Pantheon Report

Generated at 2018-07-12 16:19:11 (UTC).
Data path: GCE Iowa Ethernet (remote) → GCE London Ethernet (local).
Repeated the test of 17 congestion control schemes 10 times.
Each test lasted for 30 seconds running 1 flow.
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).
NTP offsets were measured against time.google.com and have been applied
to correct the timestamps in logs.

Git summary:
branch: master @ 9250dbeec7fb57193c9f1ba8c440b4e16a9b30f0
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b4834
third_party/fillp-sheep @ 37162fe9af85249aeccac061c93e75640ef710b5
third_party/genericCC @ d0153f8e594aa89e93b032143ceddfe58e562f4
third_party/indigo @ 2601c92e4a9d58d38dc4dfe0ecdf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ 6f038ed31259d366f9840f65b82cbe8f464b1b39
third_party/pcc @ 1afc958fa0d66d18b623c091a55f6c872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8ac0f892c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1a8c13eb2a7fc978f3ccf42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3b5b2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f57d7f4
third_party/webRTC @ 3f0cc2a9061a41b6f9ddde4735770d143a1fa2851
test from GCE Iowa to GCE London, 10 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>10</td>
<td>221.58</td>
<td>57.72</td>
<td>0.35</td>
</tr>
<tr>
<td>Copa</td>
<td>10</td>
<td>119.88</td>
<td>54.38</td>
<td>0.35</td>
</tr>
<tr>
<td>TCP Cubic</td>
<td>10</td>
<td>171.60</td>
<td>60.04</td>
<td>0.32</td>
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<tr>
<td>FillP</td>
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<td>572.13</td>
<td>234.59</td>
<td>1.02</td>
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<tr>
<td>FillP-Sheep</td>
<td>10</td>
<td>602.52</td>
<td>267.43</td>
<td>1.74</td>
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<td>Indigo</td>
<td>9</td>
<td>191.70</td>
<td>51.31</td>
<td>0.37</td>
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<tr>
<td>LEDBAT</td>
<td>10</td>
<td>33.61</td>
<td>52.04</td>
<td>0.67</td>
</tr>
<tr>
<td>PCC-Allegro</td>
<td>10</td>
<td>308.61</td>
<td>72.64</td>
<td>0.46</td>
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<td>PCC-Expr</td>
<td>10</td>
<td>231.61</td>
<td>72.24</td>
<td>0.61</td>
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<tr>
<td>QUIC Cubic</td>
<td>9</td>
<td>70.45</td>
<td>50.59</td>
<td>0.39</td>
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<tr>
<td>SCReAM</td>
<td>10</td>
<td>0.22</td>
<td>50.57</td>
<td>0.36</td>
</tr>
<tr>
<td>Sprout</td>
<td>10</td>
<td>6.54</td>
<td>51.52</td>
<td>0.32</td>
</tr>
<tr>
<td>TaoVA-100x</td>
<td>10</td>
<td>210.70</td>
<td>51.71</td>
<td>0.34</td>
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<tr>
<td>TCP Vegas</td>
<td>10</td>
<td>118.12</td>
<td>54.74</td>
<td>0.28</td>
</tr>
<tr>
<td>Verus</td>
<td>10</td>
<td>227.62</td>
<td>117.26</td>
<td>0.46</td>
</tr>
<tr>
<td>PCC-Vivace</td>
<td>10</td>
<td>299.64</td>
<td>51.90</td>
<td>0.39</td>
</tr>
<tr>
<td>WebRTC media</td>
<td>9</td>
<td>1.99</td>
<td>50.95</td>
<td>0.40</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

Start at: 2018-07-12 11:20:00
End at: 2018-07-12 11:20:30
Local clock offset: -0.594 ms
Remote clock offset: -0.079 ms

# Below is generated by plot.py at 2018-07-12 14:54:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 221.28 Mbit/s
95th percentile per-packet one-way delay: 52.680 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 221.28 Mbit/s
95th percentile per-packet one-way delay: 52.680 ms
Loss rate: 0.34%
Run 1: Report of TCP BBR — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 221.29 Mbit/s)  Flow 1 egress (mean 221.28 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 52.68 ms)
Run 2: Statistics of TCP BBR

Start at: 2018-07-12 11:41:20
End at: 2018-07-12 11:41:50
Local clock offset: 0.149 ms
Remote clock offset: -0.095 ms

# Below is generated by plot.py at 2018-07-12 14:55:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 226.38 Mbit/s
95th percentile per-packet one-way delay: 60.691 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 226.38 Mbit/s
95th percentile per-packet one-way delay: 60.691 ms
Loss rate: 0.34%
Run 2: Report of TCP BBR — Data Link

![Throughput Graph](image1)

- Flow 1 ingress (mean 226.41 Mbit/s)
- Flow 1 egress (mean 226.38 Mbit/s)

![Delay Graph](image2)

- Flow 1 (95th percentile 60.69 ms)
Run 3: Statistics of TCP BBR

Start at: 2018-07-12 12:03:05
End at: 2018-07-12 12:03:35
Local clock offset: 0.162 ms
Remote clock offset: -0.055 ms

# Below is generated by plot.py at 2018-07-12 14:55:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 223.11 Mbit/s
95th percentile per-packet one-way delay: 53.763 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 223.11 Mbit/s
95th percentile per-packet one-way delay: 53.763 ms
Loss rate: 0.35%
Run 3: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 223.14 Mbit/s)
- Flow 1 egress (mean 223.11 Mbit/s)

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

- Flow 1 (95th percentile 53.76 ms)
Run 4: Statistics of TCP BBR

Start at: 2018-07-12 12:24:54
End at: 2018-07-12 12:25:24
Local clock offset: -0.568 ms
Remote clock offset: -0.073 ms

# Below is generated by plot.py at 2018-07-12 14:55:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 222.66 Mbit/s
95th percentile per-packet one-way delay: 59.340 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 222.66 Mbit/s
95th percentile per-packet one-way delay: 59.340 ms
Loss rate: 0.34%
Run 4: Report of TCP BBR — Data Link

![Throughput Graph](image1)

- **Flow 1 ingress (mean 222.67 Mbit/s)**
- **Flow 1 egress (mean 222.66 Mbit/s)**

![Delay Graph](image2)

- **Flow 1 (95th percentile 59.34 ms)**
Run 5: Statistics of TCP BBR

Start at: 2018-07-12 12:46:28
End at: 2018-07-12 12:46:58
Local clock offset: -0.576 ms
Remote clock offset: -0.037 ms

# Below is generated by plot.py at 2018-07-12 14:55:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 219.20 Mbit/s
95th percentile per-packet one-way delay: 61.570 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 219.20 Mbit/s
95th percentile per-packet one-way delay: 61.570 ms
Loss rate: 0.36%
Run 5: Report of TCP BBR — Data Link

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

Flow 1 ingress (mean 219.24 Mbit/s)  Flow 1 egress (mean 219.20 Mbit/s)

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

Flow 1 (95th percentile 61.57 ms)
Run 6: Statistics of TCP BBR

Start at: 2018-07-12 13:08:13
End at: 2018-07-12 13:08:43
Local clock offset: -0.61 ms
Remote clock offset: -0.02 ms

# Below is generated by plot.py at 2018-07-12 14:55:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 220.07 Mbit/s
95th percentile per-packet one-way delay: 55.034 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 220.07 Mbit/s
95th percentile per-packet one-way delay: 55.034 ms
Loss rate: 0.35%
Run 6: Report of TCP BBR — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 220.10 Mbps)
- Flow 1 egress (mean 220.07 Mbps)

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

- Flow 1 (95th percentile 55.03 ms)
Run 7: Statistics of TCP BBR

Start at: 2018-07-12 13:29:42
End at: 2018-07-12 13:30:12
Local clock offset: -0.267 ms
Remote clock offset: -0.011 ms

# Below is generated by plot.py at 2018-07-12 14:55:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 217.94 Mbit/s
95th percentile per-packet one-way delay: 56.933 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 217.94 Mbit/s
95th percentile per-packet one-way delay: 56.933 ms
Loss rate: 0.38%
Run 7: Report of TCP BBR — Data Link
Run 8: Statistics of TCP BBR

Start at: 2018-07-12 13:51:30
End at: 2018-07-12 13:52:00
Local clock offset: 0.112 ms
Remote clock offset: -0.009 ms

# Below is generated by plot.py at 2018-07-12 14:55:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 221.53 Mbit/s
95th percentile per-packet one-way delay: 59.564 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 221.53 Mbit/s
95th percentile per-packet one-way delay: 59.564 ms
Loss rate: 0.35%
Run 8: Report of TCP BBR — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 221.55 Mbit/s)  Flow 1 egress (mean 221.53 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 59.56 ms)
Run 9: Statistics of TCP BBR

Start at: 2018-07-12 14:12:42
End at: 2018-07-12 14:13:12
Local clock offset: -0.272 ms
Remote clock offset: -0.022 ms

# Below is generated by plot.py at 2018-07-12 14:58:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 221.59 Mbit/s
95th percentile per-packet one-way delay: 58.894 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 221.59 Mbit/s
95th percentile per-packet one-way delay: 58.894 ms
Loss rate: 0.35%
Run 9: Report of TCP BBR — Data Link

The first graph shows the throughput over time for Flow 1, with the mean ingress and egress rates indicated. The second graph depicts the packet error rate over time, highlighting the 95th percentile delay.
Run 10: Statistics of TCP BBR

Start at: 2018-07-12 14:34:42
End at: 2018-07-12 14:35:12
Local clock offset: -0.228 ms
Remote clock offset: -0.005 ms

# Below is generated by plot.py at 2018-07-12 14:58:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 222.05 Mbit/s
95th percentile per-packet one-way delay: 58.691 ms
Loss rate: 0.35%

-- Flow 1:
Average throughput: 222.05 Mbit/s
95th percentile per-packet one-way delay: 58.691 ms
Loss rate: 0.35%
Run 10: Report of TCP BBR — Data Link

![Throughput plot](image1)

- Flow 1 ingress (mean 222.08 Mbit/s)
- Flow 1 egress (mean 222.05 Mbit/s)

![Per packet end-to-end delay plot](image2)

- Flow 1 (95th percentile 58.69 ms)
Run 1: Statistics of Copa

End at: 2018-07-12 11:22:50
Local clock offset: -0.235 ms
Remote clock offset: -0.069 ms

# Below is generated by plot.py at 2018-07-12 14:58:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 124.30 Mbit/s
95th percentile per-packet one-way delay: 54.998 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 124.30 Mbit/s
95th percentile per-packet one-way delay: 54.998 ms
Loss rate: 0.00%
Run 1: Report of Copa — Data Link
Run 2: Statistics of Copa

Start at: 2018-07-12 11:43:40
End at: 2018-07-12 11:44:10
Local clock offset: -0.199 ms
Remote clock offset: -0.105 ms

# Below is generated by plot.py at 2018-07-12 14:58:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 68.77 Mbit/s
95th percentile per-packet one-way delay: 59.283 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 68.77 Mbit/s
95th percentile per-packet one-way delay: 59.283 ms
Loss rate: 0.79%
Run 2: Report of Copa — Data Link

[Graph showing throughput and packet delay over time]

Throughput (Mbps) vs Time (s)

Packet delay (ms) vs Time (s)

Legend:
- Flow 1 ingress (mean 69.06 Mbps)
- Flow 1 egress (mean 68.77 Mbps)
Run 3: Statistics of Copa

Start at: 2018-07-12 12:05:26
End at: 2018-07-12 12:05:56
Local clock offset: -0.153 ms
Remote clock offset: -0.06 ms

# Below is generated by plot.py at 2018-07-12 14:58:35
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 81.99 Mbit/s
  95th percentile per-packet one-way delay: 55.491 ms
  Loss rate: 0.29%
-- Flow 1:
  Average throughput: 81.99 Mbit/s
  95th percentile per-packet one-way delay: 55.491 ms
  Loss rate: 0.29%
Run 3: Report of Copa — Data Link
Run 4: Statistics of Copa

Start at: 2018-07-12 12:27:16
End at: 2018-07-12 12:27:46
Local clock offset: -0.165 ms
Remote clock offset: -0.048 ms

# Below is generated by plot.py at 2018-07-12 14:58:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 128.12 Mbit/s
95th percentile per-packet one-way delay: 52.739 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 128.12 Mbit/s
95th percentile per-packet one-way delay: 52.739 ms
Loss rate: 0.57%
Run 4: Report of Copa — Data Link

![Graph showing throughput and packet delay over time]

- **Flow 1 ingress** (mean 128.43 Mbit/s)
- **Flow 1 egress** (mean 128.12 Mbit/s)

![Graph showing packet delay over time]

- **Flow 1** (95th percentile 52.74 ms)
Run 5: Statistics of Copa

Start at: 2018-07-12 12:48:49
End at: 2018-07-12 12:49:19
Local clock offset: 0.145 ms
Remote clock offset: -0.018 ms

# Below is generated by plot.py at 2018-07-12 14:59:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 138.95 Mbit/s
95th percentile per-packet one-way delay: 56.524 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 138.95 Mbit/s
95th percentile per-packet one-way delay: 56.524 ms
Loss rate: 0.29%
Run 5: Report of Copa — Data Link
Run 6: Statistics of Copa

Start at: 2018-07-12 13:10:34
End at: 2018-07-12 13:11:04
Local clock offset: -0.598 ms
Remote clock offset: -0.074 ms

# Below is generated by plot.py at 2018-07-12 14:59:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 147.55 Mbit/s
95th percentile per-packet one-way delay: 51.824 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 147.55 Mbit/s
95th percentile per-packet one-way delay: 51.824 ms
Loss rate: 0.32%
Run 6: Report of Copa — Data Link
Run 7: Statistics of Copa

Start at: 2018-07-12 13:32:03
End at: 2018-07-12 13:32:33
Local clock offset: -0.597 ms
Remote clock offset: -0.032 ms

# Below is generated by plot.py at 2018-07-12 15:02:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 159.23 Mbit/s
95th percentile per-packet one-way delay: 53.222 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 159.23 Mbit/s
95th percentile per-packet one-way delay: 53.222 ms
Loss rate: 0.36%
Run 7: Report of Copa — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 159.26 Mbit/s)
- Flow 1 egress (mean 159.23 Mbit/s)

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

- Flow 1 (95th percentile 53.22 ms)
Run 8: Statistics of Copa

Start at: 2018-07-12 13:53:51
End at: 2018-07-12 13:54:21
Local clock offset: -0.617 ms
Remote clock offset: -0.048 ms

# Below is generated by plot.py at 2018-07-12 15:02:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.27 Mbit/s
95th percentile per-packet one-way delay: 52.690 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 97.27 Mbit/s
95th percentile per-packet one-way delay: 52.690 ms
Loss rate: 0.22%
Run 8: Report of Copa — Data Link

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**Graph 1:**

Throughput (Mbps) over time (s) for Flow 1 ingress (mean 97.14 Mbps) and Flow 1 egress (mean 97.27 Mbps).

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**Graph 2:**

Per-packet one-way delay (ms) over time (s) for Flow 1 (95th percentile 52.69 ms).
Run 9: Statistics of Copa

Start at: 2018-07-12 14:15:03
End at: 2018-07-12 14:15:33
Local clock offset: 0.116 ms
Remote clock offset: 0.045 ms

# Below is generated by plot.py at 2018-07-12 15:02:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 100.93 Mbit/s
95th percentile per-packet one-way delay: 54.467 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 100.93 Mbit/s
95th percentile per-packet one-way delay: 54.467 ms
Loss rate: 0.37%
Run 9: Report of Copa — Data Link

![Graph of throughput and delay over time](Image)

- **Throughput:**
  - Flow 1 ingress (mean 100.96 Mbit/s)
  - Flow 1 egress (mean 100.93 Mbit/s)

- **Delay:**
  - Flow 1 (99th percentile 34.47 ms)
Run 10: Statistics of Copa

Start at: 2018-07-12 14:37:07
End at: 2018-07-12 14:37:37
Local clock offset: 0.129 ms
Remote clock offset: 0.009 ms

# Below is generated by plot.py at 2018-07-12 15:03:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 151.71 Mbit/s
95th percentile per-packet one-way delay: 52.585 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 151.71 Mbit/s
95th percentile per-packet one-way delay: 52.585 ms
Loss rate: 0.31%
Run 10: Report of Copa — Data Link
Run 1: Statistics of TCP Cubic

Start at: 2018-07-12 11:09:38
End at: 2018-07-12 11:10:08
Local clock offset: -0.566 ms
Remote clock offset: -0.049 ms

# Below is generated by plot.py at 2018-07-12 15:03:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 171.00 Mbit/s
95th percentile per-packet one-way delay: 60.250 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 171.00 Mbit/s
95th percentile per-packet one-way delay: 60.250 ms
Loss rate: 0.38%
Run 1: Report of TCP Cubic — Data Link
Run 2: Statistics of TCP Cubic

Start at: 2018-07-12 11:30:55
End at: 2018-07-12 11:31:25
Local clock offset: 0.134 ms
Remote clock offset: -0.09 ms

# Below is generated by plot.py at 2018-07-12 15:03:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 169.71 Mbit/s
95th percentile per-packet one-way delay: 60.595 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 169.71 Mbit/s
95th percentile per-packet one-way delay: 60.595 ms
Loss rate: 0.28%
Run 2: Report of TCP Cubic — Data Link

![Graph of throughput over time for TCP Cubic](image)

- **Flow 1 ingress (mean 169.61 Mbit/s)**
- **Flow 1 egress (mean 169.71 Mbit/s)**

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

- **Flow 1 (95th percentile 60.59 ms)**
Run 3: Statistics of TCP Cubic

Start at: 2018-07-12 11:52:33
End at: 2018-07-12 11:53:03
Local clock offset: -0.561 ms
Remote clock offset: -0.094 ms

# Below is generated by plot.py at 2018-07-12 15:03:07
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 146.55 Mbit/s
  95th percentile per-packet one-way delay: 58.702 ms
  Loss rate: 0.32%
-- Flow 1:
  Average throughput: 146.55 Mbit/s
  95th percentile per-packet one-way delay: 58.702 ms
  Loss rate: 0.32%
Run 3: Report of TCP Cubic — Data Link

![Graph of Throughput vs Time](image1)

- Flow 1 ingress (mean 146.54 Mbit/s)
- Flow 1 egress (mean 146.55 Mbit/s)

![Graph of Round-trip Delay vs Time](image2)

- Flow 1 (99th percentile 58.70 ms)
Run 4: Statistics of TCP Cubic

Start at: 2018-07-12 12:14:26
End at: 2018-07-12 12:14:56
Local clock offset: -0.545 ms
Remote clock offset: -0.046 ms

# Below is generated by plot.py at 2018-07-12 15:03:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 179.94 Mbit/s
95th percentile per-packet one-way delay: 60.630 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 179.94 Mbit/s
95th percentile per-packet one-way delay: 60.630 ms
Loss rate: 0.44%
Run 4: Report of TCP Cubic — Data Link
Run 5: Statistics of TCP Cubic

Start at: 2018-07-12 12:36:19
End at: 2018-07-12 12:36:49
Local clock offset: -0.576 ms
Remote clock offset: -0.04 ms

# Below is generated by plot.py at 2018-07-12 15:03:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 164.45 Mbit/s
95th percentile per-packet one-way delay: 58.754 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 164.45 Mbit/s
95th percentile per-packet one-way delay: 58.754 ms
Loss rate: 0.47%
Run 5: Report of TCP Cubic — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 164.92 Mbit/s)  Flow 1 egress (mean 164.45 Mbit/s)

Per packet (total delay (ms))

Time (s)

Flow 1 (95th percentile 58.75 ms)
Run 6: Statistics of TCP Cubic

Start at: 2018-07-12 12:57:47
End at: 2018-07-12 12:58:17
Local clock offset: -0.567 ms
Remote clock offset: -0.067 ms

# Below is generated by plot.py at 2018-07-12 15:04:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 190.83 Mbit/s
95th percentile per-packet one-way delay: 59.499 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 190.83 Mbit/s
95th percentile per-packet one-way delay: 59.499 ms
Loss rate: 0.26%
Run 6: Report of TCP Cubic — Data Link

![Graph 1: Throughput (Mbps) vs. Time (s)](attachment:throughput_graph.png)

- Flow 1 ingress (mean 190.70 Mbps)
- Flow 1 egress (mean 190.83 Mbps)

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

- Flow 1 (95th percentile 59.50 ms)
Run 7: Statistics of TCP Cubic

Start at: 2018-07-12 13:19:31
End at: 2018-07-12 13:20:01
Local clock offset: 0.091 ms
Remote clock offset: -0.013 ms

# Below is generated by plot.py at 2018-07-12 15:04:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 168.45 Mbit/s
95th percentile per-packet one-way delay: 61.185 ms
Loss rate: 0.49%

-- Flow 1:
Average throughput: 168.45 Mbit/s
95th percentile per-packet one-way delay: 61.185 ms
Loss rate: 0.49%
Run 7: Report of TCP Cubic — Data Link

![Throughput Graph](image)

- Flow 1 ingress (mean 168.70 Mbit/s)
- Flow 1 egress (mean 168.45 Mbit/s)

![Packet Delay Graph](image)

- Flow 1 (95th percentile 61.19 ms)
Run 8: Statistics of TCP Cubic

Start at: 2018-07-12 13:41:09
End at: 2018-07-12 13:41:39
Local clock offset: -0.225 ms
Remote clock offset: -0.037 ms

# Below is generated by plot.py at 2018-07-12 15:04:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 157.13 Mbit/s
95th percentile per-packet one-way delay: 58.499 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 157.13 Mbit/s
95th percentile per-packet one-way delay: 58.499 ms
Loss rate: 0.23%
Run 8: Report of TCP Cubic — Data Link

![Graph 1: Throughput (Mbps)]

- **Flow 1 ingress** (mean 156.97 Mbps)
- **Flow 1 egress** (mean 157.13 Mbps)

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

- **Flow 1** (95th percentile 58.50 ms)
Run 9: Statistics of TCP Cubic

Start at: 2018-07-12 14:02:38
End at: 2018-07-12 14:03:08
Local clock offset: -0.217 ms
Remote clock offset: -0.0 ms

# Below is generated by plot.py at 2018-07-12 15:04:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 140.98 Mbit/s
95th percentile per-packet one-way delay: 60.644 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 140.98 Mbit/s
95th percentile per-packet one-way delay: 60.644 ms
Loss rate: 0.25%
Run 9: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 140.86 Mbit/s)
- Flow 1 egress (mean 140.98 Mbit/s)

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

- Flow 1 (95th percentile 60.64 ms)
Run 10: Statistics of TCP Cubic

Start at: 2018-07-12 14:24:03
End at: 2018-07-12 14:24:33
Local clock offset: -0.204 ms
Remote clock offset: 0.007 ms

# Below is generated by plot.py at 2018-07-12 15:05:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 226.95 Mbit/s
95th percentile per-packet one-way delay: 61.602 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 226.95 Mbit/s
95th percentile per-packet one-way delay: 61.602 ms
Loss rate: 0.10%
Run 10: Report of TCP Cubic — Data Link

![Graph 1: Throughput (Mbps) over Time (s)](image1)
- Flow 1 ingress (mean 226.42 Mbps)
- Flow 1 egress (mean 226.95 Mbps)

![Graph 2: Per-packet one-way delay (ms) over Time (s)](image2)
- Flow 1 (95th percentile 61.60 ms)
Run 1: Statistics of FillP

Start at: 2018-07-12 11:13:11
End at: 2018-07-12 11:13:41
Local clock offset: -0.21 ms
Remote clock offset: -0.04 ms

# Below is generated by plot.py at 2018-07-12 15:14:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 599.76 Mbit/s
95th percentile per-packet one-way delay: 240.304 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 599.76 Mbit/s
95th percentile per-packet one-way delay: 240.304 ms
Loss rate: 0.69%
Run 1: Report of FillP — Data Link
Run 2: Statistics of FillP

Start at: 2018-07-12 11:34:26
End at: 2018-07-12 11:34:56
Local clock offset: -0.565 ms
Remote clock offset: -0.087 ms

# Below is generated by plot.py at 2018-07-12 15:15:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 581.79 Mbit/s
95th percentile per-packet one-way delay: 247.857 ms
Loss rate: 2.46%
-- Flow 1:
Average throughput: 581.79 Mbit/s
95th percentile per-packet one-way delay: 247.857 ms
Loss rate: 2.46%
Run 2: Report of FillP — Data Link

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[Graph 1: Throughput in Mbps over time (0-30 seconds)]

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 594.45 Mbps) — Flow 1 egress (mean 581.79 Mbps)

[Graph 2: Per packet one way latency over time (0-30 seconds)]

Per packet one way latency (ms)

Time (s)

Flow 1 (95th percentile 247.86 ms)
Run 3: Statistics of FillP

Start at: 2018-07-12 11:56:07
End at: 2018-07-12 11:56:37
Local clock offset: -0.556 ms
Remote clock offset: -0.092 ms

# Below is generated by plot.py at 2018-07-12 15:16:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 637.22 Mbit/s
95th percentile per-packet one-way delay: 229.644 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 637.22 Mbit/s
95th percentile per-packet one-way delay: 229.644 ms
Loss rate: 0.48%
Run 3: Report of FillP — Data Link

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

[Graph 2: Time vs. Packet Delay (ms)]
Run 4: Statistics of FillP

Start at: 2018-07-12 12:17:58
End at: 2018-07-12 12:18:28
Local clock offset: -0.211 ms
Remote clock offset: -0.013 ms

# Below is generated by plot.py at 2018-07-12 15:16:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 572.63 Mbit/s
95th percentile per-packet one-way delay: 231.120 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 572.63 Mbit/s
95th percentile per-packet one-way delay: 231.120 ms
Loss rate: 0.66%
Run 4: Report of FillP — Data Link
Run 5: Statistics of FillP

Start at: 2018-07-12 12:39:45
End at: 2018-07-12 12:40:15
Local clock offset: -0.231 ms
Remote clock offset: -0.041 ms

# Below is generated by plot.py at 2018-07-12 15:16:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 483.54 Mbit/s
95th percentile per-packet one-way delay: 237.852 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 483.54 Mbit/s
95th percentile per-packet one-way delay: 237.852 ms
Loss rate: 0.47%
Run 5: Report of FillP — Data Link

[Graph 1: Throughput vs Time]

- Flow 1 ingress (mean 484.17 Mbit/s)
- Flow 1 egress (mean 483.54 Mbit/s)

[Graph 2: Packet Delay vs Time]

- Flow 1 (95th percentile 237.85 ms)
Run 6: Statistics of FillP

Start at: 2018-07-12 13:01:22
End at: 2018-07-12 13:01:52
Local clock offset: -0.24 ms
Remote clock offset: -0.083 ms

# Below is generated by plot.py at 2018-07-12 15:16:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 613.60 Mbit/s
95th percentile per-packet one-way delay: 232.858 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 613.60 Mbit/s
95th percentile per-packet one-way delay: 232.858 ms
Loss rate: 0.83%
Run 6: Report of FillP — Data Link
Run 7: Statistics of FillP

Local clock offset: -0.293 ms
Remote clock offset: -0.067 ms

# Below is generated by plot.py at 2018-07-12 15:16:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 580.12 Mbit/s
95th percentile per-packet one-way delay: 211.677 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 580.12 Mbit/s
95th percentile per-packet one-way delay: 211.677 ms
Loss rate: 1.00%
Run 7: Report of FillP — Data Link

![Graph of Throughput and Packet Delay](image)

- **Flow 1 ingress (mean 583.99 Mbit/s)**
- **Flow 1 egress (mean 580.12 Mbit/s)**

- **Flow 1 (95th percentile 211.68 ms)**
Run 8: Statistics of FillP

Start at: 2018-07-12 13:44:35
End at: 2018-07-12 13:45:05
Local clock offset: 0.116 ms
Remote clock offset: -0.018 ms

# Below is generated by plot.py at 2018-07-12 15:18:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 604.36 Mbit/s
95th percentile per-packet one-way delay: 242.494 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 604.36 Mbit/s
95th percentile per-packet one-way delay: 242.494 ms
Loss rate: 0.85%
Run 8: Report of FillP — Data Link

![Graph showing throughput over time](image1)

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

Flow 1 ingress (mean 607.46 Mbit/s) vs. Flow 1 egress (mean 604.36 Mbit/s)

Flow 1 (95th percentile 242.49 ms)
Run 9: Statistics of FillP

Start at: 2018-07-12 14:06:04
End at: 2018-07-12 14:06:34
Local clock offset: -0.262 ms
Remote clock offset: -0.037 ms

# Below is generated by plot.py at 2018-07-12 15:23:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 522.96 Mbit/s
95th percentile per-packet one-way delay: 246.954 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 522.96 Mbit/s
95th percentile per-packet one-way delay: 246.954 ms
Loss rate: 1.62%
Run 9: Report of FillP — Data Link

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

Flow 1 ingress (mean 529.75 Mbit/s) vs Flow 1 egress (mean 522.96 Mbit/s)
Run 10: Statistics of FillP

Start at: 2018-07-12 14:27:41
End at: 2018-07-12 14:28:11
Local clock offset: 0.126 ms
Remote clock offset: -0.008 ms

# Below is generated by plot.py at 2018-07-12 15:24:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 525.36 Mbit/s
95th percentile per-packet one-way delay: 225.114 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 525.36 Mbit/s
95th percentile per-packet one-way delay: 225.114 ms
Loss rate: 1.10%
Run 10: Report of FillP — Data Link

Throughput (Mbit/s)

Flow 1 ingress (mean 529.39 Mbit/s)  Flow 1 egress (mean 525.36 Mbit/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 225.11 ms)
Run 1: Statistics of FillP-Sheep

Start at: 2018-07-12 11:24:42
End at: 2018-07-12 11:25:12
Local clock offset: -0.572 ms
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2018-07-12 15:24:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 253.46 Mbit/s
95th percentile per-packet one-way delay: 302.605 ms
Loss rate: 4.28%
-- Flow 1:
Average throughput: 253.46 Mbit/s
95th percentile per-packet one-way delay: 302.605 ms
Loss rate: 4.28%
Run 1: Report of FillP-Sheep — Data Link

![Graphs showing throughput and packet delay over time]

- Flow 1 ingress (mean 263.97 Mbit/s)
- Flow 1 egress (mean 253.46 Mbit/s)
- Flow 1 (95th percentile 302.63 ms)
Run 2: Statistics of FillP-Sheep

Start at: 2018-07-12 11:45:57
End at: 2018-07-12 11:46:27
Local clock offset: -0.259 ms
Remote clock offset: -0.044 ms

# Below is generated by plot.py at 2018-07-12 15:28:09
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 627.61 Mbit/s
  95th percentile per-packet one-way delay: 275.277 ms
  Loss rate: 1.44%
-- Flow 1:
  Average throughput: 627.61 Mbit/s
  95th percentile per-packet one-way delay: 275.277 ms
  Loss rate: 1.44%
Run 2: Report of FillP-Sheep — Data Link

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

- Flow 1 ingress (mean 634.61 Mbps)
- Flow 1 egress (mean 627.61 Mbps)

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

- Flow 1 (95th percentile 275.28 ms)
Run 3: Statistics of FillP-Sheep

Start at: 2018-07-12 12:07:44
End at: 2018-07-12 12:08:14
Local clock offset: -0.202 ms
Remote clock offset: -0.055 ms

# Below is generated by plot.py at 2018-07-12 15:29:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 709.45 Mbit/s
95th percentile per-packet one-way delay: 253.269 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 709.45 Mbit/s
95th percentile per-packet one-way delay: 253.269 ms
Loss rate: 1.20%
Run 3: Report of FillP-Sheep — Data Link

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

- **Throughput**: The graph illustrates the throughput in Mbps over time, with two lines indicating the ingress (dotted blue) and egress (solid blue) flows. The mean throughput for ingress is 715.64 Mbps, and for egress, it is 709.45 Mbps.

- **Packet Delay**: The second graph shows the packet delay over time, with a line indicating the 95th percentile of delay, which is 253.27 ms.

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Run 4: Statistics of FillP-Sheep

Start at: 2018-07-12 12:29:38
End at: 2018-07-12 12:30:08
Local clock offset: -0.202 ms
Remote clock offset: -0.049 ms

# Below is generated by plot.py at 2018-07-12 15:29:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 668.51 Mbit/s
95th percentile per-packet one-way delay: 286.239 ms
Loss rate: 2.28%
-- Flow 1:
Average throughput: 668.51 Mbit/s
95th percentile per-packet one-way delay: 286.239 ms
Loss rate: 2.28%
Run 4: Report of FillP-Sheep — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 681.78 Mbit/s)
- Flow 1 egress (mean 668.51 Mbit/s)

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

- Flow 1 (95th percentile 286.24 ms)
Run 5: Statistics of FillP-Sheep

Start at: 2018-07-12 12:51:12
End at: 2018-07-12 12:51:42
Local clock offset: -0.572 ms
Remote clock offset: -0.036 ms

# Below is generated by plot.py at 2018-07-12 15:29:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 623.55 Mbit/s
95th percentile per-packet one-way delay: 246.815 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 623.55 Mbit/s
95th percentile per-packet one-way delay: 246.815 ms
Loss rate: 0.26%
Run 5: Report of FillP-Sheep — Data Link

![Graph of Throughput vs. Time]

- **Throughput (Mbps)**
- **Time (s)**

Legend:
- Flow 1 ingress (mean 623.05 Mbit/s)
- Flow 1 egress (mean 623.55 Mbit/s)

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

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

Legend:
- Flow 1 (95th percentile 246.81 ms)
Run 6: Statistics of FillP-Sheep

Start at: 2018-07-12 13:12:58
Local clock offset: -0.267 ms
Remote clock offset: -0.056 ms

# Below is generated by plot.py at 2018-07-12 15:30:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 590.33 Mbit/s
95th percentile per-packet one-way delay: 288.996 ms
Loss rate: 2.18%
-- Flow 1:
Average throughput: 590.33 Mbit/s
95th percentile per-packet one-way delay: 288.996 ms
Loss rate: 2.18%
Run 6: Report of FillP-Sheep — Data Link
Run 7: Statistics of FillP-Sheep

Start at: 2018-07-12 13:34:28
End at: 2018-07-12 13:34:58
Local clock offset: ~0.234 ms
Remote clock offset: 0.016 ms

# Below is generated by plot.py at 2018-07-12 15:35:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 736.65 Mbit/s
95th percentile per-packet one-way delay: 251.118 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 736.65 Mbit/s
95th percentile per-packet one-way delay: 251.118 ms
Loss rate: 0.90%
Run 7: Report of FillP-Sheep — Data Link

![Graph of throughput over time](image1)

- Flow 1 ingress (mean 740.88 Mbit/s)
- Flow 1 egress (mean 736.65 Mbit/s)

![Graph of per-packet one-way delay over time](image2)

- Flow 1 (95th percentile 251.12 ms)
Run 8: Statistics of FillP-Sheep

Start at: 2018-07-12 13:56:10
End at: 2018-07-12 13:56:40
Local clock offset: -0.223 ms
Remote clock offset: -0.009 ms

# Below is generated by plot.py at 2018-07-12 15:35:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 531.22 Mbit/s
95th percentile per-packet one-way delay: 240.637 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 531.22 Mbit/s
95th percentile per-packet one-way delay: 240.637 ms
Loss rate: 1.08%
Run 8: Report of FillP-Sheep — Data Link
Run 9: Statistics of FillP-Sheep

Start at: 2018-07-12 14:17:23
End at: 2018-07-12 14:17:53
Local clock offset: 0.155 ms
Remote clock offset: -0.017 ms

# Below is generated by plot.py at 2018-07-12 15:39:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 665.43 Mbit/s
95th percentile per-packet one-way delay: 270.590 ms
Loss rate: 2.68%
-- Flow 1:
Average throughput: 665.43 Mbit/s
95th percentile per-packet one-way delay: 270.590 ms
Loss rate: 2.68%
Run 9: Report of FillP-Sheep — Data Link

![Graph of throughput over time with two traces for flow ingress and egress.]
Run 10: Statistics of FillP-Sheep

Start at: 2018-07-12 14:39:36
End at: 2018-07-12 14:40:06
Local clock offset: -0.534 ms
Remote clock offset: 0.037 ms

# Below is generated by plot.py at 2018-07-12 15:41:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 619.00 Mbit/s
95th percentile per-packet one-way delay: 258.772 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 619.00 Mbit/s
95th percentile per-packet one-way delay: 258.772 ms
Loss rate: 1.07%
Run 10: Report of FillP-Sheep — Data Link

![Graph of throughput and latency over time for Flow 1 ingress and egress.]
Run 1: Statistics of Indigo

Start at: 2018-07-12 11:08:33
End at: 2018-07-12 11:09:03
Local clock offset: -0.189 ms
Remote clock offset: -0.059 ms
Run 1: Report of Indigo — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 0.00 Mbps)
  - Flow 1 egress (mean 0.00 Mbps)

- **Per packet delay (ms):**
  - Flow 1 (95th percentile 50.66 ms)
Run 2: Statistics of Indigo

Start at: 2018-07-12 11:29:43
End at: 2018-07-12 11:30:14
Local clock offset: -0.199 ms
Remote clock offset: -0.05 ms

# Below is generated by plot.py at 2018-07-12 15:41:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.07 Mbit/s
95th percentile per-packet one-way delay: 50.254 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 86.07 Mbit/s
95th percentile per-packet one-way delay: 50.254 ms
Loss rate: 0.36%
Run 3: Statistics of Indigo

Start at: 2018-07-12 11:51:14
End at: 2018-07-12 11:51:44
Local clock offset: 0.138 ms
Remote clock offset: -0.079 ms

# Below is generated by plot.py at 2018-07-12 15:41:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 214.95 Mbit/s
95th percentile per-packet one-way delay: 50.870 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 214.95 Mbit/s
95th percentile per-packet one-way delay: 50.870 ms
Loss rate: 0.37%
Run 3: Report of Indigo — Data Link

![Graph of throughput over time](image1)

**Flow 1 ingress (mean 215.01 Mbit/s)  Flow 1 egress (mean 214.95 Mbit/s)**

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

*Flow 1 (95th percentile 50.87 ms)*
Run 4: Statistics of Indigo

Start at: 2018-07-12 12:13:07
End at: 2018-07-12 12:13:37
Local clock offset: -0.231 ms
Remote clock offset: -0.031 ms

# Below is generated by plot.py at 2018-07-12 15:41:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 216.05 Mbit/s
95th percentile per-packet one-way delay: 51.568 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 216.05 Mbit/s
95th percentile per-packet one-way delay: 51.568 ms
Loss rate: 0.35%
Run 4: Report of Indigo — Data Link

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

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Run 5: Statistics of Indigo

Start at: 2018-07-12 12:35:00
End at: 2018-07-12 12:35:30
Local clock offset: 0.16 ms
Remote clock offset: 0.008 ms

# Below is generated by plot.py at 2018-07-12 15:41:17
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 208.41 Mbit/s
  95th percentile per-packet one-way delay: 52.183 ms
  Loss rate: 0.36%
-- Flow 1:
  Average throughput: 208.41 Mbit/s
  95th percentile per-packet one-way delay: 52.183 ms
  Loss rate: 0.36%
Run 5: Report of Indigo — Data Link

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

Flow 1 ingress (mean 208.44 Mbps)  Flow 1 egress (mean 208.41 Mbps)

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

Flow 1 (95th percentile 52.18 ms)
Run 6: Statistics of Indigo

Start at: 2018-07-12 12:56:29
End at: 2018-07-12 12:56:59
Local clock offset: -0.251 ms
Remote clock offset: -0.052 ms

# Below is generated by plot.py at 2018-07-12 15:41:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 204.98 Mbit/s
95th percentile per-packet one-way delay: 51.407 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 204.98 Mbit/s
95th percentile per-packet one-way delay: 51.407 ms
Loss rate: 0.37%
Run 6: Report of Indigo — Data Link

![Graph of throughput vs. time](image1)

- Flow 1 ingress (mean 205.05 Mbit/s)
- Flow 1 egress (mean 204.98 Mbit/s)

![Graph of packet loss vs. time](image2)

- Flow 1 (99th percentile 51 ms)
Run 7: Statistics of Indigo

End at: 2018-07-12 13:18:43
Local clock offset: 0.148 ms
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2018-07-12 15:41:17
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 200.00 Mbit/s
  95th percentile per-packet one-way delay: 51.739 ms
  Loss rate: 0.36%
-- Flow 1:
  Average throughput: 200.00 Mbit/s
  95th percentile per-packet one-way delay: 51.739 ms
  Loss rate: 0.36%
Run 7: Report of Indigo — Data Link
Run 8: Statistics of Indigo

Start at: 2018-07-12 13:39:52
End at: 2018-07-12 13:40:22
Local clock offset: -0.569 ms
Remote clock offset: -0.034 ms

# Below is generated by plot.py at 2018-07-12 15:41:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 197.89 Mbit/s
95th percentile per-packet one-way delay: 50.935 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 197.89 Mbit/s
95th percentile per-packet one-way delay: 50.935 ms
Loss rate: 0.38%
Run 8: Report of Indigo — Data Link

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

- **Flow 1 Ingress** (mean 197.97 Mbps)
- **Flow 1 Egress** (mean 197.89 Mbps)

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

- **Flow 1** (95th percentile 50.94 ms)
Run 9: Statistics of Indigo

Start at: 2018-07-12 14:01:21
End at: 2018-07-12 14:01:51
Local clock offset: -0.226 ms
Remote clock offset: -0.032 ms

# Below is generated by plot.py at 2018-07-12 15:41:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 187.18 Mbit/s
95th percentile per-packet one-way delay: 51.655 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 187.18 Mbit/s
95th percentile per-packet one-way delay: 51.655 ms
Loss rate: 0.39%
Run 9: Report of Indigo — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 187.26 Mbit/s)
Flow 1 egress (mean 187.18 Mbit/s)

Packet error rate (Per packet error)

Flow 1 (95th percentile 51.66 ms)
Run 10: Statistics of Indigo

Start at: 2018-07-12 14:22:43
End at: 2018-07-12 14:23:13
Local clock offset: 0.124 ms
Remote clock offset: -0.035 ms

# Below is generated by plot.py at 2018-07-12 15:41:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 209.73 Mbit/s
95th percentile per-packet one-way delay: 51.160 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 209.73 Mbit/s
95th percentile per-packet one-way delay: 51.160 ms
Loss rate: 0.37%
Run 10: Report of Indigo — Data Link

![Graph showing throughput and packet delay over time for Flow 1 ingress and egress with mean rates of 209.82 Mbps and 209.73 Mbps respectively.](image)

![Graph showing packet delay distribution over time for Flow 1 with 90th percentile delay of 51.16 ms.](image)
Run 1: Statistics of LEDBAT

Start at: 2018-07-12 11:18:52
End at: 2018-07-12 11:19:22
Local clock offset: -0.242 ms
Remote clock offset: -0.098 ms

# Below is generated by plot.py at 2018-07-12 15:41:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 35.28 Mbit/s
95th percentile per-packet one-way delay: 52.213 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 35.28 Mbit/s
95th percentile per-packet one-way delay: 52.213 ms
Loss rate: 0.66%
Run 1: Report of LEDBAT — Data Link
Run 2: Statistics of LEDBAT

Start at: 2018-07-12 11:40:13
End at: 2018-07-12 11:40:43
Local clock offset: -0.587 ms
Remote clock offset: -0.032 ms

# Below is generated by plot.py at 2018-07-12 15:41:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 26.67 Mbit/s
95th percentile per-packet one-way delay: 51.465 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 26.67 Mbit/s
95th percentile per-packet one-way delay: 51.465 ms
Loss rate: 0.66%
Run 2: Report of LEDBAT — Data Link

![Throughput Graph](image1)

- **Flow 1 ingress (mean 26.76 Mbit/s)**
- **Flow 1 egress (mean 26.67 Mbit/s)**

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

- **Flow 1 95th percentile 51.47 ms**
Run 3: Statistics of LEDBAT

Start at: 2018-07-12 12:01:58
End at: 2018-07-12 12:02:28
Local clock offset: -0.599 ms
Remote clock offset: -0.068 ms

# Below is generated by plot.py at 2018-07-12 15:41:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 34.72 Mbit/s
95th percentile per-packet one-way delay: 52.096 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 34.72 Mbit/s
95th percentile per-packet one-way delay: 52.096 ms
Loss rate: 0.67%
Run 3: Report of LEDBAT — Data Link

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

- **Flow 1 ingress (mean 34.84 Mbps)**
- **Flow 1 egress (mean 34.72 Mbps)**

![Graph 2: Per-packet rate vs. delay (ms)]
Run 4: Statistics of LEDBAT

Start at: 2018-07-12 12:23:47
End at: 2018-07-12 12:24:17
Local clock offset: -0.565 ms
Remote clock offset: -0.045 ms

# Below is generated by plot.py at 2018-07-12 15:41:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 34.47 Mbit/s
95th percentile per-packet one-way delay: 52.119 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 34.47 Mbit/s
95th percentile per-packet one-way delay: 52.119 ms
Loss rate: 0.67%
Run 5: Statistics of LEDBAT

Start at: 2018-07-12 12:45:20
End at: 2018-07-12 12:45:50
Local clock offset: -0.585 ms
Remote clock offset: -0.06 ms

# Below is generated by plot.py at 2018-07-12 15:41:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 35.23 Mbit/s
95th percentile per-packet one-way delay: 51.464 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 35.23 Mbit/s
95th percentile per-packet one-way delay: 51.464 ms
Loss rate: 0.67%
Run 5: Report of LEDBAT — Data Link
Run 6: Statistics of LEDBAT

Start at: 2018-07-12 13:07:05
End at: 2018-07-12 13:07:35
Local clock offset: -0.246 ms
Remote clock offset: -0.016 ms

# Below is generated by plot.py at 2018-07-12 15:41:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 34.27 Mbit/s
95th percentile per-packet one-way delay: 52.513 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 34.27 Mbit/s
95th percentile per-packet one-way delay: 52.513 ms
Loss rate: 0.68%
Run 6: Report of LEDBAT — Data Link

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

- **Flow 1 ingress (mean 34.39 Mbit/s)**
- **Flow 1 egress (mean 34.27 Mbit/s)**

![Graph 2: Per packet delay vs Time (s)]

- **Flow 1 95th percentile 52.51 ms**
Run 7: Statistics of LEDBAT

End at: 2018-07-12 13:29:05
Local clock offset: -0.24 ms
Remote clock offset: -0.019 ms

# Below is generated by plot.py at 2018-07-12 15:41:17
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 32.13 Mbit/s
  95th percentile per-packet one-way delay: 52.865 ms
  Loss rate: 0.70%
-- Flow 1:
  Average throughput: 32.13 Mbit/s
  95th percentile per-packet one-way delay: 52.865 ms
  Loss rate: 0.70%
Run 7: Report of LEDBAT — Data Link

![Graph showing data link throughput over time with two lines representing ingress and egress speeds.](image)

- **Flow 1 ingress (mean 32.24 Mbit/s)**
- **Flow 1 egress (mean 32.13 Mbit/s)**

![Graph showing packet delay over time with a blue line.](image)

- **Flow 1 95th percentile 52.87 ms**
Run 8: Statistics of Ledbat

Start at: 2018-07-12 13:50:22
End at: 2018-07-12 13:50:52
Local clock offset: -0.536 ms
Remote clock offset: 0.04 ms

# Below is generated by plot.py at 2018-07-12 15:41:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 34.94 Mbit/s
95th percentile per-packet one-way delay: 51.811 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 34.94 Mbit/s
95th percentile per-packet one-way delay: 51.811 ms
Loss rate: 0.67%
Run 8: Report of LEDBAT — Data Link

---

**Throughput (Mbps)**

- **Flow 1 ingress (mean 35.06 Mbps)**
- **Flow 1 egress (mean 34.94 Mbps)**

**Packet delay (ms)**

- **Flow 1 (95th percentile 51.81 ms)**
Run 9: Statistics of LEDBAT

Start at: 2018-07-12 14:11:35
End at: 2018-07-12 14:12:05
Local clock offset: -0.234 ms
Remote clock offset: 0.005 ms

# Below is generated by plot.py at 2018-07-12 15:41:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 34.76 Mbit/s
95th percentile per-packet one-way delay: 52.070 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 34.76 Mbit/s
95th percentile per-packet one-way delay: 52.070 ms
Loss rate: 0.67%
Run 9: Report of LEDBAT — Data Link

![Graph showing throughput over time with flow ingress and egress data.]

![Graph showing packet delay over time with flow 1 95th percentile delay data.]

Flow 1 ingress (mean 34.87 Mbit/s) — Flow 1 egress (mean 34.76 Mbit/s) — Flow 1 (95th percentile 52.07 ms)
Run 10: Statistics of LEDBAT

Start at: 2018-07-12 14:33:34
End at: 2018-07-12 14:34:04
Local clock offset: -0.232 ms
Remote clock offset: 0.02 ms

# Below is generated by plot.py at 2018-07-12 15:41:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 33.67 Mbit/s
95th percentile per-packet one-way delay: 51.736 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 33.67 Mbit/s
95th percentile per-packet one-way delay: 51.736 ms
Loss rate: 0.68%
Run 10: Report of LEDBAT — Data Link

![Graph 1: Throughput over time (Mbps)](image1)
- Flow 1 ingress (mean 33.78 Mbps)
- Flow 1 egress (mean 33.67 Mbps)

![Graph 2: Per-packet inter-packet delay (ms)](image2)
- Flow 1 (95th percentile 51.74 ms)
Run 1: Statistics of PCC-Allegro

Start at: 2018-07-12 11:07:17
End at: 2018-07-12 11:07:47
Local clock offset: -0.162 ms
Remote clock offset: -0.015 ms

# Below is generated by plot.py at 2018-07-12 15:42:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 296.77 Mbit/s
95th percentile per-packet one-way delay: 60.834 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 296.77 Mbit/s
95th percentile per-packet one-way delay: 60.834 ms
Loss rate: 0.46%
Run 1: Report of PCC-Allegro — Data Link
Run 2: Statistics of PCC-Allegro

Start at: 2018-07-12 11:28:27
End at: 2018-07-12 11:28:57
Local clock offset: -0.235 ms
Remote clock offset: -0.084 ms

# Below is generated by plot.py at 2018-07-12 15:43:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 323.80 Mbit/s
95th percentile per-packet one-way delay: 89.517 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 323.80 Mbit/s
95th percentile per-packet one-way delay: 89.517 ms
Loss rate: 0.48%
Run 2: Report of PCC-Allegro — Data Link

![Graphs showing throughput and packet delay over time for Flow 1 ingress and egress.]
Run 3: Statistics of PCC-Allegro

Start at: 2018-07-12 11:49:57
End at: 2018-07-12 11:50:27
Local clock offset: -0.23 ms
Remote clock offset: -0.069 ms

# Below is generated by plot.py at 2018-07-12 15:43:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 329.54 Mbit/s
95th percentile per-packet one-way delay: 68.892 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 329.54 Mbit/s
95th percentile per-packet one-way delay: 68.892 ms
Loss rate: 0.36%
Run 3: Report of PCC-Allegro — Data Link

---

**Graph 1:**
- Y-axis: Throughput (Mbps)
- X-axis: Time (s)
- Legend:
  - Flow 1 ingress (mean 329.62 Mbit/s)
  - Flow 1 egress (mean 329.54 Mbit/s)

**Graph 2:**
- Y-axis: Per packet one way delay (ms)
- X-axis: Time (s)
- Legend:
  - Flow 1 (95th percentile 68.89 ms)
Run 4: Statistics of PCC-Allegro

Start at: 2018-07-12 12:11:50
End at: 2018-07-12 12:12:20
Local clock offset: -0.147 ms
Remote clock offset: -0.026 ms

# Below is generated by plot.py at 2018-07-12 15:43:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 308.44 Mbit/s
95th percentile per-packet one-way delay: 65.793 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 308.44 Mbit/s
95th percentile per-packet one-way delay: 65.793 ms
Loss rate: 0.42%
Run 4: Report of PCC-Allegro — Data Link

[Graph showing throughput and packet delay over time]

Throughput (Mbps)

Time (s)

0 5 10 15 20 25 30

Flow 1 ingress (mean 308.68 Mbps)  Flow 1 egress (mean 308.44 Mbps)

Packet delay (ms)

Time (s)

0 5 10 15 20 25 30

Flow 1 (95th percentile 65.79 ms)
Run 5: Statistics of PCC-Allegro

Start at: 2018-07-12 12:33:44
End at: 2018-07-12 12:34:14
Local clock offset: -0.562 ms
Remote clock offset: -0.046 ms

# Below is generated by plot.py at 2018-07-12 15:43:38
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 298.54 Mbit/s
  95th percentile per-packet one-way delay: 59.648 ms
  Loss rate: 0.43%
-- Flow 1:
  Average throughput: 298.54 Mbit/s
  95th percentile per-packet one-way delay: 59.648 ms
  Loss rate: 0.43%
Run 5: Report of PCC-Allegro — Data Link

[Graphs showing throughput and packet delay for Flow 1 ingress and egress]
Run 6: Statistics of PCC-Allegro

Start at: 2018-07-12 12:55:12
End at: 2018-07-12 12:55:42
Local clock offset: -0.255 ms
Remote clock offset: -0.054 ms

# Below is generated by plot.py at 2018-07-12 15:43:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 316.51 Mbit/s
95th percentile per-packet one-way delay: 61.300 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 316.51 Mbit/s
95th percentile per-packet one-way delay: 61.300 ms
Loss rate: 0.37%
Run 6: Report of PCC-Allegro — Data Link

[Graph showing throughput and packet delay over time]
Run 7: Statistics of PCC-Allegro

Start at: 2018-07-12 13:16:57
End at: 2018-07-12 13:17:27
Local clock offset: -0.216 ms
Remote clock offset: -0.027 ms

# Below is generated by plot.py at 2018-07-12 15:45:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 326.98 Mbit/s
95th percentile per-packet one-way delay: 108.323 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 326.98 Mbit/s
95th percentile per-packet one-way delay: 108.323 ms
Loss rate: 0.82%
Run 7: Report of PCC-Allegro — Data Link

![Graph 1: Throughput (Mbps)]

![Graph 2: Packet Delay (ms)]

- Flow 1 ingress (mean 328.53 Mbit/s)
- Flow 1 egress (mean 326.98 Mbit/s)

Flow 1 (95th percentile 108.32 ms)
Run 8: Statistics of PCC-Allegro

Start at: 2018-07-12 13:38:36
End at: 2018-07-12 13:39:06
Local clock offset: -0.565 ms
Remote clock offset: -0.063 ms

# Below is generated by plot.py at 2018-07-12 15:46:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 300.05 Mbit/s
95th percentile per-packet one-way delay: 75.474 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 300.05 Mbit/s
95th percentile per-packet one-way delay: 75.474 ms
Loss rate: 0.41%
Run 8: Report of PCC-Allegro — Data Link
Run 9: Statistics of PCC-Allegro

Start at: 2018-07-12 14:00:05  
End at: 2018-07-12 14:00:36  
Local clock offset: -0.598 ms  
Remote clock offset: -0.024 ms  

# Below is generated by plot.py at 2018-07-12 15:47:02  
# Datalink statistics
-- Total of 1 flow:
Average throughput: 275.92 Mbit/s  
95th percentile per-packet one-way delay: 54.642 ms  
Loss rate: 0.40%  
-- Flow 1:
Average throughput: 275.92 Mbit/s  
95th percentile per-packet one-way delay: 54.642 ms  
Loss rate: 0.40%
Run 9: Report of PCC-Allegro — Data Link

![Graph 1: Throughput vs Time]

- **Flow 1 ingress (mean 276.09 Mbit/s)**
- **Flow 1 egress (mean 275.92 Mbit/s)**

![Graph 2: Packet delay vs Time]

- **Flow 1 (95th percentile 54.64 ms)**

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Run 10: Statistics of PCC-Allegro

Start at: 2018-07-12 14:21:26
End at: 2018-07-12 14:21:56
Local clock offset: 0.191 ms
Remote clock offset: -0.017 ms

# Below is generated by plot.py at 2018-07-12 15:48:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 309.53 Mbit/s
95th percentile per-packet one-way delay: 82.006 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 309.53 Mbit/s
95th percentile per-packet one-way delay: 82.006 ms
Loss rate: 0.40%
Run 1: Statistics of PCC-Expr

Start at: 2018-07-12 11:14:40
End at: 2018-07-12 11:15:10
Local clock offset: -0.24 ms
Remote clock offset: -0.111 ms

# Below is generated by plot.py at 2018-07-12 15:52:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 286.72 Mbit/s
95th percentile per-packet one-way delay: 78.272 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 286.72 Mbit/s
95th percentile per-packet one-way delay: 78.272 ms
Loss rate: 0.15%
Run 1: Report of PCC-Expr — Data Link
Run 2: Statistics of PCC-Expr

Start at: 2018-07-12 11:35:56
End at: 2018-07-12 11:36:26
Local clock offset: -0.533 ms
Remote clock offset: -0.068 ms

# Below is generated by plot.py at 2018-07-12 15:52:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 225.79 Mbit/s
95th percentile per-packet one-way delay: 53.389 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 225.79 Mbit/s
95th percentile per-packet one-way delay: 53.389 ms
Loss rate: 0.51%
Run 2: Report of PCC-Expr — Data Link

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

- **Flow 1 ingress** (mean 226.17 Mbit/s)
- **Flow 1 egress** (mean 225.79 Mbit/s)

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

- **Flow 1** (95th percentile 53.39 ms)
Run 3: Statistics of PCC-Expr

Start at: 2018-07-12 11:57:37
End at: 2018-07-12 11:58:07
Local clock offset: -0.211 ms
Remote clock offset: -0.098 ms

# Below is generated by plot.py at 2018-07-12 15:52:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 230.87 Mbit/s
95th percentile per-packet one-way delay: 51.120 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 230.87 Mbit/s
95th percentile per-packet one-way delay: 51.120 ms
Loss rate: 0.39%
Run 3: Report of PCC-Expr — Data Link

![Graph showing throughput and delay over time with two graphs, one for throughput and one for delay.]

Flow 1 ingress (mean 230.99 Mbit/s)  Flow 1 egress (mean 230.87 Mbit/s)

Flow 1 (95th percentile 51.12 ms)
Run 4: Statistics of PCC-Expr

Start at: 2018-07-12 12:19:27
End at: 2018-07-12 12:19:57
Local clock offset: -0.218 ms
Remote clock offset: -0.048 ms

# Below is generated by plot.py at 2018-07-12 15:52:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 225.81 Mbit/s
95th percentile per-packet one-way delay: 52.549 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 225.81 Mbit/s
95th percentile per-packet one-way delay: 52.549 ms
Loss rate: 0.41%
Run 4: Report of PCC-Expr — Data Link

![Graph showing throughput and packet delay over time]

- Flow 1 ingress (mean 225.96 Mbit/s)
- Flow 1 egress (mean 225.81 Mbit/s)

![Graph showing packet delay over time]

Flow 1 (95th percentile 52.55 ms)
Run 5: Statistics of PCC-Expr

Start at: 2018-07-12 12:41:10
End at: 2018-07-12 12:41:40
Local clock offset: -0.569 ms
Remote clock offset: -0.049 ms

# Below is generated by plot.py at 2018-07-12 15:52:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 228.79 Mbit/s
95th percentile per-packet one-way delay: 55.992 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 228.79 Mbit/s
95th percentile per-packet one-way delay: 55.992 ms
Loss rate: 0.37%
Run 5: Report of PCC-Expr — Data Link
Run 6: Statistics of PCC-Expr

Start at: 2018-07-12 13:02:53
End at: 2018-07-12 13:03:23
Local clock offset: 0.126 ms
Remote clock offset: -0.046 ms

# Below is generated by plot.py at 2018-07-12 15:53:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 193.22 Mbit/s
95th percentile per-packet one-way delay: 51.553 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 193.22 Mbit/s
95th percentile per-packet one-way delay: 51.553 ms
Loss rate: 0.40%
Run 6: Report of PCC-Expr — Data Link
Run 7: Statistics of PCC-Expr

Start at: 2018-07-12 13:24:27
End at: 2018-07-12 13:24:57
Local clock offset: -0.596 ms
Remote clock offset: -0.037 ms

# Below is generated by plot.py at 2018-07-12 15:53:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 193.97 Mbit/s
95th percentile per-packet one-way delay: 50.627 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 193.97 Mbit/s
95th percentile per-packet one-way delay: 50.627 ms
Loss rate: 0.39%
Run 7: Report of PCC-Expr — Data Link

![Graph of Throughput and Packet Delay](image-url)
Run 8: Statistics of PCC-Expr

Start at: 2018-07-12 13:46:05
End at: 2018-07-12 13:46:36
Local clock offset: -0.241 ms
Remote clock offset: -0.046 ms

# Below is generated by plot.py at 2018-07-12 15:59:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 339.58 Mbit/s
95th percentile per-packet one-way delay: 226.829 ms
Loss rate: 2.72%
-- Flow 1:
Average throughput: 339.58 Mbit/s
95th percentile per-packet one-way delay: 226.829 ms
Loss rate: 2.72%
Run 8: Report of PCC-Expr — Data Link

![Graph of Throughput vs Time]

![Graph of One-Way Packet Delay vs Time]

Flow 1 ingress (mean 347.86 Mbit/s)  Flow 1 egress (mean 339.58 Mbit/s)

Flow 1 (95th percentile 226.83 ms)
Run 9: Statistics of PCC-Expr

Start at: 2018-07-12 14:07:31
End at: 2018-07-12 14:08:01
Local clock offset: -0.215 ms
Remote clock offset: -0.032 ms

# Below is generated by plot.py at 2018-07-12 15:59:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 205.32 Mbit/s
95th percentile per-packet one-way delay: 51.403 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 205.32 Mbit/s
95th percentile per-packet one-way delay: 51.403 ms
Loss rate: 0.38%
Run 9: Report of PCC-Expr — Data Link

![Graph showing throughput and packet delay over time for Flow 1 with ingress and egress rates.

Throughput: Y-axis (0-300 Mbps) vs. Time (0-30 seconds).

Packet Delay: Y-axis (50-80 ms) vs. Time (0-30 seconds).]

Flow 1 ingress (mean 205.39 Mbit/s) — Flow 1 egress (mean 205.32 Mbit/s)
Run 10: Statistics of PCC-Expr

Start at: 2018-07-12 14:29:20
End at: 2018-07-12 14:29:50
Local clock offset: -0.584 ms
Remote clock offset: 0.018 ms

# Below is generated by plot.py at 2018-07-12 15:59:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 186.00 Mbit/s
95th percentile per-packet one-way delay: 50.685 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 186.00 Mbit/s
95th percentile per-packet one-way delay: 50.685 ms
Loss rate: 0.38%
Run 10: Report of PCC-Expr — Data Link
Run 1: Statistics of QUIC Cubic

Start at: 2018-07-12 11:04:52
End at: 2018-07-12 11:05:22
Local clock offset: -0.215 ms
Remote clock offset: -0.058 ms
Run 1: Report of QUIC Cubic — Data Link

![Graph showing throughput and packet round trip time over time](image)

Throughput (Mbps):

<table>
<thead>
<tr>
<th>Time (s)</th>
<th>Flow 1 ingress (mean 0.06 Mbps)</th>
<th>Flow 1 egress (mean 0.06 Mbps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
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</tr>
<tr>
<td>0.1</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>0.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Packet round trip time (ms):

<table>
<thead>
<tr>
<th>Time (s)</th>
<th>Flow 1 (95th percentile 50.75 ms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
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<td>0.2</td>
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<tr>
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<td></td>
</tr>
<tr>
<td>1.0</td>
<td></td>
</tr>
</tbody>
</table>
Run 2: Statistics of QUIC Cubic

Start at: 2018-07-12 11:25:59
End at: 2018-07-12 11:26:29
Local clock offset: 0.117 ms
Remote clock offset: -0.104 ms

# Below is generated by plot.py at 2018-07-12 15:59:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 69.92 Mbit/s
95th percentile per-packet one-way delay: 51.071 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 69.92 Mbit/s
95th percentile per-packet one-way delay: 51.071 ms
Loss rate: 0.39%
Run 2: Report of QUIC Cubic — Data Link
Run 3: Statistics of QUIC Cubic

Start at: 2018-07-12 11:47:28
End at: 2018-07-12 11:47:58
Local clock offset: 0.143 ms
Remote clock offset: -0.045 ms

# Below is generated by plot.py at 2018-07-12 15:59:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 74.61 Mbit/s
95th percentile per-packet one-way delay: 50.564 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 74.61 Mbit/s
95th percentile per-packet one-way delay: 50.564 ms
Loss rate: 0.39%
Run 3: Report of QUIC Cubic — Data Link

[Graph 1: Throughput vs Time]

[Graph 2: Packet Round Trip Time vs Time]

Flow 1 ingress (mean 74.66 Mbit/s)  Flow 1 egress (mean 74.61 Mbit/s)

Flow 1 (99th percentile 50.36 ms)
Run 4: Statistics of QUIC Cubic

Start at: 2018-07-12 12:09:20
End at: 2018-07-12 12:09:50
Local clock offset: -0.209 ms
Remote clock offset: -0.075 ms

# Below is generated by plot.py at 2018-07-12 15:59:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 70.54 Mbit/s
95th percentile per-packet one-way delay: 50.920 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 70.54 Mbit/s
95th percentile per-packet one-way delay: 50.920 ms
Loss rate: 0.41%
Run 4: Report of QUIC Cubic — Data Link
Run 5: Statistics of QUIC Cubic

Start at: 2018-07-12 12:31:12
End at: 2018-07-12 12:31:42
Local clock offset: -0.182 ms
Remote clock offset: -0.041 ms

# Below is generated by plot.py at 2018-07-12 15:59:53
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 72.63 Mbit/s
  95th percentile per-packet one-way delay: 49.754 ms
  Loss rate: 0.39%
-- Flow 1:
  Average throughput: 72.63 Mbit/s
  95th percentile per-packet one-way delay: 49.754 ms
  Loss rate: 0.39%
Run 5: Report of QUIC Cubic — Data Link

![Graphs showing throughput and packet delay over time for Flow 1 ingress and egress.]
Run 6: Statistics of QUIC Cubic

Start at: 2018-07-12 12:52:43
End at: 2018-07-12 12:53:13
Local clock offset: -0.202 ms
Remote clock offset: -0.072 ms

# Below is generated by plot.py at 2018-07-12 15:59:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 72.56 Mbit/s
95th percentile per-packet one-way delay: 51.190 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 72.56 Mbit/s
95th percentile per-packet one-way delay: 51.190 ms
Loss rate: 0.39%
Run 6: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 72.58 Mbps/s)
- Flow 1 egress (mean 72.56 Mbps/s)

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

- Flow 1 (95th percentile 51.19 ms)
Run 7: Statistics of QUIC Cubic

Start at: 2018-07-12 13:14:29
End at: 2018-07-12 13:14:59
Local clock offset: -0.23 ms
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2018-07-12 15:59:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 61.42 Mbit/s
95th percentile per-packet one-way delay: 50.878 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 61.42 Mbit/s
95th percentile per-packet one-way delay: 50.878 ms
Loss rate: 0.45%
Run 7: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 61.48 Mbit/s)
- Flow 1 egress (mean 61.42 Mbit/s)

![Graph of End-to-End Delay (ms) vs. Time (s)]

- Flow 1 (95th percentile 50.88 ms)
Run 8: Statistics of QUIC Cubic

Start at: 2018-07-12 13:36:07
End at: 2018-07-12 13:36:37
Local clock offset: 0.123 ms
Remote clock offset: 0.003 ms

# Below is generated by plot.py at 2018-07-12 15:59:54
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 71.44 Mbit/s
  95th percentile per-packet one-way delay: 49.300 ms
  Loss rate: 0.37%
-- Flow 1:
  Average throughput: 71.44 Mbit/s
  95th percentile per-packet one-way delay: 49.300 ms
  Loss rate: 0.37%
Run 8: Report of QUIC Cubic — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 71.46 Mbps)
- Flow 1 egress (mean 71.44 Mbps)

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

- Flow 1 (95th percentile 49.30 ms)
Run 9: Statistics of QUIC Cubic

Start at: 2018-07-12 13:57:38
End at: 2018-07-12 13:58:08
Local clock offset: 0.073 ms
Remote clock offset: -0.024 ms

# Below is generated by plot.py at 2018-07-12 15:59:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 70.36 Mbit/s
95th percentile per-packet one-way delay: 51.139 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 70.36 Mbit/s
95th percentile per-packet one-way delay: 51.139 ms
Loss rate: 0.39%
Run 9: Report of QUIC Cubic — Data Link

![Diagram 1: Throughput over Time](Image)

- Flow 1 ingress (mean 70.40 Mbit/s)
- Flow 1 egress (mean 70.36 Mbit/s)

![Diagram 2: Per-packet one-way delay](Image)

- Flow 1 (95th percentile 51.14 ms)
Run 10: Statistics of QUIC Cubic

Start at: 2018-07-12 14:18:58
End at: 2018-07-12 14:19:28
Local clock offset: -0.603 ms
Remote clock offset: -0.025 ms

# Below is generated by plot.py at 2018-07-12 15:59:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 70.60 Mbit/s
95th percentile per-packet one-way delay: 50.524 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 70.60 Mbit/s
95th percentile per-packet one-way delay: 50.524 ms
Loss rate: 0.37%
Run 10: Report of QUIC Cubic — Data Link

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

- **Flow 1 ingress** (mean 70.62 Mbps)
- **Flow 1 egress** (mean 70.60 Mbps)

![Graph 2: Average packet round-trip delay (ms) vs. Time (s)]

- **Flow 1** (95th percentile 50.52 ms)
Run 1: Statistics of SCReAM

Start at: 2018-07-12 11:21:15
End at: 2018-07-12 11:21:45
Local clock offset: -0.214 ms
Remote clock offset: -0.127 ms

# Below is generated by plot.py at 2018-07-12 15:59:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.870 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.870 ms
Loss rate: 0.38%
Run 1: Report of SCReAM — Data Link

![Graph showing throughput over time with two lines indicating Flow 1 ingress and egress mean data rates of 0.22 Mbps and 0.22 Mbps respectively.]

![Graph showing packet one-way delay over time with a line indicating Flow 1 95th percentile at 50.87 ms.]
Run 2: Statistics of SCReAM

Start at: 2018-07-12 11:42:35
End at: 2018-07-12 11:43:05
Local clock offset: -0.252 ms
Remote clock offset: -0.079 ms

# Below is generated by plot.py at 2018-07-12 15:59:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.881 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.881 ms
Loss rate: 0.39%
Run 2: Report of SCReAM — Data Link

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

**Packet one-way delay (ms):**
- Flow 1 (95th percentile 50.88 ms)
Run 3: Statistics of SCReAM

Start at: 2018-07-12 12:04:21
End at: 2018-07-12 12:04:51
Local clock offset: -0.548 ms
Remote clock offset: -0.035 ms

# Below is generated by plot.py at 2018-07-12 15:59:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.570 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.570 ms
Loss rate: 0.26%
Run 3: Report of SCReAM — Data Link

[Diagram showing network performance metrics with throughput and one-way delay data for Flow 1 ingress and egress.]
Run 4: Statistics of SCReAM

Start at: 2018-07-12 12:26:10
End at: 2018-07-12 12:26:40
Local clock offset: -0.593 ms
Remote clock offset: -0.042 ms

# Below is generated by plot.py at 2018-07-12 15:59:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.505 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.505 ms
Loss rate: 0.38%
Run 4: Report of SCReAM — Data Link
Run 5: Statistics of SCReAM

Start at: 2018-07-12 12:47:43
End at: 2018-07-12 12:48:13
Local clock offset: -0.566 ms
Remote clock offset: -0.042 ms

# Below is generated by plot.py at 2018-07-12 15:59:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.636 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.636 ms
Loss rate: 0.26%
Run 5: Report of SCReAM — Data Link

![Graph of Throughput and Per-packet one way delay](image)

- **Throughput**: Graph showing throughput over time with two lines.
  - Light blue line: Flow 1 ingress (mean 0.22 Mbit/s)
  - Blue line: Flow 1 egress (mean 0.22 Mbit/s)

- **Per-packet one way delay**: Graph showing per-packet one way delay over time with a line.
  - There is a specific point marked at 50.64 ms.
Run 6: Statistics of SCReAM

Start at: 2018-07-12 13:09:29
End at: 2018-07-12 13:09:59
Local clock offset: -0.24 ms
Remote clock offset: -0.033 ms

# Below is generated by plot.py at 2018-07-12 15:59:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.975 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.975 ms
Loss rate: 0.38%
Run 6: Report of SCReAM — Data Link

![Graph of throughput over time with two lines representing different data flows.]

![Graph of packet delay over time with a line indicating the 95th percentile delay.]

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Run 7: Statistics of SCReAM

Start at: 2018-07-12 13:30:58
End at: 2018-07-12 13:31:28
Local clock offset: -0.638 ms
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2018-07-12 15:59:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.632 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.632 ms
Loss rate: 0.38%
Run 7: Report of SCReAM — Data Link

![Graph of throughput over time with two lines: one for Flow 1 ingress (mean 0.22 Mbps) and one for Flow 1 egress (mean 0.22 Mbps).]

![Graph of packet one-way delay over time with one line indicating Flow 1 (95th percentile 50.63 ms).]
Run 8: Statistics of SCReAM

Start at: 2018-07-12 13:52:45
End at: 2018-07-12 13:53:16
Local clock offset: -0.259 ms
Remote clock offset: -0.012 ms

# Below is generated by plot.py at 2018-07-12 15:59:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.862 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.862 ms
Loss rate: 0.26%
Run 8: Report of SCReAM — Data Link

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

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

![Graph 2: Packet Drop vs Time](image)

- Flow 1 (95th percentile 49.96 ms)
Run 9: Statistics of SCReAM

Start at: 2018-07-12 14:13:58
End at: 2018-07-12 14:14:28
Local clock offset: -0.247 ms
Remote clock offset: -0.012 ms

# Below is generated by plot.py at 2018-07-12 15:59:54
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 51.068 ms
  Loss rate: 0.38%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 51.068 ms
  Loss rate: 0.38%
Run 9: Report of SCReAM — Data Link

![Throughput Graph](image1)

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

![Packet Delay Graph](image2)

- **Flow 1 (95th percentile 51.07 ms)**
Run 10: Statistics of SCReAM

Start at: 2018-07-12 14:36:02
End at: 2018-07-12 14:36:32
Local clock offset: -0.599 ms
Remote clock offset: -0.015 ms

# Below is generated by plot.py at 2018-07-12 15:59:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.712 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.712 ms
Loss rate: 0.51%
Run 10: Report of SCReAM — Data Link

Throughput (Mb/s) vs Time (s)

Flow 1 ingress (mean 0.22 Mb/s) vs Flow 1 egress (mean 0.22 Mb/s)

Packet one way delay (ms) vs Time (s)

Flow 1 (95th percentile 50.71 ms)
Run 1: Statistics of Sprout

Start at: 2018-07-12 11:23:36
End at: 2018-07-12 11:24:06
Local clock offset: 0.163 ms
Remote clock offset: -0.067 ms

# Below is generated by plot.py at 2018-07-12 15:59:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.47 Mbit/s
95th percentile per-packet one-way delay: 51.868 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 6.47 Mbit/s
95th percentile per-packet one-way delay: 51.868 ms
Loss rate: 0.25%
Run 1: Report of Sprout — Data Link

![Graph showing throughput and delay over time with dashed and solid lines for ingress and egress flows.]

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 6.47 Mbit/s)  Flow 1 egress (mean 6.47 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

[Legend: Flow 1 95th percentile 51.87 ms]
Run 2: Statistics of Sprout

Start at: 2018-07-12 11:44:51
End at: 2018-07-12 11:45:21
Local clock offset: -0.213 ms
Remote clock offset: -0.06 ms

# Below is generated by plot.py at 2018-07-12 15:59:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.69 Mbit/s
95th percentile per-packet one-way delay: 50.940 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 6.69 Mbit/s
95th percentile per-packet one-way delay: 50.940 ms
Loss rate: 0.55%
Run 2: Report of Sprout — Data Link

![Graph 1: Throughput (Mbps)](image1)
- **Flow 1 ingress (mean 6.71 Mbps)**
- **Flow 1 egress (mean 6.69 Mbps)**

![Graph 2: One-way delay (ms)](image2)
- **Flow 1 (95th percentile 50.94 ms)**

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Run 3: Statistics of Sprout

Start at: 2018-07-12 12:06:38
End at: 2018-07-12 12:07:08
Local clock offset: -0.54 ms
Remote clock offset: -0.062 ms

# Below is generated by plot.py at 2018-07-12 15:59:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.51 Mbit/s
95th percentile per-packet one-way delay: 51.624 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 7.51 Mbit/s
95th percentile per-packet one-way delay: 51.624 ms
Loss rate: 0.32%
Run 3: Report of Sprout — Data Link

![Graph showing throughput and packet delay over time](image-url)
Run 4: Statistics of Sprout

Start at: 2018-07-12 12:28:32
End at: 2018-07-12 12:29:02
Local clock offset: -0.201 ms
Remote clock offset: -0.062 ms

# Below is generated by plot.py at 2018-07-12 15:59:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.48 Mbit/s
95th percentile per-packet one-way delay: 51.697 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 6.48 Mbit/s
95th percentile per-packet one-way delay: 51.697 ms
Loss rate: 0.38%
Run 4: Report of Sprout — Data Link

[Graph 1: Throughput (Mbps)]

[Graph 2: Packet one-way delay (ms)]
Run 5: Statistics of Sprout

Start at: 2018-07-12 12:50:06
End at: 2018-07-12 12:50:36
Local clock offset: -0.581 ms
Remote clock offset: -0.051 ms

# Below is generated by plot.py at 2018-07-12 15:59:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.23 Mbit/s
95th percentile per-packet one-way delay: 51.451 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 7.23 Mbit/s
95th percentile per-packet one-way delay: 51.451 ms
Loss rate: 0.21%
Run 5: Report of Sprout — Data Link
Run 6: Statistics of Sprout

Start at: 2018-07-12 13:11:52
End at: 2018-07-12 13:12:22
Local clock offset: -0.257 ms
Remote clock offset: -0.034 ms

# Below is generated by plot.py at 2018-07-12 15:59:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.40 Mbit/s
95th percentile per-packet one-way delay: 51.810 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 6.40 Mbit/s
95th percentile per-packet one-way delay: 51.810 ms
Loss rate: 0.39%
Run 6: Report of Sprout — Data Link
Run 7: Statistics of Sprout

Start at: 2018-07-12 13:33:21
End at: 2018-07-12 13:33:51
Local clock offset: -0.267 ms
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2018-07-12 15:59:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.55 Mbit/s
95th percentile per-packet one-way delay: 51.712 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 6.55 Mbit/s
95th percentile per-packet one-way delay: 51.712 ms
Loss rate: 0.48%
Run 7: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 6.56 Mbit/s)
- Flow 1 egress (mean 6.55 Mbit/s)

Flow 1 (95th percentile 51.71 ms)
Run 8: Statistics of Sprout

Start at: 2018-07-12 13:55:05
Local clock offset: -0.603 ms
Remote clock offset: -0.033 ms

# Below is generated by plot.py at 2018-07-12 15:59:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.64 Mbit/s
95th percentile per-packet one-way delay: 50.971 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 4.64 Mbit/s
95th percentile per-packet one-way delay: 50.971 ms
Loss rate: 0.02%
Run 8: Report of Sprout — Data Link
Run 9: Statistics of Sprout

Start at: 2018-07-12 14:16:17
End at: 2018-07-12 14:16:47
Local clock offset: -0.235 ms
Remote clock offset: 0.02 ms

# Below is generated by plot.py at 2018-07-12 15:59:54
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 6.46 Mbit/s
  95th percentile per-packet one-way delay: 51.657 ms
  Loss rate: 0.43%
-- Flow 1:
  Average throughput: 6.46 Mbit/s
  95th percentile per-packet one-way delay: 51.657 ms
  Loss rate: 0.43%
Run 9: Report of Sprout — Data Link

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

Flow 1 ingress (mean 6.47 Mbit/s) and Flow 1 egress (mean 6.46 Mbit/s) are depicted.

Flow 1 95th percentile 51.66 ms
Run 10: Statistics of Sprout

Start at: 2018-07-12 14:38:30
End at: 2018-07-12 14:39:00
Local clock offset: -0.197 ms
Remote clock offset: -0.004 ms

# Below is generated by plot.py at 2018-07-12 15:59:54
# Datalink statistics
  -- Total of 1 flow:
  Average throughput: 6.93 Mbit/s
  95th percentile per-packet one-way delay: 51.509 ms
  Loss rate: 0.17%
  -- Flow 1:
  Average throughput: 6.93 Mbit/s
  95th percentile per-packet one-way delay: 51.509 ms
  Loss rate: 0.17%
Run 10: Report of Sprout — Data Link

![Graphical representation of network performance metrics over time, showing throughput and per-packet round trip time delay. The graphs depict fluctuating data rates and delays, with markers indicating specific metrics like mean throughput and 95th percentile delay.]
Run 1: Statistics of TaoVA-100x

Start at: 2018-07-12 11:16:07
End at: 2018-07-12 11:16:37
Local clock offset: 0.158 ms
Remote clock offset: -0.086 ms

# Below is generated by plot.py at 2018-07-12 16:03:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 234.75 Mbit/s
95th percentile per-packet one-way delay: 51.200 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 234.75 Mbit/s
95th percentile per-packet one-way delay: 51.200 ms
Loss rate: 0.32%
Run 1: Report of TaoVA-100x — Data Link

- Throughput (Mbit/s)
- Time (s)
- Flow 1 ingress (mean 234.69 Mbit/s)
- Flow 1 egress (mean 234.75 Mbit/s)

- Packet one-way delay (ms)
- Time (s)
- Flow 1 (95th percentile 51.20 ms)
Run 2: Statistics of TaoVA-100x

Start at: 2018-07-12 11:37:21  
End at: 2018-07-12 11:37:51  
Local clock offset: 0.155 ms  
Remote clock offset: -0.062 ms

# Below is generated by plot.py at 2018-07-12 16:03:00  
# Datalink statistics

-- Total of 1 flow:
Average throughput: 215.28 Mbit/s
95th percentile per-packet one-way delay: 50.976 ms
Loss rate: 0.35%

-- Flow 1:
Average throughput: 215.28 Mbit/s
95th percentile per-packet one-way delay: 50.976 ms
Loss rate: 0.35%
Run 2: Report of TaoVA-100x — Data Link

![Chart 1: Throughput (Mbps)]

- **Flow 1 ingress** (mean 215.30 Mbit/s)
- **Flow 1 egress** (mean 215.28 Mbit/s)

![Chart 2: RTT (ms)]

- **Flow 1** (95th percentile 50.98 ms)
Run 3: Statistics of TaoVA-100x

Start at: 2018-07-12 11:59:02
End at: 2018-07-12 11:59:32
Local clock offset: -0.209 ms
Remote clock offset: -0.053 ms

# Below is generated by plot.py at 2018-07-12 16:03:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 253.05 Mbit/s
95th percentile per-packet one-way delay: 51.380 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 253.05 Mbit/s
95th percentile per-packet one-way delay: 51.380 ms
Loss rate: 0.34%
Run 4: Statistics of TaoVA-100x

Start at: 2018-07-12 12:20:51
End at: 2018-07-12 12:21:21
Local clock offset: -0.214 ms
Remote clock offset: -0.061 ms

# Below is generated by plot.py at 2018-07-12 16:03:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 253.05 Mbit/s
95th percentile per-packet one-way delay: 51.453 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 253.05 Mbit/s
95th percentile per-packet one-way delay: 51.453 ms
Loss rate: 0.35%
Run 4: Report of TaoVA-100x — Data Link

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**Graph 1:**

- **Throughput (Mbps):**
  - X-axis: Time (s)
  - Y-axis: Throughput (Mbps)

- **Legend:**
  - Flow 1 ingress (mean 253.08 Mbit/s)
  - Flow 1 egress (mean 253.05 Mbit/s)

**Graph 2:**

- **Packet Loss (ms):**
  - X-axis: Time (s)
  - Y-axis: Per-packet loss (ms)

- **Legend:**
  - Flow 1 (95th percentile 51.45 ms)
Run 5: Statistics of TaoVA-100x

Start at: 2018-07-12 12:42:35
End at: 2018-07-12 12:43:05
Local clock offset: -0.536 ms
Remote clock offset: -0.014 ms

# Below is generated by plot.py at 2018-07-12 16:03:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 148.48 Mbit/s
95th percentile per-packet one-way delay: 50.516 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 148.48 Mbit/s
95th percentile per-packet one-way delay: 50.516 ms
Loss rate: 0.54%
Run 5: Report of TaoVA-100x — Data Link
Run 6: Statistics of TaoVA-100x

Start at: 2018-07-12 13:04:15
End at: 2018-07-12 13:04:45
Local clock offset: 0.142 ms
Remote clock offset: -0.027 ms

# Below is generated by plot.py at 2018-07-12 16:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 235.68 Mbit/s
95th percentile per-packet one-way delay: 51.863 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 235.68 Mbit/s
95th percentile per-packet one-way delay: 51.863 ms
Loss rate: 0.39%
Run 7: Statistics of TaoVA-100x

Start at: 2018-07-12 13:25:49
End at: 2018-07-12 13:26:19
Local clock offset: -0.193 ms
Remote clock offset: -0.032 ms

# Below is generated by plot.py at 2018-07-12 16:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 218.05 Mbit/s
95th percentile per-packet one-way delay: 51.382 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 218.05 Mbit/s
95th percentile per-packet one-way delay: 51.382 ms
Loss rate: 0.28%
Run 7: Report of TaoVA-100x — Data Link
Run 8: Statistics of TaoVA-100x

Start at: 2018-07-12 13:47:35
End at: 2018-07-12 13:48:05
Local clock offset: -0.635 ms
Remote clock offset: 0.001 ms

# Below is generated by plot.py at 2018-07-12 16:07:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 210.79 Mbit/s
95th percentile per-packet one-way delay: 51.294 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 210.79 Mbit/s
95th percentile per-packet one-way delay: 51.294 ms
Loss rate: 0.35%
Run 9: Statistics of TaoVA-100x

Start at: 2018-07-12 14:08:54
End at: 2018-07-12 14:09:24
Local clock offset: ~0.248 ms
Remote clock offset: 0.009 ms

# Below is generated by plot.py at 2018-07-12 16:07:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 176.69 Mbit/s
95th percentile per-packet one-way delay: 51.495 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 176.69 Mbit/s
95th percentile per-packet one-way delay: 51.495 ms
Loss rate: 0.28%
Run 9: Report of TaoVA-100x — Data Link
Run 10: Statistics of TaoVA-100x

Start at: 2018-07-12 14:30:42
End at: 2018-07-12 14:31:12
Local clock offset: 0.125 ms
Remote clock offset: 0.004 ms

# Below is generated by plot.py at 2018-07-12 16:07:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 161.18 Mbit/s
95th percentile per-packet one-way delay: 55.545 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 161.18 Mbit/s
95th percentile per-packet one-way delay: 55.545 ms
Loss rate: 0.19%
Run 10: Report of TaoVA-100x — Data Link

**Throughput (Mbps) vs Time (s)**
- Flow 1 ingress (mean 160.93 Mbit/s)
- Flow 1 egress (mean 161.18 Mbit/s)

**Round trip time (ms) vs Time (s)**
- Flow 1 (95th percentile 55.55 ms)
Run 1: Statistics of TCP Vegas

Start at: 2018-07-12 11:11:57
End at: 2018-07-12 11:12:27
Local clock offset: 0.107 ms
Remote clock offset: -0.066 ms

# Below is generated by plot.py at 2018-07-12 16:07:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 200.61 Mbit/s
95th percentile per-packet one-way delay: 52.266 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 200.61 Mbit/s
95th percentile per-packet one-way delay: 52.266 ms
Loss rate: 0.34%
Run 1: Report of TCP Vegas — Data Link
Run 2: Statistics of TCP Vegas

Start at: 2018-07-12 11:33:14
End at: 2018-07-12 11:33:44
Local clock offset: -0.608 ms
Remote clock offset: -0.056 ms

# Below is generated by plot.py at 2018-07-12 16:07:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 143.18 Mbit/s
95th percentile per-packet one-way delay: 60.621 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 143.18 Mbit/s
95th percentile per-packet one-way delay: 60.621 ms
Loss rate: 0.19%
Run 2: Report of TCP Vegas — Data Link

![Graph of TCP Vegas data link with time (s) on the x-axis and throughput (Mbps) on the y-axis, showing two lines: one for Flow 1 ingress with a mean of 142.97 Mbps and another for Flow 1 egress with a mean of 143.18 Mbps.]

![Graph showing the per-packet one-way delay (ms) with time (s) on the x-axis and delay on the y-axis, highlighting Flow 1 with a 95th percentile delay of 60.62 ms.]

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Run 3: Statistics of TCP Vegas

Start at: 2018-07-12 11:54:51
End at: 2018-07-12 11:55:21
Local clock offset: -0.217 ms
Remote clock offset: -0.05 ms

# Below is generated by plot.py at 2018-07-12 16:07:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 223.71 Mbit/s
95th percentile per-packet one-way delay: 61.446 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 223.71 Mbit/s
95th percentile per-packet one-way delay: 61.446 ms
Loss rate: 0.14%
Run 3: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 223.29 Mbps)
- Flow 1 egress (mean 223.71 Mbps)

![Graph of Packet one way delay (ms) over Time (s)]

- Flow 1 (95th percentile 61.45 ms)
Run 4: Statistics of TCP Vegas

Start at: 2018-07-12 12:16:46
End at: 2018-07-12 12:17:16
Local clock offset: -0.59 ms
Remote clock offset: -0.041 ms

# Below is generated by plot.py at 2018-07-12 16:07:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 130.71 Mbit/s
95th percentile per-packet one-way delay: 51.553 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 130.71 Mbit/s
95th percentile per-packet one-way delay: 51.553 ms
Loss rate: 0.32%
Run 4: Report of TCP Vegas — Data Link
Run 5: Statistics of TCP Vegas

Start at: 2018-07-12 12:38:37
End at: 2018-07-12 12:39:08
Local clock offset: -0.224 ms
Remote clock offset: -0.035 ms

# Below is generated by plot.py at 2018-07-12 16:07:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 49.00 Mbit/s
95th percentile per-packet one-way delay: 51.786 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 49.00 Mbit/s
95th percentile per-packet one-way delay: 51.786 ms
Loss rate: 0.39%
Run 5: Report of TCP Vegas — Data Link

![Throughput Graph]

![Ping Packet One Way Delay Graph]

Flow 1 ingress (mean 49.03 Mb/s)  Flow 1 egress (mean 49.00 Mb/s)

Flow 1 (95th percentile 51.79 ms)
Run 6: Statistics of TCP Vegas

Start at: 2018-07-12 13:00:07
End at: 2018-07-12 13:00:37
Local clock offset: -0.609 ms
Remote clock offset: -0.053 ms

# Below is generated by plot.py at 2018-07-12 16:08:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 211.90 Mbit/s
95th percentile per-packet one-way delay: 62.723 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 211.90 Mbit/s
95th percentile per-packet one-way delay: 62.723 ms
Loss rate: 0.11%
Run 6: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 211.43 Mbit/s)
- Flow 1 egress (mean 211.90 Mbit/s)

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

- Flow 1 (95th percentile 62.72 ms)
Run 7: Statistics of TCP Vegas

Start at: 2018-07-12 13:21:50
Local clock offset: -0.608 ms
Remote clock offset: -0.078 ms

# Below is generated by plot.py at 2018-07-12 16:08:52
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 53.05 Mbit/s
  95th percentile per-packet one-way delay: 51.787 ms
  Loss rate: 0.35%
-- Flow 1:
  Average throughput: 53.05 Mbit/s
  95th percentile per-packet one-way delay: 51.787 ms
  Loss rate: 0.35%
Run 7: Report of TCP Vegas — Data Link

![Graph: Throughput vs Time](image1)

- **Flow 1 ingress (mean 53.06 Mbit/s)**
- **Flow 1 egress (mean 53.05 Mbit/s)**

![Graph: One-Way Delay vs Time](image2)

- **Flow 1 95th percentile 51.79 ms**
Run 8: Statistics of TCP Vegas

End at: 2018-07-12 13:43:58
Local clock offset: -0.214 ms
Remote clock offset: -0.042 ms

# Below is generated by plot.py at 2018-07-12 16:08:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 27.58 Mbit/s
95th percentile per-packet one-way delay: 51.752 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 27.58 Mbit/s
95th percentile per-packet one-way delay: 51.752 ms
Loss rate: 0.33%
Run 8: Report of TCP Vegas — Data Link

![Graphs showing throughput and packet inter-arrival time](image_url)
Run 9: Statistics of TCP Vegas

Start at: 2018-07-12 14:04:55
End at: 2018-07-12 14:05:26
Local clock offset: -0.584 ms
Remote clock offset: -0.069 ms

# Below is generated by plot.py at 2018-07-12 16:08:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 62.75 Mbit/s
95th percentile per-packet one-way delay: 52.142 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 62.75 Mbit/s
95th percentile per-packet one-way delay: 52.142 ms
Loss rate: 0.25%
Run 9: Report of TCP Vegas — Data Link

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

- **Flow 1 ingress (mean 62.70 Mbit/s)**
- **Flow 1 egress (mean 62.75 Mbit/s)**

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

- **Flow 1 (95th percentile 52.14 ms)**
Run 10: Statistics of TCP Vegas

Start at: 2018-07-12 14:26:27
End at: 2018-07-12 14:26:57
Local clock offset: -0.246 ms
Remote clock offset: -0.006 ms

# Below is generated by plot.py at 2018-07-12 16:08:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.74 Mbit/s
95th percentile per-packet one-way delay: 51.372 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 78.74 Mbit/s
95th percentile per-packet one-way delay: 51.372 ms
Loss rate: 0.34%
Run 10: Report of TCP Vegas — Data Link
Run 1: Statistics of Verus

Start at: 2018-07-12 11:05:58
End at: 2018-07-12 11:06:28
Local clock offset: -0.282 ms
Remote clock offset: -0.064 ms

# Below is generated by plot.py at 2018-07-12 16:10:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 229.08 Mbit/s
95th percentile per-packet one-way delay: 98.937 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 229.08 Mbit/s
95th percentile per-packet one-way delay: 98.937 ms
Loss rate: 0.17%
Run 1: Report of Verus — Data Link

![Graph showing network throughput and packet delay over time, with data points for flow ingress and egress rates.]
Run 2: Statistics of Verus

Start at: 2018-07-12 11:27:08
End at: 2018-07-12 11:27:38
Local clock offset: -0.579 ms
Remote clock offset: -0.087 ms

# Below is generated by plot.py at 2018-07-12 16:10:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 207.31 Mbit/s
95th percentile per-packet one-way delay: 113.775 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 207.31 Mbit/s
95th percentile per-packet one-way delay: 113.775 ms
Loss rate: 0.00%
Run 2: Report of Verus — Data Link

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

- Flow 1 ingress (mean 207.43 Mbit/s)
- Flow 1 egress (mean 207.31 Mbit/s)

![Graph of Per Packet One-Way Delay (ms) vs Time (s)]

- Flow 1 (95th percentile 113.78 ms)
Run 3: Statistics of Verus

Start at: 2018-07-12 11:48:37
End at: 2018-07-12 11:49:08
Local clock offset: 0.167 ms
Remote clock offset: -0.077 ms

# Below is generated by plot.py at 2018-07-12 16:11:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 229.35 Mbit/s
95th percentile per-packet one-way delay: 87.779 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 229.35 Mbit/s
95th percentile per-packet one-way delay: 87.779 ms
Loss rate: 0.74%
Run 3: Report of Verus — Data Link

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

- Flow 1 ingress (mean 230.31 Mbit/s)
- Flow 1 egress (mean 229.35 Mbit/s)

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

- Flow 1 (95th percentile 87.78 ms)
Run 4: Statistics of Verus

Start at: 2018-07-12 12:10:29
End at: 2018-07-12 12:10:59
Local clock offset: -0.585 ms
Remote clock offset: -0.039 ms

# Below is generated by plot.py at 2018-07-12 16:11:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 236.15 Mbit/s
95th percentile per-packet one-way delay: 96.077 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 236.15 Mbit/s
95th percentile per-packet one-way delay: 96.077 ms
Loss rate: 0.14%
Run 4: Report of Verus — Data Link

![Graph of throughput and delay over time]

- Flow 1 ingress (mean 235.69 Mbit/s)
- Flow 1 egress (mean 236.15 Mbit/s)

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

- Flow 1 (95th percentile 96.08 ms)
Run 5: Statistics of Verus

Start at: 2018-07-12 12:32:21
End at: 2018-07-12 12:32:51
Local clock offset: -0.207 ms
Remote clock offset: -0.055 ms

# Below is generated by plot.py at 2018-07-12 16:12:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 279.50 Mbit/s
95th percentile per-packet one-way delay: 131.034 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 279.50 Mbit/s
95th percentile per-packet one-way delay: 131.034 ms
Loss rate: 0.29%
Run 5: Report of Verus — Data Link

![Graph of throughput vs time](image1)

- Flow 1 ingress (mean 279.91 Mbit/s)
- Flow 1 egress (mean 279.50 Mbit/s)

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

- Flow 1 (95th percentile 131.03 ms)
Run 6: Statistics of Verus

Start at: 2018-07-12 12:53:52
End at: 2018-07-12 12:54:22
Local clock offset: -0.229 ms
Remote clock offset: -0.055 ms

# Below is generated by plot.py at 2018-07-12 16:12:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 235.50 Mbit/s
95th percentile per-packet one-way delay: 114.905 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 235.50 Mbit/s
95th percentile per-packet one-way delay: 114.905 ms
Loss rate: 0.00%
Run 6: Report of Verus — Data Link

![Graph of throughput and per-packet one-way delay for Flow 1 ingress and egress]

- Flow 1 ingress (mean 235.53 Mbit/s)
- Flow 1 egress (mean 235.50 Mbit/s)

![Graph of per-packet one-way delay for Flow 1 (95th percentile 114.91 ms)]
Run 7: Statistics of Verus

Start at: 2018-07-12 13:15:38
End at: 2018-07-12 13:16:08
Local clock offset: -0.597 ms
Remote clock offset: -0.069 ms

# Below is generated by plot.py at 2018-07-12 16:12:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 208.22 Mbit/s
95th percentile per-packet one-way delay: 96.895 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 208.22 Mbit/s
95th percentile per-packet one-way delay: 96.895 ms
Loss rate: 0.48%
Run 7: Report of Verus — Data Link

![Graph of Throughput](image1)

![Graph of Per-packet delay](image2)
Run 8: Statistics of Verus

Start at: 2018-07-12 13:37:16
End at: 2018-07-12 13:37:46
Local clock offset: 0.105 ms
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2018-07-12 16:13:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 224.22 Mbit/s
95th percentile per-packet one-way delay: 95.541 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 224.22 Mbit/s
95th percentile per-packet one-way delay: 95.541 ms
Loss rate: 0.86%
Run 8: Report of Verus — Data Link

![Graph of throughput and round trip latency over time](image)

- **Flow 1 ingress** (mean 225.39 Mbit/s)
- **Flow 1 egress** (mean 224.22 Mbit/s)

![Graph of round trip latency over time](image)

- **Flow 1** (95th percentile 95.54 ms)
Run 9: Statistics of Verus

Start at: 2018-07-12 13:58:47
End at: 2018-07-12 13:59:17
Local clock offset: 0.068 ms
Remote clock offset: 0.007 ms

# Below is generated by plot.py at 2018-07-12 16:13:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 214.44 Mbit/s
95th percentile per-packet one-way delay: 163.551 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 214.44 Mbit/s
95th percentile per-packet one-way delay: 163.551 ms
Loss rate: 1.62%
Run 9: Report of Verus — Data Link

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

- Flow 1 ingress (mean 217.51 Mbps)
- Flow 1 egress (mean 214.44 Mbps)

![Graph of Packet Delay (ms)](image2)

- Flow 1 (95th percentile 163.55 ms)
Run 10: Statistics of Verus

Start at: 2018-07-12 14:20:07
End at: 2018-07-12 14:20:37
Local clock offset: 0.124 ms
Remote clock offset: 0.006 ms

# Below is generated by plot.py at 2018-07-12 16:14:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 212.43 Mbit/s
95th percentile per-packet one-way delay: 174.110 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 212.43 Mbit/s
95th percentile per-packet one-way delay: 174.110 ms
Loss rate: 0.33%
Run 10: Report of Verus — Data Link

![Graph showing throughput and delay over time]
Run 1: Statistics of PCC-Vivace

Start at: 2018-07-12 11:17:32
End at: 2018-07-12 11:18:02
Local clock offset: 0.128 ms
Remote clock offset: -0.084 ms

# Below is generated by plot.py at 2018-07-12 16:14:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 220.78 Mbit/s
95th percentile per-packet one-way delay: 50.783 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 220.78 Mbit/s
95th percentile per-packet one-way delay: 50.783 ms
Loss rate: 0.36%
Run 1: Report of PCC-Vivace — Data Link
Run 2: Statistics of PCC-Vivace

Start at: 2018-07-12 11:38:45
End at: 2018-07-12 11:39:15
Local clock offset: -0.216 ms
Remote clock offset: -0.026 ms

# Below is generated by plot.py at 2018-07-12 16:17:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 341.73 Mbit/s
95th percentile per-packet one-way delay: 51.305 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 341.73 Mbit/s
95th percentile per-packet one-way delay: 51.305 ms
Loss rate: 0.38%
Run 2: Report of PCC-Vivace — Data Link

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

- **Flow 1 ingress** (mean 341.89 Mbit/s)
- **Flow 1 egress** (mean 341.73 Mbit/s)

![Graph of packet delay over time](image-url)

- **Flow 1** (95th percentile 51.30 ms)
Run 3: Statistics of PCC-Vivace

Start at: 2018-07-12 12:00:29
End at: 2018-07-12 12:00:59
Local clock offset: -0.204 ms
Remote clock offset: -0.068 ms

# Below is generated by plot.py at 2018-07-12 16:18:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 366.09 Mbit/s
95th percentile per-packet one-way delay: 51.549 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 366.09 Mbit/s
95th percentile per-packet one-way delay: 51.549 ms
Loss rate: 0.32%
Run 3: Report of PCC-Vivace — Data Link

---

**Throughput (Mbps):**

- **Flow 1 ingress (mean 366.03 Mbit/s)**
- **Flow 1 egress (mean 366.09 Mbit/s)**

---

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

- **Flow 1 (95th percentile 51.55 ms)**
Run 4: Statistics of PCC-Vivace

Start at: 2018-07-12 12:22:17
End at: 2018-07-12 12:22:47
Local clock offset: -0.222 ms
Remote clock offset: -0.113 ms

# Below is generated by plot.py at 2018-07-12 16:18:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 384.33 Mbit/s
95th percentile per-packet one-way delay: 55.762 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 384.33 Mbit/s
95th percentile per-packet one-way delay: 55.762 ms
Loss rate: 0.38%
Run 4: Report of PCC-Vivace — Data Link

![Graph of throughput and packet delay over time]

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 384.48 Mbit/s)  Flow 1 egress (mean 384.33 Mbit/s)

Packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 55.76 ms)
Run 5: Statistics of PCC-Vivace

End at: 2018-07-12 12:44:23
Local clock offset: -0.566 ms
Remote clock offset: -0.039 ms

# Below is generated by plot.py at 2018-07-12 16:18:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 335.09 Mbit/s
95th percentile per-packet one-way delay: 54.201 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 335.09 Mbit/s
95th percentile per-packet one-way delay: 54.201 ms
Loss rate: 0.40%
Run 5: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 335.28 Mbit/s)
- Flow 1 egress (mean 335.09 Mbit/s)

![Graph showing packet delay over time.]

- Flow 1 (95th percentile 54.20 ms)
Run 6: Statistics of PCC-Vivace

Start at: 2018-07-12 13:05:41
End at: 2018-07-12 13:06:11
Local clock offset: -0.199 ms
Remote clock offset: -0.071 ms

# Below is generated by plot.py at 2018-07-12 16:18:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 278.26 Mbit/s
95th percentile per-packet one-way delay: 50.955 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 278.26 Mbit/s
95th percentile per-packet one-way delay: 50.955 ms
Loss rate: 0.33%
Run 6: Report of PCC-Vivace — Data Link
Run 7: Statistics of PCC-Vivace

End at: 2018-07-12 13:27:43
Local clock offset: -0.576 ms
Remote clock offset: -0.013 ms

# Below is generated by plot.py at 2018-07-12 16:18:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 242.05 Mbit/s
95th percentile per-packet one-way delay: 51.233 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 242.05 Mbit/s
95th percentile per-packet one-way delay: 51.233 ms
Loss rate: 0.37%
Run 7: Report of PCC-Vivace — Data Link

![Throughput and Delay Graphs](image)

Throughput (Mbps)

Time (s)

- Flow 1 ingress (mean 242.12 Mbps)
- Flow 1 egress (mean 242.05 Mbps)

Delay (ms)

Time (s)

- Flow 1 (95th percentile 51.23 ms)
Run 8: Statistics of PCC-Vivace

Local clock offset: -0.308 ms
Remote clock offset: 0.009 ms

# Below is generated by plot.py at 2018-07-12 16:18:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 280.79 Mbit/s
95th percentile per-packet one-way delay: 51.174 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 280.79 Mbit/s
95th percentile per-packet one-way delay: 51.174 ms
Loss rate: 0.58%
Run 9: Statistics of PCC-Vivace

Start at: 2018-07-12 14:10:14
End at: 2018-07-12 14:10:44
Local clock offset: ~0.548 ms
Remote clock offset: 0.002 ms

# Below is generated by plot.py at 2018-07-12 16:18:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 239.17 Mbit/s
95th percentile per-packet one-way delay: 51.475 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 239.17 Mbit/s
95th percentile per-packet one-way delay: 51.475 ms
Loss rate: 0.47%
Run 10: Statistics of PCC-Vivace

Start at: 2018-07-12 14:32:04
End at: 2018-07-12 14:32:34
Local clock offset: 0.112 ms
Remote clock offset: -0.002 ms

# Below is generated by plot.py at 2018-07-12 16:19:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 308.15 Mbit/s
95th percentile per-packet one-way delay: 50.556 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 308.15 Mbit/s
95th percentile per-packet one-way delay: 50.556 ms
Loss rate: 0.29%
Run 10: Report of PCC-Vivace — Data Link
Run 1: Statistics of WebRTC media

Start at: 2018-07-12 11:10:52
End at: 2018-07-12 11:11:22
Local clock offset: -0.612 ms
Remote clock offset: -0.06 ms
Run 1: Report of WebRTC media — Data Link

![Graph of throughput and packet delay over time for flow 1 with ingress and egress rates](image-url)
Run 2: Statistics of WebRTC media

Start at: 2018-07-12 11:32:08
End at: 2018-07-12 11:32:38
Local clock offset: -0.591 ms
Remote clock offset: -0.062 ms

# Below is generated by plot.py at 2018-07-12 16:19:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 50.065 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 50.065 ms
Loss rate: 0.37%
Run 2: Report of WebRTC media — Data Link

![Graph showing throughput and packet delay]

- **Flow 1 ingress (mean 1.92 Mbit/s)**
- **Flow 1 egress (mean 1.92 Mbit/s)**

![Graph showing packet delay]

- **Flow 1 (95th percentile 50.06 ms)**
Run 3: Statistics of WebRTC media

Start at: 2018-07-12 11:53:45
End at: 2018-07-12 11:54:15
Local clock offset: -0.581 ms
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2018-07-12 16:19:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 50.514 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 50.514 ms
Loss rate: 0.42%
Run 3: Report of WebRTC media — Data Link

![Graph of throughput over time](image1)

- **Flow 1 ingress (mean 1.93 Mbit/s)**
- **Flow 1 egress (mean 1.93 Mbit/s)**

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

- **Flow 1 (95th percentile 50.51 ms)**
Run 4: Statistics of WebRTC media

Start at: 2018-07-12 12:15:41
End at: 2018-07-12 12:16:11
Local clock offset: -0.219 ms
Remote clock offset: -0.072 ms

# Below is generated by plot.py at 2018-07-12 16:19:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 50.962 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 50.962 ms
Loss rate: 0.52%
Run 4: Report of WebRTC media — Data Link

![Graph showing throughput and per-packet one-way delay over time for Flow 1 ingress and egress with mean 2.04 Mbit/s and 95th percentile 50.96 ms.]
Run 5: Statistics of WebRTC media

Start at: 2018-07-12 12:37:32
End at: 2018-07-12 12:38:02
Local clock offset: 0.139 ms
Remote clock offset: -0.049 ms

# Below is generated by plot.py at 2018-07-12 16:19:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 51.188 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 51.188 ms
Loss rate: 0.36%
Run 5: Report of WebRTC media — Data Link

![Graph showing throughput and packet delay over time]

- **Flow 1 ingress (mean 1.96 Mbit/s)**
- **Flow 1 egress (mean 1.96 Mbit/s)**
Run 6: Statistics of WebRTC media

Start at: 2018-07-12 12:59:01
End at: 2018-07-12 12:59:31
Local clock offset: -0.188 ms
Remote clock offset: -0.041 ms

# Below is generated by plot.py at 2018-07-12 16:19:07
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 1.94 Mbit/s
  95th percentile per-packet one-way delay: 50.987 ms
  Loss rate: 0.43%
-- Flow 1:
  Average throughput: 1.94 Mbit/s
  95th percentile per-packet one-way delay: 50.987 ms
  Loss rate: 0.43%
Run 6: Report of WebRTC media — Data Link

![Graph of throughput over time for a data link, showing peaks and troughs.]

- **Flow 1 ingress (mean 1.95 Mbit/s)**
- **Flow 1 egress (mean 1.94 Mbit/s)**

![Graph of per-packet one-way delay, with a 95th percentile of 50.99 ms.]

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Run 7: Statistics of WebRTC media

Start at: 2018-07-12 13:20:44
End at: 2018-07-12 13:21:14
Local clock offset: -0.262 ms
Remote clock offset: -0.097 ms

# Below is generated by plot.py at 2018-07-12 16:19:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 51.103 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 51.103 ms
Loss rate: 0.43%
Run 7: Report of WebRTC media — Data Link
Run 8: Statistics of WebRTC media

End at: 2018-07-12 13:42:52
Local clock offset: 0.131 ms
Remote clock offset: -0.032 ms

# Below is generated by plot.py at 2018-07-12 16:19:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 50.118 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 50.118 ms
Loss rate: 0.37%
Run 8: Report of WebRTC media — Data Link

![Graph 1: Throughput (Mbps)]

Time (s)

Flow 1 ingress (mean 1.94 Mbit/s)  Flow 1 egress (mean 1.94 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 50.12 ms)
Run 9: Statistics of WebRTC media

Start at: 2018-07-12 14:03:50
End at: 2018-07-12 14:04:20
Local clock offset: -0.598 ms
Remote clock offset: 0.059 ms

# Below is generated by plot.py at 2018-07-12 16:19:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 54.100 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 54.100 ms
Loss rate: 0.38%
Run 9: Report of WebRTC media — Data Link

![Graph of WebRTC media throughput](image1)

![Graph of WebRTC media packet delay](image2)
Run 10: Statistics of WebRTC media

Start at: 2018-07-12 14:25:22
End at: 2018-07-12 14:25:52
Local clock offset: -0.593 ms
Remote clock offset: 0.03 ms

# Below is generated by plot.py at 2018-07-12 16:19:07
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 2.12 Mbit/s
  95th percentile per-packet one-way delay: 49.477 ms
  Loss rate: 0.32%
-- Flow 1:
  Average throughput: 2.12 Mbit/s
  95th percentile per-packet one-way delay: 49.477 ms
  Loss rate: 0.32%

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Run 10: Report of WebRTC media — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 2.12 Mbit/s)  Flow 1 egress (mean 2.12 Mbit/s)

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 49.48 ms)