Pantheon Report

Generated at 2018-09-11 20:02:22 (UTC).
Data path: GCE Iowa on ens4 (remote) → GCE London on ens4 (local).
Repeated the test of 18 congestion control schemes 5 times.
Each test lasted for 30 seconds running 1 flow.
NTP offsets were measured against time.google.com and have been applied
to correct the timestamps in logs.

System info:
Linux 4.15.0-1018-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
net.ipv4.tcp_mem = 190986 254651 381972

Git summary:
branch: muses @ f30bceca2aecc2ef14a3cf71e25642f4a30905a03
third_party/fillp @ d47f4fa1b45a5e0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e694aa89e93b032143cedbdef58e562f4
third_party/indigo @ 2601c92e4aa95d8d38dc4dfe0ed6bf90c077e64d
third_party/libutp @ b3465b94e2826f2b179eaaab4a906e6bb7cf3cf
third_party/muses @ 65ac1b19b0ed0d63499e986009b4a8643c40a
third_party/pantheon-tunnel @ cbfcee6db5ff5740 rgba17ff813cd646339e1952
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f55613e8ac0d08fab92e4eb24f974ab
third_party/proto-quic @ 77961ff1a82733a86b42f1bc8143ebc978f3cf42
third_party/scream-reproduce @ f099118d1421aa3131bf1ff1964974e1da3dbd2
  M src/ScramClient
  M src/ScramServer
third_party/sprout @ 36e635c6178b01e31d4a46ad18c74f9415f91a26
  M src/examples/cellsim.cc
  M src/examples/sprouttb2.cc
  M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562539f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
test from GCE Iowa to GCE London, 5 runs of 30s each per scheme
(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>
<tr>
<td>TCP BBR</td>
<td>5</td>
<td>583.21</td>
<td>127.50</td>
<td>0.81</td>
</tr>
<tr>
<td>Copa</td>
<td>5</td>
<td>339.69</td>
<td>57.39</td>
<td>0.33</td>
</tr>
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<td>TCP Cubic</td>
<td>5</td>
<td>642.86</td>
<td>111.14</td>
<td>0.45</td>
</tr>
<tr>
<td>FillP</td>
<td>5</td>
<td>835.78</td>
<td>121.50</td>
<td>3.44</td>
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<td>FillP-Sheep</td>
<td>5</td>
<td>834.19</td>
<td>104.93</td>
<td>1.01</td>
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<tr>
<td>Indigo</td>
<td>5</td>
<td>202.77</td>
<td>50.67</td>
<td>0.36</td>
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<tr>
<td>LEDBAT</td>
<td>5</td>
<td>35.23</td>
<td>51.49</td>
<td>0.59</td>
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<td>Indigo-Muses</td>
<td>4</td>
<td>700.86</td>
<td>71.08</td>
<td>0.36</td>
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<tr>
<td>PCC-Allegro</td>
<td>5</td>
<td>484.89</td>
<td>142.68</td>
<td>1.24</td>
</tr>
<tr>
<td>PCC-Expr</td>
<td>5</td>
<td>360.08</td>
<td>151.15</td>
<td>2.63</td>
</tr>
<tr>
<td>QUIC Cubic</td>
<td>4</td>
<td>65.77</td>
<td>49.78</td>
<td>0.43</td>
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<tr>
<td>SCReAM</td>
<td>5</td>
<td>0.22</td>
<td>50.21</td>
<td>0.33</td>
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<tr>
<td>Sprout</td>
<td>5</td>
<td>8.18</td>
<td>51.01</td>
<td>0.30</td>
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<tr>
<td>TaoVA-100x</td>
<td>5</td>
<td>245.50</td>
<td>50.04</td>
<td>0.35</td>
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<tr>
<td>TCP Vegas</td>
<td>5</td>
<td>551.65</td>
<td>52.27</td>
<td>0.31</td>
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<tr>
<td>Verus</td>
<td>5</td>
<td>200.13</td>
<td>161.42</td>
<td>1.69</td>
</tr>
<tr>
<td>PCC-Vivace</td>
<td>5</td>
<td>383.12</td>
<td>74.94</td>
<td>0.44</td>
</tr>
<tr>
<td>WebRTC media</td>
<td>5</td>
<td>1.89</td>
<td>49.59</td>
<td>0.43</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

Start at: 2018-09-11 16:17:59
End at: 2018-09-11 16:18:29
Local clock offset: -0.086 ms
Remote clock offset: -0.139 ms

# Below is generated by plot.py at 2018-09-11 18:42:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 543.68 Mbit/s
95th percentile per-packet one-way delay: 122.568 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 543.68 Mbit/s
95th percentile per-packet one-way delay: 122.568 ms
Loss rate: 0.89%
Run 1: Report of TCP BBR — Data Link

![Graph showing network performance metrics over time.](image-url)
Run 2: Statistics of TCP BBR

Start at: 2018-09-11 16:43:18
End at: 2018-09-11 16:43:48
Local clock offset: -0.459 ms
Remote clock offset: -0.149 ms

# Below is generated by plot.py at 2018-09-11 18:42:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 578.02 Mbit/s
95th percentile per-packet one-way delay: 142.608 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 578.02 Mbit/s
95th percentile per-packet one-way delay: 142.608 ms
Loss rate: 1.12%
Run 2: Report of TCP BBR — Data Link

![Throughput Graph](image1)

![Delay Graph](image2)
Run 3: Statistics of TCP BBR

Start at: 2018-09-11 17:09:25
End at: 2018-09-11 17:09:55
Local clock offset: 0.254 ms
Remote clock offset: -0.004 ms

# Below is generated by plot.py at 2018-09-11 18:43:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 593.52 Mbit/s
95th percentile per-packet one-way delay: 130.535 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 593.52 Mbit/s
95th percentile per-packet one-way delay: 130.535 ms
Loss rate: 0.53%
Run 3: Report of TCP BBR — Data Link

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

**Flow 1 ingress (mean 594.66 Mbps)**

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

**Flow 1 (95th percentile 130.53 ms)**
Run 4: Statistics of TCP BBR

Start at: 2018-09-11 17:35:27
End at: 2018-09-11 17:35:57
Local clock offset: 0.234 ms
Remote clock offset: -0.036 ms

# Below is generated by plot.py at 2018-09-11 18:43:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 625.04 Mbit/s
95th percentile per-packet one-way delay: 121.246 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 625.04 Mbit/s
95th percentile per-packet one-way delay: 121.246 ms
Loss rate: 0.77%
Run 4: Report of TCP BBR — Data Link
Run 5: Statistics of TCP BBR

Start at: 2018-09-11 18:01:19
End at: 2018-09-11 18:01:49
Local clock offset: -0.127 ms
Remote clock offset: -0.087 ms

# Below is generated by plot.py at 2018-09-11 18:43:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 575.77 Mbit/s
95th percentile per-packet one-way delay: 120.532 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 575.77 Mbit/s
95th percentile per-packet one-way delay: 120.532 ms
Loss rate: 0.74%
Run 1: Statistics of Copa

Start at: 2018-09-11 16:34:30
End at: 2018-09-11 16:35:00
Local clock offset: -0.106 ms
Remote clock offset: -0.153 ms

# Below is generated by plot.py at 2018-09-11 18:43:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 354.12 Mbit/s
95th percentile per-packet one-way delay: 53.404 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 354.12 Mbit/s
95th percentile per-packet one-way delay: 53.404 ms
Loss rate: 0.32%
Run 1: Report of Copa — Data Link

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Graph 1: Throughput (Mbps)
- Flow 1 ingress (mean 354.07 Mbps)
- Flow 1 egress (mean 354.12 Mbps)

Graph 2: Per-packet one-way delay (ms)
- Flow 1 (95th percentile 53.40 ms)
Run 2: Statistics of Copa

Start at: 2018-09-11 17:00:43
End at: 2018-09-11 17:01:13
Local clock offset: -0.086 ms
Remote clock offset: -0.032 ms

# Below is generated by plot.py at 2018-09-11 18:43:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 337.86 Mbit/s
95th percentile per-packet one-way delay: 53.994 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 337.86 Mbit/s
95th percentile per-packet one-way delay: 53.994 ms
Loss rate: 0.35%
Run 2: Report of Copa — Data Link

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

- Flow 1 ingress (mean 337.93 Mbit/s)
- Flow 1 egress (mean 337.86 Mbit/s)

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

Flow 1 (95th percentile 53.99 ms)
Run 3: Statistics of Copa

Start at: 2018-09-11 17:26:40
End at: 2018-09-11 17:27:10
Local clock offset: ~0.073 ms
Remote clock offset: 0.061 ms

# Below is generated by plot.py at 2018-09-11 18:44:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 375.24 Mbit/s
95th percentile per-packet one-way delay: 52.566 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 375.24 Mbit/s
95th percentile per-packet one-way delay: 52.566 ms
Loss rate: 0.35%
Run 3: Report of Copa — Data Link
Run 4: Statistics of Copa

Start at: 2018-09-11 17:52:43
End at: 2018-09-11 17:53:13
Local clock offset: -0.062 ms
Remote clock offset: -0.071 ms

# Below is generated by plot.py at 2018-09-11 18:51:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 282.15 Mbit/s
95th percentile per-packet one-way delay: 57.050 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 282.15 Mbit/s
95th percentile per-packet one-way delay: 57.050 ms
Loss rate: 0.33%
Run 4: Report of Copa — Data Link

[Graph showing throughputs and delays over time]

Legend:
- Flow 1 ingress (mean 282.14 Mbit/s)
- Flow 1 egress (mean 282.15 Mbit/s)

[Graph showing packet delay over time]

Legend:
- Flow 1 (95th percentile 57.05 ms)
Run 5: Statistics of Copa

Start at: 2018-09-11 18:18:39
End at: 2018-09-11 18:19:09
Local clock offset: -0.1 ms
Remote clock offset: -0.031 ms

# Below is generated by plot.py at 2018-09-11 18:53:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 349.08 Mbit/s
95th percentile per-packet one-way delay: 69.949 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 349.08 Mbit/s
95th percentile per-packet one-way delay: 69.949 ms
Loss rate: 0.32%
Run 5: Report of Copa — Data Link

![Graph showing throughput and delay over time with two lines indicating flow ingress and egress with mean values.](image-url)
Run 1: Statistics of TCP Cubic

Start at: 2018-09-11 16:15:15
End at: 2018-09-11 16:15:45
Local clock offset: -0.468 ms
Remote clock offset: -0.114 ms

# Below is generated by plot.py at 2018-09-11 18:53:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 651.43 Mbit/s
95th percentile per-packet one-way delay: 131.619 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 651.43 Mbit/s
95th percentile per-packet one-way delay: 131.619 ms
Loss rate: 0.55%
Run 1: Report of TCP Cubic — Data Link

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

Flow 1 ingress (mean 652.84 Mbit/s)  Flow 1 egress (mean 651.43 Mbit/s)

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

Flow 1 (95th percentile 131.62 ms)
Run 2: Statistics of TCP Cubic

Start at: 2018-09-11 16:40:33
End at: 2018-09-11 16:41:03
Local clock offset: -0.064 ms
Remote clock offset: -0.149 ms

# Below is generated by plot.py at 2018-09-11 18:53:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 648.48 Mbit/s
95th percentile per-packet one-way delay: 135.259 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 648.48 Mbit/s
95th percentile per-packet one-way delay: 135.259 ms
Loss rate: 0.57%
Run 2: Report of TCP Cubic — Data Link
Run 3: Statistics of TCP Cubic

Start at: 2018-09-11 17:06:41
End at: 2018-09-11 17:07:11
Local clock offset: -0.467 ms
Remote clock offset: 0.006 ms

# Below is generated by plot.py at 2018-09-11 18:53:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 639.49 Mbit/s
95th percentile per-packet one-way delay: 127.954 ms
Loss rate: 0.42%

-- Flow 1:
Average throughput: 639.49 Mbit/s
95th percentile per-packet one-way delay: 127.954 ms
Loss rate: 0.42%
Run 3: Report of TCP Cubic — Data Link
Run 4: Statistics of TCP Cubic

Start at: 2018-09-11 17:32:41
End at: 2018-09-11 17:33:11
Local clock offset: -0.073 ms
Remote clock offset: -0.016 ms

# Below is generated by plot.py at 2018-09-11 18:54:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 671.54 Mbit/s
95th percentile per-packet one-way delay: 95.976 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 671.54 Mbit/s
95th percentile per-packet one-way delay: 95.976 ms
Loss rate: 0.45%
Run 4: Report of TCP Cubic — Data Link

![Graph depicting throughput and packet one-way delay over time for Flow 1.](image)
Run 5: Statistics of TCP Cubic

Start at: 2018-09-11 17:58:37
End at: 2018-09-11 17:59:07
Local clock offset: -0.465 ms
Remote clock offset: -0.084 ms

# Below is generated by plot.py at 2018-09-11 18:54:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 603.37 Mbit/s
95th percentile per-packet one-way delay: 64.872 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 603.37 Mbit/s
95th percentile per-packet one-way delay: 64.872 ms
Loss rate: 0.25%
Run 5: Report of TCP Cubic — Data Link

![Graph of Throughput vs. Time]

- Flow 1 ingress (mean 602.88 Mbit/s)
- Flow 1 egress (mean 603.37 Mbit/s)

![Graph of Packet Drop Probability vs. Time]

- Flow 1 (95th percentile 64.87 ms)
Run 1: Statistics of FillP

Start at: 2018-09-11 16:30:13
End at: 2018-09-11 16:30:43
Local clock offset: -0.086 ms
Remote clock offset: -0.136 ms

# Below is generated by plot.py at 2018-09-11 19:00:13
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 844.77 Mbit/s
  95th percentile per-packet one-way delay: 118.315 ms
  Loss rate: 2.65%
-- Flow 1:
  Average throughput: 844.77 Mbit/s
  95th percentile per-packet one-way delay: 118.315 ms
  Loss rate: 2.65%
Run 1: Report of FillP — Data Link

Graph 1: Throughput (Mbps) vs Time (s)
- Flow 1 ingress (mean 864.82 Mbps)
- Flow 1 egress (mean 844.77 Mbps)

Graph 2: Per packet one way delay (ms) vs Time (s)
- Flow 1 (95th percentile 118.31 ms)
Run 2: Statistics of FillP

Start at: 2018-09-11 16:56:12
End at: 2018-09-11 16:56:42
Local clock offset: 0.247 ms
Remote clock offset: -0.075 ms

# Below is generated by plot.py at 2018-09-11 19:08:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 813.18 Mbit/s
95th percentile per-packet one-way delay: 124.035 ms
Loss rate: 3.96%
-- Flow 1:
Average throughput: 813.18 Mbit/s
95th percentile per-packet one-way delay: 124.035 ms
Loss rate: 3.96%
Run 2: Report of FillP — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 843.64 Mbps)  Flow 1 egress (mean 813.18 Mbps)

Per packet end-to-end delay (ms)

Time (s)

Flow 1 (95th percentile 124.03 ms)
Run 3: Statistics of FillP

Start at: 2018-09-11 17:22:10
End at: 2018-09-11 17:22:40
Local clock offset: -0.084 ms
Remote clock offset: 0.044 ms

# Below is generated by plot.py at 2018-09-11 19:09:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 810.83 Mbit/s
95th percentile per-packet one-way delay: 126.257 ms
Loss rate: 3.62%
-- Flow 1:
Average throughput: 810.83 Mbit/s
95th percentile per-packet one-way delay: 126.257 ms
Loss rate: 3.62%
Run 3: Report of FillP — Data Link

![Graph 1](image1.png)

**Flow 1 Ingress (mean 838.40 Mbits/s)**

**Flow 1 Egress (mean 810.83 Mbits/s)**

![Graph 2](image2.png)

**Flow 1 (95th percentile 126.26 ms)**
Run 4: Statistics of FillP

Start at: 2018-09-11 17:48:14
End at: 2018-09-11 17:48:44
Local clock offset: -0.091 ms
Remote clock offset: -0.058 ms

# Below is generated by plot.py at 2018-09-11 19:10:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 837.43 Mbit/s
95th percentile per-packet one-way delay: 122.891 ms
Loss rate: 3.69%
-- Flow 1:
Average throughput: 837.43 Mbit/s
95th percentile per-packet one-way delay: 122.891 ms
Loss rate: 3.69%
Run 4: Report of FillP — Data Link

**Graph 1:**
- **Throughput (Mbps):**
  - Time (s):
    - 0 to 30
  - Graph showing throughput over time with two lines indicating 'Flow 1 Ingress (mean 866.58 Mbps)' and 'Flow 1 egress (mean 837.43 Mbps)'.

**Graph 2:**
- **Per packet one-way delay (ms):**
  - Time (s):
    - 0 to 30
  - Graph showing per packet delay over time with a line indicating 'Flow 1 (95th percentile 122.89 ms)'.

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Run 5: Statistics of FillP

Start at: 2018-09-11 18:14:10
End at: 2018-09-11 18:14:40
Local clock offset: -0.411 ms
Remote clock offset: -0.041 ms

# Below is generated by plot.py at 2018-09-11 19:10:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 872.69 Mbit/s
95th percentile per-packet one-way delay: 115.999 ms
Loss rate: 3.28%
-- Flow 1:
Average throughput: 872.69 Mbit/s
95th percentile per-packet one-way delay: 115.999 ms
Loss rate: 3.28%
Run 5: Report of FillP — Data Link

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

- Flow 1 Ingress (mean 899.25 Mbits/s)
- Flow 1 Egress (mean 872.69 Mbits/s)

![Graph 2: Per Socket One Way Delay vs Time](image2)

- Flow 1 (95th percentile 116.00 ms)
Run 1: Statistics of FillP-Sheep

Start at: 2018-09-11 16:36:09
End at: 2018-09-11 16:36:39
Local clock offset: -0.099 ms
Remote clock offset: -0.079 ms

# Below is generated by plot.py at 2018-09-11 19:10:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 859.51 Mbit/s
95th percentile per-packet one-way delay: 90.923 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 859.51 Mbit/s
95th percentile per-packet one-way delay: 90.923 ms
Loss rate: 0.49%
Run 1: Report of FillP-Sheep — Data Link

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

- Flow 1 ingress (mean 860.86 Mbps)
- Flow 1 egress (mean 859.51 Mbps)

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

- Flow 1 (95th percentile 90.92 ms)
Run 2: Statistics of FillP-Sheep

Start at: 2018-09-11 17:02:20
End at: 2018-09-11 17:02:50
Local clock offset: -0.087 ms
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2018-09-11 19:11:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 859.27 Mbit/s
95th percentile per-packet one-way delay: 89.402 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 859.27 Mbit/s
95th percentile per-packet one-way delay: 89.402 ms
Loss rate: 0.54%
Run 2: Report of FillP-Sheep — Data Link
Run 3: Statistics of FillP-Sheep

Start at: 2018-09-11 17:28:19
End at: 2018-09-11 17:28:49
Local clock offset: -0.063 ms
Remote clock offset: 0.026 ms

# Below is generated by plot.py at 2018-09-11 19:11:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 812.62 Mbit/s
95th percentile per-packet one-way delay: 103.328 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 812.62 Mbit/s
95th percentile per-packet one-way delay: 103.328 ms
Loss rate: 0.55%
Run 3: Report of FillP-Sheep — Data Link

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

- Flow 1 ingress (mean 814.36 Mbps)
- Flow 1 egress (mean 812.62 Mbps)

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

- Flow 1 (95th percentile 103.33 ms)
Run 4: Statistics of FillP-Sheep

Start at: 2018-09-11 17:54:14
End at: 2018-09-11 17:54:44
Local clock offset: -0.082 ms
Remote clock offset: -0.079 ms

# Below is generated by plot.py at 2018-09-11 19:19:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 823.63 Mbit/s
95th percentile per-packet one-way delay: 125.081 ms
Loss rate: 2.23%
-- Flow 1:
Average throughput: 823.63 Mbit/s
95th percentile per-packet one-way delay: 125.081 ms
Loss rate: 2.23%
Run 4: Report of FillP-Sheep — Data Link

![Graph showing throughput and delay over time]

Throughput (Mbps)

Flow 1 ingress (mean 839.64 Mbps)  Flow 1 egress (mean 823.63 Mbps)

Delay (ms)

Flow 1 (95th percentile 125.08 ms)
Run 5: Statistics of FillP-Sheep

Start at: 2018-09-11 18:20:16
End at: 2018-09-11 18:20:46
Local clock offset: -0.436 ms
Remote clock offset: -0.027 ms

# Below is generated by plot.py at 2018-09-11 19:24:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 815.91 Mbit/s
95th percentile per-packet one-way delay: 115.910 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 815.91 Mbit/s
95th percentile per-packet one-way delay: 115.910 ms
Loss rate: 1.24%
Run 5: Report of FillP-Sheep — Data Link

![Graph of throughput and packet delay over time]

- **Flow 1 ingress (mean 823.44 Mbit/s)**
- **Flow 1 egress (mean 815.91 Mbit/s)**

- **Flow 1 (95th percentile 115.91 ms)**
Run 1: Statistics of Indigo

Start at: 2018-09-11 16:31:52
End at: 2018-09-11 16:32:22
Local clock offset: -0.464 ms
Remote clock offset: -0.141 ms

# Below is generated by plot.py at 2018-09-11 19:24:28
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 92.30 Mbit/s
  95th percentile per-packet one-way delay: 50.805 ms
  Loss rate: 0.37%
-- Flow 1:
  Average throughput: 92.30 Mbit/s
  95th percentile per-packet one-way delay: 50.805 ms
  Loss rate: 0.37%
Run 1: Report of Indigo — Data Link

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

- **Flow 1 ingress** (mean 92.32 Mbit/s)
- **Flow 1 egress** (mean 92.30 Mbit/s)

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

- **Flow 1** (95th percentile 50.80 ms)
Run 2: Statistics of Indigo

Start at: 2018-09-11 16:57:52
End at: 2018-09-11 16:58:22
Local clock offset: -0.144 ms
Remote clock offset: -0.073 ms

# Below is generated by plot.py at 2018-09-11 19:24:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 229.24 Mbit/s
95th percentile per-packet one-way delay: 49.875 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 229.24 Mbit/s
95th percentile per-packet one-way delay: 49.875 ms
Loss rate: 0.36%
Run 2: Report of Indigo — Data Link

![Graph showing throughput over time with two lines for flow ingress and egress with specified mean transmission rates.]

![Graph showing packet loss over time with marked 95th percentile delay.]
Run 3: Statistics of Indigo

Start at: 2018-09-11 17:23:48
End at: 2018-09-11 17:24:18
Local clock offset: -0.44 ms
Remote clock offset: 0.072 ms

# Below is generated by plot.py at 2018-09-11 19:24:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 234.25 Mbit/s
95th percentile per-packet one-way delay: 50.266 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 234.25 Mbit/s
95th percentile per-packet one-way delay: 50.266 ms
Loss rate: 0.34%
Run 4: Statistics of Indigo

Start at: 2018-09-11 17:49:53
End at: 2018-09-11 17:50:23
Local clock offset: 0.286 ms
Remote clock offset: -0.061 ms

# Below is generated by plot.py at 2018-09-11 19:24:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 228.99 Mbit/s
95th percentile per-packet one-way delay: 51.362 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 228.99 Mbit/s
95th percentile per-packet one-way delay: 51.362 ms
Loss rate: 0.35%
Run 4: Report of Indigo — Data Link

**Graph 1:**
- Y-axis: Throughput (Mbps)
- X-axis: Time (s)
- Graph shows two lines:
  - Dotted line: Flow 1 ingress (mean 229.01 Mbit/s)
  - Solid line: Flow 1 egress (mean 228.99 Mbit/s)

**Graph 2:**
- Y-axis: Packet delay (ms)
- X-axis: Time (s)
- Graph shows a distribution of packet delays, with a 95th percentile of 51.36 ms.

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Run 5: Statistics of Indigo

Start at: 2018-09-11 18:15:49
End at: 2018-09-11 18:16:19
Local clock offset: -0.079 ms
Remote clock offset: -0.011 ms

# Below is generated by plot.py at 2018-09-11 19:24:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 229.09 Mbit/s
95th percentile per-packet one-way delay: 51.026 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 229.09 Mbit/s
95th percentile per-packet one-way delay: 51.026 ms
Loss rate: 0.37%
Run 5: Report of Indigo — Data Link
Run 1: Statistics of LEDBAT

Start at: 2018-09-11 16:27:57
End at: 2018-09-11 16:28:28
Local clock offset: -0.12 ms
Remote clock offset: -0.079 ms

# Below is generated by plot.py at 2018-09-11 19:24:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 29.86 Mbit/s
95th percentile per-packet one-way delay: 51.133 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 29.86 Mbit/s
95th percentile per-packet one-way delay: 51.133 ms
Loss rate: 0.29%
Run 1: Report of LEDBAT — Data Link

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

- **Throughput (Mbps)**
- **Time (s)**
- **Flow 1 ingress (mean 29.84 Mbps)**
- **Flow 1 egress (mean 29.86 Mbps)**

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

- **Per-packet end-to-end delay (ms)**
- **Time (s)**
- **Flow 1 (95th percentile 51.13 ms)**
Run 2: Statistics of LEDBAT

Start at: 2018-09-11 16:53:22
End at: 2018-09-11 16:53:52
Local clock offset: -0.154 ms
Remote clock offset: -0.09 ms

# Below is generated by plot.py at 2018-09-11 19:24:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 36.28 Mbit/s
95th percentile per-packet one-way delay: 51.156 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 36.28 Mbit/s
95th percentile per-packet one-way delay: 51.156 ms
Loss rate: 0.67%
Run 2: Report of LEDBAT — Data Link

![Graph showing throughput over time for Flow 1 ingress and egress.]

- Flow 1 ingress (mean 36.41 Mbit/s)
- Flow 1 egress (mean 36.28 Mbit/s)

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

- Flow 1 (95th percentile 51.16 ms)
Run 3: Statistics of LEDBAT

Start at: 2018-09-11 17:19:21
End at: 2018-09-11 17:19:51
Local clock offset: -0.121 ms
Remote clock offset: 0.04 ms

# Below is generated by plot.py at 2018-09-11 19:24:28
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 36.47 Mbit/s
  95th percentile per-packet one-way delay: 51.302 ms
  Loss rate: 0.67%
-- Flow 1:
  Average throughput: 36.47 Mbit/s
  95th percentile per-packet one-way delay: 51.302 ms
  Loss rate: 0.67%
Run 3: Report of LEDBAT — Data Link

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

Start at: 2018-09-11 17:45:25
End at: 2018-09-11 17:45:55
Local clock offset: 0.238 ms
Remote clock offset: -0.058 ms

# Below is generated by plot.py at 2018-09-11 19:24:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 36.50 Mbit/s
95th percentile per-packet one-way delay: 51.756 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 36.50 Mbit/s
95th percentile per-packet one-way delay: 51.756 ms
Loss rate: 0.67%
Run 4: Report of LEDBAT — Data Link

[Graph showing throughput over time with labels for Flow 1 ingress (mean 36.62 Mbit/s) and Flow 1 egress (mean 36.50 Mbit/s).]

[Graph showing per-packet one-way delay over time with label for Flow 1 95th percentile 51.76 ms.]
Run 5: Statistics of LEDBAT

Start at: 2018-09-11 18:11:21
End at: 2018-09-11 18:11:51
Local clock offset: -0.423 ms
Remote clock offset: -0.064 ms

# Below is generated by plot.py at 2018-09-11 19:24:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 37.03 Mbit/s
95th percentile per-packet one-way delay: 52.094 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 37.03 Mbit/s
95th percentile per-packet one-way delay: 52.094 ms
Loss rate: 0.66%
Run 5: Report of LEDBAT — Data Link
Run 1: Statistics of Indigo-Muses

Start at: 2018-09-11 16:29:07
End at: 2018-09-11 16:29:37
Local clock offset: 0.247 ms
Remote clock offset: -0.112 ms
Run 1: Report of Indigo-Muses — Data Link

---

**Throughput (Mbit/s)**

- Flow 1 ingress (mean 0.00 Mbit/s)
- Flow 1 egress (mean 0.00 Mbit/s)

---

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

- Flow 1 (95th percentile 51.90 ms)
Run 2: Statistics of Indigo-Muses

Start at: 2018-09-11 16:54:32
End at: 2018-09-11 16:55:02
Local clock offset: 0.263 ms
Remote clock offset: -0.093 ms

# Below is generated by plot.py at 2018-09-11 19:26:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 715.87 Mbit/s
95th percentile per-packet one-way delay: 68.336 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 715.87 Mbit/s
95th percentile per-packet one-way delay: 68.336 ms
Loss rate: 0.37%
Run 2: Report of Indigo-Muses — Data Link

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

*Flow 1 ingress (mean 716.20 Mbps)  Flow 1 egress (mean 715.87 Mbps)*

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

*Flow 1 (95th percentile 68.34 ms)*
Run 3: Statistics of Indigo-Muses

Start at: 2018-09-11 17:20:31
End at: 2018-09-11 17:21:01
Local clock offset: -0.085 ms
Remote clock offset: 0.056 ms

# Below is generated by plot.py at 2018-09-11 19:27:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 709.20 Mbit/s
95th percentile per-packet one-way delay: 72.422 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 709.20 Mbit/s
95th percentile per-packet one-way delay: 72.422 ms
Loss rate: 0.40%
Run 3: Report of Indigo-Muses — Data Link

![Graph of network throughput and packet delay](image-url)

Throughput (Mbps)

Flow 1 ingress (mean 709.78 Mbit/s)  Flow 1 egress (mean 709.20 Mbit/s)

Packet delay (ms)

Flow 1 (95th percentile 72.42 ms)
Run 4: Statistics of Indigo-Muses

Start at: 2018-09-11 17:46:35
End at: 2018-09-11 17:47:05
Local clock offset: -0.415 ms
Remote clock offset: -0.089 ms

# Below is generated by plot.py at 2018-09-11 19:28:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 678.46 Mbit/s
95th percentile per-packet one-way delay: 71.363 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 678.46 Mbit/s
95th percentile per-packet one-way delay: 71.363 ms
Loss rate: 0.32%
Run 4: Report of Indigo-Muses — Data Link

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

- **Flow 1 ingress** (mean 678.32 Mbit/s)
- **Flow 1 egress** (mean 678.46 Mbit/s)

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

**Flow 1** (95th percentile 71.36 ms)
Run 5: Statistics of Indigo-Muses

Start at: 2018-09-11 18:12:31
End at: 2018-09-11 18:13:01
Local clock offset: -0.089 ms
Remote clock offset: -0.034 ms

# Below is generated by plot.py at 2018-09-11 19:30:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 699.91 Mbit/s
95th percentile per-packet one-way delay: 72.200 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 699.91 Mbit/s
95th percentile per-packet one-way delay: 72.200 ms
Loss rate: 0.34%
Run 5: Report of Indigo-Muses — Data Link

![Graphs showing throughput and ping times for different flows.](image-url)

- Flow 1 ingress (mean 699.91 Mbit/s)
- Flow 1 egress (mean 699.91 Mbit/s)

- Flow 1 (95th percentile 72.20 ms)
Run 1: Statistics of PCC-Allegro

Start at: 2018-09-11 16:13:39
End at: 2018-09-11 16:14:09
Local clock offset: -0.137 ms
Remote clock offset: -0.116 ms

# Below is generated by plot.py at 2018-09-11 19:32:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 458.60 Mbit/s
95th percentile per-packet one-way delay: 139.675 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 458.60 Mbit/s
95th percentile per-packet one-way delay: 139.675 ms
Loss rate: 0.56%
Run 1: Report of PCC-Allegro — Data Link
Run 2: Statistics of PCC-Allegro

Start at: 2018-09-11 16:38:55
End at: 2018-09-11 16:39:25
Local clock offset: -0.452 ms
Remote clock offset: -0.162 ms

# Below is generated by plot.py at 2018-09-11 19:33:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 498.74 Mbit/s
95th percentile per-packet one-way delay: 150.589 ms
Loss rate: 2.08%
-- Flow 1:
Average throughput: 498.74 Mbit/s
95th percentile per-packet one-way delay: 150.589 ms
Loss rate: 2.08%
Run 2: Report of PCC-Allegro — Data Link

![Graph 1: Throughput (Mbps)]

- **Flow 1 ingress** (mean 507.63 Mbps)
- **Flow 1 egress** (mean 498.74 Mbps)

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

- **Flow 1** (95th percentile 150.59 ms)
Run 3: Statistics of PCC-Allegro

Start at: 2018-09-11 17:05:06
End at: 2018-09-11 17:05:36
Local clock offset: -0.067 ms
Remote clock offset: 0.022 ms

# Below is generated by plot.py at 2018-09-11 19:33:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 462.28 Mbit/s
95th percentile per-packet one-way delay: 126.028 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 462.28 Mbit/s
95th percentile per-packet one-way delay: 126.028 ms
Loss rate: 0.50%
Run 3: Report of PCC-Allegro — Data Link

![Graph showing network performance metrics](chart_1.png)

- **Flow 1 ingress (mean 463.04 Mbit/s)**
- **Flow 1 egress (mean 462.28 Mbit/s)**

![Graph showing packet delay](chart_2.png)

- **Flow 1 (95th percentile 126.03 ms)**
Run 4: Statistics of PCC-Allegro

Start at: 2018-09-11 17:31:04
End at: 2018-09-11 17:31:34
Local clock offset: -0.468 ms
Remote clock offset: -0.012 ms

# Below is generated by plot.py at 2018-09-11 19:42:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 512.32 Mbit/s
95th percentile per-packet one-way delay: 146.987 ms
Loss rate: 1.65%
-- Flow 1:
Average throughput: 512.32 Mbit/s
95th percentile per-packet one-way delay: 146.987 ms
Loss rate: 1.65%
Run 4: Report of PCC-Allegro — Data Link
Run 5: Statistics of PCC-Allegro

Start at: 2018-09-11 17:57:00
End at: 2018-09-11 17:57:30
Local clock offset: -0.436 ms
Remote clock offset: -0.024 ms

# Below is generated by plot.py at 2018-09-11 19:43:52
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 492.52 Mbit/s
  95th percentile per-packet one-way delay: 150.136 ms
  Loss rate: 1.43%
-- Flow 1:
  Average throughput: 492.52 Mbit/s
  95th percentile per-packet one-way delay: 150.136 ms
  Loss rate: 1.43%
Run 5: Report of PCC-Allegro — Data Link

![Graph 1: Throughput over time](chart1)

- Flow 1 ingress (mean 497.97 Mbit/s)
- Flow 1 egress (mean 492.52 Mbit/s)

![Graph 2: Packet delay over time](chart2)

- Flow 1 (95th percentile 150.14 ms)
Run 1: Statistics of PCC-Expr

Start at: 2018-09-11 16:19:34
End at: 2018-09-11 16:20:04
Local clock offset: -0.133 ms
Remote clock offset: -0.12 ms

# Below is generated by plot.py at 2018-09-11 19:43:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 352.22 Mbit/s
95th percentile per-packet one-way delay: 137.233 ms
Loss rate: 1.75%
-- Flow 1:
Average throughput: 352.22 Mbit/s
95th percentile per-packet one-way delay: 137.233 ms
Loss rate: 1.75%
Run 1: Report of PCC-Expr — Data Link
Run 2: Statistics of PCC-Expr

Start at: 2018-09-11 16:44:53
End at: 2018-09-11 16:45:23
Local clock offset: -0.115 ms
Remote clock offset: -0.121 ms

# Below is generated by plot.py at 2018-09-11 19:43:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 368.55 Mbit/s
95th percentile per-packet one-way delay: 137.604 ms
Loss rate: 1.77%
-- Flow 1:
Average throughput: 368.55 Mbit/s
95th percentile per-packet one-way delay: 137.604 ms
Loss rate: 1.77%
Run 2: Report of PCC-Expr — Data Link

[Graphs showing throughput and packet delay over time]
Run 3: Statistics of PCC-Expr

Start at: 2018-09-11 17:11:01
End at: 2018-09-11 17:11:31
Local clock offset: -0.428 ms
Remote clock offset: 0.038 ms

# Below is generated by plot.py at 2018-09-11 19:43:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 355.36 Mbit/s
95th percentile per-packet one-way delay: 142.891 ms
Loss rate: 1.75%
-- Flow 1:
Average throughput: 355.36 Mbit/s
95th percentile per-packet one-way delay: 142.891 ms
Loss rate: 1.75%
Run 3: Report of PCC-Expr — Data Link

![Graph 1](image1.png)

![Graph 2](image2.png)
Run 4: Statistics of PCC-Expr

Start at: 2018-09-11 17:37:04
End at: 2018-09-11 17:37:34
Local clock offset: +0.08 ms
Remote clock offset: +0.054 ms

# Below is generated by plot.py at 2018-09-11 19:45:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 368.59 Mbit/s
95th percentile per-packet one-way delay: 176.702 ms
Loss rate: 4.08%
-- Flow 1:
Average throughput: 368.59 Mbit/s
95th percentile per-packet one-way delay: 176.702 ms
Loss rate: 4.08%
Run 4: Report of PCC-Expr — Data Link

![Throughput Graph]

- Flow 1 ingress (mean 382.98 Mbit/s)
- Flow 1 egress (mean 368.59 Mbit/s)

![Packet Delay Graph]

- Flow 1 (95th percentile 176.70 ms)
Run 5: Statistics of PCC-Expr

Start at: 2018-09-11 18:02:54
End at: 2018-09-11 18:03:24
Local clock offset: -0.127 ms
Remote clock offset: -0.076 ms

# Below is generated by plot.py at 2018-09-11 19:46:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 355.69 Mbit/s
95th percentile per-packet one-way delay: 161.314 ms
Loss rate: 3.81%
-- Flow 1:
Average throughput: 355.69 Mbit/s
95th percentile per-packet one-way delay: 161.314 ms
Loss rate: 3.81%
Run 5: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 368.56 Mbps)
- Flow 1 egress (mean 355.69 Mbps)

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

- Flow 1 (95th percentile 161.31 ms)
Run 1: Statistics of QUIC Cubic

Start at: 2018-09-11 16:25:23
End at: 2018-09-11 16:25:53
Local clock offset: -0.488 ms
Remote clock offset: -0.133 ms
Run 1: Report of QUIC Cubic — Data Link
Run 2: Statistics of QUIC Cubic

Start at: 2018-09-11 16:50:43
End at: 2018-09-11 16:51:13
Local clock offset: -0.147 ms
Remote clock offset: -0.155 ms

# Below is generated by plot.py at 2018-09-11 19:46:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.46 Mbit/s
95th percentile per-packet one-way delay: 50.054 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 78.46 Mbit/s
95th percentile per-packet one-way delay: 50.054 ms
Loss rate: 0.00%
Run 2: Report of QUIC Cubic — Data Link
Run 3: Statistics of QUIC Cubic

Start at: 2018-09-11 17:16:43
End at: 2018-09-11 17:17:13
Local clock offset: -0.065 ms
Remote clock offset: 0.038 ms

# Below is generated by plot.py at 2018-09-11 19:46:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 74.03 Mbit/s
95th percentile per-packet one-way delay: 49.452 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 74.03 Mbit/s
95th percentile per-packet one-way delay: 49.452 ms
Loss rate: 0.48%
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic

Start at: 2018-09-11 17:42:48
End at: 2018-09-11 17:43:18
Local clock offset: -0.077 ms
Remote clock offset: -0.051 ms

# Below is generated by plot.py at 2018-09-11 19:46:50
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 46.21 Mbit/s
  95th percentile per-packet one-way delay: 50.148 ms
  Loss rate: 0.70%
-- Flow 1:
  Average throughput: 46.21 Mbit/s
  95th percentile per-packet one-way delay: 50.148 ms
  Loss rate: 0.70%
Run 4: Report of QUIC Cubic — Data Link

![Graph showing throughput over time for different flow rates.]

- Flow 1 ingress (mean 46.38 Mbit/s)
- Flow 1 egress (mean 46.21 Mbit/s)

![Graph showing per-packet one-way delay over time for Flow 1.]

- Flow 1 (95th percentile 50.15 ms)
Run 5: Statistics of QUIC Cubic

Start at: 2018-09-11 18:08:43
End at: 2018-09-11 18:09:13
Local clock offset: -0.068 ms
Remote clock offset: -0.064 ms

# Below is generated by plot.py at 2018-09-11 19:46:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 64.39 Mbit/s
95th percentile per-packet one-way delay: 49.461 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 64.39 Mbit/s
95th percentile per-packet one-way delay: 49.461 ms
Loss rate: 0.53%
Run 5: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

Start at: 2018-09-11 16:21:10
End at: 2018-09-11 16:21:40
Local clock offset: -0.476 ms
Remote clock offset: -0.147 ms

# Below is generated by plot.py at 2018-09-11 19:46:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.982 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.982 ms
Loss rate: 0.38%
Run 2: Statistics of SCReAM

Start at: 2018-09-11 16:46:32
End at: 2018-09-11 16:47:02
Local clock offset: 0.26 ms
Remote clock offset: -0.142 ms

# Below is generated by plot.py at 2018-09-11 19:46:50
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.616 ms
  Loss rate: 0.26%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.616 ms
  Loss rate: 0.26%
Run 2: Report of SCReAM — Data Link

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

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

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

- Flow 1 (95th percentile 50.62 ms)
Run 3: Statistics of SCReAM

Start at: 2018-09-11 17:12:37
End at: 2018-09-11 17:13:07
Local clock offset: -0.086 ms
Remote clock offset: 0.039 ms

# Below is generated by plot.py at 2018-09-11 19:46:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.860 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.860 ms
Loss rate: 0.39%
Run 3: Report of SCReAM — Data Link

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

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 0.22 Mbps)
  - Flow 1 egress (mean 0.22 Mbps)

- **Packet delay (ms)**
  - Flow 1 (95th percentile 50.86 ms)
Run 4: Statistics of SCReAM

Start at: 2018-09-11 17:38:42
End at: 2018-09-11 17:39:12
Local clock offset: 0.275 ms
Remote clock offset: -0.053 ms

# Below is generated by plot.py at 2018-09-11 19:46:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.230 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.230 ms
Loss rate: 0.26%
Run 4: Report of SCReAM — Data Link

![Throughput Graph](image1)

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

![Delay Graph](image2)

- Flow 1 95th percentile 49.23 ms
Run 5: Statistics of SCReAM

Start at: 2018-09-11 18:04:31
End at: 2018-09-11 18:05:01
Local clock offset: -0.074 ms
Remote clock offset: -0.078 ms

# Below is generated by plot.py at 2018-09-11 19:46:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.343 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.343 ms
Loss rate: 0.38%
Run 1: Statistics of Sprout

Start at: 2018-09-11 16:16:52
End at: 2018-09-11 16:17:22
Local clock offset: -0.088 ms
Remote clock offset: -0.113 ms

# Below is generated by plot.py at 2018-09-11 19:46:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.13 Mbit/s
95th percentile per-packet one-way delay: 51.270 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 8.13 Mbit/s
95th percentile per-packet one-way delay: 51.270 ms
Loss rate: 0.43%
Run 1: Report of Sprout — Data Link
Run 2: Statistics of Sprout

Start at: 2018-09-11 16:42:10
End at: 2018-09-11 16:42:40
Local clock offset: -0.104 ms
Remote clock offset: -0.127 ms

# Below is generated by plot.py at 2018-09-11 19:46:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.08 Mbit/s
95th percentile per-packet one-way delay: 51.509 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 8.08 Mbit/s
95th percentile per-packet one-way delay: 51.509 ms
Loss rate: 0.42%
Run 2: Report of Sprout — Data Link

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

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 8.09 Mbps)
  - Flow 1 egress (mean 8.06 Mbps)

- **Per-packet one-way delay (ms)**
  - Flow 1 (99th percentile 51.31 ms)
Run 3: Statistics of Sprout

Start at: 2018-09-11 17:08:18
End at: 2018-09-11 17:08:48
Local clock offset: 0.279 ms
Remote clock offset: -0.044 ms

# Below is generated by plot.py at 2018-09-11 19:46:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.20 Mbit/s
95th percentile per-packet one-way delay: 51.425 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 8.20 Mbit/s
95th percentile per-packet one-way delay: 51.425 ms
Loss rate: 0.18%
Run 3: Report of Sprout — Data Link

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

Flow 1 ingress (mean 8.19 Mbps/s) vs Flow 1 egress (mean 8.20 Mbps/s)

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

Flow 1 (90th percentile 51.42 ms)
Run 4: Statistics of Sprout

Start at: 2018-09-11 17:34:20
End at: 2018-09-11 17:34:50
Local clock offset: -0.061 ms
Remote clock offset: 0.009 ms

# Below is generated by plot.py at 2018-09-11 19:46:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.28 Mbit/s
95th percentile per-packet one-way delay: 49.675 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 8.28 Mbit/s
95th percentile per-packet one-way delay: 49.675 ms
Loss rate: 0.04%
Run 4: Report of Sprout — Data Link
Run 5: Statistics of Sprout

Start at: 2018-09-11 18:00:11
End at: 2018-09-11 18:00:41
Local clock offset: -0.445 ms
Remote clock offset: -0.087 ms

# Below is generated by plot.py at 2018-09-11 19:46:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.21 Mbit/s
95th percentile per-packet one-way delay: 51.155 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 8.21 Mbit/s
95th percentile per-packet one-way delay: 51.155 ms
Loss rate: 0.42%
Run 5: Report of Sprout — Data Link
Run 1: Statistics of TaoVA-100x

Start at: 2018-09-11 16:26:29
End at: 2018-09-11 16:26:59
Local clock offset: -0.056 ms
Remote clock offset: -0.02 ms

# Below is generated by plot.py at 2018-09-11 19:48:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 247.37 Mbit/s
95th percentile per-packet one-way delay: 50.189 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 247.37 Mbit/s
95th percentile per-packet one-way delay: 50.189 ms
Loss rate: 0.35%
Run 1: Report of TaoVA-100x — Data Link
Run 2: Statistics of TaoVA-100x

Start at: 2018-09-11 16:51:54
End at: 2018-09-11 16:52:24
Local clock offset: -0.151 ms
Remote clock offset: -0.141 ms

# Below is generated by plot.py at 2018-09-11 19:48:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 246.93 Mbit/s
95th percentile per-packet one-way delay: 50.201 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 246.93 Mbit/s
95th percentile per-packet one-way delay: 50.201 ms
Loss rate: 0.36%
Run 2: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 246.99 Mbit/s)
- Flow 1 egress (mean 246.93 Mbit/s)

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

- Flow 1 (95th percentile 50.20 ms)
Run 3: Statistics of TaoVA-100x

Start at: 2018-09-11 17:17:53
End at: 2018-09-11 17:18:23
Local clock offset: -0.463 ms
Remote clock offset: 0.052 ms

# Below is generated by plot.py at 2018-09-11 19:49:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 242.95 Mbit/s
95th percentile per-packet one-way delay: 50.390 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 242.95 Mbit/s
95th percentile per-packet one-way delay: 50.390 ms
Loss rate: 0.37%
Run 3: Report of TaoVA-100x — Data Link

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

- **Flow 1 ingress (mean 243.02 Mbit/s)**
- **Flow 1 egress (mean 242.95 Mbit/s)**

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

- **Flow 1 (95th percentile 50.39 ms)**
Run 4: Statistics of TaoVA-100x

Start at: 2018-09-11 17:43:57
End at: 2018-09-11 17:44:27
Local clock offset: -0.076 ms
Remote clock offset: -0.078 ms

# Below is generated by plot.py at 2018-09-11 19:49:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 245.52 Mbit/s
95th percentile per-packet one-way delay: 48.863 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 245.52 Mbit/s
95th percentile per-packet one-way delay: 48.863 ms
Loss rate: 0.33%
Run 4: Report of TaoVA-100x — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 245.51 Mbps)
  - Flow 1 egress (mean 245.52 Mbps)

- **Packet Delay (ms):**
  - Flow 1 (99th percentile 48.86 ms)
Run 5: Statistics of TaoVA-100x

Start at: 2018-09-11 18:09:53
End at: 2018-09-11 18:10:23
Local clock offset: -0.412 ms
Remote clock offset: -0.042 ms

# Below is generated by plot.py at 2018-09-11 19:49:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 244.75 Mbit/s
95th percentile per-packet one-way delay: 50.550 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 244.75 Mbit/s
95th percentile per-packet one-way delay: 50.550 ms
Loss rate: 0.35%
Run 5: Report of TaoVA-100x — Data Link
Run 1: Statistics of TCP Vegas

Start at: 2018-09-11 16:22:17
End at: 2018-09-11 16:22:47
Local clock offset: 0.158 ms
Remote clock offset: -0.086 ms

# Below is generated by plot.py at 2018-09-11 19:53:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 558.83 Mbit/s
95th percentile per-packet one-way delay: 50.648 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 558.83 Mbit/s
95th percentile per-packet one-way delay: 50.648 ms
Loss rate: 0.35%
Run 1: Report of TCP Vegas — Data Link

![Graphs showing throughput and latency over time for TCP Vegas flows.](image-url)
Run 2: Statistics of TCP Vegas

Start at: 2018-09-11 16:47:38
End at: 2018-09-11 16:48:08
Local clock offset: 0.241 ms
Remote clock offset: -0.124 ms

# Below is generated by plot.py at 2018-09-11 19:55:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 530.00 Mbit/s
95th percentile per-packet one-way delay: 56.329 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 530.00 Mbit/s
95th percentile per-packet one-way delay: 56.329 ms
Loss rate: 0.18%
Run 2: Report of TCP Vegas — Data Link
Run 3: Statistics of TCP Vegas

Start at: 2018-09-11 17:13:44
End at: 2018-09-11 17:14:14
Local clock offset: 0.299 ms
Remote clock offset: 0.055 ms

# Below is generated by plot.py at 2018-09-11 19:57:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 559.20 Mbit/s
95th percentile per-packet one-way delay: 51.993 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 559.20 Mbit/s
95th percentile per-packet one-way delay: 51.993 ms
Loss rate: 0.34%
Run 3: Report of TCP Vegas — Data Link

![Graph 1: Throughput (Mbps)]

![Graph 2: Per-packet end-to-end delay (ms)]
Run 4: Statistics of TCP Vegas

Start at: 2018-09-11 17:39:48
End at: 2018-09-11 17:40:18
Local clock offset: -0.435 ms
Remote clock offset: -0.088 ms

# Below is generated by plot.py at 2018-09-11 19:57:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 556.91 Mbit/s
95th percentile per-packet one-way delay: 50.746 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 556.91 Mbit/s
95th percentile per-packet one-way delay: 50.746 ms
Loss rate: 0.35%
Run 4: Report of TCP Vegas — Data Link
Run 5: Statistics of TCP Vegas

Start at: 2018-09-11 18:05:38
End at: 2018-09-11 18:06:08
Local clock offset: -0.069 ms
Remote clock offset: -0.027 ms

# Below is generated by plot.py at 2018-09-11 19:57:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 553.33 Mbit/s
95th percentile per-packet one-way delay: 51.639 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 553.33 Mbit/s
95th percentile per-packet one-way delay: 51.639 ms
Loss rate: 0.35%
Run 5: Report of TCP Vegas — Data Link

![Graph of throughput and packet delay over time]

- Flow 1 ingress (mean 553.41 Mbit/s)
- Flow 1 egress (mean 553.33 Mbit/s)

- Flow 1 (99th percentile 51.64 ms)
Run 1: Statistics of Verus

Start at: 2018-09-11 16:33:06
End at: 2018-09-11 16:33:36
Local clock offset: -0.131 ms
Remote clock offset: -0.116 ms

# Below is generated by plot.py at 2018-09-11 19:57:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 201.58 Mbit/s
95th percentile per-packet one-way delay: 136.542 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 201.58 Mbit/s
95th percentile per-packet one-way delay: 136.542 ms
Loss rate: 0.03%
Run 1: Report of Verus — Data Link

![Graph of throughput over time](image1)

![Graph of packet delay over time](image2)
Run 2: Statistics of Verus

Start at: 2018-09-11 16:59:18
End at: 2018-09-11 16:59:48
Local clock offset: 0.261 ms
Remote clock offset: -0.031 ms

# Below is generated by plot.py at 2018-09-11 19:57:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 208.26 Mbit/s
95th percentile per-packet one-way delay: 169.852 ms
Loss rate: 2.20%
-- Flow 1:
Average throughput: 208.26 Mbit/s
95th percentile per-packet one-way delay: 169.852 ms
Loss rate: 2.20%
Run 2: Report of Verus — Data Link
Run 3: Statistics of Verus

Start at: 2018-09-11 17:25:15
End at: 2018-09-11 17:25:45
Local clock offset: −0.472 ms
Remote clock offset: 0.079 ms

# Below is generated by plot.py at 2018-09-11 19:57:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 198.30 Mbit/s
95th percentile per-packet one-way delay: 192.702 ms
Loss rate: 4.21%
-- Flow 1:
Average throughput: 198.30 Mbit/s
95th percentile per-packet one-way delay: 192.702 ms
Loss rate: 4.21%
Run 3: Report of Verus — Data Link

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

- Flow 1 ingress (mean 207.19 Mbps)
- Flow 1 egress (mean 198.30 Mbps)

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

- Flow 1 (95th percentile 192.70 ms)
Run 4: Statistics of Verus

Start at: 2018-09-11 17:51:19
End at: 2018-09-11 17:51:49
Local clock offset: -0.107 ms
Remote clock offset: -0.086 ms

# Below is generated by plot.py at 2018-09-11 19:59:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 192.64 Mbit/s
95th percentile per-packet one-way delay: 158.621 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 192.64 Mbit/s
95th percentile per-packet one-way delay: 158.621 ms
Loss rate: 0.78%
Run 4: Report of Verus — Data Link

![Graph showing throughput and delay over time for Flow 1 ingress and egress.](image)

- **Throughput**: The graph depicts the throughput in Mbit/s over time, with two lines indicating ingress (mean 193.50 Mbit/s) and egress (mean 192.64 Mbit/s).
- **Delay**: The second graph shows the delay per packet over time (95th percentile 158.62 ms).
Run 5: Statistics of Verus

Start at: 2018-09-11 18:17:15
End at: 2018-09-11 18:17:45
Local clock offset: 0.287 ms
Remote clock offset: -0.032 ms

# Below is generated by plot.py at 2018-09-11 20:01:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 199.88 Mbit/s
95th percentile per-packet one-way delay: 149.406 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 199.88 Mbit/s
95th percentile per-packet one-way delay: 149.406 ms
Loss rate: 1.23%
Run 5: Report of Verus — Data Link
Run 1: Statistics of PCC-Vivace

Start at: 2018-09-11 16:23:50
End at: 2018-09-11 16:24:20
Local clock offset: -0.1 ms
Remote clock offset: -0.103 ms

# Below is generated by plot.py at 2018-09-11 20:01:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 413.60 Mbit/s
95th percentile per-packet one-way delay: 51.473 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 413.60 Mbit/s
95th percentile per-packet one-way delay: 51.473 ms
Loss rate: 0.33%
Run 2: Statistics of PCC-Vivace

Start at: 2018-09-11 16:49:09
End at: 2018-09-11 16:49:39
Local clock offset: -0.068 ms
Remote clock offset: -0.169 ms

# Below is generated by plot.py at 2018-09-11 20:02:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 426.79 Mbit/s
95th percentile per-packet one-way delay: 51.353 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 426.79 Mbit/s
95th percentile per-packet one-way delay: 51.353 ms
Loss rate: 0.36%
Run 2: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 426.89 Mbit/s)
- Flow 1 egress (mean 426.79 Mbit/s)

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

- Flow 1 (95th percentile 51.35 ms)
Run 3: Statistics of PCC-Vivace

Start at: 2018-09-11 17:15:16
End at: 2018-09-11 17:15:46
Local clock offset: -0.079 ms
Remote clock offset: -0.004 ms

# Below is generated by plot.py at 2018-09-11 20:02:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 325.29 Mbit/s
95th percentile per-packet one-way delay: 50.106 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 325.29 Mbit/s
95th percentile per-packet one-way delay: 50.106 ms
Loss rate: 0.46%
Run 3: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 325.70 Mbps)
- Flow 1 egress (mean 325.29 Mbps)

![Diagram 2: Packet per-byte delay (ms) vs Time (s)]

- Flow 1 (95th percentile 50.11 ms)
Run 4: Statistics of PCC-Vivace

Start at: 2018-09-11 17:41:21
End at: 2018-09-11 17:41:51
Local clock offset: -0.073 ms
Remote clock offset: -0.076 ms

# Below is generated by plot.py at 2018-09-11 20:02:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 340.13 Mbit/s
95th percentile per-packet one-way delay: 170.455 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 340.13 Mbit/s
95th percentile per-packet one-way delay: 170.455 ms
Loss rate: 0.70%
Run 4: Report of PCC-Vivace — Data Link

![Throughput Graph](image1)

- Flow 1 ingress (mean 341.30 Mbit/s)
- Flow 1 egress (mean 340.13 Mbit/s)

![Delay Graph](image2)

- Flow 1 (95th percentile 170.46 ms)
Run 5: Statistics of PCC-Vivace

Start at: 2018-09-11 18:07:10
End at: 2018-09-11 18:07:40
Local clock offset: -0.09 ms
Remote clock offset: -0.106 ms

# Below is generated by plot.py at 2018-09-11 20:02:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 409.77 Mbit/s
95th percentile per-packet one-way delay: 51.309 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 409.77 Mbit/s
95th percentile per-packet one-way delay: 51.309 ms
Loss rate: 0.36%
Run 5: Report of PCC-Vivace — Data Link

![Graph showing throughput and packet delay for Flow 1 ingress and egress.]

Throughput (Mbps) vs. Time (s)

Flow 1 ingress (mean 409.87 Mbps)  Flow 1 egress (mean 409.77 Mbps)

Packet delay (ms) vs. Time (s)

Flow 1 (95th percentile 51.31 ms)
Run 1: Statistics of WebRTC media

Start at: 2018-09-11 16:37:48
End at: 2018-09-11 16:38:19
Local clock offset: 0.208 ms
Remote clock offset: -0.109 ms

# Below is generated by plot.py at 2018-09-11 20:02:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 49.191 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 49.191 ms
Loss rate: 0.63%
Run 1: Report of WebRTC media — Data Link

![Graph 1](image1.png)

---

![Graph 2](image2.png)
Run 2: Statistics of WebRTC media

Start at: 2018-09-11 17:04:00
End at: 2018-09-11 17:04:30
Local clock offset: -0.103 ms
Remote clock offset: 0.011 ms

# Below is generated by plot.py at 2018-09-11 20:02:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 48.873 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 48.873 ms
Loss rate: 0.35%
Run 2: Report of WebRTC media — Data Link
Run 3: Statistics of WebRTC media

Start at: 2018-09-11 17:29:57
End at: 2018-09-11 17:30:27
Local clock offset: -0.438 ms
Remote clock offset: 0.02 ms

# Below is generated by plot.py at 2018-09-11 20:02:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 49.271 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 49.271 ms
Loss rate: 0.38%
Run 3: Report of WebRTC media — Data Link

![Throughput Graph](image1)

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 1.87 Mbit/s)  Flow 1 egress (mean 1.87 Mbit/s)

![Delay Graph](image2)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 49.27 ms)
Run 4: Statistics of WebRTC media

End at: 2018-09-11 17:56:23
Local clock offset: -0.44 ms
Remote clock offset: -0.092 ms

# Below is generated by plot.py at 2018-09-11 20:02:18
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 1.91 Mbit/s
  95th percentile per-packet one-way delay: 49.943 ms
  Loss rate: 0.37%
-- Flow 1:
  Average throughput: 1.91 Mbit/s
  95th percentile per-packet one-way delay: 49.943 ms
  Loss rate: 0.37%
Run 4: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 1.91 Mbit/s)
- Flow 1 egress (mean 1.91 Mbit/s)

![Graph 2: End-to-End Delay vs Time](image2.png)

- Flow 1 (95th percentile 49.94 ms)
Run 5: Statistics of WebRTC media

End at: 2018-09-11 18:22:25
Local clock offset: -0.426 ms
Remote clock offset: -0.05 ms

# Below is generated by plot.py at 2018-09-11 20:02:18
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 1.91 Mbit/s
  95th percentile per-packet one-way delay: 50.690 ms
  Loss rate: 0.41%
-- Flow 1:
  Average throughput: 1.91 Mbit/s
  95th percentile per-packet one-way delay: 50.690 ms
  Loss rate: 0.41%
Run 5: Report of WebRTC media — Data Link

![WebRTC Media Throughput Graph](image1)

![WebRTC Media Delay Graph](image2)