start at: 2018-08-12 00:35:52
End at: 2018-08-12 00:36:22
Local clock offset: -0.071 ms
Remote clock offset: 0.501 ms

# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 61.031 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.074 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.888 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.897 ms
Loss rate: 1.10%
Run 9: Report of SCReAM — Data Link
Run 10: Statistics of SCReAM

Start at: 2018-08-12 01:02:30
End at: 2018-08-12 01:03:00
Local clock offset: -0.074 ms
Remote clock offset: -0.045 ms

# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 61.497 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.375 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.569 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.513 ms
  Loss rate: 1.08%
Run 10: Report of SCReAM — Data Link
Run 1: Statistics of Sprout

Start at: 2018-08-11 21:04:19
End at: 2018-08-11 21:04:49
Local clock offset: 0.052 ms
Remote clock offset: -0.111 ms

# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.48 Mbit/s
95th percentile per-packet one-way delay: 61.791 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 61.779 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 61.522 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 5.47 Mbit/s
95th percentile per-packet one-way delay: 61.817 ms
Loss rate: 1.24%
Run 1: Report of Sprout — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 0.37 Mbps)  
Flow 1 egress (mean 0.37 Mbps)  
Flow 2 ingress (mean 0.49 Mbps)  
Flow 2 egress (mean 0.49 Mbps)  
Flow 3 ingress (mean 5.46 Mbps)  
Flow 3 egress (mean 5.47 Mbps)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 61.78 ms)  
Flow 2 (95th percentile 61.52 ms)  
Flow 3 (95th percentile 61.82 ms)
Run 2: Statistics of Sprout

Start at: 2018-08-11 21:30:56
End at: 2018-08-11 21:31:26
Local clock offset: 0.01 ms
Remote clock offset: -0.913 ms

# Below is generated by plot.py at 2018-08-12 04:28:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 62.487 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 0.90 Mbit/s
95th percentile per-packet one-way delay: 62.347 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 62.274 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 2.87 Mbit/s
95th percentile per-packet one-way delay: 62.659 ms
Loss rate: 0.33%
Run 2: Report of Sprout — Data Link

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

**Throughput (Mbps)**

0 1 2 3 4 5 6 7

0 5 10 15 20 25 30

Flow 1 ingress (mean 0.90 Mbps)  Flow 1 egress (mean 0.90 Mbps)
Flow 2 ingress (mean 0.65 Mbps)  Flow 2 egress (mean 0.66 Mbps)
Flow 3 ingress (mean 2.84 Mbps)  Flow 3 egress (mean 2.87 Mbps)

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

0 10 20 30 40 50 60

0 10 20 30 40 50 60

Flow 1 (95th percentile 62.35 ms)  Flow 2 (95th percentile 62.27 ms)  Flow 3 (95th percentile 62.66 ms)
Run 3: Statistics of Sprout

Start at: 2018-08-11 21:57:41
End at: 2018-08-11 21:58:11
Local clock offset: -0.083 ms
Remote clock offset: -0.026 ms

# Below is generated by plot.py at 2018-08-12 04:28:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.48 Mbit/s
95th percentile per-packet one-way delay: 61.775 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 3.13 Mbit/s
95th percentile per-packet one-way delay: 61.809 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 61.655 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 1.70 Mbit/s
95th percentile per-packet one-way delay: 61.591 ms
Loss rate: 0.14%
Run 3: Report of Sprout — Data Link

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

- **Flow 1 ingress (mean 3.12 Mbit/s)**
- **Flow 1 egress (mean 3.13 Mbit/s)**
- **Flow 2 ingress (mean 1.19 Mbit/s)**
- **Flow 2 egress (mean 1.20 Mbit/s)**
- **Flow 3 ingress (mean 1.68 Mbit/s)**
- **Flow 3 egress (mean 1.70 Mbit/s)**

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

- **Flow 1 (95th percentile 61.81 ms)**
- **Flow 2 (95th percentile 61.66 ms)**
- **Flow 3 (95th percentile 61.59 ms)**
Run 4: Statistics of Sprout

Start at: 2018-08-11 22:24:40
End at: 2018-08-11 22:25:10
Local clock offset: −0.025 ms
Remote clock offset: 0.264 ms

# Below is generated by plot.py at 2018-08-12 04:28:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 61.308 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 0.76 Mbit/s
95th percentile per-packet one-way delay: 61.314 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 0.59 Mbit/s
95th percentile per-packet one-way delay: 61.289 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 61.332 ms
Loss rate: 0.45%
Run 4: Report of Sprout — Data Link

![Data Link Graph]

- Flow 1 ingress (mean 0.75 Mbit/s)
- Flow 1 egress (mean 0.76 Mbit/s)
- Flow 2 ingress (mean 0.59 Mbit/s)
- Flow 2 egress (mean 0.59 Mbit/s)
- Flow 3 ingress (mean 0.33 Mbit/s)
- Flow 3 egress (mean 0.53 Mbit/s)

![Packet Loss Graph]

- Flow 1 (95th percentile 61.31 ms)
- Flow 2 (95th percentile 61.29 ms)
- Flow 3 (95th percentile 61.33 ms)
Run 5: Statistics of Sprout

Start at: 2018-08-11 22:51:36
End at: 2018-08-11 22:52:06
Local clock offset: -0.02 ms
Remote clock offset: -0.908 ms

# Below is generated by plot.py at 2018-08-12 04:28:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.44 Mbit/s
95th percentile per-packet one-way delay: 62.493 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 62.471 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 0.94 Mbit/s
95th percentile per-packet one-way delay: 62.502 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 62.539 ms
Loss rate: 1.00%
Run 5: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 0.44 Mbit/s)
- Flow 1 egress (mean 0.44 Mbit/s)
- Flow 2 ingress (mean 0.94 Mbit/s)
- Flow 2 egress (mean 0.94 Mbit/s)
- Flow 3 ingress (mean 1.17 Mbit/s)
- Flow 3 egress (mean 1.18 Mbit/s)
Run 6: Statistics of Sprout

Start at: 2018-08-11 23:18:35
End at: 2018-08-11 23:19:05
Local clock offset: -0.074 ms
Remote clock offset: -0.024 ms

# Below is generated by plot.py at 2018-08-12 04:28:57
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1.09 Mbit/s
  95th percentile per-packet one-way delay: 61.461 ms
  Loss rate: 0.40%
-- Flow 1:
  Average throughput: 0.41 Mbit/s
  95th percentile per-packet one-way delay: 61.516 ms
  Loss rate: 0.29%
-- Flow 2:
  Average throughput: 0.69 Mbit/s
  95th percentile per-packet one-way delay: 61.277 ms
  Loss rate: 0.10%
-- Flow 3:
  Average throughput: 0.68 Mbit/s
  95th percentile per-packet one-way delay: 61.472 ms
  Loss rate: 1.18%
Run 6: Report of Sprout — Data Link

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

Legend:
- **Flow 1 ingress (mean 0.40 Mbit/s)**
- **Flow 1 egress (mean 0.41 Mbit/s)**
- **Flow 2 ingress (mean 0.69 Mbit/s)**
- **Flow 2 egress (mean 0.69 Mbit/s)**
- **Flow 3 ingress (mean 0.68 Mbit/s)**
- **Flow 3 egress (mean 0.68 Mbit/s)**

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Run 7: Statistics of Sprout

Start at: 2018-08-11 23:45:21
End at: 2018-08-11 23:45:51
Local clock offset: -0.026 ms
Remote clock offset: 0.108 ms

# Below is generated by plot.py at 2018-08-12 04:28:57
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1.51 Mbit/s
  95th percentile per-packet one-way delay: 61.526 ms
  Loss rate: 0.47%
-- Flow 1:
  Average throughput: 0.75 Mbit/s
  95th percentile per-packet one-way delay: 61.541 ms
  Loss rate: 0.16%
-- Flow 2:
  Average throughput: 0.58 Mbit/s
  95th percentile per-packet one-way delay: 61.519 ms
  Loss rate: 1.01%
-- Flow 3:
  Average throughput: 1.15 Mbit/s
  95th percentile per-packet one-way delay: 61.431 ms
  Loss rate: 0.51%
Run 7: Report of Sprout — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 0.75 Mbit/s)
Flow 1 egress (mean 0.75 Mbit/s)
Flow 2 ingress (mean 0.58 Mbit/s)
Flow 2 egress (mean 0.58 Mbit/s)
Flow 3 ingress (mean 1.14 Mbit/s)
Flow 3 egress (mean 1.15 Mbit/s)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 61.54 ms)
Flow 2 (95th percentile 61.52 ms)
Flow 3 (95th percentile 61.43 ms)
Run 8: Statistics of Sprout

Start at: 2018-08-12 00:12:13
End at: 2018-08-12 00:12:43
Local clock offset: -0.029 ms
Remote clock offset: 0.267 ms

# Below is generated by plot.py at 2018-08-12 04:28:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 61.309 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 61.318 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 61.303 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 0.75 Mbit/s
95th percentile per-packet one-way delay: 61.303 ms
Loss rate: 0.48%
Run 8: Report of Sprout — Data Link

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

- **Flow 1 ingress (mean 0.50 Mbit/s)**
- **Flow 1 egress (mean 0.50 Mbit/s)**
- **Flow 2 ingress (mean 1.92 Mbit/s)**
- **Flow 2 egress (mean 1.93 Mbit/s)**
- **Flow 3 ingress (mean 0.74 Mbit/s)**
- **Flow 3 egress (mean 0.75 Mbit/s)**

![Graph 2: Per packet end-to-end delay (ms)](image2)

- **Flow 1 (95th percentile 61.32 ms)**
- **Flow 2 (95th percentile 61.30 ms)**
- **Flow 3 (95th percentile 61.30 ms)**

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Run 9: Statistics of Sprout

Start at: 2018-08-12 00:38:54
End at: 2018-08-12 00:39:24
Local clock offset: -0.091 ms
Remote clock offset: -0.296 ms

# Below is generated by plot.py at 2018-08-12 04:28:57
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 2.81 Mbit/s
  95th percentile per-packet one-way delay: 61.791 ms
  Loss rate: 0.51%
-- Flow 1:
  Average throughput: 0.70 Mbit/s
  95th percentile per-packet one-way delay: 61.793 ms
  Loss rate: 0.22%
-- Flow 2:
  Average throughput: 0.68 Mbit/s
  95th percentile per-packet one-way delay: 61.631 ms
  Loss rate: 0.26%
-- Flow 3:
  Average throughput: 5.07 Mbit/s
  95th percentile per-packet one-way delay: 61.805 ms
  Loss rate: 0.69%
Run 9: Report of Sprout — Data Link

[Graph 1] Throughput (Mbps) vs. Time (s)

Legend:
- Flow 1 ingress (mean 0.70 Mbps)
- Flow 1 egress (mean 0.70 Mbps)
- Flow 2 ingress (mean 0.67 Mbps)
- Flow 2 egress (mean 0.68 Mbps)
- Flow 3 ingress (mean 5.04 Mbps)
- Flow 3 egress (mean 5.07 Mbps)

[Graph 2] Packet End-to-End Delay (ms) vs. Time (s)

Legend:
- Flow 1 (95th percentile 61.79 ms)
- Flow 2 (95th percentile 61.63 ms)
- Flow 3 (95th percentile 61.80 ms)
Run 10: Statistics of Sprout

Start at: 2018-08-12 01:05:27
End at: 2018-08-12 01:05:57
Local clock offset: -0.045 ms
Remote clock offset: -0.17 ms

# Below is generated by plot.py at 2018-08-12 04:28:57
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1.47 Mbit/s
  95th percentile per-packet one-way delay: 61.689 ms
  Loss rate: 1.82%
-- Flow 1:
  Average throughput: 0.58 Mbit/s
  95th percentile per-packet one-way delay: 61.711 ms
  Loss rate: 0.98%
-- Flow 2:
  Average throughput: 0.55 Mbit/s
  95th percentile per-packet one-way delay: 61.670 ms
  Loss rate: 0.53%
-- Flow 3:
  Average throughput: 1.59 Mbit/s
  95th percentile per-packet one-way delay: 61.665 ms
  Loss rate: 3.64%
Run 10: Report of Sprout — Data Link
Run 1: Statistics of TaoVA-100x

Start at: 2018-08-11 20:52:15
End at: 2018-08-11 20:52:45
Local clock offset: 0.1 ms
Remote clock offset: -0.185 ms

# Below is generated by plot.py at 2018-08-12 04:37:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 444.18 Mbit/s
95th percentile per-packet one-way delay: 65.601 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 229.83 Mbit/s
95th percentile per-packet one-way delay: 64.649 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 216.84 Mbit/s
95th percentile per-packet one-way delay: 64.958 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 213.00 Mbit/s
95th percentile per-packet one-way delay: 67.921 ms
Loss rate: 1.37%
Run 1: Report of TaoVA-100x — Data Link

![Graph showing throughput and per-packet end-to-end delay over time]

**Throughput (Mbps):**
- Flow 1 ingress (mean 229.95 Mbps)
- Flow 1 egress (mean 229.83 Mbps)
- Flow 2 ingress (mean 216.73 Mbps)
- Flow 2 egress (mean 216.84 Mbps)
- Flow 3 ingress (mean 213.27 Mbps)
- Flow 3 egress (mean 213.08 Mbps)

**Per-packet end-to-end delay (ms):**
- Flow 1 (95th percentile 64.65 ms)
- Flow 2 (95th percentile 64.96 ms)
- Flow 3 (95th percentile 67.92 ms)
Run 2: Statistics of TaoVA-100x

Start at: 2018-08-11 21:18:52
End at: 2018-08-11 21:19:22
Local clock offset: 0.069 ms
Remote clock offset: 0.583 ms

# Below is generated by plot.py at 2018-08-12 04:37:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 452.91 Mbit/s
95th percentile per-packet one-way delay: 62.759 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 234.84 Mbit/s
95th percentile per-packet one-way delay: 62.115 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 220.17 Mbit/s
95th percentile per-packet one-way delay: 63.233 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 217.70 Mbit/s
95th percentile per-packet one-way delay: 63.938 ms
Loss rate: 1.42%
Run 2: Report of TaoVA-100x — Data Link
Run 3: Statistics of TaoVA-100x

Start at: 2018-08-11 21:45:39
End at: 2018-08-11 21:46:09
Local clock offset: -0.13 ms
Remote clock offset: -1.32 ms

# Below is generated by plot.py at 2018-08-12 04:37:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 432.18 Mbit/s
95th percentile per-packet one-way delay: 67.931 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 219.21 Mbit/s
95th percentile per-packet one-way delay: 66.648 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 210.01 Mbit/s
95th percentile per-packet one-way delay: 69.265 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 222.78 Mbit/s
95th percentile per-packet one-way delay: 68.382 ms
Loss rate: 1.12%
Run 3: Report of TaoVA-100x — Data Link

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

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

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Run 4: Statistics of TaoVA-100x

Start at: 2018-08-11 22:12:30
End at: 2018-08-11 22:13:00
Local clock offset: -0.073 ms
Remote clock offset: -1.409 ms

# Below is generated by plot.py at 2018-08-12 04:38:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 452.59 Mbit/s
95th percentile per-packet one-way delay: 68.878 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 233.25 Mbit/s
95th percentile per-packet one-way delay: 66.363 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 230.17 Mbit/s
95th percentile per-packet one-way delay: 69.836 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 201.40 Mbit/s
95th percentile per-packet one-way delay: 73.804 ms
Loss rate: 1.28%
Run 5: Statistics of TaoVA-100x

Start at: 2018-08-11 22:39:30
End at: 2018-08-11 22:40:00
Local clock offset: 0.031 ms
Remote clock offset: 0.618 ms

# Below is generated by plot.py at 2018-08-12 04:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 447.44 Mbit/s
95th percentile per-packet one-way delay: 62.786 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 231.37 Mbit/s
95th percentile per-packet one-way delay: 62.117 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 225.97 Mbit/s
95th percentile per-packet one-way delay: 63.168 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 200.73 Mbit/s
95th percentile per-packet one-way delay: 64.186 ms
Loss rate: 2.37%
Run 5: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 231.20 Mbit/s)
- Flow 1 egress (mean 231.37 Mbit/s)
- Flow 2 ingress (mean 226.07 Mbit/s)
- Flow 2 egress (mean 225.97 Mbit/s)
- Flow 3 ingress (mean 203.68 Mbit/s)
- Flow 3 egress (mean 200.73 Mbit/s)
Run 6: Statistics of TaoVA-100x

Start at: 2018-08-11 23:06:26
End at: 2018-08-11 23:06:56
Local clock offset: -0.063 ms
Remote clock offset: -0.706 ms

# Below is generated by plot.py at 2018-08-12 04:41:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 458.56 Mbit/s
95th percentile per-packet one-way delay: 64.441 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 235.82 Mbit/s
95th percentile per-packet one-way delay: 63.562 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 234.12 Mbit/s
95th percentile per-packet one-way delay: 63.851 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 203.62 Mbit/s
95th percentile per-packet one-way delay: 70.767 ms
Loss rate: 0.92%
Run 6: Report of TaoVA-100x — Data Link

![Graph of throughput over time with different flow rates and delays.]
Run 7: Statistics of TaoVA-100x

Start at: 2018-08-11 23:33:18
End at: 2018-08-11 23:33:48
Local clock offset: 0.012 ms
Remote clock offset: -0.044 ms

# Below is generated by plot.py at 2018-08-12 04:44:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 450.53 Mbit/s
95th percentile per-packet one-way delay: 64.578 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 226.16 Mbit/s
95th percentile per-packet one-way delay: 63.598 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 227.41 Mbit/s
95th percentile per-packet one-way delay: 65.027 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 222.21 Mbit/s
95th percentile per-packet one-way delay: 65.571 ms
Loss rate: 1.41%
Run 7: Report of TaoVA-100x — Data Link

![Graph 1](chart1.png)

![Graph 2](chart2.png)
Run 8: Statistics of TaoVA-100x

Start at: 2018-08-12 00:00:04
End at: 2018-08-12 00:00:34
Local clock offset: -0.049 ms
Remote clock offset: -0.499 ms

# Below is generated by plot.py at 2018-08-12 04:45:09
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 451.99 Mbit/s
  95th percentile per-packet one-way delay: 64.740 ms
  Loss rate: 0.62%
-- Flow 1:
  Average throughput: 234.82 Mbit/s
  95th percentile per-packet one-way delay: 63.953 ms
  Loss rate: 0.44%
-- Flow 2:
  Average throughput: 231.14 Mbit/s
  95th percentile per-packet one-way delay: 64.943 ms
  Loss rate: 0.64%
-- Flow 3:
  Average throughput: 193.16 Mbit/s
  95th percentile per-packet one-way delay: 67.578 ms
  Loss rate: 1.26%
Run 8: Report of TaoVA-100x — Data Link
Run 9: Statistics of TaoVA-100x

Start at: 2018-08-12 00:26:57
End at: 2018-08-12 00:27:27
Local clock offset: -0.107 ms
Remote clock offset: 0.053 ms

# Below is generated by plot.py at 2018-08-12 04:52:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 439.05 Mbit/s
95th percentile per-packet one-way delay: 63.559 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 228.08 Mbit/s
95th percentile per-packet one-way delay: 62.999 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 216.97 Mbit/s
95th percentile per-packet one-way delay: 64.571 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 202.54 Mbit/s
95th percentile per-packet one-way delay: 63.419 ms
Loss rate: 1.10%
Run 9: Report of TaoVA-100x — Data Link
Run 10: Statistics of TaoVA-100x

Start at: 2018-08-12 00:53:30
End at: 2018-08-12 00:54:00
Local clock offset: -0.052 ms
Remote clock offset: 0.327 ms

# Below is generated by plot.py at 2018-08-12 04:52:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 437.01 Mbit/s
95th percentile per-packet one-way delay: 63.990 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 225.72 Mbit/s
95th percentile per-packet one-way delay: 63.309 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 218.18 Mbit/s
95th percentile per-packet one-way delay: 63.866 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 201.32 Mbit/s
95th percentile per-packet one-way delay: 67.028 ms
Loss rate: 1.19%
Run 10: Report of TaoVA-100x — Data Link

![Graph 1](image1.png)

![Graph 2](image2.png)
Run 1: Statistics of TCP Vegas

Start at: 2018-08-11 20:59:55
End at: 2018-08-11 21:00:25
Local clock offset: 0.037 ms
Remote clock offset: -0.238 ms

# Below is generated by plot.py at 2018-08-12 04:52:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 226.06 Mbit/s
95th percentile per-packet one-way delay: 62.885 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 111.16 Mbit/s
95th percentile per-packet one-way delay: 62.548 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 63.93 Mbit/s
95th percentile per-packet one-way delay: 62.665 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 219.72 Mbit/s
95th percentile per-packet one-way delay: 63.587 ms
Loss rate: 0.71%
Run 1: Report of TCP Vegas — Data Link
Run 2: Statistics of TCP Vegas

Start at: 2018-08-11 21:26:31
End at: 2018-08-11 21:27:01
Local clock offset: 0.093 ms
Remote clock offset: 0.731 ms

# Below is generated by plot.py at 2018-08-12 04:52:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 245.91 Mbit/s
95th percentile per-packet one-way delay: 62.533 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 131.49 Mbit/s
95th percentile per-packet one-way delay: 61.611 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 67.42 Mbit/s
95th percentile per-packet one-way delay: 61.339 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 211.31 Mbit/s
95th percentile per-packet one-way delay: 74.029 ms
Loss rate: 1.34%
Run 2: Report of TCP Vegas — Data Link

![Graph 1: Throughput (Mbps)]

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

- Flow 1 ingress (mean 131.54 Mbit/s)
- Flow 1 egress (mean 131.49 Mbit/s)
- Flow 2 ingress (mean 67.48 Mbit/s)
- Flow 2 egress (mean 67.42 Mbit/s)
- Flow 3 ingress (mean 211.54 Mbit/s)
- Flow 3 egress (mean 211.31 Mbit/s)

Flow 1 (95th percentile 61.61 ms)
Flow 2 (95th percentile 61.34 ms)
Flow 3 (95th percentile 74.03 ms)
Run 3: Statistics of TCP Vegas

Start at: 2018-08-11 21:53:20
End at: 2018-08-11 21:53:50
Local clock offset: -0.062 ms
Remote clock offset: 0.618 ms

# Below is generated by plot.py at 2018-08-12 04:52:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 182.22 Mbit/s
  95th percentile per-packet one-way delay: 62.636 ms
  Loss rate: 0.89%
-- Flow 1:
  Average throughput: 63.29 Mbit/s
  95th percentile per-packet one-way delay: 61.738 ms
  Loss rate: 0.44%
-- Flow 2:
  Average throughput: 66.77 Mbit/s
  95th percentile per-packet one-way delay: 62.058 ms
  Loss rate: 0.69%
-- Flow 3:
  Average throughput: 226.60 Mbit/s
  95th percentile per-packet one-way delay: 65.035 ms
  Loss rate: 1.38%
Run 3: Report of TCP Vegas — Data Link

![Graph](image1)

![Graph](image2)

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Run 4: Statistics of TCP Vegas

Start at: 2018-08-11 22:20:15
End at: 2018-08-11 22:20:45
Local clock offset: -0.0 ms
Remote clock offset: 0.57 ms

# Below is generated by plot.py at 2018-08-12 04:52:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 320.99 Mbit/s
  95th percentile per-packet one-way delay: 61.981 ms
  Loss rate: 0.48%
-- Flow 1:
  Average throughput: 246.49 Mbit/s
  95th percentile per-packet one-way delay: 62.154 ms
  Loss rate: 0.42%
-- Flow 2:
  Average throughput: 110.00 Mbit/s
  95th percentile per-packet one-way delay: 61.498 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 4.19 Mbit/s
  95th percentile per-packet one-way delay: 61.182 ms
  Loss rate: 2.53%
Run 4: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 246.51 Mbit/s)
- Flow 1 egress (mean 246.49 Mbit/s)
- Flow 2 ingress (mean 110.03 Mbit/s)
- Flow 2 egress (mean 110.00 Mbit/s)
- Flow 3 ingress (mean 4.24 Mbit/s)
- Flow 3 egress (mean 4.19 Mbit/s)
Run 5: Statistics of TCP Vegas

Start at: 2018-08-11 22:47:08
End at: 2018-08-11 22:47:38
Local clock offset: -0.04 ms
Remote clock offset: -0.208 ms

# Below is generated by plot.py at 2018-08-12 04:52:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 227.36 Mbit/s
95th percentile per-packet one-way delay: 62.878 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 70.50 Mbit/s
95th percentile per-packet one-way delay: 62.564 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 124.85 Mbit/s
95th percentile per-packet one-way delay: 62.753 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 224.46 Mbit/s
95th percentile per-packet one-way delay: 63.618 ms
Loss rate: 1.36%
Run 6: Statistics of TCP Vegas

Start at: 2018-08-11 23:14:12
End at: 2018-08-11 23:14:42
Local clock offset: -0.062 ms
Remote clock offset: 0.309 ms

# Below is generated by plot.py at 2018-08-12 04:52:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 148.74 Mbit/s
95th percentile per-packet one-way delay: 62.143 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 64.82 Mbit/s
95th percentile per-packet one-way delay: 62.259 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 124.34 Mbit/s
95th percentile per-packet one-way delay: 62.036 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 4.16 Mbit/s
95th percentile per-packet one-way delay: 61.296 ms
Loss rate: 2.55%
Run 6: Report of TCP Vegas — Data Link
Run 7: Statistics of TCP Vegas

Start at: 2018-08-11 23:41:00
End at: 2018-08-11 23:41:30
Local clock offset: -0.011 ms
Remote clock offset: -0.018 ms

# Below is generated by plot.py at 2018-08-12 04:52:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 235.31 Mbit/s
95th percentile per-packet one-way delay: 62.667 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 115.29 Mbit/s
95th percentile per-packet one-way delay: 62.782 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 125.74 Mbit/s
95th percentile per-packet one-way delay: 62.575 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 110.90 Mbit/s
95th percentile per-packet one-way delay: 62.354 ms
Loss rate: 1.36%
Run 7: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 115.32 Mbit/s)
- Flow 1 egress (mean 115.29 Mbit/s)
- Flow 2 ingress (mean 125.82 Mbit/s)
- Flow 2 egress (mean 125.74 Mbit/s)
- Flow 3 ingress (mean 111.09 Mbit/s)
- Flow 3 egress (mean 110.90 Mbit/s)

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

- Flow 1 (95th percentile 62.78 ms)
- Flow 2 (95th percentile 62.58 ms)
- Flow 3 (95th percentile 62.35 ms)
Run 8: Statistics of TCP Vegas

Start at: 2018-08-12 00:07:48
End at: 2018-08-12 00:08:18
Local clock offset: -0.092 ms
Remote clock offset: -0.254 ms

# Below is generated by plot.py at 2018-08-12 04:52:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 198.22 Mbit/s
95th percentile per-packet one-way delay: 62.468 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 126.48 Mbit/s
95th percentile per-packet one-way delay: 62.527 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 105.79 Mbit/s
95th percentile per-packet one-way delay: 62.369 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 4.37 Mbit/s
95th percentile per-packet one-way delay: 61.705 ms
Loss rate: 2.32%
Run 8: Report of TCP Vegas — Data Link

[Graph showing throughput over time for different flows with markers for mean throughput and 95th percentile delay.]
Run 9: Statistics of TCP Vegas

Start at: 2018-08-12 00:34:33
End at: 2018-08-12 00:35:03
Local clock offset: -0.056 ms
Remote clock offset: -0.163 ms

# Below is generated by plot.py at 2018-08-12 04:52:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 172.32 Mbit/s
95th percentile per-packet one-way delay: 62.352 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 69.66 Mbit/s
95th percentile per-packet one-way delay: 62.299 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 95.92 Mbit/s
95th percentile per-packet one-way delay: 62.197 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 118.16 Mbit/s
95th percentile per-packet one-way delay: 63.028 ms
Loss rate: 1.34%
Run 9: Report of TCP Vegas — Data Link
Run 10: Statistics of TCP Vegas

Start at: 2018-08-12 01:01:13
End at: 2018-08-12 01:01:43
Local clock offset: -0.004 ms
Remote clock offset: 0.197 ms

# Below is generated by plot.py at 2018-08-12 04:52:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 148.94 Mbit/s
95th percentile per-packet one-way delay: 62.074 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 102.97 Mbit/s
95th percentile per-packet one-way delay: 61.999 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 67.20 Mbit/s
95th percentile per-packet one-way delay: 62.283 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 3.98 Mbit/s
95th percentile per-packet one-way delay: 61.440 ms
Loss rate: 2.63%
Run 10: Report of TCP Vegas — Data Link
Run 1: Statistics of Verus

Start at: 2018-08-11 20:49:17
End at: 2018-08-11 20:49:47
Local clock offset: 0.111 ms
Remote clock offset: 0.588 ms

# Below is generated by plot.py at 2018-08-12 04:53:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 348.92 Mbit/s
95th percentile per-packet one-way delay: 125.466 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 179.99 Mbit/s
95th percentile per-packet one-way delay: 145.791 ms
Loss rate: 2.88%
-- Flow 2:
Average throughput: 216.78 Mbit/s
95th percentile per-packet one-way delay: 120.209 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 75.23 Mbit/s
95th percentile per-packet one-way delay: 95.841 ms
Loss rate: 0.28%
Run 1: Report of Verus — Data Link

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

**Throughput**
- Flow 1 ingress (mean 184.58 Mbps)
- Flow 1 egress (mean 179.99 Mbps)
- Flow 2 ingress (mean 216.38 Mbps)
- Flow 2 egress (mean 216.78 Mbps)
- Flow 3 ingress (mean 74.31 Mbps)
- Flow 3 egress (mean 75.23 Mbps)

**Packet Delay**
- Flow 1 (95th percentile 145.79 ms)
- Flow 2 (95th percentile 120.21 ms)
- Flow 3 (95th percentile 95.84 ms)
Run 2: Statistics of Verus

Start at: 2018-08-11 21:15:56
End at: 2018-08-11 21:16:26
Local clock offset: 0.086 ms
Remote clock offset: 0.614 ms

# Below is generated by plot.py at 2018-08-12 04:53:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 294.87 Mbit/s
95th percentile per-packet one-way delay: 114.330 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 125.85 Mbit/s
95th percentile per-packet one-way delay: 113.530 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 181.37 Mbit/s
95th percentile per-packet one-way delay: 96.400 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 147.53 Mbit/s
95th percentile per-packet one-way delay: 169.417 ms
Loss rate: 5.38%
Run 2: Report of Verus — Data Link

![Data Link Throughput Graph]

- **Flow 1 ingress (mean 125.62 Mbit/s)**
- **Flow 1 egress (mean 125.85 Mbit/s)**
- **Flow 2 ingress (mean 181.78 Mbit/s)**
- **Flow 2 egress (mean 181.37 Mbit/s)**
- **Flow 3 ingress (mean 155.72 Mbit/s)**
- **Flow 3 egress (mean 147.53 Mbit/s)**

![Data Link Delay Graph]

- **Flow 1 (95th percentile 113.53 ms)**
- **Flow 2 (95th percentile 96.40 ms)**
- **Flow 3 (95th percentile 169.42 ms)**
Run 3: Statistics of Verus

Start at: 2018-08-11 21:42:36
End at: 2018-08-11 21:43:06
Local clock offset: -0.05 ms
Remote clock offset: -0.12 ms

# Below is generated by plot.py at 2018-08-12 04:55:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 380.53 Mbit/s
95th percentile per-packet one-way delay: 116.077 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 223.79 Mbit/s
95th percentile per-packet one-way delay: 112.896 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 155.55 Mbit/s
95th percentile per-packet one-way delay: 102.046 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 162.64 Mbit/s
95th percentile per-packet one-way delay: 133.102 ms
Loss rate: 1.95%
Run 3: Report of Verus — Data Link
Run 4: Statistics of Verus

Start at: 2018-08-11 22:09:16
End at: 2018-08-11 22:09:46
Local clock offset: -0.05 ms
Remote clock offset: -0.232 ms

# Below is generated by plot.py at 2018-08-12 04:55:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 390.57 Mbit/s
95th percentile per-packet one-way delay: 189.805 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 250.38 Mbit/s
95th percentile per-packet one-way delay: 201.992 ms
Loss rate: 1.51%
-- Flow 2:
Average throughput: 140.75 Mbit/s
95th percentile per-packet one-way delay: 174.252 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 147.12 Mbit/s
95th percentile per-packet one-way delay: 130.315 ms
Loss rate: 2.38%
Run 4: Report of Verus — Data Link

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**Throughput (Mbps)**

![Graph showing throughput over time](image1)

- **Flow 1 ingress (mean 254.75 Mbps)**
- **Flow 1 egress (mean 250.38 Mbps)**
- **Flow 2 ingress (mean 139.43 Mbps)**
- **Flow 2 egress (mean 140.75 Mbps)**
- **Flow 3 ingress (mean 148.29 Mbps)**
- **Flow 3 egress (mean 147.12 Mbps)**

---

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

![Graph showing per-packet delay over time](image2)

- **Flow 1 (95th percentile 201.99 ms)**
- **Flow 2 (95th percentile 174.25 ms)**
- **Flow 3 (95th percentile 130.31 ms)**

---
Run 5: Statistics of Verus

Start at: 2018-08-11 22:36:25
End at: 2018-08-11 22:36:55
Local clock offset: -0.022 ms
Remote clock offset: -0.093 ms

# Below is generated by plot.py at 2018-08-12 04:55:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 350.60 Mbit/s
95th percentile per-packet one-way delay: 133.344 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 207.96 Mbit/s
95th percentile per-packet one-way delay: 114.850 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 181.33 Mbit/s
95th percentile per-packet one-way delay: 159.198 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 75.18 Mbit/s
95th percentile per-packet one-way delay: 95.609 ms
Loss rate: 1.42%
Run 5: Report of Verus — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 209.51 Mbit/s)
Flow 1 egress (mean 207.96 Mbit/s)
Flow 2 ingress (mean 181.54 Mbit/s)
Flow 2 egress (mean 181.33 Mbit/s)
Flow 3 ingress (mean 67.97 Mbit/s)
Flow 3 egress (mean 75.18 Mbit/s)

Round-trip one-way delay (ms)

Time (s)

Flow 1 (95th percentile 114.85 ms)
Flow 2 (95th percentile 159.20 ms)
Flow 3 (95th percentile 95.61 ms)
Run 6: Statistics of Verus

Start at: 2018-08-11 23:03:26
End at: 2018-08-11 23:03:56
Local clock offset: -0.07 ms
Remote clock offset: -0.179 ms

# Below is generated by plot.py at 2018-08-12 04:56:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 381.86 Mbit/s
95th percentile per-packet one-way delay: 109.487 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 181.74 Mbit/s
95th percentile per-packet one-way delay: 100.563 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 233.71 Mbit/s
95th percentile per-packet one-way delay: 118.317 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 137.81 Mbit/s
95th percentile per-packet one-way delay: 89.594 ms
Loss rate: 1.74%
Run 7: Statistics of Verus

Start at: 2018-08-11 23:30:19
End at: 2018-08-11 23:30:49
Local clock offset: 0.052 ms
Remote clock offset: -0.019 ms

# Below is generated by plot.py at 2018-08-12 04:59:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 362.97 Mbit/s
95th percentile per-packet one-way delay: 170.904 ms
Loss rate: 2.58%
-- Flow 1:
Average throughput: 237.13 Mbit/s
95th percentile per-packet one-way delay: 190.422 ms
Loss rate: 3.49%
-- Flow 2:
Average throughput: 137.79 Mbit/s
95th percentile per-packet one-way delay: 106.634 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 104.77 Mbit/s
95th percentile per-packet one-way delay: 98.084 ms
Loss rate: 1.80%
Run 7: Report of Verus — Data Link

Throughput (Mbps):

- Flow 1 ingress (mean 244.69 Mbps)
- Flow 2 ingress (mean 137.84 Mbps)
- Flow 3 ingress (mean 105.33 Mbps)
- Flow 1 egress (mean 237.13 Mbps)
- Flow 2 egress (mean 137.79 Mbps)
- Flow 3 egress (mean 104.77 Mbps)

Round-trip end-to-end delay (ms):

- Flow 1 (95th percentile 190.42 ms)
- Flow 2 (95th percentile 106.63 ms)
- Flow 3 (95th percentile 98.08 ms)
Run 8: Statistics of Verus

Start at: 2018-08-11 23:56:59
End at: 2018-08-11 23:57:29
Local clock offset: 0.038 ms
Remote clock offset: -1.224 ms

# Below is generated by plot.py at 2018-08-12 04:59:41
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 355.30 Mbit/s
  95th percentile per-packet one-way delay: 100.443 ms
  Loss rate: 0.71%
-- Flow 1:
  Average throughput: 147.12 Mbit/s
  95th percentile per-packet one-way delay: 98.472 ms
  Loss rate: 0.71%
-- Flow 2:
  Average throughput: 204.24 Mbit/s
  95th percentile per-packet one-way delay: 97.574 ms
  Loss rate: 0.72%
-- Flow 3:
  Average throughput: 220.73 Mbit/s
  95th percentile per-packet one-way delay: 112.986 ms
  Loss rate: 0.70%
Run 8: Report of Verus — Data Link

![Throughput Graph]

![Packet Error Rate Graph]

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Run 9: Statistics of Verus

Start at: 2018-08-12 00:23:53
End at: 2018-08-12 00:24:23
Local clock offset: -0.038 ms
Remote clock offset: -0.285 ms

# Below is generated by plot.py at 2018-08-12 04:59:41
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 329.02 Mbit/s
  95th percentile per-packet one-way delay: 138.869 ms
  Loss rate: 2.44%
-- Flow 1:
  Average throughput: 187.84 Mbit/s
  95th percentile per-packet one-way delay: 126.657 ms
  Loss rate: 0.78%
-- Flow 2:
  Average throughput: 137.89 Mbit/s
  95th percentile per-packet one-way delay: 103.440 ms
  Loss rate: 1.46%
-- Flow 3:
  Average throughput: 153.24 Mbit/s
  95th percentile per-packet one-way delay: 275.413 ms
  Loss rate: 9.67%
Run 9: Report of Verus — Data Link

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

- Flow 1 ingress (mean 187.77 Mbit/s)
- Flow 1 egress (mean 187.84 Mbit/s)
- Flow 2 ingress (mean 139.06 Mbit/s)
- Flow 2 egress (mean 137.89 Mbit/s)
- Flow 3 ingress (mean 169.78 Mbit/s)
- Flow 3 egress (mean 153.24 Mbit/s)

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

- Flow 1 (95th percentile 126.66 ms)
- Flow 2 (95th percentile 103.44 ms)
- Flow 3 (95th percentile 275.41 ms)
Run 10: Statistics of Verus

Start at: 2018-08-12 00:50:31
End at: 2018-08-12 00:51:01
Local clock offset: -0.062 ms
Remote clock offset: 0.253 ms

# Below is generated by plot.py at 2018-08-12 04:59:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 350.31 Mbit/s
95th percentile per-packet one-way delay: 188.706 ms
Loss rate: 2.20%
-- Flow 1:
Average throughput: 195.93 Mbit/s
95th percentile per-packet one-way delay: 143.966 ms
Loss rate: 1.16%
-- Flow 2:
Average throughput: 202.90 Mbit/s
95th percentile per-packet one-way delay: 220.244 ms
Loss rate: 3.65%
-- Flow 3:
Average throughput: 59.68 Mbit/s
95th percentile per-packet one-way delay: 99.820 ms
Loss rate: 2.29%
Run 10: Report of Verus — Data Link

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

- Flow 1 ingress (mean 197.42 Mbit/s)
- Flow 1 egress (mean 195.93 Mbit/s)
- Flow 2 ingress (mean 209.28 Mbit/s)
- Flow 2 egress (mean 202.90 Mbit/s)
- Flow 3 ingress (mean 60.34 Mbit/s)
- Flow 3 egress (mean 59.66 Mbit/s)

![Graph of round-trip delay over time for different flows.]

- Flow 1 (95th percentile 143.97 ms)
- Flow 2 (95th percentile 220.24 ms)
- Flow 3 (95th percentile 99.82 ms)
Run 1: Statistics of PCC-Vivace

Start at: 2018-08-11 20:44:35
End at: 2018-08-11 20:45:05
Local clock offset: 0.134 ms
Remote clock offset: -0.08 ms

# Below is generated by plot.py at 2018-08-12 05:06:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 563.46 Mbit/s
95th percentile per-packet one-way delay: 83.677 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 363.66 Mbit/s
95th percentile per-packet one-way delay: 77.767 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 251.76 Mbit/s
95th percentile per-packet one-way delay: 113.481 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 100.53 Mbit/s
95th percentile per-packet one-way delay: 61.766 ms
Loss rate: 1.90%
Run 1: Report of PCC-Vivace — Data Link

![Graph showing throughput and latency over time]

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 363.46 Mbps)
  - Flow 1 egress (mean 363.66 Mbps)
  - Flow 2 ingress (mean 251.84 Mbps)
  - Flow 2 egress (mean 251.76 Mbps)
  - Flow 3 ingress (mean 101.19 Mbps)
  - Flow 3 egress (mean 100.53 Mbps)

- **Packet one-way delay (ms):**
  - Flow 1 (95th percentile 77.77 ms)
  - Flow 2 (95th percentile 113.48 ms)
  - Flow 3 (95th percentile 61.77 ms)
Run 2: Statistics of PCC-Vivace

Start at: 2018-08-11 21:11:15
End at: 2018-08-11 21:11:45
Local clock offset: 0.049 ms
Remote clock offset: 0.642 ms

# Below is generated by plot.py at 2018-08-12 05:06:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 590.62 Mbit/s
95th percentile per-packet one-way delay: 83.796 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 357.93 Mbit/s
95th percentile per-packet one-way delay: 70.451 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 338.27 Mbit/s
95th percentile per-packet one-way delay: 115.254 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 25.03 Mbit/s
95th percentile per-packet one-way delay: 60.448 ms
Loss rate: 1.53%
Run 2: Report of PCC-Vivace — Data Link

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![Graph of Throughput vs Time]

- Flow 1 ingress (mean 358.27 Mbit/s)
- Flow 1 egress (mean 357.93 Mbit/s)
- Flow 2 ingress (mean 337.32 Mbit/s)
- Flow 2 egress (mean 338.27 Mbit/s)
- Flow 3 ingress (mean 25.18 Mbit/s)
- Flow 3 egress (mean 25.03 Mbit/s)

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

- Flow 1 (95th percentile 70.45 ms)
- Flow 2 (95th percentile 115.25 ms)
- Flow 3 (95th percentile 60.45 ms)

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Run 3: Statistics of PCC-Vivace

Start at: 2018-08-11 21:37:57
End at: 2018-08-11 21:38:27
Local clock offset: -0.07 ms
Remote clock offset: -0.455 ms

# Below is generated by plot.py at 2018-08-12 05:06:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 572.79 Mbit/s
95th percentile per-packet one-way delay: 82.599 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 356.91 Mbit/s
95th percentile per-packet one-way delay: 94.779 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 280.49 Mbit/s
95th percentile per-packet one-way delay: 64.562 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 90.95 Mbit/s
95th percentile per-packet one-way delay: 61.964 ms
Loss rate: 1.49%
Run 3: Report of PCC-Vivace — Data Link
Run 4: Statistics of PCC-Vivace

Start at: 2018-08-11 22:04:39
End at: 2018-08-11 22:05:09
Local clock offset: -0.089 ms
Remote clock offset: -0.038 ms

# Below is generated by plot.py at 2018-08-12 05:06:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 532.81 Mbit/s
  95th percentile per-packet one-way delay: 160.858 ms
  Loss rate: 0.55%
-- Flow 1:
  Average throughput: 332.82 Mbit/s
  95th percentile per-packet one-way delay: 144.191 ms
  Loss rate: 0.34%
-- Flow 2:
  Average throughput: 259.01 Mbit/s
  95th percentile per-packet one-way delay: 208.143 ms
  Loss rate: 0.78%
-- Flow 3:
  Average throughput: 86.04 Mbit/s
  95th percentile per-packet one-way delay: 61.968 ms
  Loss rate: 1.62%
Run 4: Report of PCC-Vivace — Data Link

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

Legend:
- Flow 1 ingress (mean 332.59 Mbit/s)
- Flow 2 ingress (mean 259.46 Mbit/s)
- Flow 3 ingress (mean 86.37 Mbit/s)
- Flow 1 egress (mean 332.82 Mbit/s)
- Flow 2 egress (mean 259.01 Mbit/s)
- Flow 3 egress (mean 86.04 Mbit/s)

Legend for per-packet one-way delay:
- Flow 1 (95th percentile 144.19 ms)
- Flow 2 (95th percentile 208.14 ms)
- Flow 3 (95th percentile 61.97 ms)
Run 5: Statistics of PCC-Vivace

End at: 2018-08-11 22:32:11
Local clock offset: 0.055 ms
Remote clock offset: -0.619 ms

# Below is generated by plot.py at 2018-08-12 05:10:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 578.87 Mbit/s
95th percentile per-packet one-way delay: 66.197 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 349.52 Mbit/s
95th percentile per-packet one-way delay: 65.961 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 316.50 Mbit/s
95th percentile per-packet one-way delay: 67.141 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 59.10 Mbit/s
95th percentile per-packet one-way delay: 62.104 ms
Loss rate: 2.00%
Run 5: Report of PCC-Vivace — Data Link
Run 6: Statistics of PCC-Vivace

Start at: 2018-08-11 22:58:38
End at: 2018-08-11 22:59:08
Local clock offset: -0.037 ms
Remote clock offset: -0.777 ms

# Below is generated by plot.py at 2018-08-12 05:10:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 621.81 Mbit/s
95th percentile per-packet one-way delay: 82.445 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 336.48 Mbit/s
95th percentile per-packet one-way delay: 64.288 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 330.54 Mbit/s
95th percentile per-packet one-way delay: 123.168 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 201.72 Mbit/s
95th percentile per-packet one-way delay: 64.479 ms
Loss rate: 1.94%
Run 6: Report of PCC-Vivace — Data Link
Run 7: Statistics of PCC-Vivace

Start at: 2018-08-11 23:25:34  
End at: 2018-08-11 23:26:04  
Local clock offset: -0.057 ms  
Remote clock offset: 0.729 ms

# Below is generated by plot.py at 2018-08-12 05:10:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 548.13 Mbit/s  
95th percentile per-packet one-way delay: 121.184 ms  
Loss rate: 1.00%  
-- Flow 1:  
Average throughput: 314.10 Mbit/s  
95th percentile per-packet one-way delay: 103.687 ms  
Loss rate: 0.37%  
-- Flow 2:  
Average throughput: 276.57 Mbit/s  
95th percentile per-packet one-way delay: 226.511 ms  
Loss rate: 1.94%  
-- Flow 3:  
Average throughput: 154.32 Mbit/s  
95th percentile per-packet one-way delay: 61.966 ms  
Loss rate: 1.52%
Run 7: Report of PCC-Vivace — Data Link
Run 8: Statistics of PCC-Vivace

Start at: 2018-08-11 23:52:21
End at: 2018-08-11 23:52:51
Local clock offset: -0.016 ms
Remote clock offset: 0.753 ms

# Below is generated by plot.py at 2018-08-12 05:10:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 577.07 Mbit/s
95th percentile per-packet one-way delay: 66.855 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 351.24 Mbit/s
95th percentile per-packet one-way delay: 74.036 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 262.61 Mbit/s
95th percentile per-packet one-way delay: 64.915 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 157.63 Mbit/s
95th percentile per-packet one-way delay: 62.155 ms
Loss rate: 1.76%
Run 8: Report of PCC-Vivace — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 351.50 Mbit/s)  Flow 1 egress (mean 351.24 Mbit/s)
Flow 2 ingress (mean 262.60 Mbit/s)  Flow 2 egress (mean 262.61 Mbit/s)
Flow 3 ingress (mean 156.45 Mbit/s)  Flow 3 egress (mean 157.63 Mbit/s)

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 74.04 ms)  Flow 2 (95th percentile 64.92 ms)  Flow 3 (95th percentile 62.16 ms)
Run 9: Statistics of PCC-Vivace

Start at: 2018-08-12 00:19:13
End at: 2018-08-12 00:19:43
Local clock offset: -0.012 ms
Remote clock offset: 0.784 ms

# Below is generated by plot.py at 2018-08-12 05:11:50
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 561.04 Mbit/s
  95th percentile per-packet one-way delay: 62.664 ms
  Loss rate: 0.48%
-- Flow 1:
  Average throughput: 325.09 Mbit/s
  95th percentile per-packet one-way delay: 62.622 ms
  Loss rate: 0.23%
-- Flow 2:
  Average throughput: 271.62 Mbit/s
  95th percentile per-packet one-way delay: 62.670 ms
  Loss rate: 0.57%
-- Flow 3:
  Average throughput: 170.59 Mbit/s
  95th percentile per-packet one-way delay: 62.766 ms
  Loss rate: 1.61%
Run 9: Report of PCC-Vivace — Data Link

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

- **Flow 1 ingress (mean 324.63 Mbps)**
- **Flow 1 egress (mean 325.09 Mbps)**
- **Flow 2 ingress (mean 271.47 Mbps)**
- **Flow 2 egress (mean 271.62 Mbps)**
- **Flow 3 ingress (mean 171.23 Mbps)**
- **Flow 3 egress (mean 170.59 Mbps)**

![Graph 2: Latency (ms)](image2)

- **Flow 1 (95th percentile 62.62 ms)**
- **Flow 2 (95th percentile 62.67 ms)**
- **Flow 3 (95th percentile 62.77 ms)**
Run 10: Statistics of PCC-Vivace

Start at: 2018-08-12 00:45:51
End at: 2018-08-12 00:46:21
Local clock offset: -0.001 ms
Remote clock offset: -0.118 ms

# Below is generated by plot.py at 2018-08-12 05:11:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 579.47 Mbit/s
95th percentile per-packet one-way delay: 70.529 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 319.74 Mbit/s
95th percentile per-packet one-way delay: 64.699 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 312.63 Mbit/s
95th percentile per-packet one-way delay: 85.682 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 159.91 Mbit/s
95th percentile per-packet one-way delay: 62.461 ms
Loss rate: 1.74%
Run 10: Report of PCC-Vivace — Data Link

![Graph of network performance metrics](image)

- Flow 1 ingress (mean 319.92 Mbps)
- Flow 1 egress (mean 319.74 Mbps)
- Flow 2 ingress (mean 313.00 Mbps)
- Flow 2 egress (mean 312.63 Mbps)
- Flow 3 ingress (mean 166.70 Mbps)
- Flow 3 egress (mean 159.91 Mbps)

![Graph of packet loss](image)

- Flow 1 (95th percentile 64.70 ms)
- Flow 2 (95th percentile 85.68 ms)
- Flow 3 (95th percentile 62.48 ms)
Run 1: Statistics of WebRTC media

Start at: 2018-08-11 20:46:23
End at: 2018-08-11 20:46:53
Local clock offset: 0.12 ms
Remote clock offset: -0.258 ms

# Below is generated by plot.py at 2018-08-12 05:11:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 2.89 Mbit/s
  95th percentile per-packet one-way delay: 61.815 ms
  Loss rate: 0.85%
-- Flow 1:
  Average throughput: 1.23 Mbit/s
  95th percentile per-packet one-way delay: 61.869 ms
  Loss rate: 0.86%
-- Flow 2:
  Average throughput: 1.19 Mbit/s
  95th percentile per-packet one-way delay: 61.711 ms
  Loss rate: 0.89%
-- Flow 3:
  Average throughput: 0.49 Mbit/s
  95th percentile per-packet one-way delay: 61.619 ms
  Loss rate: 0.72%
Run 1: Report of WebRTC media — Data Link

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

*Flow 1 ingress (mean 1.24 Mbit/s)*  
*Flow 1 egress (mean 1.23 Mbit/s)*  
*Flow 2 ingress (mean 1.20 Mbit/s)*  
*Flow 2 egress (mean 1.19 Mbit/s)*  
*Flow 3 ingress (mean 0.49 Mbit/s)*  
*Flow 3 egress (mean 0.49 Mbit/s)*

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

*Flow 1 (95th percentile 61.87 ms)*  
*Flow 2 (95th percentile 61.71 ms)*  
*Flow 3 (95th percentile 61.62 ms)*
Run 2: Statistics of WebRTC media

Start at: 2018-08-11 21:13:05
End at: 2018-08-11 21:13:35
Local clock offset: 0.077 ms
Remote clock offset: -0.126 ms

# Below is generated by plot.py at 2018-08-12 05:11:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.58 Mbit/s
95th percentile per-packet one-way delay: 61.627 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 1.95 Mbit/s
95th percentile per-packet one-way delay: 61.661 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 61.583 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 61.306 ms
Loss rate: 1.70%
Run 2: Report of WebRTC media — Data Link

[Graph showing throughput over time for different flows: Flow 1 ingress (mean 1.95 Mbit/s), Flow 1 egress (mean 1.95 Mbit/s), Flow 2 ingress (mean 1.19 Mbit/s), Flow 2 egress (mean 1.16 Mbit/s), Flow 3 ingress (mean 0.48 Mbit/s), Flow 3 egress (mean 0.47 Mbit/s).]

[Graph showing per-packet one-way delay for different flows: Flow 1 (95th percentile 61.66 ms), Flow 2 (95th percentile 61.58 ms), Flow 3 (95th percentile 61.31 ms).]
Run 3: Statistics of WebRTC media

Start at: 2018-08-11 21:39:46
End at: 2018-08-11 21:40:16
Local clock offset: ~0.098 ms
Remote clock offset: ~0.311 ms

# Below is generated by plot.py at 2018-08-12 05:11:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.59 Mbit/s
95th percentile per-packet one-way delay: 61.712 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 61.732 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 1.17 Mbit/s
95th percentile per-packet one-way delay: 61.678 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 61.676 ms
Loss rate: 1.27%
Run 3: Report of WebRTC media — Data Link

![Throughput Graph](image_url)

- **Flow 1 ingress (mean 1.96 Mbit/s)**
- **Flow 1 egress (mean 1.96 Mbit/s)**
- **Flow 2 ingress (mean 1.17 Mbit/s)**
- **Flow 2 egress (mean 1.17 Mbit/s)**
- **Flow 3 ingress (mean 0.49 Mbit/s)**
- **Flow 3 egress (mean 0.48 Mbit/s)**

![Delay Graph](image_url)

- **Flow 1 (95th percentile 61.73 ms)**
- **Flow 2 (95th percentile 61.68 ms)**
- **Flow 3 (95th percentile 61.68 ms)**
Run 4: Statistics of WebRTC media

Start at: 2018-08-11 22:06:25
End at: 2018-08-11 22:06:55
Local clock offset: -0.056 ms
Remote clock offset: -0.052 ms

# Below is generated by plot.py at 2018-08-12 05:11:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.55 Mbit/s
95th percentile per-packet one-way delay: 61.514 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 61.475 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 1.17 Mbit/s
95th percentile per-packet one-way delay: 61.497 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 61.627 ms
Loss rate: 0.55%
Run 4: Report of WebRTC media — Data Link
Run 5: Statistics of WebRTC media

Start at: 2018-08-11 22:33:32
End at: 2018-08-11 22:34:02
Local clock offset: 0.05 ms
Remote clock offset: 1.276 ms

# Below is generated by plot.py at 2018-08-12 05:11:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.61 Mbit/s
  95th percentile per-packet one-way delay: 60.231 ms
  Loss rate: 0.68%
-- Flow 1:
  Average throughput: 1.95 Mbit/s
  95th percentile per-packet one-way delay: 60.246 ms
  Loss rate: 0.64%
-- Flow 2:
  Average throughput: 1.19 Mbit/s
  95th percentile per-packet one-way delay: 60.225 ms
  Loss rate: 0.76%
-- Flow 3:
  Average throughput: 0.49 Mbit/s
  95th percentile per-packet one-way delay: 60.074 ms
  Loss rate: 0.63%
Run 5: Report of WebRTC media — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 1.96 Mbit/s)
Flow 1 egress (mean 1.95 Mbit/s)
Flow 2 ingress (mean 1.20 Mbit/s)
Flow 2 egress (mean 1.19 Mbit/s)
Flow 3 ingress (mean 0.49 Mbit/s)
Flow 3 egress (mean 0.49 Mbit/s)

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 60.25 ms)
Flow 2 (95th percentile 60.23 ms)
Flow 3 (95th percentile 60.07 ms)
Run 6: Statistics of WebRTC media

Start at: 2018-08-11 23:00:32
End at: 2018-08-11 23:01:02
Local clock offset: -0.042 ms
Remote clock offset: -1.292 ms

# Below is generated by plot.py at 2018-08-12 05:11:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.57 Mbit/s
95th percentile per-packet one-way delay: 62.891 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 62.933 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 62.714 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 62.810 ms
Loss rate: 2.17%
Run 6: Report of WebRTC media — Data Link

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

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 1.94 Mbps) — Flow 1 egress (mean 1.94 Mbps)
Flow 2 ingress (mean 1.20 Mbps) — Flow 2 egress (mean 1.19 Mbps)
Flow 3 ingress (mean 0.47 Mbps) — Flow 3 egress (mean 0.46 Mbps)

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

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 62.93 ms) — Flow 2 (95th percentile 62.71 ms) — Flow 3 (95th percentile 62.81 ms)
Run 7: Statistics of WebRTC media

Start at: 2018-08-11 23:27:22
End at: 2018-08-11 23:27:52
Local clock offset: -0.024 ms
Remote clock offset: 0.311 ms

# Below is generated by plot.py at 2018-08-12 05:11:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.54 Mbit/s
  95th percentile per-packet one-way delay: 61.218 ms
  Loss rate: 0.73%
-- Flow 1:
  Average throughput: 1.91 Mbit/s
  95th percentile per-packet one-way delay: 61.257 ms
  Loss rate: 0.47%
-- Flow 2:
  Average throughput: 1.17 Mbit/s
  95th percentile per-packet one-way delay: 61.053 ms
  Loss rate: 0.91%
-- Flow 3:
  Average throughput: 0.48 Mbit/s
  95th percentile per-packet one-way delay: 61.165 ms
  Loss rate: 1.35%
Run 7: Report of WebRTC media — Data Link

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

Flow 1 ingress (mean 1.91 Mbit/s)  
Flow 1 egress (mean 1.91 Mbit/s)  
Flow 2 ingress (mean 1.18 Mbit/s)  
Flow 2 egress (mean 1.17 Mbit/s)  
Flow 3 ingress (mean 0.48 Mbit/s)  
Flow 3 egress (mean 0.48 Mbit/s)
Run 8: Statistics of WebRTC media

Start at: 2018-08-11 23:54:11
End at: 2018-08-11 23:54:41
Local clock offset: -0.015 ms
Remote clock offset: -0.42 ms

# Below is generated by plot.py at 2018-08-12 05:11:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.55 Mbit/s
95th percentile per-packet one-way delay: 61.950 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 61.948 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 61.909 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 62.027 ms
Loss rate: 1.70%
Run 8: Report of WebRTC media — Data Link
Run 9: Statistics of WebRTC media

Start at: 2018-08-12 00:21:02
End at: 2018-08-12 00:21:32
Local clock offset: -0.087 ms
Remote clock offset: 1.498 ms

# Below is generated by plot.py at 2018-08-12 05:11:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.55 Mbit/s
95th percentile per-packet one-way delay: 60.089 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 60.127 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 59.888 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 59.888 ms
Loss rate: 1.27%
Run 9: Report of WebRTC media — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 1.92 Mbit/s) — Flow 1 egress (mean 1.92 Mbit/s)
Flow 2 ingress (mean 1.18 Mbit/s) — Flow 2 egress (mean 1.18 Mbit/s)
Flow 3 ingress (mean 0.48 Mbit/s) — Flow 3 egress (mean 0.47 Mbit/s)

Per packet one-way delay [ms]

Flow 1 (95th percentile 60.13 ms) — Flow 2 (99th percentile 59.89 ms) — Flow 3 (99th percentile 59.89 ms)

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Run 10: Statistics of WebRTC media

Start at: 2018-08-12 00:47:41
End at: 2018-08-12 00:48:11
Local clock offset: -0.043 ms
Remote clock offset: -0.123 ms

# Below is generated by plot.py at 2018-08-12 05:11:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.52 Mbit/s
95th percentile per-packet one-way delay: 61.555 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 61.576 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 1.17 Mbit/s
95th percentile per-packet one-way delay: 61.337 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 61.583 ms
Loss rate: 1.80%
Run 10: Report of WebRTC media — Data Link

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

- **Flow 1 ingress** (mean 1.93 Mbit/s)
- **Flow 1 egress** (mean 1.93 Mbit/s)
- **Flow 2 ingress** (mean 1.18 Mbit/s)
- **Flow 2 egress** (mean 1.17 Mbit/s)
- **Flow 3 ingress** (mean 0.45 Mbit/s)
- **Flow 3 egress** (mean 0.44 Mbit/s)

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

- **Flow 1** (95th percentile 61.58 ms)
- **Flow 2** (95th percentile 61.34 ms)
- **Flow 3** (95th percentile 61.58 ms)

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