Pantheon Report

Generated at 2018-09-08 04:21:23 (UTC).
Data path: Saudi Arabia on enp2s0 (remote) → AWS India 2 on ens5 (local).
Repeated the test of 18 congestion control schemes 5 times.
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.
NTP offsets were measured against nets.org.sg and have been applied to correct the timestamps in logs.

System info:
Linux 4.15.0-1020-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
net.ipv4.tcp_mem = 536870912 536870912 536870912

Git summary:
branch: muses @ e0a9b05ad97d268013b9a9c95637b593a1b4c
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436bd4b834
third_party/fillp-sheep @ daed0c84f98031712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38d4dfe0edc6f90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cfe3cf
third_party/muses @ 7631aea3923a3598767c87765ae5103aca0678d3
third_party/pantheon-tunnel @ cbfcb6bb5ff5740a1f771f813cd646339e1952
third_party/pcc @ 1af9589a0d66f18b623c091a55f8ec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3c7f42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e2da39db2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
test from Saudi Arabia to AWS India 2, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)
<table>
<thead>
<tr>
<th>scheme</th>
<th># runs</th>
<th>mean avg tput (Mbit/s)</th>
<th>mean 95th-%ile delay (ms)</th>
<th>mean loss rate (%)</th>
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</thead>
<tbody>
<tr>
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<td>flow 1</td>
<td>flow 2</td>
<td>flow 3</td>
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<tr>
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<td>259.78</td>
<td>109.18</td>
<td>67.91</td>
</tr>
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<td>Copa</td>
<td>5</td>
<td>119.60</td>
<td>57.63</td>
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<td>TCP Cubic</td>
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<td>143.96</td>
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<td>202.76</td>
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<td>FillP-Sheep</td>
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<td>267.67</td>
<td>166.53</td>
<td>133.44</td>
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<td>LEBAT</td>
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<td>Indigo-Muses</td>
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<td>74.13</td>
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<td>PCC-Allegro</td>
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<td>PCC-Expr</td>
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<tr>
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<td>60.19</td>
<td>56.41</td>
<td>50.94</td>
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<td>WebRTC media</td>
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<td>1.68</td>
<td>1.02</td>
<td>0.39</td>
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</table>
Run 1: Statistics of TCP BBR

Start at: 2018-09-08 00:32:42
End at: 2018-09-08 00:33:12
Local clock offset: -0.012 ms
Remote clock offset: -38.358 ms

# Below is generated by plot.py at 2018-09-08 03:55:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 352.48 Mbit/s
95th percentile per-packet one-way delay: 542.964 ms
Loss rate: 3.33%
-- Flow 1:
Average throughput: 308.64 Mbit/s
95th percentile per-packet one-way delay: 545.358 ms
Loss rate: 2.74%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 141.179 ms
Loss rate: 35.55%
-- Flow 3:
Average throughput: 133.50 Mbit/s
95th percentile per-packet one-way delay: 352.497 ms
Loss rate: 7.31%
Run 1: Report of TCP BBR — Data Link

![Graph of Throughput and Latency](image-url)
Run 2: Statistics of TCP BBR

Start at: 2018-09-08 01:05:07
End at: 2018-09-08 01:05:37
Local clock offset: -0.474 ms
Remote clock offset: -32.941 ms

# Below is generated by plot.py at 2018-09-08 03:55:47
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 345.78 Mbit/s
  95th percentile per-packet one-way delay: 541.858 ms
  Loss rate: 3.55%
-- Flow 1:
  Average throughput: 246.32 Mbit/s
  95th percentile per-packet one-way delay: 546.938 ms
  Loss rate: 3.10%
-- Flow 2:
  Average throughput: 124.32 Mbit/s
  95th percentile per-packet one-way delay: 478.120 ms
  Loss rate: 3.48%
-- Flow 3:
  Average throughput: 53.82 Mbit/s
  95th percentile per-packet one-way delay: 408.649 ms
  Loss rate: 10.07%
Run 2: Report of TCP BBR — Data Link

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

- **Flow 1** (ingress 249.42 Mbit/s, egress 246.32 Mbit/s)
- **Flow 2** (ingress 123.88 Mbit/s, egress 124.32 Mbit/s)
- **Flow 3** (ingress 55.64 Mbit/s, egress 53.82 Mbit/s)

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

- **Flow 1** (95th percentile 546.94 ms)
- **Flow 2** (95th percentile 478.12 ms)
- **Flow 3** (95th percentile 410.65 ms)
Run 3: Statistics of TCP BBR

Start at: 2018-09-08 01:49:21
End at: 2018-09-08 01:49:51
Local clock offset: 1.369 ms
Remote clock offset: -34.478 ms

# Below is generated by plot.py at 2018-09-08 03:55:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 357.99 Mbit/s
95th percentile per-packet one-way delay: 535.975 ms
Loss rate: 3.28%
-- Flow 1:
Average throughput: 261.41 Mbit/s
95th percentile per-packet one-way delay: 544.457 ms
Loss rate: 2.59%
-- Flow 2:
Average throughput: 151.98 Mbit/s
95th percentile per-packet one-way delay: 503.344 ms
Loss rate: 5.08%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 139.142 ms
Loss rate: 0.00%
Run 3: Report of TCP BBR — Data Link

![Graph 1: Throughput (Mbps)]

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

Legend:
- Flow 1 ingress (mean 262.56 Mbps)
- Flow 1 egress (mean 261.41 Mbps)
- Flow 2 ingress (mean 158.43 Mbps)
- Flow 2 egress (mean 151.98 Mbps)
- Flow 3 ingress (mean 0.00 Mbps)
- Flow 3 egress (mean 0.00 Mbps)
Run 4: Statistics of TCP BBR

Start at: 2018-09-08 02:16:17
End at: 2018-09-08 02:16:47
Local clock offset: 2.57 ms
Remote clock offset: -31.71 ms

# Below is generated by plot.py at 2018-09-08 03:55:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 346.15 Mbit/s
95th percentile per-packet one-way delay: 528.930 ms
Loss rate: 4.47%
-- Flow 1:
Average throughput: 237.52 Mbit/s
95th percentile per-packet one-way delay: 554.750 ms
Loss rate: 4.34%
-- Flow 2:
Average throughput: 141.00 Mbit/s
95th percentile per-packet one-way delay: 492.797 ms
Loss rate: 4.61%
-- Flow 3:
Average throughput: 60.50 Mbit/s
95th percentile per-packet one-way delay: 356.106 ms
Loss rate: 5.50%
Run 4: Report of TCP BBR — Data Link
Run 5: Statistics of TCP BBR

Start at: 2018-09-08 02:58:55
End at: 2018-09-08 02:59:25
Local clock offset: 2.747 ms
Remote clock offset: -28.502 ms

# Below is generated by plot.py at 2018-09-08 03:55:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 359.11 Mbit/s
95th percentile per-packet one-way delay: 464.807 ms
Loss rate: 6.17%
-- Flow 1:
Average throughput: 244.99 Mbit/s
95th percentile per-packet one-way delay: 553.601 ms
Loss rate: 5.00%
-- Flow 2:
Average throughput: 128.59 Mbit/s
95th percentile per-packet one-way delay: 407.511 ms
Loss rate: 4.40%
-- Flow 3:
Average throughput: 91.72 Mbit/s
95th percentile per-packet one-way delay: 450.985 ms
Loss rate: 19.11%
Run 5: Report of TCP BBR — Data Link

![Throughput Graph](image1)

- **Flow 1 ingress** (mean 256.20 Mbit/s)
- **Flow 1 egress** (mean 244.99 Mbit/s)
- **Flow 2 ingress** (mean 133.16 Mbit/s)
- **Flow 2 egress** (mean 128.59 Mbit/s)
- **Flow 3 ingress** (mean 111.00 Mbit/s)
- **Flow 3 egress** (mean 91.72 Mbit/s)

![Delay Graph](image2)

- **Flow 1 (95th percentile 553.60 ms)**
- **Flow 2 (95th percentile 407.51 ms)**
- **Flow 3 (95th percentile 450.99 ms)**
Run 1: Statistics of Copa

Start at: 2018-09-08 00:29:35
End at: 2018-09-08 00:30:05
Local clock offset: 2.279 ms
Remote clock offset: -34.594 ms

# Below is generated by plot.py at 2018-09-08 03:55:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 162.64 Mbit/s
95th percentile per-packet one-way delay: 138.787 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 112.69 Mbit/s
95th percentile per-packet one-way delay: 140.117 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 61.38 Mbit/s
95th percentile per-packet one-way delay: 137.210 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 28.11 Mbit/s
95th percentile per-packet one-way delay: 135.815 ms
Loss rate: 3.37%
Run 1: Report of Copa — Data Link

![Graph 1: Throughput (Mbps)]

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

*Flow 1 ingress (mean 112.55 Mbit/s)*
*Flow 1 egress (mean 112.69 Mbit/s)*
*Flow 2 ingress (mean 61.20 Mbit/s)*
*Flow 2 egress (mean 61.35 Mbit/s)*
*Flow 3 ingress (mean 28.54 Mbit/s)*
*Flow 3 egress (mean 28.11 Mbit/s)*
Run 2: Statistics of Copa

Start at: 2018-09-08 01:01:59
End at: 2018-09-08 01:02:29
Local clock offset: -0.226 ms
Remote clock offset: -36.94 ms

# Below is generated by plot.py at 2018-09-08 03:55:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 159.15 Mbit/s
95th percentile per-packet one-way delay: 139.294 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 102.73 Mbit/s
95th percentile per-packet one-way delay: 139.575 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 71.96 Mbit/s
95th percentile per-packet one-way delay: 137.597 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 26.36 Mbit/s
95th percentile per-packet one-way delay: 138.811 ms
Loss rate: 3.29%
Run 2: Report of Copa — Data Link

![Graph with throughput and per-packet round-trip delay over time for different flows with mean rates and 95th percentile delay values.]
Run 3: Statistics of Copa

Start at: 2018-09-08 01:46:04
End at: 2018-09-08 01:46:34
Local clock offset: 0.923 ms
Remote clock offset: -29.4 ms

# Below is generated by plot.py at 2018-09-08 03:55:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 170.75 Mbit/s
95th percentile per-packet one-way delay: 131.894 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 108.23 Mbit/s
95th percentile per-packet one-way delay: 132.074 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 81.06 Mbit/s
95th percentile per-packet one-way delay: 131.316 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 26.61 Mbit/s
95th percentile per-packet one-way delay: 132.399 ms
Loss rate: 2.46%
Run 3: Report of Copa — Data Link

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First diagram:
- Flow 1 ingress (mean 107.98 Mbit/s)
- Flow 1 egress (mean 108.23 Mbit/s)
- Flow 2 ingress (mean 81.12 Mbit/s)
- Flow 2 egress (mean 81.06 Mbit/s)
- Flow 3 ingress (mean 26.74 Mbit/s)
- Flow 3 egress (mean 26.61 Mbit/s)

Second diagram:
- Flow 1 (95th percentile 132.07 ms)
- Flow 2 (95th percentile 131.32 ms)
- Flow 3 (95th percentile 132.40 ms)
Run 4: Statistics of Copa

Start at: 2018-09-08 02:13:10
End at: 2018-09-08 02:13:40
Local clock offset: 1.497 ms
Remote clock offset: -26.922 ms

# Below is generated by plot.py at 2018-09-08 03:58:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 168.31 Mbit/s
95th percentile per-packet one-way delay: 135.307 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 128.25 Mbit/s
95th percentile per-packet one-way delay: 134.380 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 42.96 Mbit/s
95th percentile per-packet one-way delay: 136.450 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 35.64 Mbit/s
95th percentile per-packet one-way delay: 139.322 ms
Loss rate: 6.39%
Run 4: Report of Copa — Data Link

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

Legend:
- Flow 1 ingress (mean 127.69 Mbit/s)
- Flow 2 ingress (mean 42.85 Mbit/s)
- Flow 3 ingress (mean 37.31 Mbit/s)
- Flow 1 egress (mean 128.25 Mbit/s)
- Flow 2 egress (mean 42.96 Mbit/s)
- Flow 3 egress (mean 35.64 Mbit/s)
Run 5: Statistics of Copa

Start at: 2018-09-08 02:55:46
End at: 2018-09-08 02:56:16
Local clock offset: 1.198 ms
Remote clock offset: -24.3 ms

# Below is generated by plot.py at 2018-09-08 03:58:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 172.31 Mbit/s
95th percentile per-packet one-way delay: 133.253 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 146.08 Mbit/s
95th percentile per-packet one-way delay: 133.264 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 30.81 Mbit/s
95th percentile per-packet one-way delay: 133.265 ms
Loss rate: 1.64%
-- Flow 3:
Average throughput: 17.64 Mbit/s
95th percentile per-packet one-way delay: 132.151 ms
Loss rate: 3.26%
Run 5: Report of Copa — Data Link

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

- Flow 1 ingress (mean 145.91 Mbps)
- Flow 1 egress (mean 146.08 Mbps)
- Flow 2 ingress (mean 31.01 Mbps)
- Flow 2 egress (mean 30.81 Mbps)
- Flow 3 ingress (mean 17.87 Mbps)
- Flow 3 egress (mean 17.64 Mbps)

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

- Flow 1 (95th percentile 133.26 ms)
- Flow 2 (95th percentile 133.26 ms)
- Flow 3 (95th percentile 132.15 ms)
Run 1: Statistics of TCP Cubic

Start at: 2018-09-08 00:28:08
End at: 2018-09-08 00:28:38
Local clock offset: 0.896 ms
Remote clock offset: -33.417 ms

# Below is generated by plot.py at 2018-09-08 03:58:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 165.30 Mbit/s
95th percentile per-packet one-way delay: 172.240 ms
Loss rate: 1.65%
-- Flow 1:
Average throughput: 98.14 Mbit/s
95th percentile per-packet one-way delay: 153.850 ms
Loss rate: 1.02%
-- Flow 2:
Average throughput: 41.49 Mbit/s
95th percentile per-packet one-way delay: 138.683 ms
Loss rate: 2.97%
-- Flow 3:
Average throughput: 120.95 Mbit/s
95th percentile per-packet one-way delay: 213.264 ms
Loss rate: 2.26%
Run 1: Report of TCP Cubic — Data Link

![Graph showing throughput and per-packet delivery delay over time for different flows.](image-url)
Run 2: Statistics of TCP Cubic

Start at: 2018-09-08 01:00:27
End at: 2018-09-08 01:00:57
Local clock offset: 2.295 ms
Remote clock offset: -35.47 ms

# Below is generated by plot.py at 2018-09-08 03:58:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 296.65 Mbit/s
95th percentile per-packet one-way delay: 166.779 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 165.38 Mbit/s
95th percentile per-packet one-way delay: 143.606 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 139.34 Mbit/s
95th percentile per-packet one-way delay: 169.834 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 118.40 Mbit/s
95th percentile per-packet one-way delay: 275.666 ms
Loss rate: 2.39%
Run 2: Report of TCP Cubic — Data Link

Throughput (Mbit/s) vs. Time (s)

- Flow 1 ingress (mean 165.29 Mbit/s)
- Flow 1 egress (mean 165.38 Mbit/s)
- Flow 2 ingress (mean 139.11 Mbit/s)
- Flow 2 egress (mean 139.34 Mbit/s)
- Flow 3 ingress (mean 118.91 Mbit/s)
- Flow 3 egress (mean 118.40 Mbit/s)

Packet delay (ms) vs. Time (s)

- Flow 1 (95th percentile 143.61 ms)
- Flow 2 (95th percentile 169.83 ms)
- Flow 3 (95th percentile 275.67 ms)
Run 3: Statistics of TCP Cubic

Start at: 2018-09-08 01:39:02
End at: 2018-09-08 01:39:32
Local clock offset: 2.695 ms
Remote clock offset: -30.51 ms

# Below is generated by plot.py at 2018-09-08 03:58:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 217.79 Mbit/s
  95th percentile per-packet one-way delay: 142.234 ms
  Loss rate: 1.18%
-- Flow 1:
  Average throughput: 71.01 Mbit/s
  95th percentile per-packet one-way delay: 137.216 ms
  Loss rate: 0.94%
-- Flow 2:
  Average throughput: 160.06 Mbit/s
  95th percentile per-packet one-way delay: 141.884 ms
  Loss rate: 0.79%
-- Flow 3:
  Average throughput: 123.27 Mbit/s
  95th percentile per-packet one-way delay: 179.985 ms
  Loss rate: 2.59%
Run 3: Report of TCP Cubic — Data Link

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

- **Flow 1 ingress**: mean 71.21 Mbps
- **Flow 1 egress**: mean 71.01 Mbps
- **Flow 2 ingress**: mean 159.74 Mbps
- **Flow 2 egress**: mean 160.06 Mbps
- **Flow 3 ingress**: mean 124.93 Mbps
- **Flow 3 egress**: mean 123.27 Mbps

![Graph showing per-packet error rate over time for different flows.]

- **Flow 1 (95th percentile)**: 137.22 ms
- **Flow 2 (95th percentile)**: 141.88 ms
- **Flow 3 (95th percentile)**: 179.99 ms
Run 4: Statistics of TCP Cubic

Start at: 2018-09-08 02:11:36
End at: 2018-09-08 02:12:06
Local clock offset: -1.933 ms
Remote clock offset: -36.347 ms

# Below is generated by plot.py at 2018-09-08 03:59:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 317.98 Mbit/s
95th percentile per-packet one-way delay: 153.809 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 181.24 Mbit/s
95th percentile per-packet one-way delay: 149.449 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 152.62 Mbit/s
95th percentile per-packet one-way delay: 167.033 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 108.28 Mbit/s
95th percentile per-packet one-way delay: 184.388 ms
Loss rate: 2.38%
Run 4: Report of TCP Cubic — Data Link

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

Start at: 2018-09-08 02:44:30
End at: 2018-09-08 02:45:00
Local clock offset: 2.659 ms
Remote clock offset: -30.172 ms

# Below is generated by plot.py at 2018-09-08 03:59:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 317.06 Mbit/s
95th percentile per-packet one-way delay: 150.810 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 204.05 Mbit/s
95th percentile per-packet one-way delay: 145.234 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 166.65 Mbit/s
95th percentile per-packet one-way delay: 163.260 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 7.16 Mbit/s
95th percentile per-packet one-way delay: 137.525 ms
Loss rate: 5.69%
Run 5: Report of TCP Cubic — Data Link

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

- **Flow 1 ingress (mean 203.61 Mbit/s)**
- **Flow 1 egress (mean 204.05 Mbit/s)**
- **Flow 2 ingress (mean 166.29 Mbit/s)**
- **Flow 2 egress (mean 166.65 Mbit/s)**
- **Flow 3 ingress (mean 7.44 Mbit/s)**
- **Flow 3 egress (mean 7.36 Mbit/s)**
Run 1: Statistics of FillP

Start at: 2018-09-08 00:43:04
End at: 2018-09-08 00:43:34
Local clock offset: 1.085 ms
Remote clock offset: -37.631 ms

# Below is generated by plot.py at 2018-09-08 04:01:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 433.40 Mbit/s
95th percentile per-packet one-way delay: 459.118 ms
Loss rate: 7.80%
-- Flow 1:
Average throughput: 253.60 Mbit/s
95th percentile per-packet one-way delay: 445.627 ms
Loss rate: 4.03%
-- Flow 2:
Average throughput: 188.21 Mbit/s
95th percentile per-packet one-way delay: 484.279 ms
Loss rate: 9.67%
-- Flow 3:
Average throughput: 186.65 Mbit/s
95th percentile per-packet one-way delay: 460.649 ms
Loss rate: 18.21%
Run 1: Report of FillP — Data Link
Run 2: Statistics of FillP

Start at: 2018-09-08 01:21:07
End at: 2018-09-08 01:21:37
Local clock offset: 0.22 ms
Remote clock offset: -33.165 ms
Run 2: Report of FillP — Data Link

Figure is missing

Figure is missing
Run 3: Statistics of FillP

Start at: 2018-09-08 01:59:47
End at: 2018-09-08 02:00:17
Local clock offset: -0.141 ms
Remote clock offset: -28.774 ms

# Below is generated by plot.py at 2018-09-08 04:03:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 433.10 Mbit/s
95th percentile per-packet one-way delay: 439.105 ms
Loss rate: 6.69%
-- Flow 1:
Average throughput: 182.38 Mbit/s
95th percentile per-packet one-way delay: 316.430 ms
Loss rate: 2.51%
-- Flow 2:
Average throughput: 279.22 Mbit/s
95th percentile per-packet one-way delay: 451.453 ms
Loss rate: 6.89%
-- Flow 3:
Average throughput: 203.86 Mbit/s
95th percentile per-packet one-way delay: 374.108 ms
Loss rate: 16.05%
Run 3: Report of FillP — Data Link
Run 4: Statistics of FillP

Start at: 2018-09-08 02:26:49
End at: 2018-09-08 02:27:19
Local clock offset: 0.617 ms
Remote clock offset: -31.408 ms

# Below is generated by plot.py at 2018-09-08 04:03:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 408.75 Mbit/s
95th percentile per-packet one-way delay: 452.481 ms
Loss rate: 8.53%
-- Flow 1:
Average throughput: 172.30 Mbit/s
95th percentile per-packet one-way delay: 458.771 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 267.09 Mbit/s
95th percentile per-packet one-way delay: 445.317 ms
Loss rate: 8.67%
-- Flow 3:
Average throughput: 189.72 Mbit/s
95th percentile per-packet one-way delay: 333.735 ms
Loss rate: 25.35%
Run 4: Report of FillP — Data Link

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

- **Flow 1 Ingress (mean 171.16 Mbit/s)**
- **Flow 1 Egress (mean 172.30 Mbit/s)**
- **Flow 2 Ingress (mean 281.08 Mbit/s)**
- **Flow 2 Egress (mean 267.09 Mbit/s)**
- **Flow 3 Ingress (mean 247.34 Mbit/s)**
- **Flow 3 Egress (mean 189.72 Mbit/s)**

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

- **Flow 1 (95th percentile 458.77 ms)**
- **Flow 2 (95th percentile 445.32 ms)**
- **Flow 3 (95th percentile 333.74 ms)**
Run 5: Statistics of FillP

Start at: 2018-09-08 03:35:56
End at: 2018-09-08 03:36:26
Local clock offset: -0.431 ms
Remote clock offset: -22.798 ms
Run 5: Report of FillP — Data Link

Figure is missing

Figure is missing
Run 1: Statistics of FillP-Sheep

Start at: 2018-09-08 00:49:02  
End at: 2018-09-08 00:49:32  
Local clock offset: 1.155 ms  
Remote clock offset: -32.978 ms

# Below is generated by plot.py at 2018-09-08 04:04:38  
# Datalink statistics

-- Total of 3 flows:
Average throughput: 410.32 Mbit/s  
95th percentile per-packet one-way delay: 347.120 ms  
Loss rate: 6.43%

-- Flow 1:
Average throughput: 262.71 Mbit/s  
95th percentile per-packet one-way delay: 356.962 ms  
Loss rate: 1.81%

-- Flow 2:
Average throughput: 157.14 Mbit/s  
95th percentile per-packet one-way delay: 331.019 ms  
Loss rate: 12.86%

-- Flow 3:
Average throughput: 144.95 Mbit/s  
95th percentile per-packet one-way delay: 286.780 ms  
Loss rate: 15.07%
Run 1: Report of FillP-Sheep — Data Link
Run 2: Statistics of FillP-Sheep

Start at: 2018-09-08 01:27:31
End at: 2018-09-08 01:28:01
Local clock offset: 0.853 ms
Remote clock offset: -35.61 ms

# Below is generated by plot.py at 2018-09-08 04:04:45
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 418.68 Mbit/s
95th percentile per-packet one-way delay: 361.767 ms
Loss rate: 7.24%
-- Flow 1:
 Average throughput: 261.56 Mbit/s
95th percentile per-packet one-way delay: 370.487 ms
Loss rate: 3.31%
-- Flow 2:
 Average throughput: 167.62 Mbit/s
95th percentile per-packet one-way delay: 361.401 ms
Loss rate: 7.18%
-- Flow 3:
 Average throughput: 148.91 Mbit/s
95th percentile per-packet one-way delay: 329.000 ms
Loss rate: 23.91%
Run 3: Statistics of FillP-Sheep

Start at: 2018-09-08 02:05:35
End at: 2018-09-08 02:06:05
Local clock offset: 0.631 ms
Remote clock offset: -30.611 ms

# Below is generated by plot.py at 2018-09-08 04:04:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 426.52 Mbit/s
95th percentile per-packet one-way delay: 345.916 ms
Loss rate: 6.42%
-- Flow 1:
Average throughput: 283.06 Mbit/s
95th percentile per-packet one-way delay: 310.300 ms
Loss rate: 4.28%
-- Flow 2:
Average throughput: 161.99 Mbit/s
95th percentile per-packet one-way delay: 386.961 ms
Loss rate: 8.27%
-- Flow 3:
Average throughput: 122.92 Mbit/s
95th percentile per-packet one-way delay: 389.980 ms
Loss rate: 15.69%
Run 3: Report of FillP-Sheep — Data Link

0 5 10 15 20 25 30
Time (s)

0 100 200 300 400 500 600
Throughput (Mbit/s)

Flow 1 ingress (mean 293.77 Mbit/s)
Flow 1 egress (mean 283.06 Mbit/s)
Flow 2 ingress (mean 174.78 Mbit/s)
Flow 2 egress (mean 161.99 Mbit/s)
Flow 3 ingress (mean 142.71 Mbit/s)
Flow 3 egress (mean 122.92 Mbit/s)

0 5 10 15 20 25 30
Time (s)

150 200 250 300 350 400 450 500
Per-packet one-way delay (ms)

Flow 1 (95th percentile 310.30 ms)
Flow 2 (95th percentile 386.96 ms)
Flow 3 (95th percentile 389.98 ms)
Run 4: Statistics of FillP-Sheep

Start at: 2018-09-08 02:32:56
End at: 2018-09-08 02:33:26
Local clock offset: 0.743 ms
Remote clock offset: -28.569 ms

# Below is generated by plot.py at 2018-09-08 04:05:13
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 409.60 Mbit/s
  95th percentile per-packet one-way delay: 360.430 ms
  Loss rate: 10.12%
-- Flow 1:
  Average throughput: 260.51 Mbit/s
  95th percentile per-packet one-way delay: 345.938 ms
  Loss rate: 2.19%
-- Flow 2:
  Average throughput: 166.13 Mbit/s
  95th percentile per-packet one-way delay: 395.082 ms
  Loss rate: 21.29%
-- Flow 3:
  Average throughput: 124.45 Mbit/s
  95th percentile per-packet one-way delay: 320.420 ms
  Loss rate: 21.26%
Run 4: Report of FillP-Sheep — Data Link
Run 5: Statistics of FillP-Sheep

Start at: 2018-09-08 03:42:17
End at: 2018-09-08 03:42:47
Local clock offset: -2.217 ms
Remote clock offset: -28.026 ms

# Below is generated by plot.py at 2018-09-08 04:05:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 429.33 Mbit/s
  95th percentile per-packet one-way delay: 385.295 ms
  Loss rate: 4.94%
-- Flow 1:
  Average throughput: 270.50 Mbit/s
  95th percentile per-packet one-way delay: 343.325 ms
  Loss rate: 2.29%
-- Flow 2:
  Average throughput: 179.77 Mbit/s
  95th percentile per-packet one-way delay: 315.901 ms
  Loss rate: 8.32%
-- Flow 3:
  Average throughput: 125.99 Mbit/s
  95th percentile per-packet one-way delay: 550.418 ms
  Loss rate: 11.48%
Run 5: Report of FillP-Sheep — Data Link

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

- **Flow 1 ingress** (mean 275.06 Mbit/s)
- **Flow 1 egress** (mean 270.50 Mbit/s)
- **Flow 2 ingress** (mean 194.10 Mbit/s)
- **Flow 2 egress** (mean 179.77 Mbit/s)
- **Flow 3 ingress** (mean 139.36 Mbit/s)
- **Flow 3 egress** (mean 125.99 Mbit/s)

![Graph showing packet delivery delay over time.](image)

- **Flow 1** (95th percentile 343.32 ms)
- **Flow 2** (95th percentile 315.90 ms)
- **Flow 3** (95th percentile 550.42 ms)
Run 1: Statistics of Indigo

Start at: 2018-09-08 00:41:31
End at: 2018-09-08 00:42:01
Local clock offset: 0.616 ms
Remote clock offset: -37.405 ms

# Below is generated by plot.py at 2018-09-08 04:05:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 246.67 Mbit/s
95th percentile per-packet one-way delay: 165.606 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 129.70 Mbit/s
95th percentile per-packet one-way delay: 162.030 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 126.16 Mbit/s
95th percentile per-packet one-way delay: 164.238 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 102.95 Mbit/s
95th percentile per-packet one-way delay: 181.863 ms
Loss rate: 2.39%
Run 1: Report of Indigo — Data Link

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

- **Flow 1 ingress (mean 129.90 Mbit/s)**
- **Flow 1 egress (mean 129.70 Mbit/s)**
- **Flow 2 ingress (mean 126.35 Mbit/s)**
- **Flow 2 egress (mean 126.16 Mbit/s)**
- **Flow 3 ingress (mean 103.30 Mbit/s)**
- **Flow 3 egress (mean 102.95 Mbit/s)**
Run 2: Statistics of Indigo

Start at: 2018-09-08 01:14:01
End at: 2018-09-08 01:14:31
Local clock offset: -0.807 ms
Remote clock offset: -35.865 ms

# Below is generated by plot.py at 2018-09-08 04:07:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 292.95 Mbit/s
95th percentile per-packet one-way delay: 177.312 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 174.73 Mbit/s
95th percentile per-packet one-way delay: 174.974 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 126.70 Mbit/s
95th percentile per-packet one-way delay: 170.891 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 106.98 Mbit/s
95th percentile per-packet one-way delay: 186.451 ms
Loss rate: 2.79%
Run 2: Report of Indigo — Data Link

[Graph showing throughput and per-packet one-way delay over time]
Run 3: Statistics of Indigo

Start at: 2018-09-08 01:58:14
End at: 2018-09-08 01:58:44
Local clock offset: 3.19 ms
Remote clock offset: -34.007 ms

# Below is generated by plot.py at 2018-09-08 04:07:02
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 240.88 Mbit/s
  95th percentile per-packet one-way delay: 176.432 ms
  Loss rate: 1.26%
-- Flow 1:
  Average throughput: 115.42 Mbit/s
  95th percentile per-packet one-way delay: 171.612 ms
  Loss rate: 0.87%
-- Flow 2:
  Average throughput: 134.58 Mbit/s
  95th percentile per-packet one-way delay: 174.864 ms
  Loss rate: 1.19%
-- Flow 3:
  Average throughput: 111.90 Mbit/s
  95th percentile per-packet one-way delay: 188.040 ms
  Loss rate: 2.66%
Run 3: Report of Indigo — Data Link
Run 4: Statistics of Indigo

Start at: 2018-09-08 02:25:17
End at: 2018-09-08 02:25:47
Local clock offset: 0.625 ms
Remote clock offset: -27.89 ms

# Below is generated by plot.py at 2018-09-08 04:07:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 235.82 Mbit/s
  95th percentile per-packet one-way delay: 182.932 ms
  Loss rate: 1.11%
-- Flow 1:
  Average throughput: 114.18 Mbit/s
  95th percentile per-packet one-way delay: 161.870 ms
  Loss rate: 0.83%
-- Flow 2:
  Average throughput: 132.48 Mbit/s
  95th percentile per-packet one-way delay: 185.813 ms
  Loss rate: 0.92%
-- Flow 3:
  Average throughput: 104.71 Mbit/s
  95th percentile per-packet one-way delay: 201.219 ms
  Loss rate: 2.52%
Run 4: Report of Indigo — Data Link
Run 5: Statistics of Indigo

Start at: 2018-09-08 03:28:58
End at: 2018-09-08 03:29:28
Local clock offset: 0.085 ms
Remote clock offset: -24.216 ms

# Below is generated by plot.py at 2018-09-08 04:07:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 229.33 Mbit/s
  95th percentile per-packet one-way delay: 170.202 ms
  Loss rate: 1.22%
-- Flow 1:
  Average throughput: 95.55 Mbit/s
  95th percentile per-packet one-way delay: 147.156 ms
  Loss rate: 0.81%
-- Flow 2:
  Average throughput: 146.55 Mbit/s
  95th percentile per-packet one-way delay: 179.706 ms
  Loss rate: 1.09%
-- Flow 3:
  Average throughput: 113.30 Mbit/s
  95th percentile per-packet one-way delay: 181.739 ms
  Loss rate: 2.62%
Run 5: Report of Indigo — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 95.70 Mbit/s)
Flow 1 egress (mean 95.55 Mbit/s)
Flow 2 ingress (mean 146.67 Mbit/s)
Flow 2 egress (mean 146.55 Mbit/s)
Flow 3 ingress (mean 113.93 Mbit/s)
Flow 3 egress (mean 113.32 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 147.16 ms)
Flow 2 (95th percentile 179.71 ms)
Flow 3 (95th percentile 181.74 ms)
Run 1: Statistics of LEDBAT

Start at: 2018-09-08 00:47:43
End at: 2018-09-08 00:48:13
Local clock offset: -0.368 ms
Remote clock offset: -36.662 ms

# Below is generated by plot.py at 2018-09-08 04:07:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 14.80 Mbit/s
  95th percentile per-packet one-way delay: 133.492 ms
  Loss rate: 1.66%
-- Flow 1:
  Average throughput: 9.67 Mbit/s
  95th percentile per-packet one-way delay: 132.178 ms
  Loss rate: 1.28%
-- Flow 2:
  Average throughput: 6.27 Mbit/s
  95th percentile per-packet one-way delay: 133.534 ms
  Loss rate: 1.96%
-- Flow 3:
  Average throughput: 3.10 Mbit/s
  95th percentile per-packet one-way delay: 132.283 ms
  Loss rate: 3.93%
Run 1: Report of LEDBAT — Data Link
Run 2: Statistics of LEDBAT

Start at: 2018-09-08 01:26:11
End at: 2018-09-08 01:26:41
Local clock offset: 1.074 ms
Remote clock offset: -40.034 ms

# Below is generated by plot.py at 2018-09-08 04:07:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.73 Mbit/s
95th percentile per-packet one-way delay: 139.660 ms
Loss rate: 1.65%
-- Flow 1:
Average throughput: 9.50 Mbit/s
95th percentile per-packet one-way delay: 139.673 ms
Loss rate: 1.27%
-- Flow 2:
Average throughput: 6.40 Mbit/s
95th percentile per-packet one-way delay: 138.072 ms
Loss rate: 1.95%
-- Flow 3:
Average throughput: 3.09 Mbit/s
95th percentile per-packet one-way delay: 138.116 ms
Loss rate: 3.89%
Run 2: Report of LEDBAT — Data Link

![Graph showing throughput over time for different flows, with annotations for mean throughput rates.]

![Graph showing per-packet one-way delay over time for different flows, with annotations for 95th percentile delays.]

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Run 3: Statistics of LEDBAT

Start at: 2018-09-08 02:04:15
End at: 2018-09-08 02:04:45
Local clock offset: 0.543 ms
Remote clock offset: -31.254 ms

# Below is generated by plot.py at 2018-09-08 04:07:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.68 Mbit/s
95th percentile per-packet one-way delay: 132.817 ms
Loss rate: 1.66%
-- Flow 1:
Average throughput: 9.49 Mbit/s
95th percentile per-packet one-way delay: 132.453 ms
Loss rate: 1.29%
-- Flow 2:
Average throughput: 6.39 Mbit/s
95th percentile per-packet one-way delay: 131.291 ms
Loss rate: 1.94%
-- Flow 3:
Average throughput: 3.00 Mbit/s
95th percentile per-packet one-way delay: 132.922 ms
Loss rate: 4.01%
Run 3: Report of LEDBAT — Data Link
Run 4: Statistics of LEDBAT

Start at: 2018-09-08 02:31:37
End at: 2018-09-08 02:32:07
Local clock offset: 1.365 ms
Remote clock offset: -28.077 ms

# Below is generated by plot.py at 2018-09-08 04:07:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.39 Mbit/s
95th percentile per-packet one-way delay: 131.411 ms
Loss rate: 1.68%
-- Flow 1:
Average throughput: 9.29 Mbit/s
95th percentile per-packet one-way delay: 131.299 ms
Loss rate: 1.31%
-- Flow 2:
Average throughput: 6.27 Mbit/s
95th percentile per-packet one-way delay: 131.261 ms
Loss rate: 1.96%
-- Flow 3:
Average throughput: 3.00 Mbit/s
95th percentile per-packet one-way delay: 131.475 ms
Loss rate: 4.01%
Run 4: Report of LEDBAT — Data Link

![Graph 1: Throughput vs. Time]

- Flow 1 ingress (mean 9.35 Mbit/s)
- Flow 1 egress (mean 9.29 Mbit/s)
- Flow 2 ingress (mean 6.33 Mbit/s)
- Flow 2 egress (mean 6.27 Mbit/s)
- Flow 3 ingress (mean 3.07 Mbit/s)
- Flow 3 egress (mean 3.00 Mbit/s)

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

- Flow 1 (95th percentile 131.30 ms)
- Flow 2 (95th percentile 131.26 ms)
- Flow 3 (95th percentile 131.47 ms)
Run 5: Statistics of LEDBAT

Start at: 2018-09-08 03:40:57
End at: 2018-09-08 03:41:27
Local clock offset: -0.582 ms
Remote clock offset: -27.245 ms

# Below is generated by plot.py at 2018-09-08 04:07:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.59 Mbit/s
95th percentile per-packet one-way delay: 133.661 ms
Loss rate: 1.67%
-- Flow 1:
Average throughput: 9.52 Mbit/s
95th percentile per-packet one-way delay: 133.664 ms
Loss rate: 1.29%
-- Flow 2:
Average throughput: 6.23 Mbit/s
95th percentile per-packet one-way delay: 133.657 ms
Loss rate: 1.97%
-- Flow 3:
Average throughput: 2.97 Mbit/s
95th percentile per-packet one-way delay: 133.608 ms
Loss rate: 4.01%
Run 5: Report of LEDBAT — Data Link
Run 1: Statistics of Indigo-Muses

Start at: 2018-09-08 00:34:18
End at: 2018-09-08 00:34:48
Local clock offset: 1.07 ms
Remote clock offset: -38.229 ms

# Below is generated by plot.py at 2018-09-08 04:08:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 245.66 Mbit/s
95th percentile per-packet one-way delay: 139.861 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 179.47 Mbit/s
95th percentile per-packet one-way delay: 140.092 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 62.72 Mbit/s
95th percentile per-packet one-way delay: 138.669 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 75.22 Mbit/s
95th percentile per-packet one-way delay: 140.656 ms
Loss rate: 3.60%
Run 1: Report of Indigo-Muses — Data Link

![Graph showing network throughput and delay over time for different flows. The graphs depict the throughput in Mbps against time in seconds, with distinct lines for Flow 1, Flow 2, and Flow 3, each with different ingress and egress rates. The lower graph shows the per-packet one-way delay in ms against time, with markers indicating the 95th percentile delays for each flow.]
Run 2: Statistics of Indigo-Muses

Start at: 2018-09-08 01:06:43
End at: 2018-09-08 01:07:13
Local clock offset: 1.883 ms
Remote clock offset: -33.375 ms

# Below is generated by plot.py at 2018-09-08 04:08:46
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 294.28 Mbit/s
  95th percentile per-packet one-way delay: 138.432 ms
  Loss rate: 0.78%
-- Flow 1:
  Average throughput: 212.56 Mbit/s
  95th percentile per-packet one-way delay: 137.638 ms
  Loss rate: 0.39%
-- Flow 2:
  Average throughput: 90.94 Mbit/s
  95th percentile per-packet one-way delay: 138.828 ms
  Loss rate: 1.26%
-- Flow 3:
  Average throughput: 65.84 Mbit/s
  95th percentile per-packet one-way delay: 138.984 ms
  Loss rate: 3.16%
Run 2: Report of Indigo-Muses — Data Link

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

**Graph Legend:**
- Flow 1 ingress (mean 212.03 Mbit/s)
- Flow 1 egress (mean 212.56 Mbit/s)
- Flow 2 ingress (mean 91.15 Mbit/s)
- Flow 2 egress (mean 90.94 Mbit/s)
- Flow 3 ingress (mean 66.62 Mbit/s)
- Flow 3 egress (mean 65.84 Mbit/s)
Run 3: Statistics of Indigo-Muses

Start at: 2018-09-08 01:50:58
End at: 2018-09-08 01:51:28
Local clock offset: 3.31 ms
Remote clock offset: -29.497 ms

# Below is generated by plot.py at 2018-09-08 04:08:46
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 283.97 Mbit/s
  95th percentile per-packet one-way delay: 137.009 ms
  Loss rate: 0.85%
-- Flow 1:
  Average throughput: 213.08 Mbit/s
  95th percentile per-packet one-way delay: 137.145 ms
  Loss rate: 0.37%
-- Flow 2:
  Average throughput: 68.93 Mbit/s
  95th percentile per-packet one-way delay: 135.495 ms
  Loss rate: 1.78%
-- Flow 3:
  Average throughput: 77.07 Mbit/s
  95th percentile per-packet one-way delay: 138.447 ms
  Loss rate: 3.07%
Run 3: Report of Indigo-Muses — Data Link

![Graph 1](image1.png)

- **Flow 1 ingress (mean 212.47 Mbit/s)**
- **Flow 1 egress (mean 213.08 Mbit/s)**
- **Flow 2 ingress (mean 69.49 Mbit/s)**
- **Flow 2 egress (mean 68.93 Mbit/s)**
- **Flow 3 ingress (mean 77.89 Mbit/s)**
- **Flow 3 egress (mean 77.07 Mbit/s)**

![Graph 2](image2.png)

- **Flow 1 (95th percentile 137.15 ms)**
- **Flow 2 (95th percentile 135.50 ms)**
- **Flow 3 (95th percentile 138.45 ms)**

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Run 4: Statistics of Indigo-Muses

Start at: 2018-09-08 02:18:04
End at: 2018-09-08 02:18:34
Local clock offset: 0.453 ms
Remote clock offset: -26.813 ms

# Below is generated by plot.py at 2018-09-08 04:08:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 275.01 Mbit/s
95th percentile per-packet one-way delay: 133.197 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 209.12 Mbit/s
95th percentile per-packet one-way delay: 132.672 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 54.95 Mbit/s
95th percentile per-packet one-way delay: 133.265 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 90.19 Mbit/s
95th percentile per-packet one-way delay: 136.641 ms
Loss rate: 3.18%
Run 4: Report of Indigo-Muses — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 208.73 Mbit/s)
Flow 1 egress (mean 209.12 Mbit/s)
Flow 2 ingress (mean 55.02 Mbit/s)
Flow 2 egress (mean 54.95 Mbit/s)
Flow 3 ingress (mean 91.25 Mbit/s)
Flow 3 egress (mean 90.19 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 132.67 ms)
Flow 2 (95th percentile 133.26 ms)
Flow 3 (95th percentile 136.64 ms)
Run 5: Statistics of Indigo-Muses

Start at: 2018-09-08 03:06:11
End at: 2018-09-08 03:06:41
Local clock offset: 2.096 ms
Remote clock offset: -22.64 ms

# Below is generated by plot.py at 2018-09-08 04:09:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 261.70 Mbit/s
95th percentile per-packet one-way delay: 136.790 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 173.63 Mbit/s
95th percentile per-packet one-way delay: 137.309 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 93.09 Mbit/s
95th percentile per-packet one-way delay: 135.106 ms
Loss rate: 1.34%
-- Flow 3:
Average throughput: 80.59 Mbit/s
95th percentile per-packet one-way delay: 139.736 ms
Loss rate: 2.93%
Run 5: Report of Indigo-Muses — Data Link
Run 1: Statistics of PCC-Allegro

Start at: 2018-09-08 00:56:06
End at: 2018-09-08 00:56:36
Local clock offset: 0.545 ms
Remote clock offset: -36.192 ms

# Below is generated by plot.py at 2018-09-08 04:11:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 350.69 Mbit/s
95th percentile per-packet one-way delay: 140.106 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 299.31 Mbit/s
95th percentile per-packet one-way delay: 140.392 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 75.55 Mbit/s
95th percentile per-packet one-way delay: 139.536 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 4.18 Mbit/s
95th percentile per-packet one-way delay: 139.301 ms
Loss rate: 1.90%
Run 1: Report of PCC-Allegro — Data Link

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

- Flow 1 ingress (mean 299.05 Mbit/s)
- Flow 1 egress (mean 299.31 Mbit/s)
- Flow 2 ingress (mean 75.82 Mbit/s)
- Flow 2 egress (mean 75.35 Mbit/s)
- Flow 3 ingress (mean 4.17 Mbit/s)
- Flow 3 egress (mean 4.18 Mbit/s)

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

- Flow 1 (95th percentile 140.39 ms)
- Flow 2 (95th percentile 139.54 ms)
- Flow 3 (95th percentile 139.30 ms)
Run 2: Statistics of PCC-Allegro

Start at: 2018-09-08 01:29:08
End at: 2018-09-08 01:29:38
Local clock offset: 2.353 ms
Remote clock offset: -32.49 ms

# Below is generated by plot.py at 2018-09-08 04:11:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 356.46 Mbit/s
  95th percentile per-packet one-way delay: 155.080 ms
  Loss rate: 0.60%
-- Flow 1:
  Average throughput: 316.22 Mbit/s
  95th percentile per-packet one-way delay: 155.489 ms
  Loss rate: 0.55%
-- Flow 2:
  Average throughput: 59.64 Mbit/s
  95th percentile per-packet one-way delay: 138.715 ms
  Loss rate: 0.94%
-- Flow 3:
  Average throughput: 2.25 Mbit/s
  95th percentile per-packet one-way delay: 137.820 ms
  Loss rate: 1.95%
Run 2: Report of PCC-Allegro — Data Link
Run 3: Statistics of PCC-Allegro

Start at: 2018-09-08 02:07:11
End at: 2018-09-08 02:07:41
Local clock offset: 0.642 ms
Remote clock offset: -35.103 ms

# Below is generated by plot.py at 2018-09-08 04:11:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 375.04 Mbit/s
95th percentile per-packet one-way delay: 139.553 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 349.28 Mbit/s
95th percentile per-packet one-way delay: 139.607 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 34.76 Mbit/s
95th percentile per-packet one-way delay: 139.037 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 8.46 Mbit/s
95th percentile per-packet one-way delay: 140.614 ms
Loss rate: 1.99%
Run 3: Report of PCC-Allegro — Data Link
Run 4: Statistics of PCC-Allegro

Start at: 2018-09-08 02:34:42  
End at: 2018-09-08 02:35:12  
Local clock offset: 1.984 ms  
Remote clock offset: -27.361 ms

# Below is generated by plot.py at 2018-09-08 04:11:51  
# Datalink statistics

-- Total of 3 flows:
  Average throughput: 268.87 Mbit/s
  95th percentile per-packet one-way delay: 134.305 ms
  Loss rate: 6.92%

-- Flow 1:
  Average throughput: 199.74 Mbit/s
  95th percentile per-packet one-way delay: 134.516 ms
  Loss rate: 8.30%

-- Flow 2:
  Average throughput: 95.76 Mbit/s
  95th percentile per-packet one-way delay: 132.903 ms
  Loss rate: 1.67%

-- Flow 3:
  Average throughput: 17.13 Mbit/s
  95th percentile per-packet one-way delay: 134.877 ms
  Loss rate: 13.14%
Run 4: Report of PCC-Allegro — Data Link
Run 5: Statistics of PCC-Allegro

Start at: 2018-09-08 03:43:53
End at: 2018-09-08 03:44:23
Local clock offset: -2.504 ms
Remote clock offset: -27.484 ms

# Below is generated by plot.py at 2018-09-08 04:13:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 378.87 Mbit/s
95th percentile per-packet one-way delay: 222.012 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 367.25 Mbit/s
95th percentile per-packet one-way delay: 223.219 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 17.57 Mbit/s
95th percentile per-packet one-way delay: 136.476 ms
Loss rate: 1.16%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 135.120 ms
Loss rate: 0.00%
Run 5: Report of PCC-Allegro — Data Link
Run 1: Statistics of PCC-Expr

Start at: 2018-09-08 00:46:09
End at: 2018-09-08 00:46:39
Local clock offset: -0.279 ms
Remote clock offset: -36.998 ms

# Below is generated by plot.py at 2018-09-08 04:13:17
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 184.24 Mbit/s
  95th percentile per-packet one-way delay: 166.985 ms
  Loss rate: 0.60%
-- Flow 1:
  Average throughput: 150.60 Mbit/s
  95th percentile per-packet one-way delay: 195.709 ms
  Loss rate: 0.46%
-- Flow 2:
  Average throughput: 47.12 Mbit/s
  95th percentile per-packet one-way delay: 136.735 ms
  Loss rate: 1.03%
-- Flow 3:
  Average throughput: 7.41 Mbit/s
  95th percentile per-packet one-way delay: 137.899 ms
  Loss rate: 3.72%
Run 1: Report of PCC-Expr — Data Link

![Data Link Throughput Graph](image1)

- **Flow 1 ingress (mean 150.31 Mbit/s)**
- **Flow 1 egress (mean 150.60 Mbit/s)**
- **Flow 2 ingress (mean 47.13 Mbit/s)**
- **Flow 2 egress (mean 47.12 Mbit/s)**
- **Flow 3 ingress (mean 7.54 Mbit/s)**
- **Flow 3 egress (mean 7.41 Mbit/s)**

![Data Link One-Way Delay Graph](image2)

- **Flow 1 (95th percentile 195.71 ms)**
- **Flow 2 (95th percentile 136.74 ms)**
- **Flow 3 (95th percentile 137.90 ms)**

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Run 2: Statistics of PCC-Expr

Start at: 2018-09-08 01:24:37
End at: 2018-09-08 01:25:07
Local clock offset: 1.681 ms
Remote clock offset: -32.312 ms

# Below is generated by plot.py at 2018-09-08 04:13:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 180.06 Mbit/s
95th percentile per-packet one-way delay: 186.017 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 173.57 Mbit/s
95th percentile per-packet one-way delay: 192.456 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 6.41 Mbit/s
95th percentile per-packet one-way delay: 136.854 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 6.89 Mbit/s
95th percentile per-packet one-way delay: 137.089 ms
Loss rate: 2.16%
Run 2: Report of PCC-Expr — Data Link
Run 3: Statistics of PCC-Expr

Start at: 2018-09-08 02:02:41
End at: 2018-09-08 02:03:11
Local clock offset: 0.463 ms
Remote clock offset: -31.386 ms

# Below is generated by plot.py at 2018-09-08 04:14:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 178.76 Mbit/s
  95th percentile per-packet one-way delay: 172.223 ms
  Loss rate: 0.65%
-- Flow 1:
  Average throughput: 167.83 Mbit/s
  95th percentile per-packet one-way delay: 181.460 ms
  Loss rate: 0.52%
-- Flow 2:
  Average throughput: 11.59 Mbit/s
  95th percentile per-packet one-way delay: 135.093 ms
  Loss rate: 1.68%
-- Flow 3:
  Average throughput: 9.99 Mbit/s
  95th percentile per-packet one-way delay: 135.002 ms
  Loss rate: 4.98%
Run 3: Report of PCC-Expr — Data Link
Run 4: Statistics of PCC-Expr

Start at: 2018-09-08 02:30:04
End at: 2018-09-08 02:30:34
Local clock offset: 2.203 ms
Remote clock offset: -33.298 ms

# Below is generated by plot.py at 2018-09-08 04:15:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 178.15 Mbit/s
95th percentile per-packet one-way delay: 174.393 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 169.30 Mbit/s
95th percentile per-packet one-way delay: 181.784 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 9.67 Mbit/s
95th percentile per-packet one-way delay: 141.733 ms
Loss rate: 1.62%
-- Flow 3:
Average throughput: 7.51 Mbit/s
95th percentile per-packet one-way delay: 140.313 ms
Loss rate: 2.54%
Run 4: Report of PCC-Expr — Data Link
Run 5: Statistics of PCC-Expr

Start at: 2018-09-08 03:39:24
End at: 2018-09-08 03:39:54
Local clock offset: -1.311 ms
Remote clock offset: -25.26 ms

# Below is generated by plot.py at 2018-09-08 04:15:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 169.72 Mbit/s
95th percentile per-packet one-way delay: 172.592 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 151.00 Mbit/s
95th percentile per-packet one-way delay: 188.561 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 22.91 Mbit/s
95th percentile per-packet one-way delay: 134.756 ms
Loss rate: 1.37%
-- Flow 3:
Average throughput: 10.92 Mbit/s
95th percentile per-packet one-way delay: 134.531 ms
Loss rate: 5.92%
Run 5: Report of PCC-Expr — Data Link

![Graph showing network performance metrics over time]
Run 1: Statistics of QUIC Cubic

Start at: 2018-09-08 00:35:48
End at: 2018-09-08 00:36:18
Local clock offset: 0.869 ms
Remote clock offset: -38.109 ms

# Below is generated by plot.py at 2018-09-08 04:15:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 116.24 Mbit/s
  95th percentile per-packet one-way delay: 135.352 ms
  Loss rate: 1.02%
-- Flow 1:
  Average throughput: 61.34 Mbit/s
  95th percentile per-packet one-way delay: 134.078 ms
  Loss rate: 0.61%
-- Flow 2:
  Average throughput: 56.16 Mbit/s
  95th percentile per-packet one-way delay: 135.249 ms
  Loss rate: 1.00%
-- Flow 3:
  Average throughput: 54.09 Mbit/s
  95th percentile per-packet one-way delay: 135.757 ms
  Loss rate: 2.46%
Run 1: Report of QUIC Cubic — Data Link
Run 2: Statistics of QUIC Cubic

Start at: 2018-09-08 01:08:16
End at: 2018-09-08 01:08:46
Local clock offset: -0.089 ms
Remote clock offset: -32.131 ms

# Below is generated by plot.py at 2018-09-08 04:15:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 116.04 Mbit/s
95th percentile per-packet one-way delay: 131.119 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 62.62 Mbit/s
95th percentile per-packet one-way delay: 131.227 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 56.33 Mbit/s
95th percentile per-packet one-way delay: 129.572 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 49.22 Mbit/s
95th percentile per-packet one-way delay: 131.043 ms
Loss rate: 2.70%
Run 2: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 62.53 Mbps)
- Flow 1 egress (mean 62.62 Mbps)
- Flow 2 ingress (mean 56.31 Mbps)
- Flow 2 egress (mean 56.33 Mbps)
- Flow 3 ingress (mean 49.55 Mbps)
- Flow 3 egress (mean 49.22 Mbps)

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

- Flow 1 (95th percentile 131.23 ms)
- Flow 2 (95th percentile 129.57 ms)
- Flow 3 (95th percentile 131.04 ms)
Run 3: Statistics of QUIC Cubic

Start at: 2018-09-08 01:52:30
End at: 2018-09-08 01:53:00
Local clock offset: 1.066 ms
Remote clock offset: -34.436 ms

# Below is generated by plot.py at 2018-09-08 04:15:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 108.99 Mbit/s
  95th percentile per-packet one-way delay: 135.188 ms
  Loss rate: 0.09%
-- Flow 1:
  Average throughput: 58.44 Mbit/s
  95th percentile per-packet one-way delay: 134.827 ms
  Loss rate: 0.07%
-- Flow 2:
  Average throughput: 54.09 Mbit/s
  95th percentile per-packet one-way delay: 134.800 ms
  Loss rate: 0.08%
-- Flow 3:
  Average throughput: 44.95 Mbit/s
  95th percentile per-packet one-way delay: 135.714 ms
  Loss rate: 0.20%
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic

Start at: 2018-09-08 02:19:36
End at: 2018-09-08 02:20:06
Local clock offset: 0.971 ms
Remote clock offset: -31.837 ms

# Below is generated by plot.py at 2018-09-08 04:15:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 113.97 Mbit/s
95th percentile per-packet one-way delay: 134.452 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 58.25 Mbit/s
95th percentile per-packet one-way delay: 134.576 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 57.75 Mbit/s
95th percentile per-packet one-way delay: 133.171 ms
Loss rate: 0.96%
-- Flow 3:
Average throughput: 53.34 Mbit/s
95th percentile per-packet one-way delay: 134.675 ms
Loss rate: 2.42%
Run 4: Report of QUIC Cubic — Data Link

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

- **Flow 1 ingress** (mean 58.26 Mbit/s)
- **Flow 1 egress** (mean 58.25 Mbit/s)
- **Flow 2 ingress** (mean 57.72 Mbit/s)
- **Flow 2 egress** (mean 57.75 Mbit/s)
- **Flow 3 ingress** (mean 53.54 Mbit/s)
- **Flow 3 egress** (mean 53.34 Mbit/s)

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

- **Flow 1 (95th percentile 134.58 ms)**
- **Flow 2 (95th percentile 133.17 ms)**
- **Flow 3 (95th percentile 134.68 ms)**
Run 5: Statistics of QUIC Cubic

Start at: 2018-09-08 03:07:47
End at: 2018-09-08 03:08:17
Local clock offset: 2.388 ms
Remote clock offset: -28.558 ms

# Below is generated by plot.py at 2018-09-08 04:15:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 115.96 Mbit/s
  95th percentile per-packet one-way delay: 135.851 ms
  Loss rate: 1.05%
-- Flow 1:
  Average throughput: 60.31 Mbit/s
  95th percentile per-packet one-way delay: 135.759 ms
  Loss rate: 0.63%
-- Flow 2:
  Average throughput: 57.73 Mbit/s
  95th percentile per-packet one-way delay: 135.654 ms
  Loss rate: 1.12%
-- Flow 3:
  Average throughput: 53.11 Mbit/s
  95th percentile per-packet one-way delay: 136.149 ms
  Loss rate: 2.32%
Run 5: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

Start at: 2018-09-08 00:59:11
End at: 2018-09-08 00:59:41
Local clock offset: -0.47 ms
Remote clock offset: -33.189 ms

# Below is generated by plot.py at 2018-09-08 04:15:14
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 0.43 Mbit/s
   95th percentile per-packet one-way delay: 130.761 ms
   Loss rate: 0.98%
-- Flow 1:
   Average throughput: 0.22 Mbit/s
   95th percentile per-packet one-way delay: 130.756 ms
   Loss rate: 0.64%
-- Flow 2:
   Average throughput: 0.22 Mbit/s
   95th percentile per-packet one-way delay: 130.783 ms
   Loss rate: 1.03%
-- Flow 3:
   Average throughput: 0.22 Mbit/s
   95th percentile per-packet one-way delay: 129.712 ms
   Loss rate: 1.86%
Run 1: Report of SCReAM — Data Link

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

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

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

- **Per-packet one-way delay (ms)** vs **Time (s)**
  - Flow 1 (95th percentile 130.76 ms)
  - Flow 2 (95th percentile 130.78 ms)
  - Flow 3 (95th percentile 129.71 ms)
Run 2: Statistics of SCReAM

Start at: 2018-09-08 01:37:46
End at: 2018-09-08 01:38:16
Local clock offset: 3.148 ms
Remote clock offset: -36.387 ms

# Below is generated by plot.py at 2018-09-08 04:15:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 138.174 ms
  Loss rate: 0.97%
  -- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 138.181 ms
  Loss rate: 0.64%
  -- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 138.132 ms
  Loss rate: 1.03%
  -- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.894 ms
  Loss rate: 1.83%
Run 2: Report of SCReAM — Data Link

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

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

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

- Flow 1 (95th percentile 138.18 ms)
- Flow 2 (95th percentile 138.13 ms)
- Flow 3 (95th percentile 138.09 ms)
Run 3: Statistics of SCReAM

Start at: 2018-09-08 02:10:15
End at: 2018-09-08 02:10:45
Local clock offset: 2.875 ms
Remote clock offset: -28.447 ms

# Below is generated by plot.py at 2018-09-08 04:15:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 132.600 ms
  Loss rate: 0.98%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 131.346 ms
  Loss rate: 0.64%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 132.621 ms
  Loss rate: 1.05%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 132.777 ms
  Loss rate: 1.83%
Run 3: Report of SCReAM — Data Link
Run 4: Statistics of SCReAM

Start at: 2018-09-08 02:43:14
End at: 2018-09-08 02:43:44
Local clock offset: 2.658 ms
Remote clock offset: -24.587 ms

# Below is generated by plot.py at 2018-09-08 04:15:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 130.220 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 129.912 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 130.240 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 130.075 ms
Loss rate: 1.82%
Run 4: Report of SCReAM — Data Link

![Graph 1: Throughput (Mbps) vs 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)

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

- Flow 1 (95th percentile 129.91 ms)
- Flow 2 (95th percentile 130.24 ms)
- Flow 3 (95th percentile 130.07 ms)
Run 5: Statistics of SCReAM

Start at: 2018-09-08 03:46:56
End at: 2018-09-08 03:47:26
Local clock offset: 0.739 ms
Remote clock offset: -21.993 ms

# Below is generated by plot.py at 2018-09-08 04:15:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 127.420 ms
  Loss rate: 0.97%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 127.422 ms
  Loss rate: 0.64%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 127.375 ms
  Loss rate: 1.03%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 127.414 ms
  Loss rate: 1.84%
Run 5: Report of SCReAM — Data Link
Run 1: Statistics of Sprout

Start at: 2018-09-08 00:44:51
End at: 2018-09-08 00:45:21
Local clock offset: 0.066 ms
Remote clock offset: -34.6 ms

# Below is generated by plot.py at 2018-09-08 04:15:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 5.70 Mbit/s
  95th percentile per-packet one-way delay: 131.863 ms
  Loss rate: 1.31%
-- Flow 1:
  Average throughput: 3.51 Mbit/s
  95th percentile per-packet one-way delay: 131.604 ms
  Loss rate: 0.93%
-- Flow 2:
  Average throughput: 2.51 Mbit/s
  95th percentile per-packet one-way delay: 130.268 ms
  Loss rate: 1.39%
-- Flow 3:
  Average throughput: 1.64 Mbit/s
  95th percentile per-packet one-way delay: 131.951 ms
  Loss rate: 3.54%
Run 1: Report of Sprout — Data Link

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

![Graph 2: Packet one-way delay (ms)]
Run 2: Statistics of Sprout

Start at: 2018-09-08 01:23:20  
End at: 2018-09-08 01:23:50  
Local clock offset: 0.527 ms  
Remote clock offset: -30.717 ms

# Below is generated by plot.py at 2018-09-08 04:15:14  
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.71 Mbit/s
95th percentile per-packet one-way delay: 129.839 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 3.11 Mbit/s
95th percentile per-packet one-way delay: 129.860 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 2.91 Mbit/s
95th percentile per-packet one-way delay: 128.306 ms
Loss rate: 1.59%
-- Flow 3:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 129.888 ms
Loss rate: 3.59%
Run 2: Report of Sprout — Data Link
Run 3: Statistics of Sprout

Start at: 2018-09-08 02:01:24
End at: 2018-09-08 02:01:54
Local clock offset: 1.996 ms
Remote clock offset: -27.467 ms

# Below is generated by plot.py at 2018-09-08 04:15:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.53 Mbit/s
95th percentile per-packet one-way delay: 130.161 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 3.42 Mbit/s
95th percentile per-packet one-way delay: 129.925 ms
Loss rate: 0.95%
-- Flow 2:
Average throughput: 3.54 Mbit/s
95th percentile per-packet one-way delay: 130.179 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 2.34 Mbit/s
95th percentile per-packet one-way delay: 129.897 ms
Loss rate: 4.05%
Run 3: Report of Sprout — Data Link

![Graph showing throughput and packet loss over time for different flows.]
Run 4: Statistics of Sprout

Start at: 2018-09-08 02:28:46
End at: 2018-09-08 02:29:16
Local clock offset: 2.666 ms
Remote clock offset: -28.189 ms

# Below is generated by plot.py at 2018-09-08 04:15:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.49 Mbit/s
95th percentile per-packet one-way delay: 132.459 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 3.75 Mbit/s
95th percentile per-packet one-way delay: 132.467 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 3.39 Mbit/s
95th percentile per-packet one-way delay: 131.287 ms
Loss rate: 1.14%
-- Flow 3:
Average throughput: 1.53 Mbit/s
95th percentile per-packet one-way delay: 132.529 ms
Loss rate: 4.35%
Run 4: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 3.75 Mbit/s) and egress (mean 3.75 Mbit/s)
- Flow 2 ingress (mean 3.40 Mbit/s) and egress (mean 3.39 Mbit/s)
- Flow 3 ingress (mean 1.57 Mbit/s) and egress (mean 1.53 Mbit/s)
Run 5: Statistics of Sprout

Start at: 2018-09-08 03:38:06
End at: 2018-09-08 03:38:36
Local clock offset: -2.636 ms
Remote clock offset: -24.198 ms

# Below is generated by plot.py at 2018-09-08 04:15:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.00 Mbit/s
95th percentile per-packet one-way delay: 128.530 ms
Loss rate: 1.27%
-- Flow 1:
Average throughput: 2.87 Mbit/s
95th percentile per-packet one-way delay: 128.233 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 3.29 Mbit/s
95th percentile per-packet one-way delay: 128.573 ms
Loss rate: 1.49%
-- Flow 3:
Average throughput: 2.94 Mbit/s
95th percentile per-packet one-way delay: 128.240 ms
Loss rate: 3.32%
Run 5: Report of Sprout — Data Link

- Throughput (Mbps):
  - Flow 1 ingress (mean 2.87 Mbps)
  - Flow 1 egress (mean 2.87 Mbps)
  - Flow 2 ingress (mean 3.30 Mbps)
  - Flow 2 egress (mean 3.29 Mbps)
  - Flow 3 ingress (mean 2.99 Mbps)
  - Flow 3 egress (mean 2.94 Mbps)

- Packet one-way delay (ms):
  - Flow 1 (95th percentile 128.23 ms)
  - Flow 2 (95th percentile 128.57 ms)
  - Flow 3 (95th percentile 128.24 ms)
Run 1: Statistics of TaoVA-100x

Start at: 2018-09-08 00:31:08
End at: 2018-09-08 00:31:38
Local clock offset: 0.915 ms
Remote clock offset: -37.862 ms

# Below is generated by plot.py at 2018-09-08 04:17:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 170.68 Mbit/s
95th percentile per-packet one-way delay: 139.231 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 107.34 Mbit/s
95th percentile per-packet one-way delay: 139.052 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 69.84 Mbit/s
95th percentile per-packet one-way delay: 138.926 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 54.75 Mbit/s
95th percentile per-packet one-way delay: 140.971 ms
Loss rate: 1.48%
Run 1: Report of TaoVA-100x — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 107.20 Mbit/s)
Flow 1 egress (mean 107.34 Mbit/s)
Flow 2 ingress (mean 69.67 Mbit/s)
Flow 2 egress (mean 69.84 Mbit/s)
Flow 3 ingress (mean 54.42 Mbit/s)
Flow 3 egress (mean 54.75 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 139.05 ms)
Flow 2 (95th percentile 138.93 ms)
Flow 3 (95th percentile 140.97 ms)
Run 2: Statistics of TaoVA-100x

Start at: 2018-09-08 01:03:32
End at: 2018-09-08 01:04:02
Local clock offset: 0.224 ms
Remote clock offset: -36.694 ms

# Below is generated by plot.py at 2018-09-08 04:17:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 175.59 Mbit/s
  95th percentile per-packet one-way delay: 140.148 ms
  Loss rate: 0.77%
-- Flow 1:
  Average throughput: 103.08 Mbit/s
  95th percentile per-packet one-way delay: 139.693 ms
  Loss rate: 0.43%
-- Flow 2:
  Average throughput: 80.41 Mbit/s
  95th percentile per-packet one-way delay: 140.414 ms
  Loss rate: 0.73%
-- Flow 3:
  Average throughput: 58.41 Mbit/s
  95th percentile per-packet one-way delay: 141.497 ms
  Loss rate: 2.69%
Run 2: Report of TaoVA-100x — Data Link

Graph 1: Throughput (Mbps)

Graph 2: Per-packet one-way delay (ms)
Run 3: Statistics of TaoVA-100x

Start at: 2018-09-08 01:47:47
End at: 2018-09-08 01:48:17
Local clock offset: 2.819 ms
Remote clock offset: -29.057 ms

# Below is generated by plot.py at 2018-09-08 04:18:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 174.76 Mbit/s
95th percentile per-packet one-way delay: 135.561 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 106.58 Mbit/s
95th percentile per-packet one-way delay: 135.178 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 69.11 Mbit/s
95th percentile per-packet one-way delay: 134.477 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 68.58 Mbit/s
95th percentile per-packet one-way delay: 138.290 ms
Loss rate: 2.31%
Run 3: Report of TaoVA-100x — Data Link

![Graph 1: Throughput (Mbps)]

- **Flow 1 ingress** (mean 106.09 Mbps)
- **Flow 1 egress** (mean 106.58 Mbps)
- **Flow 2 ingress** (mean 68.87 Mbps)
- **Flow 2 egress** (mean 69.11 Mbps)
- **Flow 3 ingress** (mean 68.79 Mbps)
- **Flow 3 egress** (mean 68.58 Mbps)

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

- **Flow 1** (95th percentile 135.18 ms)
- **Flow 2** (95th percentile 134.48 ms)
- **Flow 3** (95th percentile 138.29 ms)
Run 4: Statistics of TaoVA-100x

Start at: 2018-09-08 02:14:43
End at: 2018-09-08 02:15:13
Local clock offset: 2.588 ms
Remote clock offset: -33.029 ms

# Below is generated by plot.py at 2018-09-08 04:18:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 177.73 Mbit/s
95th percentile per-packet one-way delay: 141.397 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 110.66 Mbit/s
95th percentile per-packet one-way delay: 139.760 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 98.33 Mbit/s
95th percentile per-packet one-way delay: 142.735 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 5.53 Mbit/s
95th percentile per-packet one-way delay: 141.606 ms
Loss rate: 1.28%
Run 4: Report of TaoVA-100x — Data Link

Graph 1: Throughput (Mbit/s) over Time (s)

Graph 2: Per-packet one-way delay (ms) over Time (s)
Run 5: Statistics of TaoVA-100x

Start at: 2018-09-08 02:57:21
End at: 2018-09-08 02:57:51
Local clock offset: 1.126 ms
Remote clock offset: -25.364 ms

# Below is generated by plot.py at 2018-09-08 04:18:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 175.53 Mbit/s
95th percentile per-packet one-way delay: 135.572 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 111.82 Mbit/s
95th percentile per-packet one-way delay: 135.336 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 68.64 Mbit/s
95th percentile per-packet one-way delay: 134.989 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 55.31 Mbit/s
95th percentile per-packet one-way delay: 137.539 ms
Loss rate: 1.53%
Run 5: Report of TaoVA-100x — Data Link
Run 1: Statistics of TCP Vegas

Start at: 2018-09-08 00:37:13
End at: 2018-09-08 00:37:43
Local clock offset: 1.066 ms
Remote clock offset: -41.932 ms

# Below is generated by plot.py at 2018-09-08 04:18:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 298.66 Mbit/s
95th percentile per-packet one-way delay: 143.714 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 179.22 Mbit/s
95th percentile per-packet one-way delay: 143.577 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 144.25 Mbit/s
95th percentile per-packet one-way delay: 143.527 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 72.04 Mbit/s
95th percentile per-packet one-way delay: 150.707 ms
Loss rate: 2.10%
Run 1: Report of TCP Vegas — Data Link

![Graph showing throughput and packet delay over time for different flows.](image1)

![Graph showing packet delay distribution for different flows.](image2)
Run 2: Statistics of TCP Vegas

Start at: 2018-09-08 01:09:41
End at: 2018-09-08 01:10:11
Local clock offset: -0.386 ms
Remote clock offset: -35.933 ms

# Below is generated by plot.py at 2018-09-08 04:18:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 302.24 Mbit/s
95th percentile per-packet one-way delay: 138.584 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 183.07 Mbit/s
95th percentile per-packet one-way delay: 137.207 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 141.93 Mbit/s
95th percentile per-packet one-way delay: 139.354 ms
Loss rate: 1.08%
-- Flow 3:
Average throughput: 76.13 Mbit/s
95th percentile per-packet one-way delay: 143.856 ms
Loss rate: 2.04%
Run 2: Report of TCP Vegas — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 182.42 Mbps)
- Flow 1 egress (mean 183.07 Mbps)
- Flow 2 ingress (mean 142.08 Mbps)
- Flow 2 egress (mean 141.93 Mbps)
- Flow 3 ingress (mean 76.22 Mbps)
- Flow 3 egress (mean 76.13 Mbps)

**Delay (ms):**
- Flow 1 (95th percentile 137.21 ms)
- Flow 2 (95th percentile 139.35 ms)
- Flow 3 (95th percentile 143.86 ms)
Run 3: Statistics of TCP Vegas

Start at: 2018-09-08 01:53:54  
End at: 2018-09-08 01:54:24  
Local clock offset: 1.435 ms  
Remote clock offset: -31.307 ms

# Below is generated by plot.py at 2018-09-08 04:18:59  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 308.59 Mbit/s  
95th percentile per-packet one-way delay: 137.471 ms  
Loss rate: 0.77%  
-- Flow 1:  
Average throughput: 199.41 Mbit/s  
95th percentile per-packet one-way delay: 138.634 ms  
Loss rate: 0.51%  
-- Flow 2:  
Average throughput: 141.41 Mbit/s  
95th percentile per-packet one-way delay: 137.189 ms  
Loss rate: 1.08%  
-- Flow 3:  
Average throughput: 46.23 Mbit/s  
95th percentile per-packet one-way delay: 135.123 ms  
Loss rate: 2.23%
Run 3: Report of TCP Vegas — Data Link
Run 4: Statistics of TCP Vegas

Start at: 2018-09-08 02:21:00
End at: 2018-09-08 02:21:30
Local clock offset: 0.757 ms
Remote clock offset: -31.543 ms

# Below is generated by plot.py at 2018-09-08 04:20:20
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 247.71 Mbit/s
  95th percentile per-packet one-way delay: 139.413 ms
  Loss rate: 1.01%
-- Flow 1:
  Average throughput: 112.41 Mbit/s
  95th percentile per-packet one-way delay: 138.511 ms
  Loss rate: 0.46%
-- Flow 2:
  Average throughput: 142.01 Mbit/s
  95th percentile per-packet one-way delay: 139.387 ms
  Loss rate: 1.06%
-- Flow 3:
  Average throughput: 124.83 Mbit/s
  95th percentile per-packet one-way delay: 191.067 ms
  Loss rate: 2.40%
Run 4: Report of TCP Vegas — Data Link

![Throughput vs Time Graph](image)

- Flow 1 ingress (mean 112.18 Mbit/s)
- Flow 1 egress (mean 112.41 Mbit/s)
- Flow 2 ingress (mean 139.18 Mbit/s)
- Flow 2 egress (mean 142.01 Mbit/s)
- Flow 3 ingress (mean 122.83 Mbit/s)
- Flow 3 egress (mean 124.83 Mbit/s)

![Delay vs Time Graph](image)

- Flow 1 (95th percentile 138.51 ms)
- Flow 2 (95th percentile 139.39 ms)
- Flow 3 (95th percentile 191.07 ms)
Run 5: Statistics of TCP Vegas

Start at: 2018-09-08 03:09:12
End at: 2018-09-08 03:09:42
Local clock offset: 2.475 ms
Remote clock offset: -27.394 ms
Run 5: Report of TCP Vegas — Data Link

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Run 1: Statistics of Verus

Start at: 2018-09-08 00:40:04
End at: 2018-09-08 00:40:34
Local clock offset: 2.089 ms
Remote clock offset: -38.005 ms

# Below is generated by plot.py at 2018-09-08 04:20:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 126.27 Mbit/s
95th percentile per-packet one-way delay: 328.405 ms
Loss rate: 1.83%
-- Flow 1:
Average throughput: 76.05 Mbit/s
95th percentile per-packet one-way delay: 354.560 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 40.77 Mbit/s
95th percentile per-packet one-way delay: 319.272 ms
Loss rate: 3.15%
-- Flow 3:
Average throughput: 74.86 Mbit/s
95th percentile per-packet one-way delay: 216.965 ms
Loss rate: 3.63%
Run 1: Report of Verus — Data Link
Run 2: Statistics of Verus

Start at: 2018-09-08 01:12:32
End at: 2018-09-08 01:13:02
Local clock offset: -0.341 ms
Remote clock offset: -35.674 ms

# Below is generated by plot.py at 2018-09-08 04:20:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 156.87 Mbit/s
95th percentile per-packet one-way delay: 214.424 ms
Loss rate: 5.59%
-- Flow 1:
Average throughput: 117.43 Mbit/s
95th percentile per-packet one-way delay: 196.078 ms
Loss rate: 2.94%
-- Flow 2:
Average throughput: 37.00 Mbit/s
95th percentile per-packet one-way delay: 207.894 ms
Loss rate: 18.26%
-- Flow 3:
Average throughput: 45.69 Mbit/s
95th percentile per-packet one-way delay: 308.956 ms
Loss rate: 1.60%
Run 2: Report of Verus — Data Link

![Graph: Throughput](image1)

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

Start at: 2018-09-08 01:56:45
End at: 2018-09-08 01:57:15
Local clock offset: 1.303 ms
Remote clock offset: -33.954 ms

# Below is generated by plot.py at 2018-09-08 04:20:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 157.08 Mbit/s
95th percentile per-packet one-way delay: 157.603 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 108.27 Mbit/s
95th percentile per-packet one-way delay: 161.133 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 46.79 Mbit/s
95th percentile per-packet one-way delay: 141.547 ms
Loss rate: 1.34%
-- Flow 3:
Average throughput: 54.29 Mbit/s
95th percentile per-packet one-way delay: 160.735 ms
Loss rate: 2.39%
Run 3: Report of Verus — Data Link

Throughput (Mbps):

```
Flow 1 ingress (mean 108.27 Mbps)  
Flow 1 egress (mean 108.27 Mbps)  
Flow 2 ingress (mean 46.95 Mbps)   
Flow 2 egress (mean 46.79 Mbps)   
Flow 3 ingress (mean 55.07 Mbps)   
Flow 3 egress (mean 54.29 Mbps)   
```

Delay (ms):

```
Flow 1 (95th percentile 161.13 ms)   
Flow 2 (95th percentile 141.55 ms)   
Flow 3 (95th percentile 160.74 ms)   
```
Run 4: Statistics of Verus

Start at: 2018-09-08 02:23:49
End at: 2018-09-08 02:24:19
Local clock offset: 0.622 ms
Remote clock offset: -29.051 ms

# Below is generated by plot.py at 2018-09-08 04:20:20
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 149.69 Mbit/s
  95th percentile per-packet one-way delay: 323.962 ms
  Loss rate: 0.68%
  -- Flow 1:
    Average throughput: 104.36 Mbit/s
    95th percentile per-packet one-way delay: 328.863 ms
    Loss rate: 0.02%
  -- Flow 2:
    Average throughput: 49.96 Mbit/s
    95th percentile per-packet one-way delay: 321.596 ms
    Loss rate: 2.84%
  -- Flow 3:
    Average throughput: 40.30 Mbit/s
    95th percentile per-packet one-way delay: 241.106 ms
    Loss rate: 0.29%
Run 4: Report of Verus — Data Link
Run 5: Statistics of Verus

Start at: 2018-09-08 03:27:33
End at: 2018-09-08 03:28:03
Local clock offset: -0.015 ms
Remote clock offset: -21.695 ms

# Below is generated by plot.py at 2018-09-08 04:20:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 108.92 Mbit/s
95th percentile per-packet one-way delay: 200.976 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 50.24 Mbit/s
95th percentile per-packet one-way delay: 233.769 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 34.08 Mbit/s
95th percentile per-packet one-way delay: 137.099 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 110.76 Mbit/s
95th percentile per-packet one-way delay: 195.821 ms
Loss rate: 1.57%
Run 5: Report of Verus — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 49.93 Mbps)
- Flow 1 egress (mean 50.24 Mbps)
- Flow 2 ingress (mean 33.76 Mbps)
- Flow 2 egress (mean 34.08 Mbps)
- Flow 3 ingress (mean 110.30 Mbps)
- Flow 3 egress (mean 110.76 Mbps)

**Per-packet one-way delay (ms):**
- Flow 1 (95th percentile 233.77 ms)
- Flow 2 (95th percentile 137.10 ms)
- Flow 3 (95th percentile 195.82 ms)
Run 1: Statistics of PCC-Vivace

Start at: 2018-09-08 00:57:39
End at: 2018-09-08 00:58:09
Local clock offset: -7.37 ms
Remote clock offset: -35.571 ms

# Below is generated by plot.py at 2018-09-08 04:20:56
# Datalink statistics

-- Total of 3 flows:
Average throughput: 191.15 Mbit/s
95th percentile per-packet one-way delay: 129.738 ms
Loss rate: 0.75%

-- Flow 1:
Average throughput: 162.96 Mbit/s
95th percentile per-packet one-way delay: 129.743 ms
Loss rate: 0.58%

-- Flow 2:
Average throughput: 38.90 Mbit/s
95th percentile per-packet one-way delay: 129.753 ms
Loss rate: 1.60%

-- Flow 3:
Average throughput: 7.32 Mbit/s
95th percentile per-packet one-way delay: 128.173 ms
Loss rate: 3.23%
Run 1: Report of PCC-Vivace — Data Link

![Graph showing throughput over time with different flow rates and delays.](image)

- Flow 1 ingress (mean 162.85 Mbit/s)
- Flow 1 egress (mean 162.96 Mbit/s)
- Flow 2 ingress (mean 39.14 Mbit/s)
- Flow 2 egress (mean 38.90 Mbit/s)
- Flow 3 ingress (mean 7.41 Mbit/s)
- Flow 3 egress (mean 7.32 Mbit/s)

![Graph showing packet delay over time with different flow rates.](image)

- Flow 1 (95th percentile 129.74 ms)
- Flow 2 (95th percentile 129.75 ms)
- Flow 3 (95th percentile 128.17 ms)
Run 2: Statistics of PCC-Vivace

Start at: 2018-09-08 01:36:07
End at: 2018-09-08 01:36:37
Local clock offset: 1.35 ms
Remote clock offset: -31.595 ms

# Below is generated by plot.py at 2018-09-08 04:21:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 201.11 Mbit/s
95th percentile per-packet one-way delay: 133.475 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 180.69 Mbit/s
95th percentile per-packet one-way delay: 133.371 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 28.21 Mbit/s
95th percentile per-packet one-way delay: 134.877 ms
Loss rate: 1.24%
-- Flow 3:
Average throughput: 5.38 Mbit/s
95th percentile per-packet one-way delay: 134.505 ms
Loss rate: 8.05%
Run 2: Report of PCC-Vivace — Data Link

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

Legend:
- Flow 1 ingress (mean 180.42 Mbit/s)
- Flow 1 egress (mean 180.69 Mbit/s)
- Flow 2 ingress (mean 28.30 Mbit/s)
- Flow 2 egress (mean 28.21 Mbit/s)
- Flow 3 ingress (mean 5.73 Mbit/s)
- Flow 3 egress (mean 5.38 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 133.37 ms)
- Flow 2 (95th percentile 134.88 ms)
- Flow 3 (95th percentile 134.50 ms)
Run 3: Statistics of PCC-Vivace

Start at: 2018-09-08 02:08:43
End at: 2018-09-08 02:09:13
Local clock offset: 0.618 ms
Remote clock offset: -32.64 ms

# Below is generated by plot.py at 2018-09-08 04:21:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 200.64 Mbit/s
95th percentile per-packet one-way delay: 137.963 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 174.47 Mbit/s
95th percentile per-packet one-way delay: 138.073 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 36.79 Mbit/s
95th percentile per-packet one-way delay: 137.586 ms
Loss rate: 1.87%
-- Flow 3:
Average throughput: 5.50 Mbit/s
95th percentile per-packet one-way delay: 137.685 ms
Loss rate: 9.32%
Run 3: Report of PCC-Vivace — Data Link
Run 4: Statistics of PCC-Vivace

Start at: 2018-09-08 02:41:42
End at: 2018-09-08 02:42:12
Local clock offset: 1.662 ms
Remote clock offset: -26.249 ms

# Below is generated by plot.py at 2018-09-08 04:21:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 206.27 Mbit/s
95th percentile per-packet one-way delay: 132.840 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 175.80 Mbit/s
95th percentile per-packet one-way delay: 132.553 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 33.83 Mbit/s
95th percentile per-packet one-way delay: 134.208 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 24.69 Mbit/s
95th percentile per-packet one-way delay: 132.856 ms
Loss rate: 3.12%
Run 4: Report of PCC-Vivace — Data Link

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

- **Flow 1 ingress** (mean 175.70 Mbps)
- **Flow 1 egress** (mean 175.80 Mbps)
- **Flow 2 ingress** (mean 33.97 Mbps)
- **Flow 2 egress** (mean 33.83 Mbps)
- **Flow 3 ingress** (mean 24.96 Mbps)
- **Flow 3 egress** (mean 24.69 Mbps)

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

- **Flow 1** (95th percentile 132.55 ms)
- **Flow 2** (95th percentile 134.21 ms)
- **Flow 3** (95th percentile 132.86 ms)
Run 5: Statistics of PCC-Vivace

Start at: 2018-09-08 03:45:24
End at: 2018-09-08 03:45:54
Local clock offset: 1.052 ms
Remote clock offset: -23.627 ms

# Below is generated by plot.py at 2018-09-08 04:21:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 208.27 Mbit/s
95th percentile per-packet one-way delay: 133.073 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 167.79 Mbit/s
95th percentile per-packet one-way delay: 132.840 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 55.87 Mbit/s
95th percentile per-packet one-way delay: 134.260 ms
Loss rate: 1.31%
-- Flow 3:
Average throughput: 10.78 Mbit/s
95th percentile per-packet one-way delay: 133.240 ms
Loss rate: 7.07%
Run 1: Statistics of WebRTC media

Start at: 2018-09-08 00:38:47
End at: 2018-09-08 00:39:17
Local clock offset: 2.106 ms
Remote clock offset: -37.92 ms

# Below is generated by plot.py at 2018-09-08 04:21:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.10 Mbit/s
95th percentile per-packet one-way delay: 136.367 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 136.357 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 1.02 Mbit/s
95th percentile per-packet one-way delay: 135.158 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 136.423 ms
Loss rate: 2.44%
Run 1: Report of WebRTC media — Data Link
Run 2: Statistics of WebRTC media

Start at: 2018-09-08 01:11:15
End at: 2018-09-08 01:11:45
Local clock offset: 1.325 ms
Remote clock offset: -35.641 ms

# Below is generated by plot.py at 2018-09-08 04:21:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.05 Mbit/s
95th percentile per-packet one-way delay: 136.005 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 1.67 Mbit/s
95th percentile per-packet one-way delay: 134.460 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 1.02 Mbit/s
95th percentile per-packet one-way delay: 135.792 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 136.100 ms
Loss rate: 3.48%
Run 2: Report of WebRTC media — Data Link

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Graph 1: Throughput (Mbps) vs Time (s)
- Blue line: Flow 1 ingress (mean 1.66 Mbps)
- Purple line: Flow 1 egress (mean 1.67 Mbps)
- Green line: Flow 2 ingress (mean 1.03 Mbps)
- Grey line: Flow 2 egress (mean 1.02 Mbps)
- Red line: Flow 3 ingress (mean 0.41 Mbps)
- Pink line: Flow 3 egress (mean 0.40 Mbps)

Graph 2: Per-packet one-way delay (ms) vs Time (s)
- Blue points: Flow 1 (95th percentile 134.46 ms)
- Green points: Flow 2 (95th percentile 135.79 ms)
- Red points: Flow 3 (95th percentile 136.10 ms)
Run 3: Statistics of WebRTC media

Start at: 2018-09-08 01:55:27
End at: 2018-09-08 01:55:57
Local clock offset: 1.484 ms
Remote clock offset: -34.15 ms

# Below is generated by plot.py at 2018-09-08 04:21:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.07 Mbit/s
  95th percentile per-packet one-way delay: 135.600 ms
  Loss rate: 1.21%
-- Flow 1:
  Average throughput: 1.68 Mbit/s
  95th percentile per-packet one-way delay: 134.074 ms
  Loss rate: 0.61%
-- Flow 2:
  Average throughput: 1.04 Mbit/s
  95th percentile per-packet one-way delay: 135.616 ms
  Loss rate: 1.31%
-- Flow 3:
  Average throughput: 0.39 Mbit/s
  95th percentile per-packet one-way delay: 135.682 ms
  Loss rate: 3.49%
Run 4: Statistics of WebRTC media

Start at: 2018-09-08 02:22:31
End at: 2018-09-08 02:23:01
Local clock offset: 0.919 ms
Remote clock offset: -32.156 ms

# Below is generated by plot.py at 2018-09-08 04:21:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.00 Mbit/s
  95th percentile per-packet one-way delay: 134.791 ms
  Loss rate: 1.02%
-- Flow 1:
  Average throughput: 1.64 Mbit/s
  95th percentile per-packet one-way delay: 133.290 ms
  Loss rate: 0.42%
-- Flow 2:
  Average throughput: 1.01 Mbit/s
  95th percentile per-packet one-way delay: 133.295 ms
  Loss rate: 1.20%
-- Flow 3:
  Average throughput: 0.38 Mbit/s
  95th percentile per-packet one-way delay: 134.866 ms
  Loss rate: 3.12%
Run 4: Report of WebRTC media — Data Link
Run 5: Statistics of WebRTC media

Start at: 2018-09-08 03:26:16
End at: 2018-09-08 03:26:46
Local clock offset: -5.628 ms
Remote clock offset: -28.776 ms

# Below is generated by plot.py at 2018-09-08 04:21:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.07 Mbit/s
  95th percentile per-packet one-way delay: 129.245 ms
  Loss rate: 1.16%
-- Flow 1:
  Average throughput: 1.70 Mbit/s
  95th percentile per-packet one-way delay: 127.790 ms
  Loss rate: 0.74%
-- Flow 2:
  Average throughput: 1.02 Mbit/s
  95th percentile per-packet one-way delay: 129.083 ms
  Loss rate: 1.33%
-- Flow 3:
  Average throughput: 0.39 Mbit/s
  95th percentile per-packet one-way delay: 129.320 ms
  Loss rate: 2.56%
Run 5: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 1.70 Mbit/s)
- Flow 1 egress (mean 1.70 Mbit/s)
- Flow 2 ingress (mean 1.02 Mbit/s)
- Flow 2 egress (mean 1.02 Mbit/s)
- Flow 3 ingress (mean 0.40 Mbit/s)
- Flow 3 egress (mean 0.39 Mbit/s)

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

- Flow 1 (95th percentile 127.79 ms)
- Flow 2 (95th percentile 129.08 ms)
- Flow 3 (95th percentile 129.32 ms)

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