Pantheon Report

Data path: GCE London Ethernet (local) → GCE Iowa Ethernet (remote).
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 @ 9250dbec7fb57193cddf1ba8c440b4e16ab30f0
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ 37162fe9af85249aeeccac061c93e75640ef710b5
third_party/genericCC @ d0153f8e594aa89e93b032143cebbdfe58e562f4
third_party/indigo @ 2601c92e4a9d58d38dc4df0e0cdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b2b19eeab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ 6f038ed31259d366f9840f65b82cbe8f464b1b39
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab9c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f18b13ebc978f3cf42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3dbb2
  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 @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9ddde4735770d143a1fa2851
test from GCE London to GCE Iowa, 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>222.07</td>
<td>56.02</td>
<td>0.00</td>
</tr>
<tr>
<td>Copa</td>
<td>10</td>
<td>203.95</td>
<td>59.72</td>
<td>0.01</td>
</tr>
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<td>TCP Cubic</td>
<td>10</td>
<td>214.13</td>
<td>60.49</td>
<td>0.02</td>
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<td>FillP</td>
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<td>735.61</td>
<td>170.37</td>
<td>4.66</td>
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<td>FillP-Sheep</td>
<td>10</td>
<td>637.51</td>
<td>215.51</td>
<td>8.95</td>
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<td>Indigo</td>
<td>10</td>
<td>227.82</td>
<td>51.11</td>
<td>0.00</td>
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<tr>
<td>LEDBAT</td>
<td>10</td>
<td>31.18</td>
<td>52.31</td>
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<td>PCC-Allegro</td>
<td>10</td>
<td>500.36</td>
<td>137.99</td>
<td>1.15</td>
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<tr>
<td>PCC-Expr</td>
<td>10</td>
<td>256.04</td>
<td>129.03</td>
<td>0.50</td>
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<td>QUIC Cubic</td>
<td>5</td>
<td>39.75</td>
<td>50.59</td>
<td>0.00</td>
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<tr>
<td>SCReAM</td>
<td>10</td>
<td>0.22</td>
<td>50.82</td>
<td>0.00</td>
</tr>
<tr>
<td>Sprout</td>
<td>10</td>
<td>6.72</td>
<td>51.04</td>
<td>0.00</td>
</tr>
<tr>
<td>TaoVA-100x</td>
<td>10</td>
<td>233.78</td>
<td>54.32</td>
<td>0.01</td>
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<tr>
<td>TCP Vegas</td>
<td>10</td>
<td>163.64</td>
<td>56.35</td>
<td>0.00</td>
</tr>
<tr>
<td>Verus</td>
<td>10</td>
<td>249.27</td>
<td>102.45</td>
<td>1.18</td>
</tr>
<tr>
<td>PCC-Vivace</td>
<td>10</td>
<td>289.17</td>
<td>86.63</td>
<td>0.12</td>
</tr>
<tr>
<td>WebRTC media</td>
<td>10</td>
<td>1.89</td>
<td>51.08</td>
<td>0.00</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

Start at: 2018-07-05 13:03:10
End at: 2018-07-05 13:03:40
Local clock offset: 0.244 ms
Remote clock offset: -0.076 ms

# Below is generated by plot.py at 2018-07-05 16:45:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 225.85 Mbit/s
95th percentile per-packet one-way delay: 50.867 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 225.85 Mbit/s
95th percentile per-packet one-way delay: 50.867 ms
Loss rate: 0.00%
Run 1: Report of TCP BBR — Data Link
Run 2: Statistics of TCP BBR

End at: 2018-07-05 13:25:50
Local clock offset: -0.464 ms
Remote clock offset: -0.024 ms

# Below is generated by plot.py at 2018-07-05 16:45:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 224.12 Mbit/s
95th percentile per-packet one-way delay: 60.856 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 224.12 Mbit/s
95th percentile per-packet one-way delay: 60.856 ms
Loss rate: 0.00%
Run 2: Report of TCP BBR — Data Link

![Graph](image1)

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

Start at: 2018-07-05 13:47:10
End at: 2018-07-05 13:47:40
Local clock offset: 0.226 ms
Remote clock offset: 0.02 ms

# Below is generated by plot.py at 2018-07-05 16:45:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 222.57 Mbit/s
95th percentile per-packet one-way delay: 56.175 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 222.57 Mbit/s
95th percentile per-packet one-way delay: 56.175 ms
Loss rate: 0.00%
Run 3: Report of TCP BBR — Data Link

![Graph showing throughput and packet delay over time]

- Flow 1 ingress (mean 222.58 Mbit/s)
- Flow 1 egress (mean 222.57 Mbit/s)

- Flow 1 (95th percentile 56.17 ms)
Run 4: Statistics of TCP BBR

Start at: 2018-07-05 14:09:30  
End at: 2018-07-05 14:10:00  
Local clock offset: -0.132 ms  
Remote clock offset: -0.029 ms

# Below is generated by plot.py at 2018-07-05 16:45:03  
# Datalink statistics
# Total of 1 flow:
Average throughput: 214.43 Mbit/s  
95th percentile per-packet one-way delay: 56.610 ms  
Loss rate: 0.00%  
Flow 1:
Average throughput: 214.43 Mbit/s  
95th percentile per-packet one-way delay: 56.610 ms  
Loss rate: 0.00%
Run 5: Statistics of TCP BBR

Start at: 2018-07-05 14:31:30
End at: 2018-07-05 14:32:00
Local clock offset: -0.113 ms
Remote clock offset: -0.006 ms

# Below is generated by plot.py at 2018-07-05 16:45:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 221.74 Mbit/s
95th percentile per-packet one-way delay: 55.249 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 221.74 Mbit/s
95th percentile per-packet one-way delay: 55.249 ms
Loss rate: 0.00%
Run 5: Report of TCP BBR — Data Link

![Throughput Chart]

![End-to-End Delay Chart]

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Run 6: Statistics of TCP BBR

Start at: 2018-07-05 14:53:09
End at: 2018-07-05 14:53:39
Local clock offset: -0.056 ms
Remote clock offset: -0.026 ms

# Below is generated by plot.py at 2018-07-05 16:45:03
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 222.45 Mbit/s
  95th percentile per-packet one-way delay: 58.389 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 222.45 Mbit/s
  95th percentile per-packet one-way delay: 58.389 ms
  Loss rate: 0.00%
Run 6: Report of TCP BBR — Data Link

![Graph of throughput and packet delay over time for Flow 1, with data points indicating mean 222.46 Mbit/s for ingress and 222.45 Mbit/s for egress, and 95th percentile delay of 58.39 ms.](image-url)
Run 7: Statistics of TCP BBR

Start at: 2018-07-05 15:14:59
End at: 2018-07-05 15:15:29
Local clock offset: -0.463 ms
Remote clock offset: 0.009 ms

# Below is generated by plot.py at 2018-07-05 16:45:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 221.21 Mbit/s
95th percentile per-packet one-way delay: 58.141 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 221.21 Mbit/s
95th percentile per-packet one-way delay: 58.141 ms
Loss rate: 0.00%
Run 7: Report of TCP BBR — Data Link

![Graph showing throughput over time for Flow 1 ingress and egress, with mean 221.22 Mbit/s for both.]

![Graph showing per-packet one-way delay for Flow 1, with 95th percentile 58.14 ms.]
Run 8: Statistics of TCP BBR

Start at: 2018-07-05 15:37:02
End at: 2018-07-05 15:37:32
Local clock offset: -0.092 ms
Remote clock offset: 0.05 ms

# Below is generated by plot.py at 2018-07-05 16:45:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 222.57 Mbit/s
95th percentile per-packet one-way delay: 51.745 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 222.57 Mbit/s
95th percentile per-packet one-way delay: 51.745 ms
Loss rate: 0.00%
Run 8: Report of TCP BBR — Data Link

![Graph showing throughput and packet one-way delay over time]
Run 9: Statistics of TCP BBR

Start at: 2018-07-05 15:58:58
End at: 2018-07-05 15:59:28
Local clock offset: -0.106 ms
Remote clock offset: 0.079 ms

# Below is generated by plot.py at 2018-07-05 16:47:53
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 224.00 Mbit/s
  95th percentile per-packet one-way delay: 53.707 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 224.00 Mbit/s
  95th percentile per-packet one-way delay: 53.707 ms
  Loss rate: 0.00%
Run 9: Report of TCP BBR — Data Link
Run 10: Statistics of TCP BBR

Start at: 2018-07-05 16:20:56
End at: 2018-07-05 16:21:26
Local clock offset: 0.305 ms
Remote clock offset: 0.029 ms

# Below is generated by plot.py at 2018-07-05 16:47:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 221.81 Mbit/s
95th percentile per-packet one-way delay: 58.411 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 221.81 Mbit/s
95th percentile per-packet one-way delay: 58.411 ms
Loss rate: 0.00%
Run 10: Report of TCP BBR — Data Link

Throughput (Mbps)

0 5 10 15 20 25 30

Flow 1 ingress (mean 221.82 Mbps)  Flow 1 egress (mean 221.81 Mbps)

Per-packet one-way delay (ms)

0 5 10 15 20 25 30

Flow 1 (95th percentile 58.41 ms)
Run 1: Statistics of Copa

Start at: 2018-07-05 13:05:45
End at: 2018-07-05 13:06:15
Local clock offset: -0.452 ms
Remote clock offset: -0.04 ms

# Below is generated by plot.py at 2018-07-05 16:51:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 235.73 Mbit/s
95th percentile per-packet one-way delay: 57.522 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 235.73 Mbit/s
95th percentile per-packet one-way delay: 57.522 ms
Loss rate: 0.00%
Run 1: Report of Copa — Data Link
Run 2: Statistics of Copa

Local clock offset: -0.469 ms
Remote clock offset: -0.019 ms

# Below is generated by plot.py at 2018-07-05 16:51:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 195.65 Mbit/s
95th percentile per-packet one-way delay: 59.505 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 195.65 Mbit/s
95th percentile per-packet one-way delay: 59.505 ms
Loss rate: 0.00%
Run 2: Report of Copa — Data Link

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

End at: 2018-07-05 13:50:19
Local clock offset: -0.111 ms
Remote clock offset: 0.012 ms

# Below is generated by plot.py at 2018-07-05 16:53:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 276.68 Mbit/s
95th percentile per-packet one-way delay: 67.355 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 276.68 Mbit/s
95th percentile per-packet one-way delay: 67.355 ms
Loss rate: 0.00%
Run 3: Report of Copa — Data Link

![Graph of Throughput (Mbps) over time]

- Flow 1 ingress (mean 276.68 Mbps)
- Flow 1 egress (mean 276.68 Mbps)

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

- Flow 1 (95th percentile 67.36 ms)
Run 4: Statistics of Copa

Start at: 2018-07-05 14:12:09
End at: 2018-07-05 14:12:39
Local clock offset: -0.115 ms
Remote clock offset: 0.045 ms

# Below is generated by plot.py at 2018-07-05 16:53:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 251.05 Mbit/s
95th percentile per-packet one-way delay: 62.341 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 251.05 Mbit/s
95th percentile per-packet one-way delay: 62.341 ms
Loss rate: 0.00%
Run 4: Report of Copa — Data Link

![Graph showing throughput and packet delay over time for Flow 1 ingress and egress with mean 251.04 Mbit/s and 251.05 Mbit/s respectively, and 95th percentile delay of 62.34 ms.]
Run 5: Statistics of Copa

Start at: 2018-07-05 14:34:04
End at: 2018-07-05 14:34:34
Local clock offset: -0.447 ms
Remote clock offset: -0.003 ms

# Below is generated by plot.py at 2018-07-05 16:53:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 242.56 Mbit/s
95th percentile per-packet one-way delay: 70.393 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 242.56 Mbit/s
95th percentile per-packet one-way delay: 70.393 ms
Loss rate: 0.00%
Run 5: Report of Copa — Data Link

![Throughput Graph](image1)

- Flow 1 ingress (mean 242.56 Mbit/s)
- Flow 1 egress (mean 242.56 Mbit/s)

![Packet Delay Graph](image2)

- Flow 1 (95th percentile 70.39 ms)
Run 6: Statistics of Copa

End at: 2018-07-05 14:56:14
Local clock offset: -0.072 ms
Remote clock offset: 0.009 ms

# Below is generated by plot.py at 2018-07-05 16:53:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 163.90 Mbit/s
95th percentile per-packet one-way delay: 55.540 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 163.90 Mbit/s
95th percentile per-packet one-way delay: 55.540 ms
Loss rate: 0.00%
Run 6: Report of Copa — Data Link

![Graph showing throughput and packet delay over time for Flow 1 ingress and egress.]
Run 7: Statistics of Copa

Start at: 2018-07-05 15:17:36
End at: 2018-07-05 15:18:06
Local clock offset: -0.098 ms
Remote clock offset: 0.0 ms

# Below is generated by plot.py at 2018-07-05 16:53:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 181.34 Mbit/s
95th percentile per-packet one-way delay: 53.185 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 181.34 Mbit/s
95th percentile per-packet one-way delay: 53.185 ms
Loss rate: 0.01%
Run 7: Report of Copa — Data Link

Graph 1: Throughput (Mbps) vs Time (s)
- Flow 1 ingress (mean 181.36 Mbps)
- Flow 1 egress (mean 181.34 Mbps)

Graph 2: Per-packet one-way delay (ms) vs Time (s)
- Flow 1 (95th percentile 53.19 ms)
Run 8: Statistics of Copa

Start at: 2018-07-05 15:39:37
End at: 2018-07-05 15:40:07
Local clock offset: 0.266 ms
Remote clock offset: 0.009 ms

# Below is generated by plot.py at 2018-07-05 16:54:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 209.26 Mbit/s
95th percentile per-packet one-way delay: 63.939 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 209.26 Mbit/s
95th percentile per-packet one-way delay: 63.939 ms
Loss rate: 0.05%
Run 8: Report of Copa — Data Link

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

- Flow 1 ingress (mean 209.36 Mbit/s) vs Flow 1 egress (mean 209.26 Mbit/s)
- Per-packet one-way delay (ms) for Flow 1 (95th percentile 63.34 ms)
Run 9: Statistics of Copa

Start at: 2018-07-05 16:01:32
End at: 2018-07-05 16:02:02
Local clock offset: -0.473 ms
Remote clock offset: 0.054 ms

# Below is generated by plot.py at 2018-07-05 16:54:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 125.61 Mbit/s
95th percentile per-packet one-way delay: 52.204 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 125.61 Mbit/s
95th percentile per-packet one-way delay: 52.204 ms
Loss rate: 0.02%
Run 9: Report of Copa — Data Link

![Graph of throughput and packet delay]
Run 10: Statistics of Copa

Start at: 2018-07-05 16:23:34  
End at: 2018-07-05 16:24:04  
Local clock offset: 0.412 ms  
Remote clock offset: 0.096 ms

# Below is generated by plot.py at 2018-07-05 16:55:20  
# Datalink statistics

-- Total of 1 flow:
Average throughput: 157.69 Mbit/s  
95th percentile per-packet one-way delay: 55.192 ms  
Loss rate: 0.00%  

-- Flow 1:
Average throughput: 157.69 Mbit/s  
95th percentile per-packet one-way delay: 55.192 ms  
Loss rate: 0.00%
Run 10: Report of Copa — Data Link

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

Start at: 2018-07-05 13:09:39
End at: 2018-07-05 13:10:09
Local clock offset: -0.425 ms
Remote clock offset: -0.032 ms

# Below is generated by plot.py at 2018-07-05 16:55:20
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 228.52 Mbit/s
  95th percentile per-packet one-way delay: 61.567 ms
  Loss rate: 0.06%
-- Flow 1:
  Average throughput: 228.52 Mbit/s
  95th percentile per-packet one-way delay: 61.567 ms
  Loss rate: 0.06%
Run 1: Report of TCP Cubic — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 228.68 Mbit/s)  Flow 1 egress (mean 228.52 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 61.57 ms)
Run 2: Statistics of TCP Cubic

End at: 2018-07-05 13:32:19
Local clock offset: -0.087 ms
Remote clock offset: -0.058 ms

# Below is generated by plot.py at 2018-07-05 16:55:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 221.42 Mbit/s
95th percentile per-packet one-way delay: 62.740 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 221.42 Mbit/s
95th percentile per-packet one-way delay: 62.740 ms
Loss rate: 0.00%
Run 2: Report of TCP Cubic — Data Link
Run 3: Statistics of TCP Cubic

End at: 2018-07-05 13:54:20
Local clock offset: -0.104 ms
Remote clock offset: -0.027 ms

# Below is generated by plot.py at 2018-07-05 16:55:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 218.77 Mbit/s
95th percentile per-packet one-way delay: 60.258 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 218.77 Mbit/s
95th percentile per-packet one-way delay: 60.258 ms
Loss rate: 0.00%
Run 3: Report of TCP Cubic — Data Link

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

- **Flow 1 ingress** (mean 218.77 Mbit/s)
- **Flow 1 egress** (mean 218.77 Mbit/s)

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

- **Flow 1** (95th percentile 60.26 ms)
Run 4: Statistics of TCP Cubic

Start at: 2018-07-05 14:16:07
End at: 2018-07-05 14:16:37
Local clock offset: -0.122 ms
Remote clock offset: -0.002 ms

# Below is generated by plot.py at 2018-07-05 16:56:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 227.63 Mbit/s
95th percentile per-packet one-way delay: 60.529 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 227.63 Mbit/s
95th percentile per-packet one-way delay: 60.529 ms
Loss rate: 0.00%
Run 4: Report of TCP Cubic — Data Link
Run 5: Statistics of TCP Cubic

Start at: 2018-07-05 14:38:01
End at: 2018-07-05 14:38:31
Local clock offset: -0.063 ms
Remote clock offset: -0.005 ms

# Below is generated by plot.py at 2018-07-05 16:57:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 227.81 Mbit/s
95th percentile per-packet one-way delay: 60.270 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 227.81 Mbit/s
95th percentile per-packet one-way delay: 60.270 ms
Loss rate: 0.03%
Run 5: Report of TCP Cubic — Data Link

![Graph showing throughput and packet delay over time]

- **Throughput (Mbps)**
  - **Flow 1 ingress (mean 227.93 Mbit/s)**
  - **Flow 1 egress (mean 227.81 Mbit/s)**

- **Packet delay (ms)**
  - **Flow 1 (95th percentile 60.27 ms)**
Run 6: Statistics of TCP Cubic

Start at: 2018-07-05 14:59:30
End at: 2018-07-05 15:00:00
Local clock offset: -0.11 ms
Remote clock offset: 0.02 ms

# Below is generated by plot.py at 2018-07-05 16:57:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 156.31 Mbit/s
95th percentile per-packet one-way delay: 60.185 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 156.31 Mbit/s
95th percentile per-packet one-way delay: 60.185 ms
Loss rate: 0.00%
Run 6: Report of TCP Cubic — Data Link

**Graph 1:**
- Y-axis: Throughput (Mbps)
- X-axis: Time (s)
- Legends: Flow 1 ingress (mean 156.32 Mbit/s), Flow 1 egress (mean 156.31 Mbit/s)

**Graph 2:**
- Y-axis: Per-packet end-to-end delay (ms)
- X-axis: Time (s)
- Legend: Flow 1 (95th percentile 60.19 ms)
Run 7: Statistics of TCP Cubic

End at: 2018-07-05 15:21:58
Local clock offset: 0.268 ms
Remote clock offset: -0.026 ms

# Below is generated by plot.py at 2018-07-05 16:58:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 228.64 Mbit/s
95th percentile per-packet one-way delay: 59.394 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 228.64 Mbit/s
95th percentile per-packet one-way delay: 59.394 ms
Loss rate: 0.03%
Run 7: Report of TCP Cubic — Data Link
Run 8: Statistics of TCP Cubic

Start at: 2018-07-05 15:43:32
End at: 2018-07-05 15:44:02
Local clock offset: -0.066 ms
Remote clock offset: 0.038 ms

# Below is generated by plot.py at 2018-07-05 16:58:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 228.83 Mbit/s
95th percentile per-packet one-way delay: 59.500 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 228.83 Mbit/s
95th percentile per-packet one-way delay: 59.500 ms
Loss rate: 0.04%
Run 8: Report of TCP Cubic — Data Link

Graph 1: Throughput (Mbps)

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

Flow 1 ingress (mean 228.92 Mbit/s)  Flow 1 egress (mean 228.83 Mbit/s)

Flow 1 (95th percentile 59.50 ms)
Run 9: Statistics of TCP Cubic

Start at: 2018-07-05 16:05:19
End at: 2018-07-05 16:05:49
Local clock offset: -0.098 ms
Remote clock offset: 0.044 ms

# Below is generated by plot.py at 2018-07-05 16:58:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 204.82 Mbit/s
95th percentile per-packet one-way delay: 59.911 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 204.82 Mbit/s
95th percentile per-packet one-way delay: 59.911 ms
Loss rate: 0.00%
Run 9: Report of TCP Cubic — Data Link

![Graph showing throughput and round-trip time over time.]

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 204.87 Mbit/s)
  - Flow 1 egress (mean 204.82 Mbit/s)

- **Round-trip time (ms)**
  - Flow 1 (95th percentile 59.91 ms)
Run 10: Statistics of TCP Cubic

Start at: 2018-07-05 16:27:20
End at: 2018-07-05 16:27:50
Local clock offset: -0.069 ms
Remote clock offset: 0.07 ms

# Below is generated by plot.py at 2018-07-05 16:58:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 198.56 Mbit/s
95th percentile per-packet one-way delay: 60.529 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 198.56 Mbit/s
95th percentile per-packet one-way delay: 60.529 ms
Loss rate: 0.00%
Run 10: Report of TCP Cubic — Data Link
Run 1: Statistics of FillP

Start at: 2018-07-05 12:53:56
End at: 2018-07-05 12:54:26
Local clock offset: ~0.121 ms
Remote clock offset: ~0.076 ms

# Below is generated by plot.py at 2018-07-05 17:11:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 745.83 Mbit/s
95th percentile per-packet one-way delay: 150.902 ms
Loss rate: 4.34%
-- Flow 1:
Average throughput: 745.83 Mbit/s
95th percentile per-packet one-way delay: 150.902 ms
Loss rate: 4.34%
Run 1: Report of FillP — Data Link

![Graph showing network performance metrics over time, including throughput and packet delay.](image-url)
Run 2: Statistics of FillP

End at: 2018-07-05 13:16:23
Local clock offset: -0.121 ms
Remote clock offset: -0.001 ms

# Below is generated by plot.py at 2018-07-05 17:11:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 690.18 Mbit/s
95th percentile per-packet one-way delay: 146.240 ms
Loss rate: 5.39%
-- Flow 1:
Average throughput: 690.18 Mbit/s
95th percentile per-packet one-way delay: 146.240 ms
Loss rate: 5.39%
Run 2: Report of FillP — Data Link

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

- **Flow 1 Ingress** (mean 729.48 Mbps)
- **Flow 1 Egress** (mean 690.18 Mbps)

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

- **Flow 1** (95th percentile 146.24 ms)
Run 3: Statistics of FillP

Start at: 2018-07-05 13:38:06
End at: 2018-07-05 13:38:36
Local clock offset: -0.096 ms
Remote clock offset: 0.009 ms

# Below is generated by plot.py at 2018-07-05 17:11:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 679.23 Mbit/s
95th percentile per-packet one-way delay: 174.141 ms
Loss rate: 5.42%
-- Flow 1:
Average throughput: 679.23 Mbit/s
95th percentile per-packet one-way delay: 174.141 ms
Loss rate: 5.42%
Run 3: Report of FillP — Data Link

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

- **Flow 1 ingress** (mean 718.15 Mbit/s)
- **Flow 1 egress** (mean 679.23 Mbit/s)

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

- **Flow 1** (95th percentile 174.14 ms)
Run 4: Statistics of FillP

Start at: 2018-07-05 14:00:04
End at: 2018-07-05 14:00:34
Local clock offset: -0.483 ms
Remote clock offset: 0.013 ms

# Below is generated by plot.py at 2018-07-05 17:12:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 777.84 Mbit/s
95th percentile per-packet one-way delay: 213.723 ms
Loss rate: 5.10%
-- Flow 1:
Average throughput: 777.84 Mbit/s
95th percentile per-packet one-way delay: 213.723 ms
Loss rate: 5.10%
Run 4: Report of FillP — Data Link

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

- Flow 1 ingress (mean 819.73 Mb/s)
- Flow 1 egress (mean 777.84 Mb/s)

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

- Flow 1 (95th percentile 213.72 ms)
Run 5: Statistics of FillP

End at: 2018-07-05 14:22:50
Local clock offset: -0.117 ms
Remote clock offset: -0.016 ms

# Below is generated by plot.py at 2018-07-05 17:12:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 746.78 Mbit/s
95th percentile per-packet one-way delay: 194.703 ms
Loss rate: 4.54%
-- Flow 1:
Average throughput: 746.78 Mbit/s
95th percentile per-packet one-way delay: 194.703 ms
Loss rate: 4.54%
Run 5: Report of FillP — Data Link

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

![Graph 2: Round-trip delay (ms)](image)
Run 6: Statistics of F11P

Start at: 2018-07-05 14:44:16
End at: 2018-07-05 14:44:46
Local clock offset: -0.009 ms
Remote clock offset: -0.031 ms

# Below is generated by plot.py at 2018-07-05 17:13:30
# Datalink statistics
   -- Total of 1 flow:
   Average throughput: 772.20 Mbit/s
   95th percentile per-packet one-way delay: 190.100 ms
   Loss rate: 4.36%
   -- Flow 1: 
   Average throughput: 772.20 Mbit/s
   95th percentile per-packet one-way delay: 190.100 ms
   Loss rate: 4.36%
Run 6: Report of FillP — Data Link

**Throughput (Mbps):**
- Flow 1 ingress (mean 809.20 Mbps)
- Flow 1 egress (mean 772.20 Mbps)

**Packet one-way delay (ms):**
- Flow 1 (95th percentile 190.10 ms)
Run 7: Statistics of FillP

Start at: 2018-07-05 15:05:37  
End at: 2018-07-05 15:06:07  
Local clock offset: -0.485 ms  
Remote clock offset: 0.015 ms

# Below is generated by plot.py at 2018-07-05 17:13:30  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 715.03 Mbit/s  
95th percentile per-packet one-way delay: 166.107 ms  
Loss rate: 4.18%  
-- Flow 1:  
Average throughput: 715.03 Mbit/s  
95th percentile per-packet one-way delay: 166.107 ms  
Loss rate: 4.18%
Run 7: Report of FillP — Data Link

[Graphs showing throughput and packet delay over time with annotations for Flow 1 ingress and egress speeds.]
Run 8: Statistics of FillP

End at: 2018-07-05 15:28:09
Local clock offset: -0.208 ms
Remote clock offset: 0.015 ms

# Below is generated by plot.py at 2018-07-05 17:13:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 714.04 Mbit/s
95th percentile per-packet one-way delay: 181.495 ms
Loss rate: 5.38%
-- Flow 1:
Average throughput: 714.04 Mbit/s
95th percentile per-packet one-way delay: 181.495 ms
Loss rate: 5.38%
Run 8: Report of FillP — Data Link

![Graph of Throughput and Delay](image-url)

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 754.67 Mbps)
  - Flow 1 egress (mean 714.04 Mbps)

- **Packet Delay (ms):**
  - Flow 1 (95th percentile 181.50 ms)
Run 9: Statistics of FillP

Start at: 2018-07-05 15:49:43
End at: 2018-07-05 15:50:13
Local clock offset: -0.083 ms
Remote clock offset: 0.049 ms

# Below is generated by plot.py at 2018-07-05 17:25:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 777.49 Mbit/s
95th percentile per-packet one-way delay: 130.358 ms
Loss rate: 3.79%
-- Flow 1:
Average throughput: 777.49 Mbit/s
95th percentile per-packet one-way delay: 130.358 ms
Loss rate: 3.79%
Run 9: Report of FillP — Data Link

---

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

**Throughput (Mb/s)**

- **Flow 1 ingress (mean 808.14 Mb/s)**
- **Flow 1 egress (mean 777.49 Mb/s)**

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

**Per-packet end-to-end delay (ms)**

- **Flow 1 (95th percentile 130.36 ms)**
Run 10: Statistics of FillP

Start at: 2018-07-05 16:11:31
End at: 2018-07-05 16:12:01
Local clock offset: -0.061 ms
Remote clock offset: 0.049 ms

# Below is generated by plot.py at 2018-07-05 17:25:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 737.48 Mbit/s
95th percentile per-packet one-way delay: 155.956 ms
Loss rate: 4.14%
-- Flow 1:
Average throughput: 737.48 Mbit/s
95th percentile per-packet one-way delay: 155.956 ms
Loss rate: 4.14%
Run 10: Report of FillP — Data Link

![Graph showing throughput and delay over time for Flow 1 ingress and egress.]
Run 1: Statistics of FillP-Sheep

Start at: 2018-07-05 12:55:30
End at: 2018-07-05 12:56:00
Local clock offset: -0.084 ms
Remote clock offset: -0.041 ms

# Below is generated by plot.py at 2018-07-05 17:25:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 706.10 Mbit/s
95th percentile per-packet one-way delay: 149.854 ms
Loss rate: 10.25%
-- Flow 1:
Average throughput: 706.10 Mbit/s
95th percentile per-packet one-way delay: 149.854 ms
Loss rate: 10.25%
Run 1: Report of FillP-Sheep — Data Link
Run 2: Statistics of FillP-Sheep

Start at: 2018-07-05 13:17:24
End at: 2018-07-05 13:17:54
Local clock offset: -0.477 ms
Remote clock offset: -0.021 ms

# Below is generated by plot.py at 2018-07-05 17:29:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 861.81 Mbit/s
95th percentile per-packet one-way delay: 246.547 ms
Loss rate: 2.86%
-- Flow 1:
Average throughput: 861.81 Mbit/s
95th percentile per-packet one-way delay: 246.547 ms
Loss rate: 2.86%
Run 2: Report of FillP-Sheep — Data Link

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

- **Flow 1 Ingress**: mean 887.15 Mbps
- **Flow 1 Egress**: mean 861.81 Mbps

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

- **Flow 1**: 95th percentile 246.55 ms
Run 3: Statistics of FillP-Sheep

End at: 2018-07-05 13:40:07  
Local clock offset: -0.478 ms  
Remote clock offset: -0.01 ms

# Below is generated by plot.py at 2018-07-05 17:29:28  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 392.17 Mbit/s  
95th percentile per-packet one-way delay: 288.592 ms  
Loss rate: 12.23%  
-- Flow 1:  
Average throughput: 392.17 Mbit/s  
95th percentile per-packet one-way delay: 288.592 ms  
Loss rate: 12.23%
Run 3: Report of FillP-Sheep — Data Link

![Graph showing throughput and per-packet one-way delay](image-url)
Run 4: Statistics of FillP-Sheep

Start at: 2018-07-05 14:01:39
End at: 2018-07-05 14:02:09
Local clock offset: -0.106 ms
Remote clock offset: 0.003 ms

# Below is generated by plot.py at 2018-07-05 17:29:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 706.43 Mbit/s
95th percentile per-packet one-way delay: 156.227 ms
Loss rate: 10.83%
-- Flow 1:
Average throughput: 706.43 Mbit/s
95th percentile per-packet one-way delay: 156.227 ms
Loss rate: 10.83%
Run 4: Report of FillP-Sheep — Data Link

---

**Throughput (Mb/s)**

- Flow 1 ingress (mean 792.22 Mb/s)
- Flow 1 egress (mean 706.43 Mb/s)

---

**Packet one way delay (ms)**

- Flow 1 (95th percentile 156.23 ms)
Run 5: Statistics of FillP-Sheep

Start at: 2018-07-05 14:23:54
End at: 2018-07-05 14:24:24
Local clock offset: 0.272 ms
Remote clock offset: 0.029 ms

# Below is generated by plot.py at 2018-07-05 17:29:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 483.73 Mbit/s
95th percentile per-packet one-way delay: 251.558 ms
Loss rate: 8.51%
-- Flow 1:
Average throughput: 483.73 Mbit/s
95th percentile per-packet one-way delay: 251.558 ms
Loss rate: 8.51%
Run 5: Report of FillP-Sheep — Data Link
Run 6: Statistics of FillP-Sheep

Start at: 2018-07-05 14:45:51
End at: 2018-07-05 14:46:21
Local clock offset: -0.029 ms
Remote clock offset: -0.051 ms

# Below is generated by plot.py at 2018-07-05 17:29:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 159.71 Mbit/s
95th percentile per-packet one-way delay: 243.832 ms
Loss rate: 2.78%
-- Flow 1:
Average throughput: 159.71 Mbit/s
95th percentile per-packet one-way delay: 243.832 ms
Loss rate: 2.78%
Run 6: Report of FillP-Sheep — Data Link

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

- **Flow 1 Ingress**: Mean 164.27 Mbps
- **Flow 1 Egress**: Mean 159.71 Mbps

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

- **Flow 1 (95th percentile)**: 243.83 ms
Run 7: Statistics of FillP-Sheep

Start at: 2018-07-05 15:07:09
End at: 2018-07-05 15:07:39
Local clock offset: -0.46 ms
Remote clock offset: 0.004 ms

# Below is generated by plot.py at 2018-07-05 17:31:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 727.75 Mbit/s
95th percentile per-packet one-way delay: 182.896 ms
Loss rate: 12.04%
-- Flow 1:
Average throughput: 727.75 Mbit/s
95th percentile per-packet one-way delay: 182.896 ms
Loss rate: 12.04%
Run 7: Report of FillP-Sheep — Data Link
Run 8: Statistics of FillP-Sheep

Start at: 2018-07-05 15:29:11
End at: 2018-07-05 15:29:41
Local clock offset: 0.259 ms
Remote clock offset: 0.003 ms

# Below is generated by plot.py at 2018-07-05 17:36:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 775.25 Mbit/s
95th percentile per-packet one-way delay: 246.928 ms
Loss rate: 13.59%
-- Flow 1:
Average throughput: 775.25 Mbit/s
95th percentile per-packet one-way delay: 246.928 ms
Loss rate: 13.59%
Run 8: Report of FillP-Sheep — Data Link

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

Throughput (Mbps) vs Time (s)
- Flow 1 ingress (mean 897.17 Mbps)
- Flow 1 egress (mean 775.25 Mbps)

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

Per-packet one-way delay (ms) vs Time (s)
- Flow 1 (95th percentile 246.93 ms)
Run 9: Statistics of FillP-Sheep

Start at: 2018-07-05 15:51:18
End at: 2018-07-05 15:51:48
Local clock offset: -0.099 ms
Remote clock offset: 0.033 ms

# Below is generated by plot.py at 2018-07-05 17:36:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 692.26 Mbit/s
95th percentile per-packet one-way delay: 141.283 ms
Loss rate: 11.20%
-- Flow 1:
Average throughput: 692.26 Mbit/s
95th percentile per-packet one-way delay: 141.283 ms
Loss rate: 11.20%
Run 9: Report of FillP-Sheep — Data Link

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

- Blue dashed line: Flow 1 ingress (mean 779.57 Mbps)
- Blue solid line: Flow 1 egress (mean 692.26 Mbps)

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

- Blue line: Flow 1 (95th percentile 141.28 ms)
Run 10: Statistics of FillP-Sheep

Start at: 2018-07-05 16:13:05
End at: 2018-07-05 16:13:35
Local clock offset: -0.088 ms
Remote clock offset: 0.055 ms

# Below is generated by plot.py at 2018-07-05 17:43:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 869.87 Mbit/s
95th percentile per-packet one-way delay: 247.385 ms
Loss rate: 5.16%
-- Flow 1:
Average throughput: 869.87 Mbit/s
95th percentile per-packet one-way delay: 247.385 ms
Loss rate: 5.16%
Run 10: Report of FillIP-Sheep — Data Link

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

- **Flow 1 ingress** (mean 917.19 Mbit/s)
- **Flow 1 egress** (mean 869.87 Mbit/s)

![Graph of packet delay distribution](image)

- **Flow 1** (95th percentile 247.38 ms)
Run 1: Statistics of Indigo

Start at: 2018-07-05 12:51:31
End at: 2018-07-05 12:52:01
Local clock offset: -0.437 ms
Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2018-07-05 17:43:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 226.12 Mbit/s
95th percentile per-packet one-way delay: 51.544 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 226.12 Mbit/s
95th percentile per-packet one-way delay: 51.544 ms
Loss rate: 0.00%
Run 1: Report of Indigo — Data Link

![Graph of Throughput vs Time]

![Graph of Per-packet one-way delay vs Time]
Run 2: Statistics of Indigo

Local clock offset: -0.481 ms
Remote clock offset: -0.04 ms

# Below is generated by plot.py at 2018-07-05 17:43:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 219.98 Mbit/s
95th percentile per-packet one-way delay: 51.748 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 219.98 Mbit/s
95th percentile per-packet one-way delay: 51.748 ms
Loss rate: 0.00%
Run 2: Report of Indigo — Data Link

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

- Flow 1 ingress (mean 219.98 Mbit/s)
- Flow 1 egress (mean 219.98 Mbit/s)

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

- Flow 1 (95th percentile 51.75 ms)
Run 3: Statistics of Indigo

Start at: 2018-07-05 13:35:39  
End at: 2018-07-05 13:36:09  
Local clock offset: -0.095 ms  
Remote clock offset: -0.017 ms

# Below is generated by plot.py at 2018-07-05 17:43:44  
# Datalink statistics
-- Total of 1 flow:  
Average throughput: 238.60 Mbit/s  
95th percentile per-packet one-way delay: 50.987 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 238.60 Mbit/s  
95th percentile per-packet one-way delay: 50.987 ms  
Loss rate: 0.00%
Run 3: Report of Indigo — Data Link
Run 4: Statistics of Indigo

End at: 2018-07-05 13:58:07
Local clock offset: -0.499 ms
Remote clock offset: 0.011 ms

# Below is generated by plot.py at 2018-07-05 17:43:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 232.69 Mbit/s
95th percentile per-packet one-way delay: 51.478 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 232.69 Mbit/s
95th percentile per-packet one-way delay: 51.478 ms
Loss rate: 0.00%
Run 4: Report of Indigo — Data Link
Run 5: Statistics of Indigo

Start at: 2018-07-05 14:19:54
End at: 2018-07-05 14:20:24
Local clock offset: -0.475 ms
Remote clock offset: -0.023 ms

# Below is generated by plot.py at 2018-07-05 17:43:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 233.65 Mbit/s
95th percentile per-packet one-way delay: 51.255 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 233.65 Mbit/s
95th percentile per-packet one-way delay: 51.255 ms
Loss rate: 0.00%
Run 5: Report of Indigo — Data Link
Run 6: Statistics of Indigo

Start at: 2018-07-05 14:41:51
End at: 2018-07-05 14:42:21
Local clock offset: 0.25 ms
Remote clock offset: -0.013 ms

# Below is generated by plot.py at 2018-07-05 17:43:44
# Datalink statistics

-- Total of 1 flow:
Average throughput: 218.06 Mbit/s
95th percentile per-packet one-way delay: 50.902 ms
Loss rate: 0.00%

-- Flow 1:
Average throughput: 218.06 Mbit/s
95th percentile per-packet one-way delay: 50.902 ms
Loss rate: 0.00%
Run 6: Report of Indigo — Data Link

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

- **Flow 1 ingress (mean 218.05 Mbit/s)**
- **Flow 1 egress (mean 218.06 Mbit/s)**

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

- **Flow 1 (95th percentile 50.90 ms)**

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Run 7: Statistics of Indigo

Start at: 2018-07-05 15:03:12
End at: 2018-07-05 15:03:43
Local clock offset: -0.12 ms
Remote clock offset: -0.01 ms

# Below is generated by plot.py at 2018-07-05 17:43:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 221.21 Mbit/s
95th percentile per-packet one-way delay: 50.662 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 221.21 Mbit/s
95th percentile per-packet one-way delay: 50.662 ms
Loss rate: 0.00%
Run 7: Report of Indigo — Data Link
Run 8: Statistics of Indigo

Start at: 2018-07-05 15:25:15
End at: 2018-07-05 15:25:45
Local clock offset: -0.489 ms
Remote clock offset: -0.017 ms

# Below is generated by plot.py at 2018-07-05 17:43:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 220.74 Mbit/s
95th percentile per-packet one-way delay: 51.259 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 220.74 Mbit/s
95th percentile per-packet one-way delay: 51.259 ms
Loss rate: 0.00%
Run 8: Report of Indigo — Data Link

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

- Flow 1 ingress (mean 220.74 Mbit/s)
- Flow 1 egress (mean 220.74 Mbit/s)

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

- Flow 1 (95th percentile 51.26 ms)
Run 9: Statistics of Indigo

Start at: 2018-07-05 15:47:19
End at: 2018-07-05 15:47:49
Local clock offset: -0.429 ms
Remote clock offset: 0.018 ms

# Below is generated by plot.py at 2018-07-05 17:43:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 237.33 Mbit/s
95th percentile per-packet one-way delay: 50.680 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 237.33 Mbit/s
95th percentile per-packet one-way delay: 50.680 ms
Loss rate: 0.00%
Run 9: Report of Indigo — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 237.33 Mbps)
  - Flow 1 egress (mean 237.33 Mbps)

- **Packet Delay (ms):**
  - Flow 1 (95th percentile 50.68 ms)
Run 10: Statistics of Indigo

Start at: 2018-07-05 16:09:07
End at: 2018-07-05 16:09:37
Local clock offset: -0.038 ms
Remote clock offset: 0.029 ms

# Below is generated by plot.py at 2018-07-05 17:43:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 229.80 Mbit/s
95th percentile per-packet one-way delay: 50.605 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 229.80 Mbit/s
95th percentile per-packet one-way delay: 50.605 ms
Loss rate: 0.00%
Run 10: Report of Indigo — Data Link

Throughput (Mbit/s)

0  5  10  15  20  25  30

Time (s)

---

Flow 1 ingress (mean 229.80 Mbit/s)  Flow 1 egress (mean 229.80 Mbit/s)

---

Packet one way delay (ms)

0  50  100  150  200  250  300

Time (s)

Flow 1 (95th percentile 50.60 ms)
Run 1: Statistics of LEDBAT

Start at: 2018-07-05 12:57:04
End at: 2018-07-05 12:57:34
Local clock offset: -0.448 ms
Remote clock offset: -0.054 ms

# Below is generated by plot.py at 2018-07-05 17:43:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 21.38 Mbit/s
95th percentile per-packet one-way delay: 52.680 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 21.38 Mbit/s
95th percentile per-packet one-way delay: 52.680 ms
Loss rate: 0.00%
Run 1: Report of LEDBAT — Data Link

![Graph showing throughput over time for LEDBAT run 1 with labels for flow ingress (mean 21.38 Mbit/s) and flow egress (mean 21.38 Mbit/s).]

![Graph showing per-packet one-way delay over time for LEDBAT run 1 with a label for flow 1 (95th percentile 52.68 ms).]

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Run 2: Statistics of LEDBAT

Start at: 2018-07-05 13:19:06
End at: 2018-07-05 13:19:36
Local clock offset: -0.458 ms
Remote clock offset: 0.003 ms

# Below is generated by plot.py at 2018-07-05 17:43:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 32.80 Mbit/s
95th percentile per-packet one-way delay: 52.450 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 32.80 Mbit/s
95th percentile per-packet one-way delay: 52.450 ms
Loss rate: 0.00%
Run 2: Report of LEDBAT — Data Link
Run 3: Statistics of LEDBAT

Start at: 2018-07-05 13:40:59
End at: 2018-07-05 13:41:29
Local clock offset: -0.082 ms
Remote clock offset: 0.022 ms

# Below is generated by plot.py at 2018-07-05 17:43:44
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 30.29 Mbit/s
  95th percentile per-packet one-way delay: 52.214 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 30.29 Mbit/s
  95th percentile per-packet one-way delay: 52.214 ms
  Loss rate: 0.00%
Run 3: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 30.29 Mbit/s)
- Flow 1 egress (mean 30.29 Mbit/s)

- Flow 1 (95th percentile 52.21 ms)
Run 4: Statistics of LEDBAT

Start at: 2018-07-05 14:03:12
End at: 2018-07-05 14:03:42
Local clock offset: -0.117 ms
Remote clock offset: 0.006 ms

# Below is generated by plot.py at 2018-07-05 17:43:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 34.98 Mbit/s
95th percentile per-packet one-way delay: 52.308 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 34.98 Mbit/s
95th percentile per-packet one-way delay: 52.308 ms
Loss rate: 0.00%
Run 4: Report of LEDBAT — Data Link

![Graph showing throughput over time with two lines representing ingress and egress data rates.]

![Graph showing packet delay over time with a line indicating 95th percentile delay.]
Run 5: Statistics of LEDBAT

Start at: 2018-07-05 14:25:18
End at: 2018-07-05 14:25:48
Local clock offset: -0.472 ms
Remote clock offset: 0.019 ms

# Below is generated by plot.py at 2018-07-05 17:43:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 29.82 Mbit/s
95th percentile per-packet one-way delay: 52.279 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 29.82 Mbit/s
95th percentile per-packet one-way delay: 52.279 ms
Loss rate: 0.00%
Run 5: Report of LEDBAT — Data Link
Run 6: Statistics of LEDBAT

Start at: 2018-07-05 14:47:02
End at: 2018-07-05 14:47:32
Local clock offset: -0.087 ms
Remote clock offset: 0.002 ms

# Below is generated by plot.py at 2018-07-05 17:43:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 30.91 Mbit/s
95th percentile per-packet one-way delay: 52.001 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 30.91 Mbit/s
95th percentile per-packet one-way delay: 52.001 ms
Loss rate: 0.00%
Run 6: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 30.91 Mbit/s)
- Flow 1 egress (mean 30.91 Mbit/s)
- Flow 1 (95th percentile 52.00 ms)
Run 7: Statistics of LEDBAT

Start at: 2018-07-05 15:08:43
End at: 2018-07-05 15:09:13
Local clock offset: -0.514 ms
Remote clock offset: 0.006 ms

# Below is generated by plot.py at 2018-07-05 17:43:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 35.35 Mbit/s
95th percentile per-packet one-way delay: 52.008 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 35.35 Mbit/s
95th percentile per-packet one-way delay: 52.008 ms
Loss rate: 0.00%
Run 7: Report of LEDBAT — Data Link

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

- **Flow 1 ingress (mean 35.34 Mbit/s)**
- **Flow 1 egress (mean 35.35 Mbit/s)**

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

- **Flow 1 (95th percentile 52.01 ms)**
Run 8: Statistics of LEDBAT

Start at: 2018-07-05 15:30:48
End at: 2018-07-05 15:31:18
Local clock offset: -0.118 ms
Remote clock offset: -0.004 ms

# Below is generated by plot.py at 2018-07-05 17:43:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 29.40 Mbit/s
95th percentile per-packet one-way delay: 52.857 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 29.40 Mbit/s
95th percentile per-packet one-way delay: 52.857 ms
Loss rate: 0.00%
Run 8: Report of LEDBAT — Data Link

![Graph showing throughput over time]

- **Flow 1 ingress (mean 29.40 Mbit/s)**
- **Flow 1 egress (mean 29.40 Mbit/s)**

![Graph showing per-packet round-trip delay over time]

- **Flow 1 (95th percentile 52.86 ms)**
Run 9: Statistics of LEDBAT

Start at: 2018-07-05 15:52:51
End at: 2018-07-05 15:53:21
Local clock offset: -0.11 ms
Remote clock offset: 0.099 ms

# Below is generated by plot.py at 2018-07-05 17:43:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 31.84 Mbit/s
95th percentile per-packet one-way delay: 52.088 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 31.84 Mbit/s
95th percentile per-packet one-way delay: 52.088 ms
Loss rate: 0.01%
Run 9: Report of LEDBAT — Data Link
Run 10: Statistics of LEDBAT

Start at: 2018-07-05 16:14:45
End at: 2018-07-05 16:15:15
Local clock offset: -0.061 ms
Remote clock offset: 0.067 ms

# Below is generated by plot.py at 2018-07-05 17:43:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 35.08 Mbit/s
95th percentile per-packet one-way delay: 52.253 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 35.08 Mbit/s
95th percentile per-packet one-way delay: 52.253 ms
Loss rate: 0.00%
Run 1: Statistics of PCC-Allegro

Start at: 2018-07-05 13:01:47
End at: 2018-07-05 13:02:17
Local clock offset: -0.437 ms
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2018-07-05 17:44:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 522.14 Mbit/s
95th percentile per-packet one-way delay: 108.238 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 522.14 Mbit/s
95th percentile per-packet one-way delay: 108.238 ms
Loss rate: 0.81%
Run 1: Report of PCC-Allegro — Data Link

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

Flow 1 ingress (mean 526.42 Mbit/s)  Flow 1 egress (mean 522.14 Mbit/s)

Flow 1 (95th percentile 108.24 ms)
Run 2: Statistics of PCC-Allegro

Local clock offset: -0.096 ms
Remote clock offset: -0.053 ms

# Below is generated by plot.py at 2018-07-05 17:44:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 492.94 Mbit/s
95th percentile per-packet one-way delay: 142.790 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 492.94 Mbit/s
95th percentile per-packet one-way delay: 142.790 ms
Loss rate: 1.12%
Run 2: Report of PCC-Allegro — Data Link

![Graph 1](Image 1)

![Graph 2](Image 2)
Run 3: Statistics of PCC-Allegro

Start at: 2018-07-05 13:45:48
End at: 2018-07-05 13:46:18
Local clock offset: -0.123 ms
Remote clock offset: 0.011 ms

# Below is generated by plot.py at 2018-07-05 17:44:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 510.20 Mbit/s
95th percentile per-packet one-way delay: 235.359 ms
Loss rate: 2.44%
-- Flow 1:
Average throughput: 510.20 Mbit/s
95th percentile per-packet one-way delay: 235.359 ms
Loss rate: 2.44%
Run 3: Report of PCC-Allegro — Data Link

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

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

Legend:
- Flow 1 ingress (mean 522.99 Mbit/s)
- Flow 1 egress (mean 510.20 Mbit/s)

Flow 1 (95th percentile 235.36 ms)
Run 4: Statistics of PCC-Allegro

Start at: 2018-07-05 14:08:08
End at: 2018-07-05 14:08:38
Local clock offset: -0.151 ms
Remote clock offset: -0.007 ms

# Below is generated by plot.py at 2018-07-05 17:44:56
# Datalink statistics
    -- Total of 1 flow:
    Average throughput: 485.01 Mbit/s
    95th percentile per-packet one-way delay: 84.734 ms
    Loss rate: 0.14%
    -- Flow 1:
    Average throughput: 485.01 Mbit/s
    95th percentile per-packet one-way delay: 84.734 ms
    Loss rate: 0.14%
Run 4: Report of PCC-Allegro — Data Link

[Graph showing throughput and packet delay]

Throughput (kbps)

0 5 10 15 20 25 30

Flow 1 ingress (mean 485.73 Mbit/s)  Flow 1 egress (mean 485.01 Mbit/s)

Per packet one way delay (ms)

0 5 10 15 20 25 30

Flow 1 95th percentile 84.73 ms
Run 5: Statistics of PCC-Allegro

Start at: 2018-07-05 14:30:08
End at: 2018-07-05 14:30:38
Local clock offset: -0.09 ms
Remote clock offset: 0.026 ms

# Below is generated by plot.py at 2018-07-05 17:45:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 491.40 Mbit/s
95th percentile per-packet one-way delay: 78.829 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 491.40 Mbit/s
95th percentile per-packet one-way delay: 78.829 ms
Loss rate: 0.94%
Run 5: Report of PCC-Allegro — Data Link

![Graph 1: Throughput vs Time](image1)
- **Flow 1 ingress** (mean 496.08 Mbit/s)
- **Flow 1 egress** (mean 491.40 Mbit/s)

![Graph 2: Per packet one way delay vs Time](image2)
- **Flow 1** (95th percentile 78.83 ms)
Run 6: Statistics of PCC-Allegro

Start at: 2018-07-05 14:51:47
End at: 2018-07-05 14:52:17
Local clock offset: -0.443 ms
Remote clock offset: -0.045 ms

# Below is generated by plot.py at 2018-07-05 17:45:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 506.39 Mbit/s
95th percentile per-packet one-way delay: 136.364 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 506.39 Mbit/s
95th percentile per-packet one-way delay: 136.364 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: 2018-07-05 15:13:36
End at: 2018-07-05 15:14:06
Local clock offset: -0.492 ms
Remote clock offset: -0.011 ms

# Below is generated by plot.py at 2018-07-05 17:46:03
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 520.96 Mbit/s
  95th percentile per-packet one-way delay: 157.194 ms
  Loss rate: 1.72%
-- Flow 1:
  Average throughput: 520.96 Mbit/s
  95th percentile per-packet one-way delay: 157.194 ms
  Loss rate: 1.72%
Run 7: Report of PCC-Allegro — Data Link

![Throughput vs Time](image1)

![Packet Delay vs Time](image2)
Run 8: Statistics of PCC-Allegro

Start at: 2018-07-05 15:35:39
End at: 2018-07-05 15:36:09
Local clock offset: -0.407 ms
Remote clock offset: 0.021 ms

# Below is generated by plot.py at 2018-07-05 17:52:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 503.54 Mbit/s
95th percentile per-packet one-way delay: 165.871 ms
Loss rate: 2.29%
-- Flow 1:
Average throughput: 503.54 Mbit/s
95th percentile per-packet one-way delay: 165.871 ms
Loss rate: 2.29%
Run 8: Report of PCC-Allegro — Data Link

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

- Dashed line: Flow 1 ingress (mean 515.37 Mbps)
- Solid line: Flow 1 egress (mean 503.54 Mbps)

![Graph 2: Ping Package one way delay (ms) vs. Time (s)]

- Dashed line: Flow 1 (95th percentile 165.87 ms)
Run 9: Statistics of PCC-Allegro

Start at: 2018-07-05 15:57:36
End at: 2018-07-05 15:58:06
Local clock offset: -0.107 ms
Remote clock offset: 0.034 ms

# Below is generated by plot.py at 2018-07-05 17:52:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 498.80 Mbit/s
95th percentile per-packet one-way delay: 108.055 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 498.80 Mbit/s
95th percentile per-packet one-way delay: 108.055 ms
Loss rate: 0.25%
Run 9: Report of PCC-Allegro — Data Link

![Graph showing throughput and delay over time for Flow 1 ingress and egress.]
Run 10: Statistics of PCC-Allegro

Start at: 2018-07-05 16:19:34
End at: 2018-07-05 16:20:04
Local clock offset: -0.377 ms
Remote clock offset: 0.046 ms

# Below is generated by plot.py at 2018-07-05 17:52:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 472.20 Mbit/s
95th percentile per-packet one-way delay: 162.504 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 472.20 Mbit/s
95th percentile per-packet one-way delay: 162.504 ms
Loss rate: 1.42%
Run 10: Report of PCC-Allegro — Data Link

![Graph 1: Throughput (Mbps)](image1)
- Flow 1 ingress (mean 479.05 Mbit/s)
- Flow 1 egress (mean 472.20 Mbit/s)

![Graph 2: Per-packet one-way delay (ms)](image2)
- Flow 1 (95th percentile 162.50 ms)
Run 1: Statistics of PCC-Expr

Start at: 2018-07-05 12:50:05
End at: 2018-07-05 12:50:35
Local clock offset: -0.083 ms
Remote clock offset: -0.052 ms

# Below is generated by plot.py at 2018-07-05 17:52:49
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 249.05 Mbit/s
  95th percentile per-packet one-way delay: 157.188 ms
  Loss rate: 0.13%
-- Flow 1:
  Average throughput: 249.05 Mbit/s
  95th percentile per-packet one-way delay: 157.188 ms
  Loss rate: 0.13%
Run 1: Report of PCC-Expr — Data Link

![Graph showing network performance metrics]

- **Flow 1 ingress (mean 249.37 Mbit/s)**
- **Flow 1 egress (mean 249.05 Mbit/s)**

![Graph showing packet delay]

- **Flow 1 (95th percentile 157.19 ms)**
Run 2: Statistics of PCC-Expr

Start at: 2018-07-05 13:12:01
End at: 2018-07-05 13:12:31
Local clock offset: -0.477 ms
Remote clock offset: 0.007 ms

# Below is generated by plot.py at 2018-07-05 17:53:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 275.66 Mbit/s
95th percentile per-packet one-way delay: 81.395 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 275.66 Mbit/s
95th percentile per-packet one-way delay: 81.395 ms
Loss rate: 0.06%
Run 2: Report of PCC-Expr — Data Link

![Chart 1: Throughput (Mbps)]

- **Flow 1 ingress (mean 275.83 Mbit/s)**
- **Flow 1 egress (mean 275.66 Mbit/s)**

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

- **Flow 1 (95th percentile 81.39 ms)**
Run 3: Statistics of PCC-Expr

Start at: 2018-07-05 13:34:10
End at: 2018-07-05 13:34:40
Local clock offset: -0.116 ms
Remote clock offset: -0.009 ms

# Below is generated by plot.py at 2018-07-05 17:53:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 281.58 Mbit/s
95th percentile per-packet one-way delay: 179.790 ms
Loss rate: 1.57%
-- Flow 1:
Average throughput: 281.58 Mbit/s
95th percentile per-packet one-way delay: 179.790 ms
Loss rate: 1.57%
Run 3: Report of PCC-Expr — Data Link
Run 4: Statistics of PCC-Expr

Start at: 2018-07-05 13:56:11
End at: 2018-07-05 13:56:41
Local clock offset: -0.117 ms
Remote clock offset: -0.059 ms

# Datalink statistics
-- Total of 1 flow:
Average throughput: 258.73 Mbit/s
95th percentile per-packet one-way delay: 161.306 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 258.73 Mbit/s
95th percentile per-packet one-way delay: 161.306 ms
Loss rate: 0.32%
Run 4: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 259.57 Mbit/s)
- Flow 1 egress (mean 258.73 Mbit/s)

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

- Flow 1 (95th percentile 161.31 ms)
Run 5: Statistics of PCC-Expr

Start at: 2018-07-05 14:18:28
End at: 2018-07-05 14:18:58
Local clock offset: -0.481 ms
Remote clock offset: -0.014 ms

# Below is generated by plot.py at 2018-07-05 17:53:51
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 241.43 Mbit/s
  95th percentile per-packet one-way delay: 178.907 ms
  Loss rate: 1.31%
-- Flow 1:
  Average throughput: 241.43 Mbit/s
  95th percentile per-packet one-way delay: 178.907 ms
  Loss rate: 1.31%
Run 5: Report of PCC-Expr — Data Link

![Graphs showing throughput and packet delay over time for a data link experiment.](image-url)
Run 6: Statistics of PCC-Expr

Start at: 2018-07-05 14:40:23
End at: 2018-07-05 14:40:53
Local clock offset: -0.065 ms
Remote clock offset: -0.005 ms

# Below is generated by plot.py at 2018-07-05 18:00:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 273.02 Mbit/s
95th percentile per-packet one-way delay: 100.711 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 273.02 Mbit/s
95th percentile per-packet one-way delay: 100.711 ms
Loss rate: 0.00%
Run 6: Report of PCC-Expr — Data Link
Run 7: Statistics of PCC-Expr

Start at: 2018-07-05 15:01:48
End at: 2018-07-05 15:02:18
Local clock offset: -0.124 ms
Remote clock offset: -0.006 ms

# Below is generated by plot.py at 2018-07-05 18:00:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 226.69 Mbit/s
95th percentile per-packet one-way delay: 86.493 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 226.69 Mbit/s
95th percentile per-packet one-way delay: 86.493 ms
Loss rate: 0.00%
Run 7: Report of PCC-Expr — Data Link

[Graph showing throughput and packet delay over time]

Flow 1 ingress (mean 226.70 Mbit/s)  Flow 1 egress (mean 226.69 Mbit/s)

Flow 1 (95th percentile 86.49 ms)
Run 8: Statistics of PCC-Expr

Start at: 2018-07-05 15:23:50
End at: 2018-07-05 15:24:20
Local clock offset: -0.155 ms
Remote clock offset: -0.005 ms

# Below is generated by plot.py at 2018-07-05 18:00:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 239.51 Mbit/s
95th percentile per-packet one-way delay: 73.857 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 239.51 Mbit/s
95th percentile per-packet one-way delay: 73.857 ms
Loss rate: 0.00%
Run 9: Statistics of PCC-Expr

Start at: 2018-07-05 15:45:53
End at: 2018-07-05 15:46:23
Local clock offset: -0.088 ms
Remote clock offset: 0.031 ms

# Below is generated by plot.py at 2018-07-05 18:00:23
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 245.53 Mbit/s
  95th percentile per-packet one-way delay: 102.364 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 245.53 Mbit/s
  95th percentile per-packet one-way delay: 102.364 ms
  Loss rate: 0.00%
Run 9: Report of PCC-Expr — Data Link

Throughput (Mbps)

Flow 1 ingress (mean 245.52 Mbit/s)  Flow 1 egress (mean 245.53 Mbit/s)

Per-packet one way delay (ms)

Flow 1 (95th percentile 102.36 ms)
Run 10: Statistics of PCC-Expr

Start at: 2018-07-05 16:07:39
End at: 2018-07-05 16:08:09
Local clock offset: -0.084 ms
Remote clock offset: 0.074 ms

# Below is generated by plot.py at 2018-07-05 18:01:41
# Datalink statistics
-- Total of 1 flow:
   Average throughput: 269.16 Mbit/s
   95th percentile per-packet one-way delay: 168.273 ms
   Loss rate: 1.59%
-- Flow 1:
   Average throughput: 269.16 Mbit/s
   95th percentile per-packet one-way delay: 168.273 ms
   Loss rate: 1.59%
Run 10: Report of PCC-Expr — Data Link

![Graphs showing throughput and packet delay over time]

- Flow 1 ingress (mean 273.51 Mbit/s)
- Flow 1 egress (mean 269.16 Mbit/s)
- Flow 1 (95th percentile 168.27 ms)
Run 1: Statistics of QUIC Cubic

Start at: 2018-07-05 12:52:49
End at: 2018-07-05 12:53:19
Local clock offset: -0.107 ms
Remote clock offset: -0.063 ms

# Below is generated by plot.py at 2018-07-05 18:01:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 42.75 Mbit/s
95th percentile per-packet one-way delay: 50.704 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 42.75 Mbit/s
95th percentile per-packet one-way delay: 50.704 ms
Loss rate: 0.00%
Run 1: Report of QUIC Cubic — Data Link

![Graph showing throughput over time for QUIC Cubic]

![Graph showing per-packet round-trip delay over time for QUIC Cubic]
Run 2: Statistics of QUIC Cubic

End at: 2018-07-05 13:15:18
Local clock offset: -0.466 ms
Remote clock offset: -0.136 ms
Run 2: Report of QUIC Cubic — Data Link

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

- **Flow 1 ingress (mean 0.06 Mbit/s)**
- **Flow 1 egress (mean 0.06 Mbit/s)**

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

- **Flow 1 (95th percentile 50.96 ms)**
Run 3: Statistics of QUIC Cubic

Start at: 2018-07-05 13:36:58
Local clock offset: -0.115 ms
Remote clock offset: -0.014 ms

# Below is generated by plot.py at 2018-07-05 18:01:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 39.58 Mbit/s
95th percentile per-packet one-way delay: 50.538 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 39.58 Mbit/s
95th percentile per-packet one-way delay: 50.538 ms
Loss rate: 0.00%
Run 3: Report of QUIC Cubic — Data Link

![Graph showing throughput and packet delay over time for Flow 1 (ingress and egress, 39.58 Mbit/s, 95th percentile 50.54 ms).]
Run 4: Statistics of QUIC Cubic

Start at: 2018-07-05 13:58:56
End at: 2018-07-05 13:59:26
Local clock offset: 0.259 ms
Remote clock offset: 0.02 ms

# Below is generated by plot.py at 2018-07-05 18:01:41
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 46.64 Mbit/s
  95th percentile per-packet one-way delay: 50.363 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 46.64 Mbit/s
  95th percentile per-packet one-way delay: 50.363 ms
  Loss rate: 0.00%
Run 4: Report of QUIC Cubic — Data Link

![Graph showing throughput and delay over time for a network flow with two lines, one indicating ingress and the other egress, with corresponding time and throughput values.]
Run 5: Statistics of QUIC Cubic

End at: 2018-07-05 14:21:43
Local clock offset: -0.12 ms
Remote clock offset: 0.016 ms

# Below is generated by plot.py at 2018-07-05 18:01:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 32.14 Mbit/s
95th percentile per-packet one-way delay: 50.418 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 32.14 Mbit/s
95th percentile per-packet one-way delay: 50.418 ms
Loss rate: 0.01%
Run 5: Report of QUIC Cubic — Data Link
Run 6: Statistics of QUIC Cubic

Start at: 2018-07-05 14:43:09
End at: 2018-07-05 14:43:39
Local clock offset: -0.073 ms
Remote clock offset: 0.01 ms

# Below is generated by plot.py at 2018-07-05 18:01:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 37.64 Mbit/s
95th percentile per-packet one-way delay: 50.933 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 37.64 Mbit/s
95th percentile per-packet one-way delay: 50.933 ms
Loss rate: 0.00%
Run 6: Report of QUIC Cubic — Data Link

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

Flow 1 ingress (mean 37.64 Mbit/s) vs. Flow 1 egress (mean 37.64 Mbit/s)

Flow 1 (95th percentile 50.93 ms)
Run 7: Statistics of QUIC Cubic

Start at: 2018-07-05 15:04:31
End at: 2018-07-05 15:05:01
Local clock offset: -0.081 ms
Remote clock offset: 0.029 ms
Run 7: Report of QUIC Cubic — Data Link

![Graph showing throughput vs. time with two lines representing different traffic flows.]

![Graph showing packet delay vs. time with a plot marker indicating the 95th percentile delay.]
Run 8: Statistics of QUIC Cubic

Start at: 2018-07-05 15:26:34
End at: 2018-07-05 15:27:04
Local clock offset: -0.193 ms
Remote clock offset: 0.001 ms
Run 8: Report of QUIC Cubic — Data Link

---

The first graph shows the throughput (Mb/s) over time (s) with two lines indicating different flows: Flow 1 ingress (mean 0.06 Mb/s) and Flow 1 egress (mean 0.06 Mb/s).

The second graph illustrates per-packet round-trip delay (ms) over time (s). It includes a single point indicating Flow 1 (99th percentile 50.87 ms).

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Run 9: Statistics of QUIC Cubic

End at: 2018-07-05 15:49:08
Local clock offset: -0.071 ms
Remote clock offset: 0.035 ms
Run 9: Report of QUIC Cubic — Data Link

Graph 1: Throughput vs. Time

Graph 2: Packet Delay vs. Time
Run 10: Statistics of QUIC Cubic

Start at: 2018-07-05 16:10:26
End at: 2018-07-05 16:10:56
Local clock offset: -0.061 ms
Remote clock offset: 0.143 ms
Run 10: Report of QUIC Cubic — Data Link

[Graph showing throughput vs. time for flow ingress and egress]

[Graph showing per-packet round-trip delay vs. time for flow]
Run 1: Statistics of SCReAM

Start at: 2018-07-05 12:58:10
End at: 2018-07-05 12:58:40
Local clock offset: -0.129 ms
Remote clock offset: -0.089 ms

# Below is generated by plot.py at 2018-07-05 18:01:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.782 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.782 ms
Loss rate: 0.00%
Run 2: Statistics of SCReAM

End at: 2018-07-05 13:20:43
Local clock offset: -0.125 ms
Remote clock offset: -0.029 ms

# Below is generated by plot.py at 2018-07-05 18:01:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.762 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.762 ms
Loss rate: 0.00%
Run 2: Report of SCReAM — Data Link

[Diagram showing network throughput and packet delay over time]

Throughput (Mbps)

Time (s)

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

Packet delay (ms)

Time (s)

Flow 1 (95th percentile 50.76 ms)
Run 3: Statistics of SCReAM

Local clock offset: -0.468 ms
Remote clock offset: 0.001 ms

# Below is generated by plot.py at 2018-07-05 18:01:41
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.976 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.976 ms
  Loss rate: 0.00%
Run 3: Report of SCReAM — Data Link
Run 4: Statistics of SCReAM

Start at: 2018-07-05 14:04:20
End at: 2018-07-05 14:04:50
Local clock offset: -0.48 ms
Remote clock offset: 0.006 ms

# Below is generated by plot.py at 2018-07-05 18:01:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.285 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.285 ms
Loss rate: 0.00%
Run 4: Report of SCReAM — Data Link
Run 5: Statistics of SCReAM

Start at: 2018-07-05 14:26:26
End at: 2018-07-05 14:26:56
Local clock offset: -0.143 ms
Remote clock offset: 0.006 ms

# Below is generated by plot.py at 2018-07-05 18:01:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.876 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.876 ms
Loss rate: 0.00%
Run 5: Report of SCReAM — Data Link

![Graph showing throughput over time with two lines representing Flow 1 ingress and Flow 1 egress.]

![Graph showing packet one-way delay with Flow 1 (95th percentile 49.88 ms).]

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Run 6: Statistics of SCReAM

Start at: 2018-07-05 14:48:10
End at: 2018-07-05 14:48:40
Local clock offset: -0.417 ms
Remote clock offset: -0.018 ms

# Below is generated by plot.py at 2018-07-05 18:01:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.360 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.360 ms
Loss rate: 0.00%
Run 6: Report of SCReAM — Data Link
Run 7: Statistics of SCReAM

Start at: 2018-07-05 15:09:51
End at: 2018-07-05 15:10:21
Local clock offset: 0.273 ms
Remote clock offset: -0.025 ms

# Below is generated by plot.py at 2018-07-05 18:01:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.522 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.522 ms
Loss rate: 0.00%
Run 7: Report of SCReAM — Data Link

![Graph 1: Throughput (Mbps)]

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

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

- Flow 1 (95th percentile 50.52 ms)
Run 8: Statistics of SCReAM

End at: 2018-07-05 15:32:25
Local clock offset: 0.243 ms
Remote clock offset: -0.017 ms

# Below is generated by plot.py at 2018-07-05 18:01:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.793 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.793 ms
Loss rate: 0.00%
Run 8: Report of SCReAM — Data Link

![Throughput Graph](image)

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

![Delay Graph](image)

- Flow 1 (95th percentile 50.79 ms)
Run 9: Statistics of SCReAM

Start at: 2018-07-05 15:53:59
End at: 2018-07-05 15:54:29
Local clock offset: 0.302 ms
Remote clock offset: 0.055 ms

# Below is generated by plot.py at 2018-07-05 18:01:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.761 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.761 ms
Loss rate: 0.00%
Run 9: Report of SCReAM — Data Link

![Graph 1: Throughput (Mbps)]

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

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

- Flow 1 (95th percentile 50.76 ms)
Run 10: Statistics of SCReAM

Start at: 2018-07-05 16:15:53
End at: 2018-07-05 16:16:23
Local clock offset: -0.108 ms
Remote clock offset: 0.062 ms

# Below is generated by plot.py at 2018-07-05 18:01:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.132 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.132 ms
Loss rate: 0.00%
Run 10: Report of SCReAM — Data Link
Run 1: Statistics of Sprout

Start at: 2018-07-05 13:08:33
End at: 2018-07-05 13:09:03
Local clock offset: -0.502 ms
Remote clock offset: -0.043 ms

# Below is generated by plot.py at 2018-07-05 18:01:42
# Datalink statistics
-- Total of 1 flow:
 Average throughput: 6.61 Mbit/s
 95th percentile per-packet one-way delay: 51.518 ms
 Loss rate: 0.00%
-- Flow 1:
 Average throughput: 6.61 Mbit/s
 95th percentile per-packet one-way delay: 51.518 ms
 Loss rate: 0.00%
Run 1: Report of Sprout — Data Link

![Graph of throughput and packet delay](image-url)
Run 2: Statistics of Sprout

Start at: 2018-07-05 13:30:43
Local clock offset: -0.076 ms
Remote clock offset: -0.039 ms

# Below is generated by plot.py at 2018-07-05 18:01:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.82 Mbit/s
95th percentile per-packet one-way delay: 51.204 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 5.82 Mbit/s
95th percentile per-packet one-way delay: 51.204 ms
Loss rate: 0.00%
Run 2: Report of Sprout — Data Link

![Graph 1: Throughput over time]

- Flow 1 ingress (mean 5.82 Mbit/s)
- Flow 1 egress (mean 5.82 Mbit/s)

![Graph 2: Per-packet one-way delay over time]

- Flow 1 (99th percentile 51.20 ms)
Run 3: Statistics of Sprout

Start at: 2018-07-05 13:52:44
Local clock offset: -0.119 ms
Remote clock offset: 0.01 ms

# Below is generated by plot.py at 2018-07-05 18:01:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.61 Mbit/s
95th percentile per-packet one-way delay: 51.304 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.61 Mbit/s
95th percentile per-packet one-way delay: 51.304 ms
Loss rate: 0.00%
Run 3: Report of Sprout — Data Link
Run 4: Statistics of Sprout

Start at: 2018-07-05 14:15:01
End at: 2018-07-05 14:15:31
Local clock offset: -0.161 ms
Remote clock offset: 0.013 ms

# Below is generated by plot.py at 2018-07-05 18:01:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.67 Mbit/s
95th percentile per-packet one-way delay: 50.526 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.67 Mbit/s
95th percentile per-packet one-way delay: 50.526 ms
Loss rate: 0.00%
Run 4: Report of Sprout — Data Link

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

Start at: 2018-07-05 14:36:55
End at: 2018-07-05 14:37:25
Local clock offset: -0.096 ms
Remote clock offset: -0.003 ms

# Below is generated by plot.py at 2018-07-05 18:01:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.88 Mbit/s
95th percentile per-packet one-way delay: 51.269 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.88 Mbit/s
95th percentile per-packet one-way delay: 51.269 ms
Loss rate: 0.00%
Run 5: Report of Sprout — Data Link
Run 6: Statistics of Sprout

Start at: 2018-07-05 14:58:24
End at: 2018-07-05 14:58:54
Local clock offset: -0.121 ms
Remote clock offset: 0.008 ms

# Below is generated by plot.py at 2018-07-05 18:01:42
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 6.96 Mbit/s
  95th percentile per-packet one-way delay: 50.950 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 6.96 Mbit/s
  95th percentile per-packet one-way delay: 50.950 ms
  Loss rate: 0.00%
Run 6: Report of Sprout — Data Link
Run 7: Statistics of Sprout

Start at: 2018-07-05 15:20:22
End at: 2018-07-05 15:20:52
Local clock offset: -0.128 ms
Remote clock offset: 0.01 ms

# Below is generated by plot.py at 2018-07-05 18:01:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.45 Mbit/s
95th percentile per-packet one-way delay: 50.911 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.45 Mbit/s
95th percentile per-packet one-way delay: 50.911 ms
Loss rate: 0.00%
Run 7: Report of Sprout — Data Link

![Graphs showing throughput and per-packet one-way delay over time.](image-url)
Run 8: Statistics of Sprout

Start at: 2018-07-05 15:42:26
End at: 2018-07-05 15:42:56
Local clock offset: -0.121 ms
Remote clock offset: 0.07 ms

# Below is generated by plot.py at 2018-07-05 18:01:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.30 Mbit/s
95th percentile per-packet one-way delay: 50.781 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.30 Mbit/s
95th percentile per-packet one-way delay: 50.781 ms
Loss rate: 0.00%
Run 8: Report of Sprout — Data Link
Run 9: Statistics of Sprout

Start at: 2018-07-05 16:04:13
End at: 2018-07-05 16:04:43
Local clock offset: -0.398 ms
Remote clock offset: 0.018 ms

# Below is generated by plot.py at 2018-07-05 18:01:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.60 Mbit/s
95th percentile per-packet one-way delay: 51.682 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 5.60 Mbit/s
95th percentile per-packet one-way delay: 51.682 ms
Loss rate: 0.00%
Run 9: Report of Sprout — Data Link
Run 10: Statistics of Sprout

Start at: 2018-07-05 16:26:14
End at: 2018-07-05 16:26:44
Local clock offset: 0.291 ms
Remote clock offset: 0.101 ms

# Below is generated by plot.py at 2018-07-05 18:01:42
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 7.31 Mbit/s
  95th percentile per-packet one-way delay: 50.279 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 7.31 Mbit/s
  95th percentile per-packet one-way delay: 50.279 ms
  Loss rate: 0.00%
Run 10: Report of Sprout — Data Link

![Graph of throughput (Mbps) vs. time (s)]

- **Flow 1 ingress (mean 7.31 Mbps)**
- **Flow 1 egress (mean 7.31 Mbps)**

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

- **Flow 1 95th percentile 50.28 ms**
Run 1: Statistics of TaoVA-100x

Start at: 2018-07-05 13:07:10
End at: 2018-07-05 13:07:40
Local clock offset: -0.463 ms
Remote clock offset: -0.022 ms

# Below is generated by plot.py at 2018-07-05 18:01:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 211.45 Mbit/s
95th percentile per-packet one-way delay: 56.146 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 211.45 Mbit/s
95th percentile per-packet one-way delay: 56.146 ms
Loss rate: 0.00%
Run 1: Report of TaoVA-100x — Data Link
Run 2: Statistics of TaoVA-100x

End at: 2018-07-05 13:29:47
Local clock offset: -0.109 ms
Remote clock offset: -0.017 ms

# Below is generated by plot.py at 2018-07-05 18:02:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 242.33 Mbit/s
95th percentile per-packet one-way delay: 54.646 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 242.33 Mbit/s
95th percentile per-packet one-way delay: 54.646 ms
Loss rate: 0.00%
Run 2: Report of TaoVA-100x — Data Link
Run 3: Statistics of TaoVA-100x

Start at: 2018-07-05 13:51:17
End at: 2018-07-05 13:51:47
Local clock offset: -0.47 ms
Remote clock offset: 0.009 ms

# Below is generated by plot.py at 2018-07-05 18:03:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 261.06 Mbit/s
95th percentile per-packet one-way delay: 54.451 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 261.06 Mbit/s
95th percentile per-packet one-way delay: 54.451 ms
Loss rate: 0.00%
Run 3: Report of TaoVA-100x — Data Link
Run 4: Statistics of TaoVA-100x

End at: 2018-07-05 14:14:05
Local clock offset: -0.141 ms
Remote clock offset: 0.014 ms

# Below is generated by plot.py at 2018-07-05 18:06:55
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 251.75 Mbit/s
  95th percentile per-packet one-way delay: 53.529 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 251.75 Mbit/s
  95th percentile per-packet one-way delay: 53.529 ms
  Loss rate: 0.00%
Run 4: Report of TaoVA-100x — Data Link

![Throughput Graph](image1)

![Packet Delay Graph](image2)
Run 5: Statistics of TaoVA-100x

Start at: 2018-07-05 14:35:29
End at: 2018-07-05 14:35:59
Local clock offset: -0.441 ms
Remote clock offset: 0.014 ms

# Below is generated by plot.py at 2018-07-05 18:07:48
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 256.10 Mbit/s
  95th percentile per-packet one-way delay: 53.382 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 256.10 Mbit/s
  95th percentile per-packet one-way delay: 53.382 ms
  Loss rate: 0.00%
Run 5: Report of TaoVA-100x — Data Link

[Graph showing throughput and packet delay over time]
Run 6: Statistics of TaoVA-100x

Start at: 2018-07-05 14:57:03
End at: 2018-07-05 14:57:33
Local clock offset: -0.079 ms
Remote clock offset: 0.041 ms

# Below is generated by plot.py at 2018-07-05 18:07:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 193.04 Mbit/s
95th percentile per-packet one-way delay: 54.155 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 193.04 Mbit/s
95th percentile per-packet one-way delay: 54.155 ms
Loss rate: 0.00%
Run 6: Report of TaoVA-100x — Data Link

![Graph of throughput](image1)

Flow 1 ingress (mean 193.04 Mbit/s)  Flow 1 egress (mean 193.04 Mbit/s)

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

Flow 1 (95th percentile 54.16 ms)
Run 7: Statistics of TaoVA-100x

Start at: 2018-07-05 15:18:57
End at: 2018-07-05 15:19:27
Local clock offset: 0.254 ms
Remote clock offset: 0.026 ms

# Below is generated by plot.py at 2018-07-05 18:07:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 237.84 Mbit/s
95th percentile per-packet one-way delay: 54.291 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 237.84 Mbit/s
95th percentile per-packet one-way delay: 54.291 ms
Loss rate: 0.01%
Run 7: Report of TaoVA-100x — Data Link

![Graph 1: Throughput (Mbps) vs Time (s) for Flow 1 ingress (mean 237.86 Mbit/s) and Flow 1 egress (mean 237.84 Mbit/s).]

![Graph 2: Per-packet one-way delay (ms) vs Time (s) for Flow 1 (95th percentile 54.29 ms).]
Run 8: Statistics of TaoVA-100x

Start at: 2018-07-05 15:40:59
End at: 2018-07-05 15:41:29
Local clock offset: -0.093 ms
Remote clock offset: 0.049 ms

# Below is generated by plot.py at 2018-07-05 18:09:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 256.36 Mbit/s
95th percentile per-packet one-way delay: 53.833 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 256.36 Mbit/s
95th percentile per-packet one-way delay: 53.833 ms
Loss rate: 0.00%
Run 8: Report of TaoVA-100x — Data Link
Run 9: Statistics of TaoVA-100x

Start at: 2018-07-05 16:02:47
End at: 2018-07-05 16:03:17
Local clock offset: -0.013 ms
Remote clock offset: 0.051 ms

# Below is generated by plot.py at 2018-07-05 18:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 246.78 Mbit/s
95th percentile per-packet one-way delay: 55.619 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 246.78 Mbit/s
95th percentile per-packet one-way delay: 55.619 ms
Loss rate: 0.00%
Run 9: Report of TaoVA-100x — Data Link

![Throughput Graph]

- Flow 1 ingress (mean 246.78 Mbit/s)
- Flow 1 egress (mean 246.78 Mbit/s)

![Packet Delay Graph]

- Flow 1 (95th percentile 55.62 ms)
Run 10: Statistics of TaoVA-100x

Start at: 2018-07-05 16:24:53
End at: 2018-07-05 16:25:23
Local clock offset: -0.055 ms
Remote clock offset: 0.05 ms

# Below is generated by plot.py at 2018-07-05 18:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 181.07 Mbit/s
95th percentile per-packet one-way delay: 53.154 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 181.07 Mbit/s
95th percentile per-packet one-way delay: 53.154 ms
Loss rate: 0.09%
Run 10: Report of TaoVA-100x — Data Link

![Graph of Throughput and Delay](image)

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 181.23 Mbit/s)  Flow 1 egress (mean 181.07 Mbit/s)

Delay (ms)

Time (s)

Flow 1 (95th percentile 53.15 ms)

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Run 1: Statistics of TCP Vegas

Start at: 2018-07-05 13:00:39
End at: 2018-07-05 13:01:09
Local clock offset: -0.125 ms
Remote clock offset: -0.05 ms

# Below is generated by plot.py at 2018-07-05 18:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.57 Mbit/s
95th percentile per-packet one-way delay: 51.705 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.57 Mbit/s
95th percentile per-packet one-way delay: 51.705 ms
Loss rate: 0.00%
Run 1: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 50.58 Mbps)
- Flow 1 egress (mean 50.57 Mbps)

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

- Flow 1 (95th percentile 51.70 ms)

265
Run 2: Statistics of TCP Vegas

Local clock offset: 0.236 ms
Remote clock offset: -0.016 ms

# Below is generated by plot.py at 2018-07-05 18:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 192.00 Mbit/s
95th percentile per-packet one-way delay: 51.118 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 192.00 Mbit/s
95th percentile per-packet one-way delay: 51.118 ms
Loss rate: 0.00%
Run 2: Report of TCP Vegas — Data Link

**Graph 1:**
- **Throughput (Mbps):** 0 to 200
- **Time (s):** 0 to 30
- **Legend:**
  - Dotted line: Flow 1 ingress (mean 192.00 Mbit/s)
  - Solid line: Flow 1 egress (mean 192.00 Mbit/s)

**Graph 2:**
- **Per-packet one way delay (ms):** 50 to 65
- **Time (s):** 0 to 30
- **Legend:**
  - Flow 1 (95th percentile 51.12 ms)
Run 3: Statistics of TCP Vegas

Start at: 2018-07-05 13:44:33
End at: 2018-07-05 13:45:03
Local clock offset: -0.104 ms
Remote clock offset: 0.005 ms

# Below is generated by plot.py at 2018-07-05 18:09:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 212.37 Mbit/s
95th percentile per-packet one-way delay: 60.648 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 212.37 Mbit/s
95th percentile per-packet one-way delay: 60.648 ms
Loss rate: 0.00%
Run 3: Report of TCP Vegas — Data Link

![Graph showing throughput and delays over time.]

- Flow 1 ingress (mean 212.37 Mbps)
- Flow 1 egress (mean 212.37 Mbps)

![Graph showing packet delay distribution.]

- Flow 1 (95th percentile 60.65 ms)
Run 4: Statistics of TCP Vegas

Start at: 2018-07-05 14:06:52
End at: 2018-07-05 14:07:22
Local clock offset: -0.509 ms
Remote clock offset: -0.003 ms

# Below is generated by plot.py at 2018-07-05 18:11:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 229.15 Mbit/s
95th percentile per-packet one-way delay: 61.213 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 229.15 Mbit/s
95th percentile per-packet one-way delay: 61.213 ms
Loss rate: 0.00%
Run 4: Report of TCP Vegas — Data Link

![Graph showing throughput and per-packet one-way delay for Flow 1.]

Flow 1 ingress (mean 229.19 Mbit/s) and Flow 1 egress (mean 229.15 Mbit/s).
Run 5: Statistics of TCP Vegas

Start at: 2018-07-05 14:28:52
End at: 2018-07-05 14:29:22
Local clock offset: -0.081 ms
Remote clock offset: -0.011 ms

# Below is generated by plot.py at 2018-07-05 18:11:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 228.36 Mbit/s
95th percentile per-packet one-way delay: 60.428 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 228.36 Mbit/s
95th percentile per-packet one-way delay: 60.428 ms
Loss rate: 0.00%
Run 5: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 228.35 Mbit/s)
- Flow 1 egress (mean 228.36 Mbit/s)

![Graph showing per-packet delay.]

- Flow 1 (95th percentile 60.43 ms)
Run 6: Statistics of TCP Vegas

Start at: 2018-07-05 14:50:38
End at: 2018-07-05 14:51:08
Local clock offset: -0.442 ms
Remote clock offset: 0.049 ms

# Below is generated by plot.py at 2018-07-05 18:11:14
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 83.92 Mbit/s
  95th percentile per-packet one-way delay: 52.764 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 83.92 Mbit/s
  95th percentile per-packet one-way delay: 52.764 ms
  Loss rate: 0.00%
Run 6: Report of TCP Vegas — Data Link
Run 7: Statistics of TCP Vegas

Start at: 2018-07-05 15:12:23
End at: 2018-07-05 15:12:53
Local clock offset: 0.231 ms
Remote clock offset: -0.014 ms

# Below is generated by plot.py at 2018-07-05 18:11:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 172.98 Mbit/s
95th percentile per-packet one-way delay: 50.511 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 172.98 Mbit/s
95th percentile per-packet one-way delay: 50.511 ms
Loss rate: 0.00%
Run 7: Report of TCP Vegas — Data Link

Throughput (Mbps)

- Flow 1 ingress (mean 172.97 Mbps)
- Flow 1 egress (mean 172.98 Mbps)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 50.51 ms)
Run 8: Statistics of TCP Vegas

Start at: 2018-07-05 15:34:24
End at: 2018-07-05 15:34:54
Local clock offset: -0.135 ms
Remote clock offset: -0.012 ms

# Below is generated by plot.py at 2018-07-05 18:11:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 211.88 Mbit/s
95th percentile per-packet one-way delay: 60.975 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 211.88 Mbit/s
95th percentile per-packet one-way delay: 60.975 ms
Loss rate: 0.00%
Run 8: Report of TCP Vegas — Data Link

![Throughput Graph](image1)

- **Flow 1 ingress (mean 211.89 Mbit/s)**
- **Flow 1 egress (mean 211.88 Mbit/s)**

![Packet Delay Graph](image2)

- **Flow 1 (95th percentile 60.98 ms)**
Run 9: Statistics of TCP Vegas

Start at: 2018-07-05 15:56:27
End at: 2018-07-05 15:56:57
Local clock offset: ~0.094 ms
Remote clock offset: 0.068 ms

# Below is generated by plot.py at 2018-07-05 18:11:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 79.32 Mbit/s
95th percentile per-packet one-way delay: 52.521 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 79.32 Mbit/s
95th percentile per-packet one-way delay: 52.521 ms
Loss rate: 0.00%
Run 9: Report of TCP Vegas — Data Link

![Graphs showing throughput and one-way delay over time for Flow 1 ingress and egress with mean 79.32 Mbps and 95th percentile 52.52 ms.](image)
Run 10: Statistics of TCP Vegas

Start at: 2018-07-05 16:18:21
End at: 2018-07-05 16:18:51
Local clock offset: -0.068 ms
Remote clock offset: 0.053 ms

# Below is generated by plot.py at 2018-07-05 18:12:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 175.82 Mbit/s
95th percentile per-packet one-way delay: 61.608 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 175.82 Mbit/s
95th percentile per-packet one-way delay: 61.608 ms
Loss rate: 0.00%
Run 10: Report of TCP Vegas — Data Link
Run 1: Statistics of Verus

Start at: 2018-07-05 13:04:26
End at: 2018-07-05 13:04:56
Local clock offset: ~0.098 ms
Remote clock offset: ~0.033 ms

# Below is generated by plot.py at 2018-07-05 18:13:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 228.33 Mbit/s
95th percentile per-packet one-way delay: 148.277 ms
Loss rate: 2.57%
-- Flow 1:
Average throughput: 228.33 Mbit/s
95th percentile per-packet one-way delay: 148.277 ms
Loss rate: 2.57%
Run 1: Report of Verus — Data Link

![Graph 1: Throughput (Mbps)]

Flow 1 ingress (mean 234.35 Mbps)  Flow 1 egress (mean 228.33 Mbps)

![Graph 2: Packet Delay (ms)]

Flow 1 (95th percentile 148.28 ms)
Run 2: Statistics of Verus

Start at: 2018-07-05 13:26:36
End at: 2018-07-05 13:27:06
Local clock offset: -0.488 ms
Remote clock offset: -0.024 ms

# Below is generated by plot.py at 2018-07-05 18:13:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 224.80 Mbit/s
95th percentile per-packet one-way delay: 114.844 ms
Loss rate: 1.44%
-- Flow 1:
Average throughput: 224.80 Mbit/s
95th percentile per-packet one-way delay: 114.844 ms
Loss rate: 1.44%
Run 2: Report of Verus — Data Link
Run 3: Statistics of Verus

Local clock offset: -0.076 ms
Remote clock offset: 0.004 ms

# Below is generated by plot.py at 2018-07-05 18:14:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 285.03 Mbit/s
95th percentile per-packet one-way delay: 97.737 ms
Loss rate: 1.80%
-- Flow 1:
Average throughput: 285.03 Mbit/s
95th percentile per-packet one-way delay: 97.737 ms
Loss rate: 1.80%
Run 3: Report of Verus — Data Link

![Data Link Graph]

- Flow 1 ingress (mean 290.24 Mbit/s)
- Flow 1 egress (mean 285.03 Mbit/s)

![Packet Delay Graph]

- Flow 1 (95th percentile 97.74 ms)
Run 4: Statistics of Verus

Start at: 2018-07-05 14:10:45
End at: 2018-07-05 14:11:15
Local clock offset: -0.492 ms
Remote clock offset: -0.042 ms

# Below is generated by plot.py at 2018-07-05 18:15:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 300.90 Mbit/s
95th percentile per-packet one-way delay: 78.794 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 300.90 Mbit/s
95th percentile per-packet one-way delay: 78.794 ms
Loss rate: 0.66%
Run 4: Report of Verus — Data Link

![Graph 1](Image 1)

Time (s)

Throughput (Mbps)

Flow 1 ingress (mean 302.90 Mbit/s)  Flow 1 egress (mean 300.90 Mbit/s)

![Graph 2](Image 2)

Time (s)

Per-packet one way delay (ms)

Flow 1 (95th percentile 78.79 ms)
Run 5: Statistics of Verus

Start at: 2018-07-05 14:32:45
End at: 2018-07-05 14:33:15
Local clock offset: -0.107 ms
Remote clock offset: -0.047 ms

# Below is generated by plot.py at 2018-07-05 18:15:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 225.56 Mbit/s
95th percentile per-packet one-way delay: 108.144 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 225.56 Mbit/s
95th percentile per-packet one-way delay: 108.144 ms
Loss rate: 0.77%
Run 5: Report of Verus — Data Link
Run 6: Statistics of Verus

Start at: 2018-07-05 14:54:25
End at: 2018-07-05 14:54:55
Local clock offset: -0.058 ms
Remote clock offset: -0.027 ms

# Below is generated by plot.py at 2018-07-05 18:15:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 236.46 Mbit/s
95th percentile per-packet one-way delay: 87.426 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 236.46 Mbit/s
95th percentile per-packet one-way delay: 87.426 ms
Loss rate: 0.10%
Run 6: Report of Verus — Data Link
Run 7: Statistics of Verus

Start at: 2018-07-05 15:16:15
End at: 2018-07-05 15:16:45
Local clock offset: -0.137 ms
Remote clock offset: -0.02 ms

# Below is generated by plot.py at 2018-07-05 18:16:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 264.21 Mbit/s
95th percentile per-packet one-way delay: 99.070 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 264.21 Mbit/s
95th percentile per-packet one-way delay: 99.070 ms
Loss rate: 0.07%
Run 7: Report of Verus — Data Link

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

- **Flow 1 ingress (mean 264.48 Mbit/s)**
- **Flow 1 egress (mean 264.21 Mbit/s)**

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

- **Flow 1 (95th percentile 99.07 ms)**

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Run 8: Statistics of Verus

Start at: 2018-07-05 15:38:17
End at: 2018-07-05 15:38:47
Local clock offset: -0.084 ms
Remote clock offset: 0.031 ms

# Below is generated by plot.py at 2018-07-05 18:16:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 249.00 Mbit/s
95th percentile per-packet one-way delay: 94.269 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 249.00 Mbit/s
95th percentile per-packet one-way delay: 94.269 ms
Loss rate: 1.28%
Run 8: Report of Verus — Data Link

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**Throughput (Mbps)**

- Flow 1 ingress (mean 252.24 Mbps)
- Flow 1 egress (mean 249.00 Mbps)

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

Flow 1 (95th percentile 94.27 ms)
Run 9: Statistics of Verus

Start at: 2018-07-05 16:00:14
End at: 2018-07-05 16:00:44
Local clock offset: -0.435 ms
Remote clock offset: 0.064 ms

# Below is generated by plot.py at 2018-07-05 18:16:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 186.09 Mbit/s
95th percentile per-packet one-way delay: 81.425 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 186.09 Mbit/s
95th percentile per-packet one-way delay: 81.425 ms
Loss rate: 1.37%
Run 9: Report of Verus — Data Link
Run 10: Statistics of Verus

End at: 2018-07-05 16:22:41
Local clock offset: 0.305 ms
Remote clock offset: 0.076 ms

# Below is generated by plot.py at 2018-07-05 18:18:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 292.32 Mbit/s
95th percentile per-packet one-way delay: 114.515 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 292.32 Mbit/s
95th percentile per-packet one-way delay: 114.515 ms
Loss rate: 1.70%
Run 10: Report of Verus — Data Link

![Graph showing throughput over time](image)

- Flow 1 ingress (mean 297.41 Mbit/s)
- Flow 1 egress (mean 292.32 Mbit/s)

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

- Flow 1 (95th percentile 114.52 ms)
Run 1: Statistics of PCC-Vivace

Start at: 2018-07-05 12:59:16
End at: 2018-07-05 12:59:46
Local clock offset: -0.117 ms
Remote clock offset: -0.033 ms

# Below is generated by plot.py at 2018-07-05 18:19:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 288.40 Mbit/s
95th percentile per-packet one-way delay: 66.627 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 288.40 Mbit/s
95th percentile per-packet one-way delay: 66.627 ms
Loss rate: 0.00%
Run 1: Report of PCC-Vivace — Data Link
Run 2: Statistics of PCC-Vivace

End at: 2018-07-05 13:21:49
Local clock offset: -0.462 ms
Remote clock offset: -0.067 ms

# Below is generated by plot.py at 2018-07-05 18:20:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 323.27 Mbit/s
95th percentile per-packet one-way delay: 114.586 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 323.27 Mbit/s
95th percentile per-packet one-way delay: 114.586 ms
Loss rate: 0.00%
Run 2: Report of PCC-Vivace — Data Link
Run 3: Statistics of PCC-Vivace

End at: 2018-07-05 13:43:42
Local clock offset: -0.083 ms
Remote clock offset: -0.011 ms

# Below is generated by plot.py at 2018-07-05 18:20:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 236.67 Mbit/s
95th percentile per-packet one-way delay: 132.723 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 236.67 Mbit/s
95th percentile per-packet one-way delay: 132.723 ms
Loss rate: 0.41%
Run 3: Report of PCC-Vivace — Data Link

![Graph 1: Throughput (Mbps) vs Time (s)]
- Flow 1 ingress (mean 237.65 Mbit/s)
- Flow 1 egress (mean 236.67 Mbit/s)

![Graph 2: Per packet one way delay (ms) vs Time (s)]
- Flow 1 (95th percentile 132.72 ms)
Run 4: Statistics of PCC-Vivace

Start at: 2018-07-05 14:05:25
End at: 2018-07-05 14:05:55
Local clock offset: 0.239 ms
Remote clock offset: 0.006 ms

# Below is generated by plot.py at 2018-07-05 18:21:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 342.76 Mbit/s
95th percentile per-packet one-way delay: 151.028 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 342.76 Mbit/s
95th percentile per-packet one-way delay: 151.028 ms
Loss rate: 0.23%
Run 4: Report of PCC-Vivace — Data Link

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

- **Throughput (Mbps):**
  - **Flow 1 ingress (mean 343.54 Mbps):**
  - **Flow 1 egress (mean 342.76 Mbps):**

- **End-to-end delay (ms):**
  - **Flow 1 (95th percentile 151.03 ms):**
Run 5: Statistics of PCC-Vivace

Start at: 2018-07-05 14:27:31
End at: 2018-07-05 14:28:01
Local clock offset: -0.442 ms
Remote clock offset: -0.004 ms

# Below is generated by plot.py at 2018-07-05 18:21:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 255.65 Mbit/s
95th percentile per-packet one-way delay: 53.730 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 255.65 Mbit/s
95th percentile per-packet one-way delay: 53.730 ms
Loss rate: 0.00%
Run 5: Report of PCC-Vivace — Data Link

![Graph showing throughput over time]

![Graph showing packet one-way delay over time]
Run 6: Statistics of PCC-Vivace

Start at: 2018-07-05 14:49:15
End at: 2018-07-05 14:49:45
Local clock offset: -0.058 ms
Remote clock offset: 0.006 ms

# Below is generated by plot.py at 2018-07-05 18:21:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 281.79 Mbit/s
95th percentile per-packet one-way delay: 78.489 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 281.79 Mbit/s
95th percentile per-packet one-way delay: 78.489 ms
Loss rate: 0.00%
Run 6: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 281.79 Mbit/s)
- Flow 1 egress (mean 281.79 Mbit/s)

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

- Flow 1 (95th percentile 78.49 ms)
Run 7: Statistics of PCC-Vivace

Start at: 2018-07-05 15:10:56
End at: 2018-07-05 15:11:26
Local clock offset: -0.491 ms
Remote clock offset: 0.022 ms

# Below is generated by plot.py at 2018-07-05 18:21:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 340.17 Mbit/s
95th percentile per-packet one-way delay: 87.624 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 340.17 Mbit/s
95th percentile per-packet one-way delay: 87.624 ms
Loss rate: 0.06%
Run 7: Report of PCC-Vivace — Data Link

![Graph showing throughput and packet delay over time](image-url)
Run 8: Statistics of PCC-Vivace

Start at: 2018-07-05 15:33:00
End at: 2018-07-05 15:33:30
Local clock offset: -0.472 ms
Remote clock offset: -0.058 ms

# Below is generated by plot.py at 2018-07-05 18:22:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 283.91 Mbit/s
95th percentile per-packet one-way delay: 58.525 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 283.91 Mbit/s
95th percentile per-packet one-way delay: 58.525 ms
Loss rate: 0.05%
Run 8: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 284.06 Mbit/s)
- Flow 1 egress (mean 283.91 Mbit/s)

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

- Flow 1 (99th percentile 58.32 ms)
Run 9: Statistics of PCC-Vivace

End at: 2018-07-05 15:55:34
Local clock offset: -0.421 ms
Remote clock offset: 0.034 ms

# Below is generated by plot.py at 2018-07-05 18:22:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 266.88 Mbit/s
95th percentile per-packet one-way delay: 55.197 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 266.88 Mbit/s
95th percentile per-packet one-way delay: 55.197 ms
Loss rate: 0.46%
Run 9: Report of PCC-Vivace — Data Link

![Graph 1: Throughput](image1)

Flow 1 ingress (mean 268.11 Mbit/s)  Flow 1 egress (mean 266.88 Mbit/s)

![Graph 2: Packet Delay](image2)

Flow 1 (95th percentile 55.20 ms)
Run 10: Statistics of PCC-Vivace

Start at: 2018-07-05 16:16:58
End at: 2018-07-05 16:17:28
Local clock offset: 0.315 ms
Remote clock offset: 0.07 ms

# Below is generated by plot.py at 2018-07-05 18:22:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 272.20 Mbit/s
95th percentile per-packet one-way delay: 67.758 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 272.20 Mbit/s
95th percentile per-packet one-way delay: 67.758 ms
Loss rate: 0.00%
Run 10: Report of PCC-Vivace — Data Link

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**Graph 1:**

- **Title:** Throughput (Mbit/s)
- **Y-axis:** Throughput (Mbit/s)
- **X-axis:** Time (s)
- **Legend:**
  - Flow 1 ingress (mean 272.20 Mbit/s)
  - Flow 1 egress (mean 272.20 Mbit/s)

**Graph 2:**

- **Title:** Packet delay (ms)
- **Y-axis:** Packet delay (ms)
- **X-axis:** Time (s)
- **Legend:**
  - Flow 1 (95th percentile 67.76 ms)
Run 1: Statistics of WebRTC media

End at: 2018-07-05 13:11:25
Local clock offset: -0.127 ms
Remote clock offset: -0.043 ms

# Below is generated by plot.py at 2018-07-05 18:22:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.10 Mbit/s
95th percentile per-packet one-way delay: 50.970 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.10 Mbit/s
95th percentile per-packet one-way delay: 50.970 ms
Loss rate: 0.00%
Run 1: Report of WebRTC media — Data Link

Graph 1: Throughput (Mbps) vs Time (s)

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

Legend:
- Flow 1 ingress (mean 1.10 Mbit/s)
- Flow 1 egress (mean 1.10 Mbit/s)
- Flow 1 (95th percentile 50.97 ms)
Run 2: Statistics of WebRTC media

Start at: 2018-07-05 13:33:05
End at: 2018-07-05 13:33:35
Local clock offset: -0.126 ms
Remote clock offset: -0.01 ms

# Below is generated by plot.py at 2018-07-05 18:22:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 50.971 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 50.971 ms
Loss rate: 0.00%
Run 2: Report of WebRTC media — Data Link

![Graph showing throughput and delay over time for WebRTC data link.]

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 1.96 Mbps)
  - Flow 1 egress (mean 1.96 Mbps)

- **Per-packet delay (ms):**
  - Flow 1 (95th percentile 50.97 ms)
Run 3: Statistics of WebRTC media

Local clock offset: -0.129 ms
Remote clock offset: 0.03 ms

# Below is generated by plot.py at 2018-07-05 18:22:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 51.039 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 51.039 ms
Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link

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

- **Throughput**
  - Flow 1 ingress (mean 1.96 Mbit/s)
  - Flow 1 egress (mean 1.96 Mbit/s)

- **Packet Delay**
  - Flow 1 (95th percentile 51.04 ms)
Run 4: Statistics of WebRTC media

Start at: 2018-07-05 14:17:23
End at: 2018-07-05 14:17:53
Local clock offset: -0.453 ms
Remote clock offset: -0.007 ms

# Below is generated by plot.py at 2018-07-05 18:22:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 51.284 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 51.284 ms
Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link

![Throughput plot](image1)

![Packet delay plot](image2)

Flow 1 ingress (mean 1.96 Mbit/s)  Flow 1 egress (mean 1.96 Mbit/s)
Run 5: Statistics of WebRTC media

Start at: 2018-07-05 14:39:17
End at: 2018-07-05 14:39:47
Local clock offset: -0.09 ms
Remote clock offset: -0.004 ms

# Below is generated by plot.py at 2018-07-05 18:22:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 50.597 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 50.597 ms
Loss rate: 0.00%
Run 5: Report of WebRTC media — Data Link
Run 6: Statistics of WebRTC media

Start at: 2018-07-05 15:00:43
End at: 2018-07-05 15:01:13
Local clock offset: -0.464 ms
Remote clock offset: -0.026 ms

# Below is generated by plot.py at 2018-07-05 18:22:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 51.195 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 51.195 ms
Loss rate: 0.00%
Run 6: Report of WebRTC media — Data Link
Run 7: Statistics of WebRTC media

End at: 2018-07-05 15:23:14
Local clock offset: -0.135 ms
Remote clock offset: -0.029 ms

# Below is generated by plot.py at 2018-07-05 18:22:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 50.945 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 50.945 ms
Loss rate: 0.00%
Run 7: Report of WebRTC media — Data Link
Run 8: Statistics of WebRTC media

Start at: 2018-07-05 15:44:48
End at: 2018-07-05 15:45:18
Local clock offset: -0.461 ms
Remote clock offset: 0.02 ms

# Below is generated by plot.py at 2018-07-05 18:22:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 51.241 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 51.241 ms
Loss rate: 0.00%
Run 8: Report of WebRTC media — Data Link

![Graph 1](image1.png)

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

![Graph 2](image2.png)

Flow 1 (95th percentile 51.24 ms)
Run 9: Statistics of WebRTC media

Start at: 2018-07-05 16:06:34
End at: 2018-07-05 16:07:04
Local clock offset: -0.447 ms
Remote clock offset: 0.068 ms

# Below is generated by plot.py at 2018-07-05 18:22:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.95 Mbit/s
95th percentile per-packet one-way delay: 51.303 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.95 Mbit/s
95th percentile per-packet one-way delay: 51.303 ms
Loss rate: 0.00%
Run 9: Report of WebRTC media — Data Link
Run 10: Statistics of WebRTC media

Start at: 2018-07-05 16:28:34
End at: 2018-07-05 16:29:04
Local clock offset: -0.04 ms
Remote clock offset: 0.127 ms

# Below is generated by plot.py at 2018-07-05 18:22:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 51.237 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 51.237 ms
Loss rate: 0.00%
Run 10: Report of WebRTC media — Data Link

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

- **Flow 1 ingress (mean 1.96 Mbit/s)**
- **Flow 1 egress (mean 1.96 Mbit/s)**