Pantheon Report

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 @ e0a9b05ad97d268013b7cc9a9c95637b593a1b4c
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436db4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143ceddbfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4df0ecdbf90c077e64d
third_party/lubutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 7631ae3923a3598767c87765ae5103aca0678d3
third_party/pantheon-tunnel @ cfbce6db5ff5740dafe177f813ced646339e1952
third_party/pcc @ 1af9c958fa0d66d18b623c091a55fecd872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8ac0d0fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc97f3cf42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3dbdb2
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 @ 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>584.04</td>
<td>138.20</td>
<td>1.11</td>
</tr>
<tr>
<td>Copa</td>
<td>5</td>
<td>367.38</td>
<td>59.67</td>
<td>0.35</td>
</tr>
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<td>TCP Cubic</td>
<td>5</td>
<td>625.75</td>
<td>103.65</td>
<td>0.45</td>
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<tr>
<td>FillP</td>
<td>5</td>
<td>832.25</td>
<td>122.10</td>
<td>4.76</td>
</tr>
<tr>
<td>FillP-Sheep</td>
<td>5</td>
<td>834.58</td>
<td>111.38</td>
<td>1.22</td>
</tr>
<tr>
<td>Indigo</td>
<td>4</td>
<td>236.86</td>
<td>50.29</td>
<td>0.33</td>
</tr>
<tr>
<td>LEDBAT</td>
<td>5</td>
<td>34.75</td>
<td>50.96</td>
<td>0.45</td>
</tr>
<tr>
<td>Indigo-Muses</td>
<td>5</td>
<td>582.76</td>
<td>55.05</td>
<td>0.34</td>
</tr>
<tr>
<td>PCC-Allegro</td>
<td>5</td>
<td>489.08</td>
<td>156.33</td>
<td>2.20</td>
</tr>
<tr>
<td>PCC-Expr</td>
<td>5</td>
<td>356.06</td>
<td>137.75</td>
<td>1.66</td>
</tr>
<tr>
<td>QUIC Cubic</td>
<td>4</td>
<td>66.84</td>
<td>49.53</td>
<td>0.52</td>
</tr>
<tr>
<td>SCRReAM</td>
<td>5</td>
<td>0.22</td>
<td>50.16</td>
<td>0.33</td>
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<tr>
<td>Sprout</td>
<td>5</td>
<td>8.21</td>
<td>50.37</td>
<td>0.41</td>
</tr>
<tr>
<td>TaoVA-100x</td>
<td>5</td>
<td>244.69</td>
<td>50.20</td>
<td>0.33</td>
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<tr>
<td>TCP Vegas</td>
<td>5</td>
<td>560.44</td>
<td>56.49</td>
<td>0.28</td>
</tr>
<tr>
<td>Verus</td>
<td>5</td>
<td>192.53</td>
<td>131.38</td>
<td>2.86</td>
</tr>
<tr>
<td>PCC-Vivace</td>
<td>5</td>
<td>405.89</td>
<td>61.02</td>
<td>0.44</td>
</tr>
<tr>
<td>WebRTC media</td>
<td>5</td>
<td>1.89</td>
<td>50.17</td>
<td>0.38</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

Start at: 2018-09-08 03:55:44
End at: 2018-09-08 03:56:14
Local clock offset: -0.419 ms
Remote clock offset: -0.088 ms

# Below is generated by plot.py at 2018-09-08 06:04:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 604.44 Mbit/s
95th percentile per-packet one-way delay: 135.421 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 604.44 Mbit/s
95th percentile per-packet one-way delay: 135.421 ms
Loss rate: 0.83%
Run 1: Report of TCP BBR — Data Link

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

- **Flow 1 ingress (mean 607.42 Mbit/s)**
- **Flow 1 egress (mean 604.44 Mbit/s)**

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

- **Flow 1 (95th percentile 135.42 ms)**
Run 2: Statistics of TCP BBR

Start at: 2018-09-08 04:21:37
End at: 2018-09-08 04:22:07
Local clock offset: -0.129 ms
Remote clock offset: -0.086 ms

# Below is generated by plot.py at 2018-09-08 06:04:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 575.66 Mbit/s
95th percentile per-packet one-way delay: 131.545 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 575.66 Mbit/s
95th percentile per-packet one-way delay: 131.545 ms
Loss rate: 0.96%
Run 2: Report of TCP BBR — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 579.30 Mbit/s)
- Flow 1 egress (mean 575.66 Mbit/s)

![Graph 2: RTT (ms)]

- Flow 1 (95th percentile 131.54 ms)
Run 3: Statistics of TCP BBR

Start at: 2018-09-08 04:47:39
End at: 2018-09-08 04:48:09
Local clock offset: -0.036 ms
Remote clock offset: -0.116 ms

# Below is generated by plot.py at 2018-09-08 06:04:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 572.58 Mbit/s
95th percentile per-packet one-way delay: 140.173 ms
Loss rate: 1.35%
-- Flow 1:
Average throughput: 572.58 Mbit/s
95th percentile per-packet one-way delay: 140.173 ms
Loss rate: 1.35%
Run 3: Report of TCP BBR — Data Link

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

- **Flow 1 ingress (mean 578.44 Mbit/s)**
- **Flow 1 egress (mean 572.58 Mbit/s)**

![Graph 2: Per packet loss vs Time](image2.png)

- **Flow 1 (95th percentile 140.17 ms)**
Run 4: Statistics of TCP BBR

Start at: 2018-09-08 05:13:42
End at: 2018-09-08 05:14:12
Local clock offset: -0.033 ms
Remote clock offset: -0.081 ms

# Below is generated by plot.py at 2018-09-08 06:04:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 573.16 Mbit/s
95th percentile per-packet one-way delay: 142.220 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 573.16 Mbit/s
95th percentile per-packet one-way delay: 142.220 ms
Loss rate: 1.43%
Run 4: Report of TCP BBR — Data Link

![Throughput Graph](image1)

- **Flow 1 ingress (mean 579.51 Mbit/s)**
- **Flow 1 egress (mean 573.16 Mbit/s)**

![Packet Delay Graph](image2)

- **Flow 1 (95th percentile 142.22 ms)**
Run 5: Statistics of TCP BBR

Start at: 2018-09-08 05:39:44
End at: 2018-09-08 05:40:14
Local clock offset: -0.067 ms
Remote clock offset: -0.007 ms

# Below is generated by plot.py at 2018-09-08 06:04:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 594.36 Mbit/s
95th percentile per-packet one-way delay: 141.620 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 594.36 Mbit/s
95th percentile per-packet one-way delay: 141.620 ms
Loss rate: 0.99%
Run 5: Report of TCP BBR — Data Link

![Graph of throughput over time](image1)

![Graph of packet delay over time](image2)
Run 1: Statistics of Copa

Start at: 2018-09-08 03:52:20
End at: 2018-09-08 03:52:50
Local clock offset: -0.137 ms
Remote clock offset: -0.097 ms

# Below is generated by plot.py at 2018-09-08 06:06:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 385.41 Mbit/s
95th percentile per-packet one-way delay: 55.922 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 385.41 Mbit/s
95th percentile per-packet one-way delay: 55.922 ms
Loss rate: 0.32%
Run 1: Report of Copa — Data Link

![Graph showing throughput and packet delay over time]

- **Flow 1 ingress (mean 385.36 Mbit/s)**
- **Flow 1 egress (mean 385.41 Mbit/s)**

![Graph showing packet delay over time]

- Flow 1 (95th percentile 55.92 ms)
Run 2: Statistics of Copa

Start at: 2018-09-08 04:18:20
End at: 2018-09-08 04:18:50
Local clock offset: -0.062 ms
Remote clock offset: -0.056 ms

# Below is generated by plot.py at 2018-09-08 06:06:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 355.65 Mbit/s
95th percentile per-packet one-way delay: 55.286 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 355.65 Mbit/s
95th percentile per-packet one-way delay: 55.286 ms
Loss rate: 0.34%
Run 2: Report of Copa — Data Link

![Graph showing throughput and packet delay for Flow 1 ingress and egress with mean values.

1. Throughput Graph:
   - X-axis: Time (s)
   - Y-axis: Throughput (Mbps)
   - Legend: Flow 1 ingress (mean 355.67 Mbit/s), Flow 1 egress (mean 355.65 Mbit/s)

2. Packet Delay Graph:
   - X-axis: Time (s)
   - Y-axis: Per-packet one-way delay (ms)
   - Legend: Flow 1 (95th percentile 55.29 ms)
Run 3: Statistics of Copa

Start at: 2018-09-08 04:44:21
End at: 2018-09-08 04:44:51
Local clock offset: -0.041 ms
Remote clock offset: -0.091 ms

# Below is generated by plot.py at 2018-09-08 06:06:00
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 372.26 Mbit/s
  95th percentile per-packet one-way delay: 63.575 ms
  Loss rate: 0.36%
-- Flow 1:
  Average throughput: 372.26 Mbit/s
  95th percentile per-packet one-way delay: 63.575 ms
  Loss rate: 0.36%
Run 3: Report of Copa — Data Link

![Graph 1: Throughput](image1)

![Graph 2: Delay](image2)
Run 4: Statistics of Copa

Start at: 2018-09-08 05:10:25
End at: 2018-09-08 05:10:55
Local clock offset: -0.408 ms
Remote clock offset: -0.052 ms

# Below is generated by plot.py at 2018-09-08 06:14:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 354.33 Mbit/s
95th percentile per-packet one-way delay: 68.780 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 354.33 Mbit/s
95th percentile per-packet one-way delay: 68.780 ms
Loss rate: 0.34%
Run 4: Report of Copa — Data Link

![Graph showing throughput and packet delay over time.](image)
Run 5: Statistics of Copa

Start at: 2018-09-08 05:36:26
End at: 2018-09-08 05:36:56
Local clock offset: -0.046 ms
Remote clock offset: -0.04 ms

# Below is generated by plot.py at 2018-09-08 06:15:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 369.25 Mbit/s
95th percentile per-packet one-way delay: 54.805 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 369.25 Mbit/s
95th percentile per-packet one-way delay: 54.805 ms
Loss rate: 0.37%
Run 5: Report of Copa — Data Link

![Graph showing throughput and packet delay over time](image)
Run 1: Statistics of TCP Cubic

Start at: 2018-09-08 03:43:51
End at: 2018-09-08 03:44:21
Local clock offset: -0.498 ms
Remote clock offset: -0.086 ms

# Below is generated by plot.py at 2018-09-08 06:15:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 622.46 Mbit/s
95th percentile per-packet one-way delay: 114.780 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 622.46 Mbit/s
95th percentile per-packet one-way delay: 114.780 ms
Loss rate: 0.52%
Run 1: Report of TCP Cubic — Data Link

Throughput (kbps)

Time (s)

Flow 1 ingress (mean 623.63 Mbit/s)  Flow 1 egress (mean 622.46 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 114.78 ms)
Run 2: Statistics of TCP Cubic

Start at: 2018-09-08 04:09:59
End at: 2018-09-08 04:10:29
Local clock offset: -0.076 ms
Remote clock offset: -0.072 ms

# Below is generated by plot.py at 2018-09-08 06:15:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 542.73 Mbit/s
95th percentile per-packet one-way delay: 50.773 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 542.73 Mbit/s
95th percentile per-packet one-way delay: 50.773 ms
Loss rate: 0.26%
Run 2: Report of TCP Cubic — Data Link

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

Legend:
- Flow 1 ingress (mean 542.36 Mbit/s)
- Flow 1 egress (mean 542.73 Mbit/s)

![Graph showing packet delay over time.]

Legend:
- Flow 1 (95th percentile 50.77 ms)
Run 3: Statistics of TCP Cubic

Start at: 2018-09-08 04:35:52
End at: 2018-09-08 04:36:22
Local clock offset: -0.055 ms
Remote clock offset: -0.092 ms

# Below is generated by plot.py at 2018-09-08 06:15:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 675.44 Mbit/s
95th percentile per-packet one-way delay: 132.646 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 675.44 Mbit/s
95th percentile per-packet one-way delay: 132.646 ms
Loss rate: 0.47%
Run 3: Report of TCP Cubic — Data Link

![Graph showing network performance metrics](image1)

- **Flow 1 ingress (mean 676.32 Mbit/s)**
- **Flow 1 egress (mean 675.44 Mbit/s)**

![Graph showing packet delay](image2)

- **Flow 1 (95th percentile 132.65 ms)**
Run 4: Statistics of TCP Cubic

Start at: 2018-09-08 05:01:51
End at: 2018-09-08 05:02:21
Local clock offset: -0.047 ms
Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2018-09-08 06:15:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 643.43 Mbit/s
95th percentile per-packet one-way delay: 131.184 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 643.43 Mbit/s
95th percentile per-packet one-way delay: 131.184 ms
Loss rate: 0.53%
Run 4: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 644.69 Mbit/s)
- Flow 1 egress (mean 643.43 Mbit/s)

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

- Flow 1 (95th percentile 131.18 ms)
Run 5: Statistics of TCP Cubic

Start at: 2018-09-08 05:27:58
End at: 2018-09-08 05:28:28
Local clock offset: ~0.073 ms
Remote clock offset: ~0.04 ms

# Below is generated by plot.py at 2018-09-08 06:16:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 644.67 Mbit/s
95th percentile per-packet one-way delay: 88.865 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 644.67 Mbit/s
95th percentile per-packet one-way delay: 88.865 ms
Loss rate: 0.47%
Run 5: Report of TCP Cubic — Data Link

![Graph of Throughput and Delay](image1)

**Throughput:**
- Flow 1 ingress (mean 645.55 Mbit/s)
- Flow 1 egress (mean 644.67 Mbit/s)

**Delay:**
- Flow 1 (95th percentile 88.86 ms)
Run 1: Statistics of FillP

Start at: 2018-09-08 03:54:01
End at: 2018-09-08 03:54:31
Local clock offset: ~0.111 ms
Remote clock offset: ~0.119 ms

# Below is generated by plot.py at 2018-09-08 06:23:44
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 927.56 Mbit/s
  95th percentile per-packet one-way delay: 101.993 ms
  Loss rate: 1.26%
-- Flow 1:
  Average throughput: 927.56 Mbit/s
  95th percentile per-packet one-way delay: 101.993 ms
  Loss rate: 1.26%
Run 1: Report of FillP — Data Link

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

- Flow 1 ingress (mean 936.16 Mbps)
- Flow 1 egress (mean 927.56 Mbps)

- Flow 1 (95th percentile 101.99 ms)
Run 2: Statistics of FillP

Start at: 2018-09-08 04:19:58
End at: 2018-09-08 04:20:28
Local clock offset: -0.09 ms
Remote clock offset: -0.102 ms

# Below is generated by plot.py at 2018-09-08 06:30:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 839.92 Mbit/s
95th percentile per-packet one-way delay: 118.596 ms
Loss rate: 3.88%
-- Flow 1:
Average throughput: 839.92 Mbit/s
95th percentile per-packet one-way delay: 118.596 ms
Loss rate: 3.88%
Run 2: Report of FillP — Data Link
Run 3: Statistics of FillP

Start at: 2018-09-08 04:46:01
End at: 2018-09-08 04:46:31
Local clock offset: -0.366 ms
Remote clock offset: -0.123 ms

# Below is generated by plot.py at 2018-09-08 06:30:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 797.08 Mbit/s
95th percentile per-packet one-way delay: 128.291 ms
Loss rate: 6.38%
-- Flow 1:
Average throughput: 797.08 Mbit/s
95th percentile per-packet one-way delay: 128.291 ms
Loss rate: 6.38%
Run 3: Report of FillP — Data Link

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

- **Flow 1 ingress** (mean 848.52 Mbps)
- **Flow 1 egress** (mean 797.08 Mbps)

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

- Flow 1 (95th percentile 128.29 ms)
Run 4: Statistics of FillP

Start at: 2018-09-08 05:12:04
End at: 2018-09-08 05:12:34
Local clock offset: 0.303 ms
Remote clock offset: -0.081 ms

# Below is generated by plot.py at 2018-09-08 06:30:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 776.16 Mbit/s
95th percentile per-packet one-way delay: 133.922 ms
Loss rate: 7.07%
-- Flow 1:
Average throughput: 776.16 Mbit/s
95th percentile per-packet one-way delay: 133.922 ms
Loss rate: 7.07%
Run 4: Report of FillP — Data Link
Run 5: Statistics of FillIP

Start at: 2018-09-08 05:38:06
End at: 2018-09-08 05:38:36
Local clock offset: -0.078 ms
Remote clock offset: -0.023 ms

# Below is generated by plot.py at 2018-09-08 06:31:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 820.53 Mbit/s
95th percentile per-packet one-way delay: 127.686 ms
Loss rate: 5.21%
-- Flow 1:
Average throughput: 820.53 Mbit/s
95th percentile per-packet one-way delay: 127.686 ms
Loss rate: 5.21%
Run 5: Report of FillP — Data Link

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

- Flow 1 ingress (mean 862.67 Mbit/s)
- Flow 1 egress (mean 820.53 Mbit/s)

- Flow 1 (95th percentile 127.69 ms)
Run 1: Statistics of FillP-Sheep

Start at: 2018-09-08 03:48:11
End at: 2018-09-08 03:48:41
Local clock offset: -0.534 ms
Remote clock offset: -0.099 ms

# Below is generated by plot.py at 2018-09-08 06:31:47
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 792.03 Mbit/s
  95th percentile per-packet one-way delay: 117.008 ms
  Loss rate: 1.26%
-- Flow 1:
  Average throughput: 792.03 Mbit/s
  95th percentile per-packet one-way delay: 117.008 ms
  Loss rate: 1.26%
Run 1: Report of FillP-Sheep — Data Link

![Graph of data transmission over time]

- **Flow 1 Ingress** (mean 799.42 Mbps)
- **Flow 1 Egress** (mean 792.03 Mbps)

![Graph of packet delay over time]

- **Flow 1** (95th percentile 117.01 ms)
Run 2: Statistics of FillP-Sheep

Start at: 2018-09-08 04:14:12
End at: 2018-09-08 04:14:42
Local clock offset: -0.46 ms
Remote clock offset: -0.082 ms

# Below is generated by plot.py at 2018-09-08 06:32:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 805.54 Mbit/s
95th percentile per-packet one-way delay: 106.588 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 805.54 Mbit/s
95th percentile per-packet one-way delay: 106.588 ms
Loss rate: 0.86%
Run 2: Report of FillP-Sheep — Data Link
Run 3: Statistics of FillP-Sheep

Start at: 2018-09-08 04:40:14
End at: 2018-09-08 04:40:44
Local clock offset: 0.326 ms
Remote clock offset: -0.1 ms

# Below is generated by plot.py at 2018-09-08 06:33:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 837.25 Mbit/s
95th percentile per-packet one-way delay: 106.645 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 837.25 Mbit/s
95th percentile per-packet one-way delay: 106.645 ms
Loss rate: 0.95%
Run 3: Report of FillP-Sheep — Data Link

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

- Flow 1 ingress (mean 842.42 Mb/s) vs. Flow 1 egress (mean 837.25 Mb/s)

![Graph showing packet delay over time.]

- Flow 1 (95th percentile 106.64 ms)
Run 4: Statistics of FillP-Sheep

Start at: 2018-09-08 05:06:13
End at: 2018-09-08 05:06:43
Local clock offset: -0.415 ms
Remote clock offset: -0.091 ms

# Below is generated by plot.py at 2018-09-08 06:44:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 885.60 Mbit/s
95th percentile per-packet one-way delay: 119.395 ms
Loss rate: 1.91%
-- Flow 1:
Average throughput: 885.60 Mbit/s
95th percentile per-packet one-way delay: 119.395 ms
Loss rate: 1.91%
Run 4: Report of FillP-Sheep — Data Link
Run 5: Statistics of FillP-Sheep

Start at: 2018-09-08 05:32:18
End at: 2018-09-08 05:32:48
Local clock offset: 0.274 ms
Remote clock offset: -0.094 ms

# Below is generated by plot.py at 2018-09-08 06:47:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 852.46 Mbit/s
95th percentile per-packet one-way delay: 107.287 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 852.46 Mbit/s
95th percentile per-packet one-way delay: 107.287 ms
Loss rate: 1.14%
Run 5: Report of FillP-Sheep — Data Link

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

- Flow 1 Ingress (mean 859.42 Mbps)
- Flow 1 Egress (mean 852.46 Mbps)

![Graph 2: Per Packet One Way Delay (ms)]

- Flow 1 (95th percentile 107.29 ms)
Run 1: Statistics of Indigo

Start at: 2018-09-08 03:37:20
End at: 2018-09-08 03:37:50
Local clock offset: -0.494 ms
Remote clock offset: -0.121 ms
Run 1: Report of Indigo — Data Link

![Graph showing throughput over time](image)

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

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

- **Flow 1 (95th percentile 50.53 ms)**
Run 2: Statistics of Indigo

Start at: 2018-09-08 04:03:03
End at: 2018-09-08 04:03:33
Local clock offset: -0.097 ms
Remote clock offset: -0.097 ms

# Below is generated by plot.py at 2018-09-08 06:47:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 237.23 Mbit/s
95th percentile per-packet one-way delay: 51.127 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 237.23 Mbit/s
95th percentile per-packet one-way delay: 51.127 ms
Loss rate: 0.34%
Run 2: Report of Indigo — Data Link

![Graphs showing throughput and packet delay over time for Flow 1.]
Run 3: Statistics of Indigo

Start at: 2018-09-08 04:28:59
End at: 2018-09-08 04:29:29
Local clock offset: ±0.056 ms
Remote clock offset: ±0.088 ms

# Below is generated by plot.py at 2018-09-08 06:47:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 233.86 Mbit/s
95th percentile per-packet one-way delay: 49.631 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 233.86 Mbit/s
95th percentile per-packet one-way delay: 49.631 ms
Loss rate: 0.33%
Run 3: Report of Indigo — Data Link
Run 4: Statistics of Indigo

Start at: 2018-09-08 04:55:00
End at: 2018-09-08 04:55:30
Local clock offset: -0.001 ms
Remote clock offset: -0.113 ms

# Below is generated by plot.py at 2018-09-08 06:47:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 244.54 Mbit/s
95th percentile per-packet one-way delay: 50.807 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 244.54 Mbit/s
95th percentile per-packet one-way delay: 50.807 ms
Loss rate: 0.31%
Run 4: Report of Indigo — Data Link

- Flow 1 ingress (mean 244.48 Mbit/s)
- Flow 1 egress (mean 244.54 Mbit/s)

- Flow 1 (95th percentile 50.81 ms)
Run 5: Statistics of Indigo

Start at: 2018-09-08 05:21:03
End at: 2018-09-08 05:21:33
Local clock offset: -0.402 ms
Remote clock offset: -0.081 ms

# Below is generated by plot.py at 2018-09-08 06:47:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 231.82 Mbit/s
95th percentile per-packet one-way delay: 49.592 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 231.82 Mbit/s
95th percentile per-packet one-way delay: 49.592 ms
Loss rate: 0.36%
Run 5: Report of Indigo — Data Link
Run 1: Statistics of LEDBAT

Start at: 2018-09-08 03:47:02
End at: 2018-09-08 03:47:32
Local clock offset: -0.15 ms
Remote clock offset: -0.11 ms

# Below is generated by plot.py at 2018-09-08 06:47:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 34.86 Mbit/s
95th percentile per-packet one-way delay: 51.247 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 34.86 Mbit/s
95th percentile per-packet one-way delay: 51.247 ms
Loss rate: 0.01%
Run 1: Report of LEDBAT — Data Link
Run 2: Statistics of LEDBAT

Start at: 2018-09-08 04:13:03
End at: 2018-09-08 04:13:33
Local clock offset: 0.26 ms
Remote clock offset: -0.092 ms

# Below is generated by plot.py at 2018-09-08 06:47:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 28.15 Mbit/s
95th percentile per-packet one-way delay: 50.990 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 28.15 Mbit/s
95th percentile per-packet one-way delay: 50.990 ms
Loss rate: 0.23%
Run 2: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 28.12 Mbps)
- Flow 1 egress (mean 28.15 Mbps)

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

- Flow 1 (95th percentile 50.99 ms)
Run 3: Statistics of LEDBAT

Start at: 2018-09-08 04:39:04
End at: 2018-09-08 04:39:35
Local clock offset: -0.043 ms
Remote clock offset: -0.085 ms

# Below is generated by plot.py at 2018-09-08 06:47:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 37.21 Mbit/s
95th percentile per-packet one-way delay: 50.994 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 37.21 Mbit/s
95th percentile per-packet one-way delay: 50.994 ms
Loss rate: 0.66%
Run 3: Report of LEDBAT — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 37.33 Mbps)
  - Flow 1 egress (mean 37.21 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 50.99 ms)
Run 4: Statistics of LEDBAT

Start at: 2018-09-08 05:05:03
End at: 2018-09-08 05:05:33
Local clock offset: -0.05 ms
Remote clock offset: -0.115 ms

# Below is generated by plot.py at 2018-09-08 06:47:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 36.52 Mbit/s
95th percentile per-packet one-way delay: 50.918 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 36.52 Mbit/s
95th percentile per-packet one-way delay: 50.918 ms
Loss rate: 0.67%
Run 4: Report of LEDBAT — Data Link

![Graph showing throughput and packet delay over time]

- **Throughput (Mbps)**
  - X-axis: Time (s)
  - Y-axis: Throughput (Mbps)
  - Graph lines:
    - Flow 1 ingress (mean 36.64 Mbps)
    - Flow 1 egress (mean 36.52 Mbps)

- **Packet delay (ms)**
  - X-axis: Time (s)
  - Y-axis: Packet delay (ms)
  - Graph marker: Flow 1 (95th percentile 50.92 ms)
Run 5: Statistics of LEDBAT

Start at: 2018-09-08 05:31:08
End at: 2018-09-08 05:31:38
Local clock offset: -0.053 ms
Remote clock offset: -0.068 ms

# Below is generated by plot.py at 2018-09-08 06:47:22
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 37.01 Mbit/s
  95th percentile per-packet one-way delay: 50.674 ms
  Loss rate: 0.66%
-- Flow 1:
  Average throughput: 37.01 Mbit/s
  95th percentile per-packet one-way delay: 50.674 ms
  Loss rate: 0.66%
Run 5: Report of LEDBAT — Data Link

![Throughput and Delay Graph]

- Flow 1 ingress (mean 37.14 Mbit/s)
- Flow 1 egress (mean 37.01 Mbit/s)

- Flow 1 95th percentile 50.67 ms
Run 1: Statistics of Indigo-Muses

Start at: 2018-09-08 03:45:28
End at: 2018-09-08 03:45:58
Local clock offset: 0.252 ms
Remote clock offset: -0.098 ms

# Below is generated by plot.py at 2018-09-08 06:47:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 583.97 Mbit/s
95th percentile per-packet one-way delay: 55.463 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 583.97 Mbit/s
95th percentile per-packet one-way delay: 55.463 ms
Loss rate: 0.34%
Run 1: Report of Indigo-Muses — Data Link

![Graph 1: Throughput](image1)

- Flow 1 ingress (mean 583.99 Mbit/s)
- Flow 1 egress (mean 583.97 Mbit/s)

![Graph 2: Packet Delay](image2)

- Flow 1 (95th percentile 55.46 ms)
Run 2: Statistics of Indigo-Muses

Start at: 2018-09-08 04:11:31
End at: 2018-09-08 04:12:01
Local clock offset: -0.105 ms
Remote clock offset: -0.095 ms

# Below is generated by plot.py at 2018-09-08 06:47:22
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 557.38 Mbit/s
  95th percentile per-packet one-way delay: 53.254 ms
  Loss rate: 0.30%
-- Flow 1:
  Average throughput: 557.38 Mbit/s
  95th percentile per-packet one-way delay: 53.254 ms
  Loss rate: 0.30%
Run 2: Report of Indigo-Muses — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 557.19 Mbit/s)
- Flow 1 egress (mean 557.38 Mbit/s)

![Graph 2: Packet Delay (ms)]

- Flow 1 (95th percentile 53.25 ms)
Run 3: Statistics of Indigo-Muses

Start at: 2018-09-08 04:37:30
End at: 2018-09-08 04:38:00
Local clock offset: 0.334 ms
Remote clock offset: -0.093 ms

# Below is generated by plot.py at 2018-09-08 06:47:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 602.46 Mbit/s
95th percentile per-packet one-way delay: 57.378 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 602.46 Mbit/s
95th percentile per-packet one-way delay: 57.378 ms
Loss rate: 0.37%
Run 3: Report of Indigo-Muses — Data Link

![Graph 1: Throughput (Mbps)]

![Graph 2: Per-packet one-way delay (ms)]
Run 4: Statistics of Indigo-Muses

Start at: 2018-09-08 05:03:28
End at: 2018-09-08 05:03:58
Local clock offset: -0.047 ms
Remote clock offset: -0.101 ms

# Below is generated by plot.py at 2018-09-08 06:47:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 598.42 Mbit/s
95th percentile per-packet one-way delay: 55.920 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 598.42 Mbit/s
95th percentile per-packet one-way delay: 55.920 ms
Loss rate: 0.36%
Run 4: Report of Indigo-Muses — Data Link

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

- **Flow 1 ingress (mean 598.55 Mbit/s)**
- **Flow 1 egress (mean 598.42 Mbit/s)**

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

- **Flow 1 (95th percentile 55.92 ms)**
Run 5: Statistics of Indigo-Muses

Start at: 2018-09-08 05:29:35
End at: 2018-09-08 05:30:05
Local clock offset: -0.081 ms
Remote clock offset: -0.027 ms

# Below is generated by plot.py at 2018-09-08 06:48:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 571.58 Mbit/s
95th percentile per-packet one-way delay: 53.218 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 571.58 Mbit/s
95th percentile per-packet one-way delay: 53.218 ms
Loss rate: 0.33%
Run 5: Report of Indigo-Muses — Data Link
Run 1: Statistics of PCC-Allegro

Start at: 2018-09-08 03:38:26
End at: 2018-09-08 03:38:56
Local clock offset: -0.519 ms
Remote clock offset: -0.042 ms

# Below is generated by plot.py at 2018-09-08 06:54:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 503.54 Mbit/s
95th percentile per-packet one-way delay: 148.172 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 503.54 Mbit/s
95th percentile per-packet one-way delay: 148.172 ms
Loss rate: 1.03%
Run 1: Report of PCC-Allegro — Data Link

![Graph of Throughput vs Time](image1)

- Flow 1 ingress (mean 507.06 Mbit/s)
- Flow 1 egress (mean 503.54 Mbit/s)

![Graph of Packet one way delay vs Time](image2)

- Flow 1 (95th percentile 148.17 ms)
Run 2: Statistics of PCC-Allegro

Start at: 2018-09-08 04:04:31
End at: 2018-09-08 04:05:01
Local clock offset: -0.078 ms
Remote clock offset: -0.046 ms

# Below is generated by plot.py at 2018-09-08 07:00:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 486.11 Mbit/s
95th percentile per-packet one-way delay: 159.154 ms
Loss rate: 2.81%
-- Flow 1:
Average throughput: 486.11 Mbit/s
95th percentile per-packet one-way delay: 159.154 ms
Loss rate: 2.81%
Run 2: Report of PCC-Allegro — Data Link

![Throughput Graph]

- Flow 1 ingress (mean 498.33 Mbit/s)
- Flow 1 egress (mean 486.11 Mbit/s)

![Delay Graph]

- Flow 1 (95th percentile 159.15 ms)
Run 3: Statistics of PCC-Allegro

Start at: 2018-09-08 04:30:26
End at: 2018-09-08 04:30:56
Local clock offset: -0.409 ms
Remote clock offset: -0.093 ms

# Below is generated by plot.py at 2018-09-08 07:01:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 498.02 Mbit/s
95th percentile per-packet one-way delay: 152.558 ms
Loss rate: 1.75%
-- Flow 1:
Average throughput: 498.02 Mbit/s
95th percentile per-packet one-way delay: 152.558 ms
Loss rate: 1.75%
Run 3: Report of PCC-Allegro — Data Link
Run 4: Statistics of PCC-Allegro

Start at: 2018-09-08 04:56:28
End at: 2018-09-08 04:56:58
Local clock offset: -0.046 ms
Remote clock offset: -0.099 ms

# Below is generated by plot.py at 2018-09-08 07:01:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 481.10 Mbit/s
95th percentile per-packet one-way delay: 155.483 ms
Loss rate: 1.78%
-- Flow 1:
Average throughput: 481.10 Mbit/s
95th percentile per-packet one-way delay: 155.483 ms
Loss rate: 1.78%
Run 4: Report of PCC-Allegro — Data Link
Run 5: Statistics of PCC-Allegro

Start at: 2018-09-08 05:22:31
End at: 2018-09-08 05:23:01
Local clock offset: -0.065 ms
Remote clock offset: -0.056 ms

# Below is generated by plot.py at 2018-09-08 07:02:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 476.65 Mbit/s
95th percentile per-packet one-way delay: 166.282 ms
Loss rate: 3.64%
-- Flow 1:
Average throughput: 476.65 Mbit/s
95th percentile per-packet one-way delay: 166.282 ms
Loss rate: 3.64%
Run 5: Report of PCC-Allegro — Data Link

![Graph of Throughput](image1)

- Flow 1 ingress (mean 492.98 Mbit/s)
- Flow 1 egress (mean 476.65 Mbit/s)

![Graph of Round Trip Time](image2)

- Flow 1 (95th percentile 166.28 ms)
Run 1: Statistics of PCC-Expr

Start at: 2018-09-08 03:57:20
End at: 2018-09-08 03:57:50
Local clock offset: -0.157 ms
Remote clock offset: -0.099 ms

# Below is generated by plot.py at 2018-09-08 07:02:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 345.59 Mbit/s
95th percentile per-packet one-way delay: 133.918 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 345.59 Mbit/s
95th percentile per-packet one-way delay: 133.918 ms
Loss rate: 0.78%
Run 1: Report of PCC-Expr — Data Link
Run 2: Statistics of PCC-Expr

Start at: 2018-09-08 04:23:13
End at: 2018-09-08 04:23:43
Local clock offset: -0.109 ms
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2018-09-08 07:02:54
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 369.84 Mbit/s
  95th percentile per-packet one-way delay: 128.054 ms
  Loss rate: 0.76%
-- Flow 1:
  Average throughput: 369.84 Mbit/s
  95th percentile per-packet one-way delay: 128.054 ms
  Loss rate: 0.76%
Run 2: Report of PCC-Expr — Data Link
Run 3: Statistics of PCC-Expr

Start at: 2018-09-08 04:49:14
End at: 2018-09-08 04:49:44
Local clock offset: 0.348 ms
Remote clock offset: -0.102 ms

# Below is generated by plot.py at 2018-09-08 07:02:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 362.89 Mbit/s
95th percentile per-packet one-way delay: 142.604 ms
Loss rate: 2.50%
-- Flow 1:
Average throughput: 362.89 Mbit/s
95th percentile per-packet one-way delay: 142.604 ms
Loss rate: 2.50%
Run 3: Report of PCC-Expr — Data Link

![Graph showing throughput and delay over time with specific flow ingress and egress data.]
Run 4: Statistics of PCC-Expr

Start at: 2018-09-08 05:15:18
End at: 2018-09-08 05:15:49
Local clock offset: 0.328 ms
Remote clock offset: -0.053 ms

# Below is generated by plot.py at 2018-09-08 07:07:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 359.84 Mbit/s
95th percentile per-packet one-way delay: 147.634 ms
Loss rate: 2.99%
-- Flow 1:
Average throughput: 359.84 Mbit/s
95th percentile per-packet one-way delay: 147.634 ms
Loss rate: 2.99%
Run 4: Report of PCC-Expr — Data Link

![Graph showing network performance metrics over time. The graph depicts throughput (Mbps) and packet delay (ms) for Flow 1, with ingoing and outgoing traffic shown separately.]
Run 5: Statistics of PCC-Expr

Start at: 2018-09-08 05:41:20
End at: 2018-09-08 05:41:50
Local clock offset: ~0.462 ms
Remote clock offset: ~0.016 ms

# Below is generated by plot.py at 2018-09-08 07:09:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 342.16 Mbit/s
95th percentile per-packet one-way delay: 136.525 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 342.16 Mbit/s
95th percentile per-packet one-way delay: 136.525 ms
Loss rate: 1.29%
Run 5: Report of PCC-Expr — Data Link

![Graph showing throughput over time with two lines representing different flows]

- Flow 1 ingress (mean 345.47 Mbit/s)
- Flow 1 egress (mean 342.16 Mbit/s)

![Graph showing per-packet delay over time with one line representing a flow]

- Flow 1 (95th percentile 136.53 ms)
Run 1: Statistics of QUIC Cubic

Start at: 2018-09-08 03:42:45
End at: 2018-09-08 03:43:15
Local clock offset: -0.14 ms
Remote clock offset: -0.115 ms
Run 1: Report of QUIC Cubic — Data Link
Run 2: Statistics of QUIC Cubic

Start at: 2018-09-08 04:08:49
End at: 2018-09-08 04:09:19
Local clock offset: -0.426 ms
Remote clock offset: -0.096 ms

# Below is generated by plot.py at 2018-09-08 07:09:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 58.78 Mbit/s
95th percentile per-packet one-way delay: 48.398 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 58.78 Mbit/s
95th percentile per-packet one-way delay: 48.398 ms
Loss rate: 0.56%
Run 2: Report of QUIC Cubic — Data Link
Run 3: Statistics of QUIC Cubic

Start at: 2018-09-08 04:34:43
End at: 2018-09-08 04:35:13
Local clock offset: 0.02 ms
Remote clock offset: -0.089 ms

# Below is generated by plot.py at 2018-09-08 07:09:28
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 54.06 Mbit/s
  95th percentile per-packet one-way delay: 48.828 ms
  Loss rate: 0.54%
-- Flow 1:
  Average throughput: 54.06 Mbit/s
  95th percentile per-packet one-way delay: 48.828 ms
  Loss rate: 0.54%
Run 3: Report of QUIC Cubic — Data Link

![Graph showing throughput and delay over time for QUIC Cubic]
Run 4: Statistics of QUIC Cubic

Start at: 2018-09-08 05:00:41
End at: 2018-09-08 05:01:11
Local clock offset: 0.324 ms
Remote clock offset: -0.094 ms

# Below is generated by plot.py at 2018-09-08 07:09:28
# Datalink statistics
   -- Total of 1 flow:
   Average throughput: 69.78 Mbit/s
   95th percentile per-packet one-way delay: 50.285 ms
   Loss rate: 0.51%
   -- Flow 1:
   Average throughput: 69.78 Mbit/s
   95th percentile per-packet one-way delay: 50.285 ms
   Loss rate: 0.51%
Run 4: Report of QUIC Cubic — Data Link

![Graph of network throughput and packet delay over time. The throughput graph shows two flows: one with ingress mean 69.91 Mbit/s and the other with egress mean 69.78 Mbit/s. The packet delay graph shows the 95th percentile delay of 50.28 ms for Flow 1.]
Run 5: Statistics of QUIC Cubic

Start at: 2018-09-08 05:26:48  
End at: 2018-09-08 05:27:18  
Local clock offset: 0.289 ms  
Remote clock offset: -0.072 ms

# Below is generated by plot.py at 2018-09-08 07:09:28  
# Datalink statistics
-- Total of 1 flow:
Average throughput: 84.73 Mbit/s  
95th percentile per-packet one-way delay: 50.607 ms  
Loss rate: 0.45%  
-- Flow 1:
Average throughput: 84.73 Mbit/s  
95th percentile per-packet one-way delay: 50.607 ms  
Loss rate: 0.45%
Run 5: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

Start at: 2018-09-08 03:49:48
End at: 2018-09-08 03:50:19
Local clock offset: -0.126 ms
Remote clock offset: -0.101 ms

# Below is generated by plot.py at 2018-09-08 07:09:28
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.296 ms
  Loss rate: 0.25%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.296 ms
  Loss rate: 0.25%
Run 1: Report of SCReAM — Data Link

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

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

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

- Flow 1 (95th percentile 50.30 ms)
Run 2: Statistics of SCReAM

Start at: 2018-09-08 04:15:50
End at: 2018-09-08 04:16:20
Local clock offset: 0.266 ms
Remote clock offset: -0.086 ms

# Below is generated by plot.py at 2018-09-08 07:09:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.970 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.970 ms
Loss rate: 0.39%
Run 2: Report of SCReAM — Data Link

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

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

![Graph 2: Per-Packet One-Way Delay](image2)

- Flow 1 (95th percentile 49.97 ms)
Run 3: Statistics of SCReAM

Start at: 2018-09-08 04:41:52
End at: 2018-09-08 04:42:22
Local clock offset: -0.379 ms
Remote clock offset: -0.136 ms

# Below is generated by plot.py at 2018-09-08 07:09:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.275 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.275 ms
Loss rate: 0.38%
Run 3: Report of SCReAM — Data Link

![Throughput Chart]

![Delay Chart]
Run 4: Statistics of SCReAM

Start at: 2018-09-08 05:07:55
End at: 2018-09-08 05:08:25
Local clock offset: -0.395 ms
Remote clock offset: -0.094 ms

# Below is generated by plot.py at 2018-09-08 07:09:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.973 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.973 ms
Loss rate: 0.38%
Run 4: Report of SCReAM — Data Link

![Graph showing network performance metrics over time]

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

- **Per-packet one-way delay (ms):**
  - **Flow 1 (95th percentile 49.97 ms)**
Run 5: Statistics of SCReAM

Start at: 2018-09-08 05:33:56
End at: 2018-09-08 05:34:26
Local clock offset: -0.048 ms
Remote clock offset: -0.021 ms

# Below is generated by plot.py at 2018-09-08 07:09:28
# Datalink statistics

-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.295 ms
Loss rate: 0.26%

-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.295 ms
Loss rate: 0.26%
Run 5: Report of SCReAM — Data Link

![Graph of Throughput vs Time]

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

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

- **Flow 1 (95th percentile 50.30 ms)**
Run 1: Statistics of Sprout

Start at: 2018-09-08 03:40:04
End at: 2018-09-08 03:40:34
Local clock offset: 0.195 ms
Remote clock offset: -0.107 ms

# Below is generated by plot.py at 2018-09-08 07:09:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.29 Mbit/s
95th percentile per-packet one-way delay: 49.712 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 8.29 Mbit/s
95th percentile per-packet one-way delay: 49.712 ms
Loss rate: 0.40%
Run 1: Report of Sprout — Data Link

---

[Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 8.29 Mbps)
- Flow 1 egress (mean 8.29 Mbps)

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

- Flow 1 (95th percentile 49.71 ms)
Run 2: Statistics of Sprout

Start at: 2018-09-08 04:06:09
End at: 2018-09-08 04:06:39
Local clock offset: -0.069 ms
Remote clock offset: -0.112 ms

# Below is generated by plot.py at 2018-09-08 07:09:28
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 8.14 Mbit/s
  95th percentile per-packet one-way delay: 51.526 ms
  Loss rate: 0.42%
-- Flow 1:
  Average throughput: 8.14 Mbit/s
  95th percentile per-packet one-way delay: 51.526 ms
  Loss rate: 0.42%
Run 2: Report of Sprout — Data Link

**Graph 1:**
- Title: Throughput (Mbps) vs Time (s)
- X-axis: Time (s)
- Y-axis: Throughput (Mbps)
- Legend:
  - Flow 1 ingress (mean 8.14 Mbit/s)
  - Flow 1 egress (mean 8.14 Mbit/s)

**Graph 2:**
- Title: Percentile one-way delay (ms) vs Time (s)
- X-axis: Time (s)
- Y-axis: Percentile one-way delay (ms)
- Legend:
  - Flow 1 (99th percentile 51.53 ms)
Run 3: Statistics of Sprout

Start at: 2018-09-08 04:32:03
End at: 2018-09-08 04:32:33
Local clock offset: -0.034 ms
Remote clock offset: -0.05 ms

# Below is generated by plot.py at 2018-09-08 07:09:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.10 Mbit/s
95th percentile per-packet one-way delay: 49.463 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 8.10 Mbit/s
95th percentile per-packet one-way delay: 49.463 ms
Loss rate: 0.41%
Run 3: Report of Sprout — Data Link
Run 4: Statistics of Sprout

Start at: 2018-09-08 04:58:04
End at: 2018-09-08 04:58:34
Local clock offset: -0.02 ms
Remote clock offset: -0.091 ms

# Below is generated by plot.py at 2018-09-08 07:09:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.26 Mbit/s
95th percentile per-packet one-way delay: 50.751 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 8.26 Mbit/s
95th percentile per-packet one-way delay: 50.751 ms
Loss rate: 0.41%
Run 4: Report of Sprout — Data Link

![Graph showing throughput and per-packet round-trip delay (ms) over time.](image)

- **Throughput (Mbps)** vs **Time (s)**
  - Flow 1 ingress (mean 8.26 Mbit/s)
  - Flow 1 egress (mean 8.26 Mbit/s)

- **Per-packet round-trip delay (ms)** vs **Time (s)**
  - Flow 1 (95th percentile 50.75 ms)
Run 5: Statistics of Sprout

Start at: 2018-09-08 05:24:08
End at: 2018-09-08 05:24:38
Local clock offset: -0.443 ms
Remote clock offset: -0.067 ms

# Below is generated by plot.py at 2018-09-08 07:09:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.26 Mbit/s
95th percentile per-packet one-way delay: 50.420 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 8.26 Mbit/s
95th percentile per-packet one-way delay: 50.420 ms
Loss rate: 0.42%
Run 5: Report of Sprout — Data Link

![Graph of Throughput and Packet One-Way Delay vs Time](image)

- **Throughput** (Mbps):
  - Flow 1 ingress (mean 8.27 Mbps)
  - Flow 1 egress (mean 8.26 Mbps)

- **Packet One-Way Delay (ms)**:
  - Flow 1 (95th percentile 50.42 ms)
Run 1: Statistics of TaoVA-100x

Start at: 2018-09-08 03:58:56  
End at: 2018-09-08 03:59:26  
Local clock offset: 0.268 ms  
Remote clock offset: -0.113 ms

# Below is generated by plot.py at 2018-09-08 07:09:28  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 247.57 Mbit/s  
95th percentile per-packet one-way delay: 51.171 ms  
Loss rate: 0.35%  
-- Flow 1:  
Average throughput: 247.57 Mbit/s  
95th percentile per-packet one-way delay: 51.171 ms  
Loss rate: 0.35%
Run 1: Report of TaoVA-100x — Data Link
Run 2: Statistics of TaoVA-100x

Start at: 2018-09-08 04:24:51
End at: 2018-09-08 04:25:21
Local clock offset: 0.268 ms
Remote clock offset: -0.004 ms

# Below is generated by plot.py at 2018-09-08 07:09:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 242.02 Mbit/s
95th percentile per-packet one-way delay: 50.254 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 242.02 Mbit/s
95th percentile per-packet one-way delay: 50.254 ms
Loss rate: 0.36%
Run 2: Report of TaoVA-100x — Data Link
Run 3: Statistics of TaoVA-100x

Start at: 2018-09-08 04:50:52
End at: 2018-09-08 04:51:22
Local clock offset: -0.018 ms
Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2018-09-08 07:09:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 245.33 Mbit/s
95th percentile per-packet one-way delay: 50.532 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 245.33 Mbit/s
95th percentile per-packet one-way delay: 50.532 ms
Loss rate: 0.34%
Run 3: Report of TaoVA-100x — Data Link

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

**Throughput (Mbit/s)**

- **Flow 1 ingress (mean 245.33 Mbit/s)**
- **Flow 1 egress (mean 245.33 Mbit/s)**

**Packet delay (ms)**

- **Flow 1 (95th percentile 50.53 ms)**
Run 4: Statistics of TaoVA-100x

Start at: 2018-09-08 05:16:56
End at: 2018-09-08 05:17:26
Local clock offset: -0.035 ms
Remote clock offset: -0.069 ms

# Below is generated by plot.py at 2018-09-08 07:09:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 240.73 Mbit/s
95th percentile per-packet one-way delay: 49.939 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 240.73 Mbit/s
95th percentile per-packet one-way delay: 49.939 ms
Loss rate: 0.30%
Run 4: Report of TaoVA-100x — Data Link

Graph 1: Throughput (Mbps) vs. Time (s)
- Flow 1 ingress (mean 240.64 Mbit/s)
- Flow 1 egress (mean 240.73 Mbit/s)

Graph 2: Per packet end-to-end delay (ms) vs. Time (s)
- Flow 1 (95th percentile 49.94 ms)
Run 5: Statistics of TaoVA-100x

Start at: 2018-09-08 05:42:56
End at: 2018-09-08 05:43:26
Local clock offset: -0.46 ms
Remote clock offset: 0.005 ms

# Below is generated by plot.py at 2018-09-08 07:10:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 247.81 Mbit/s
95th percentile per-packet one-way delay: 49.094 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 247.81 Mbit/s
95th percentile per-packet one-way delay: 49.094 ms
Loss rate: 0.32%
Run 5: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 247.77 Mbit/s)
- Flow 1 egress (mean 247.81 Mbit/s)

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

- Flow 1 (95th percentile 49.09 ms)
Run 1: Statistics of TCP Vegas

Start at: 2018-09-08 03:35:49
End at: 2018-09-08 03:36:19
Local clock offset: 0.204 ms
Remote clock offset: -0.11 ms

# Below is generated by plot.py at 2018-09-08 07:11:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 514.07 Mbit/s
95th percentile per-packet one-way delay: 51.815 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 514.07 Mbit/s
95th percentile per-packet one-way delay: 51.815 ms
Loss rate: 0.18%
Run 1: Report of TCP Vegas — Data Link

[Graph showing throughput and delay over time, with legends indicating mean throughput values for ingress and egress flows.]

146
Run 2: Statistics of TCP Vegas

Start at: 2018-09-08 04:01:31
End at: 2018-09-08 04:02:01
Local clock offset: -0.107 ms
Remote clock offset: -0.075 ms

# Below is generated by plot.py at 2018-09-08 07:17:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 540.60 Mbit/s
95th percentile per-packet one-way delay: 51.345 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 540.60 Mbit/s
95th percentile per-packet one-way delay: 51.345 ms
Loss rate: 0.34%
Run 2: Report of TCP Vegas — Data Link

![Throughput Graph](image1)

**Graph 1:**
- **Flow 1 ingress (mean 540.61 Mbps)**
- **Flow 1 egress (mean 540.60 Mbps)**

![Delay Graph](image2)

**Graph 2:**
- **Flow 1 (95th percentile 51.34 ms)**
Run 3: Statistics of TCP Vegas

Start at: 2018-09-08 04:27:25
End at: 2018-09-08 04:27:55
Local clock offset: -0.432 ms
Remote clock offset: -0.084 ms

# Below is generated by plot.py at 2018-09-08 07:18:56
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 576.58 Mbit/s
  95th percentile per-packet one-way delay: 64.368 ms
  Loss rate: 0.33%
-- Flow 1:
  Average throughput: 576.58 Mbit/s
  95th percentile per-packet one-way delay: 64.368 ms
  Loss rate: 0.33%
Run 3: Report of TCP Vegas — Data Link

![Graph showing throughput and latency over time for TCP Vegas.](image)

- Flow 1 ingress (mean 576.52 Mbit/s)
- Flow 1 egress (mean 576.58 Mbit/s)

- Flow 1 (95th percentile 64.37 ms)
Run 4: Statistics of TCP Vegas

Start at: 2018-09-08 04:53:26
End at: 2018-09-08 04:53:56
Local clock offset: -0.347 ms
Remote clock offset: -0.113 ms

# Below is generated by plot.py at 2018-09-08 07:19:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 607.49 Mbit/s
95th percentile per-packet one-way delay: 59.625 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 607.49 Mbit/s
95th percentile per-packet one-way delay: 59.625 ms
Loss rate: 0.18%
Run 4: Report of TCP Vegas — Data Link
Run 5: Statistics of TCP Vegas

Start at: 2018-09-08 05:19:30
End at: 2018-09-08 05:20:00
Local clock offset: -0.406 ms
Remote clock offset: -0.083 ms

# Below is generated by plot.py at 2018-09-08 07:19:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 563.47 Mbit/s
95th percentile per-packet one-way delay: 55.279 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 563.47 Mbit/s
95th percentile per-packet one-way delay: 55.279 ms
Loss rate: 0.35%
Run 5: Report of TCP Vegas — Data Link

[Graphs showing throughput and packet delay over time]
Run 1: Statistics of Verus

Start at: 2018-09-08 03:50:55
End at: 2018-09-08 03:51:25
Local clock offset: -0.161 ms
Remote clock offset: -0.106 ms

# Below is generated by plot.py at 2018-09-08 07:19:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 207.24 Mbit/s
95th percentile per-packet one-way delay: 192.708 ms
Loss rate: 6.77%
-- Flow 1:
Average throughput: 207.24 Mbit/s
95th percentile per-packet one-way delay: 192.708 ms
Loss rate: 6.77%
Run 1: Report of Verus — Data Link

[Graphs showing throughput and packet delay over time]
Run 2: Statistics of Verus

Start at: 2018-09-08 04:16:56
End at: 2018-09-08 04:17:26
Local clock offset: -0.418 ms
Remote clock offset: -0.112 ms

# Below is generated by plot.py at 2018-09-08 07:19:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 187.88 Mbit/s
95th percentile per-packet one-way delay: 177.778 ms
Loss rate: 5.53%
-- Flow 1:
Average throughput: 187.88 Mbit/s
95th percentile per-packet one-way delay: 177.778 ms
Loss rate: 5.53%
Run 2: Report of Verus — Data Link

![Graph showing throughput and packet delay over time. The graph displays two plots: one for throughput (Mbps) and another for one-way delay (ms). The throughput plot shows fluctuating values with a peak around 600 Mbps, while the delay plot shows a peak around 275 ms at some points.](image-url)
Run 3: Statistics of Verus

Start at: 2018-09-08 04:42:58
End at: 2018-09-08 04:43:28
Local clock offset: 0.344 ms
Remote clock offset: -0.137 ms

# Below is generated by plot.py at 2018-09-08 07:19:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 190.74 Mbit/s
95th percentile per-packet one-way delay: 85.687 ms
Loss rate: 1.15%
-- Flow 1:
Average throughput: 190.74 Mbit/s
95th percentile per-packet one-way delay: 85.687 ms
Loss rate: 1.15%
Run 3: Report of Verus — Data Link
Run 4: Statistics of Verus

Start at: 2018-09-08 05:09:02
End at: 2018-09-08 05:09:32
Local clock offset: -0.036 ms
Remote clock offset: -0.128 ms

# Below is generated by plot.py at 2018-09-08 07:19:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 183.19 Mbit/s
95th percentile per-packet one-way delay: 77.377 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 183.19 Mbit/s
95th percentile per-packet one-way delay: 77.377 ms
Loss rate: 0.48%
Run 4: Report of Verus — Data Link

[Graph showing throughput and delay over time]

- Flow 1 ingress (mean 183.22 Mbit/s)
- Flow 1 egress (mean 183.19 Mbit/s)

[Graph showing packet one-way delay over time]

- Flow 1 (95th percentile 77.38 ms)
Run 5: Statistics of Verus

Start at: 2018-09-08 05:35:03
End at: 2018-09-08 05:35:33
Local clock offset: -0.062 ms
Remote clock offset: -0.075 ms

# Below is generated by plot.py at 2018-09-08 07:21:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 193.59 Mbit/s
95th percentile per-packet one-way delay: 123.352 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 193.59 Mbit/s
95th percentile per-packet one-way delay: 123.352 ms
Loss rate: 0.36%
Run 5: Report of Verus — Data Link

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

- Flow 1 ingress (mean 194.12 Mbit/s)
- Flow 1 egress (mean 193.59 Mbit/s)

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

- Flow 1 (95th percentile 123.35 ms)
Run 1: Statistics of PCC-Vivace

Start at: 2018-09-08 03:41:11
End at: 2018-09-08 03:41:41
Local clock offset: -0.113 ms
Remote clock offset: -0.127 ms

# Below is generated by plot.py at 2018-09-08 07:22:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 431.93 Mbit/s
95th percentile per-packet one-way delay: 50.754 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 431.93 Mbit/s
95th percentile per-packet one-way delay: 50.754 ms
Loss rate: 0.38%
Run 1: Report of PCC-Vivace — Data Link
Run 2: Statistics of PCC-Vivace

Start at: 2018-09-08 04:07:16
End at: 2018-09-08 04:07:46
Local clock offset: -0.108 ms
Remote clock offset: -0.115 ms

# Below is generated by plot.py at 2018-09-08 07:22:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 417.28 Mbit/s
95th percentile per-packet one-way delay: 54.851 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 417.28 Mbit/s
95th percentile per-packet one-way delay: 54.851 ms
Loss rate: 0.36%
Run 2: Report of PCC-Vivace — Data Link

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

- **Flow 1 ingress (mean 417.39 Mbit/s)**
- **Flow 1 egress (mean 417.28 Mbit/s)**

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

- **Flow 1 (95th percentile 54.85 ms)**

168
Run 3: Statistics of PCC-Vivace

Start at: 2018-09-08 04:33:11
End at: 2018-09-08 04:33:41
Local clock offset: -0.057 ms
Remote clock offset: -0.109 ms

# Below is generated by plot.py at 2018-09-08 07:22:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 402.60 Mbit/s
95th percentile per-packet one-way delay: 97.286 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 402.60 Mbit/s
95th percentile per-packet one-way delay: 97.286 ms
Loss rate: 0.66%
Run 3: Report of PCC-Vivace — Data Link

![Graph of throughput and packet delay vs. time]
Run 4: Statistics of PCC-Vivace

Start at: 2018-09-08 04:59:11
End at: 2018-09-08 04:59:41
Local clock offset: -0.007 ms
Remote clock offset: -0.099 ms

# Below is generated by plot.py at 2018-09-08 07:22:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 369.46 Mbit/s
95th percentile per-packet one-way delay: 50.546 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 369.46 Mbit/s
95th percentile per-packet one-way delay: 50.546 ms
Loss rate: 0.48%
Run 4: Report of PCC-Vivace — Data Link

---

**Throughput (Mbps)**

```
Time (s)
0 5 10 15 20 25 30
```

---

**Flow 1 ingress (mean 370.07 Mbit/s)  Flow 1 egress (mean 369.46 Mbit/s)**

---

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

```
Time (s)
0 5 10 15 20 25 30
```

---

**Flow 1 (95th percentile 50.55 ms)**
Run 5: Statistics of PCC-Vivace

Start at: 2018-09-08 05:25:15
End at: 2018-09-08 05:25:45
Local clock offset: -0.09 ms
Remote clock offset: -0.077 ms

# Below is generated by plot.py at 2018-09-08 07:22:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 408.16 Mbit/s
95th percentile per-packet one-way delay: 51.662 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 408.16 Mbit/s
95th percentile per-packet one-way delay: 51.662 ms
Loss rate: 0.33%
Run 5: Report of PCC-Vivace — Data Link
Run 1: Statistics of WebRTC media

Start at: 2018-09-08 03:34:42
End at: 2018-09-08 03:35:12
Local clock offset: -0.175 ms
Remote clock offset: -0.131 ms

# Below is generated by plot.py at 2018-09-08 07:22:52
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 1.77 Mbit/s
  95th percentile per-packet one-way delay: 50.267 ms
  Loss rate: 0.45%
-- Flow 1:
  Average throughput: 1.77 Mbit/s
  95th percentile per-packet one-way delay: 50.267 ms
  Loss rate: 0.45%
Run 1: Report of WebRTC media — Data Link

![Graph showing throughput and packet round trip times](image-url)
Run 2: Statistics of WebRTC media

Start at: 2018-09-08 04:00:25
End at: 2018-09-08 04:00:55
Local clock offset: -0.103 ms
Remote clock offset: -0.095 ms

# Below is generated by plot.py at 2018-09-08 07:22:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.97 Mbit/s
95th percentile per-packet one-way delay: 50.791 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 1.97 Mbit/s
95th percentile per-packet one-way delay: 50.791 ms
Loss rate: 0.41%
Run 2: Report of WebRTC media — Data Link

![Graph showing throughput and delay over time]

- Flow 1 ingress (mean 1.97 Mbit/s)
- Flow 1 egress (mean 1.97 Mbit/s)

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

- Flow 1 (95th percentile 50.79 ms)
Run 3: Statistics of WebRTC media

Start at: 2018-09-08 04:26:19
End at: 2018-09-08 04:26:49
Local clock offset: -0.064 ms
Remote clock offset: -0.1 ms

# Below is generated by plot.py at 2018-09-08 07:22:52
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 1.92 Mbit/s
  95th percentile per-packet one-way delay: 48.963 ms
  Loss rate: 0.31%
-- Flow 1:
  Average throughput: 1.92 Mbit/s
  95th percentile per-packet one-way delay: 48.963 ms
  Loss rate: 0.31%
Run 3: Report of WebRTC media — Data Link
Run 4: Statistics of WebRTC media

Start at: 2018-09-08 04:52:19
End at: 2018-09-08 04:52:49
Local clock offset: -0.037 ms
Remote clock offset: -0.114 ms

# Below is generated by plot.py at 2018-09-08 07:22:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 50.546 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 50.546 ms
Loss rate: 0.38%
Run 4: Report of WebRTC media — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 1.89 Mbit/s)  Flow 1 egress (mean 1.89 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 50.55 ms)
Run 5: Statistics of WebRTC media

Start at: 2018-09-08 05:18:24
End at: 2018-09-08 05:18:54
Local clock offset: -0.07 ms
Remote clock offset: -0.095 ms

# Below is generated by plot.py at 2018-09-08 07:22:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 50.289 ms
Loss rate: 0.37%

-- Flow 1:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 50.289 ms
Loss rate: 0.37%
Run 5: Report of WebRTC media — Data Link

![Graph showing network traffic and packet delay over time.]

- **Flow 1 ingress (mean 1.88 Mbit/s)**
- **Flow 1 egress (mean 1.88 Mbit/s)**

![Graph showing packet delay distribution over time.]

- **Flow 1 (90th percentile 50.29 ms)**