Pantheon Report

Generated at 2018-05-26 20:12:52 (UTC).
Data path: GCE Iowa Ethernet (remote) →GCE London Ethernet (local).
Repeated the test of 16 congestion control schemes 10 times.
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.
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 @ 0088822873ea99180f63545a341ef069f40efe59
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/genericCC @ c7966e494a929986eaa5a9c169a7f381fe11bbe5
third_party/indigo @ 2601c92e4a9d58d33edfe0ecdbf90c0777e64d
third_party/libutp @ b3465b942e2826f2b179eaaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ 6f038ed31259d366f9840f65b82cbe8f464b1b39
third_party/pcc @ 1afc955fa0d66d8623c091a55fec872b498e1e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3ccf42
third_party/scream-reproduce @ f099118d1421a3131bf11ff1964974e1da3b8b2
third_party/sprout @ c838669682f0c19f6baf92a5c9a596a406d48c1f
third_party/verus @ d4b447ea74c6c60a261149af262956293f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f57d4f
third_party/webrtc @ 3f0cc2a9061a41b6f9d4e4735770d143a1f2851
test from GCE Iowa to GCE London, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)
<table>
<thead>
<tr>
<th>scheme</th>
<th># runs</th>
<th>mean avg tput (Mbit/s)</th>
<th>mean 95th-%ile delay (ms)</th>
<th>mean loss rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>flow 1</td>
<td>flow 2</td>
<td>flow 3</td>
</tr>
<tr>
<td>TCP BBR</td>
<td>10</td>
<td>189.69</td>
<td>174.25</td>
<td>138.66</td>
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<tr>
<td>Copa</td>
<td>10</td>
<td>103.04</td>
<td>86.22</td>
<td>83.54</td>
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<td>TCP Cubic</td>
<td>10</td>
<td>182.53</td>
<td>119.36</td>
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<td>633.07</td>
<td>538.13</td>
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<td>Indigo</td>
<td>10</td>
<td>147.03</td>
<td>130.64</td>
<td>108.54</td>
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<td>PCC-Allegro</td>
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<td>28.40</td>
<td>25.19</td>
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<td>PCC-Expr</td>
<td>10</td>
<td>258.88</td>
<td>122.33</td>
<td>59.33</td>
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<tr>
<td>QUIC Cubic</td>
<td>10</td>
<td>68.44</td>
<td>60.30</td>
<td>55.93</td>
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<td>Sprout</td>
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<td>6.52</td>
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<td>TaoVA-100x</td>
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<td>135.03</td>
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<td>TCP Vegas</td>
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<td>129.30</td>
<td>126.12</td>
<td>99.00</td>
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<td>Verus</td>
<td>10</td>
<td>184.67</td>
<td>131.00</td>
<td>98.27</td>
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<tr>
<td>PCC-Vivace</td>
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<td>268.68</td>
<td>218.28</td>
<td>114.37</td>
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<tr>
<td>WebRTC media</td>
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<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

Start at: 2018-05-26 14:36:19
End at: 2018-05-26 14:36:49
Local clock offset: -0.21 ms
Remote clock offset: -0.023 ms

# Below is generated by plot.py at 2018-05-26 18:22:22
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 350.59 Mbit/s
  95th percentile per-packet one-way delay: 116.947 ms
  Loss rate: 0.63%
-- Flow 1:
  Average throughput: 187.82 Mbit/s
  95th percentile per-packet one-way delay: 112.918 ms
  Loss rate: 0.39%
-- Flow 2:
  Average throughput: 173.99 Mbit/s
  95th percentile per-packet one-way delay: 115.441 ms
  Loss rate: 0.64%
-- Flow 3:
  Average throughput: 142.52 Mbit/s
  95th percentile per-packet one-way delay: 122.841 ms
  Loss rate: 1.55%
Run 1: Report of TCP BBR — Data Link

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

- **Throughput (Mbps):**
  - **Flow 1 ingress:** mean 187.92 Mbps
  - **Flow 1 egress:** mean 187.82 Mbps
  - **Flow 2 ingress:** mean 174.24 Mbps
  - **Flow 2 egress:** mean 173.99 Mbps
  - **Flow 3 ingress:** mean 143.31 Mbps
  - **Flow 3 egress:** mean 142.52 Mbps

- **Per-packet one-way delay (ms):**
  - **Flow 1 (95th percentile):** 112.92 ms
  - **Flow 2 (95th percentile):** 115.44 ms
  - **Flow 3 (95th percentile):** 122.84 ms
Run 2: Statistics of TCP BBR

Start at: 2018-05-26 14:58:35
End at: 2018-05-26 14:59:05
Local clock offset: -0.213 ms
Remote clock offset: -0.069 ms

# Below is generated by plot.py at 2018-05-26 18:22:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 338.77 Mbit/s
95th percentile per-packet one-way delay: 125.806 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 183.22 Mbit/s
95th percentile per-packet one-way delay: 119.026 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 167.29 Mbit/s
95th percentile per-packet one-way delay: 126.569 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 134.11 Mbit/s
95th percentile per-packet one-way delay: 135.321 ms
Loss rate: 1.84%
Run 2: Report of TCP BBR — Data Link

[Graph showing throughput and packet delay over time for different flows]
Run 3: Statistics of TCP BBR

Start at: 2018-05-26 15:21:01
End at: 2018-05-26 15:21:31
Local clock offset: -0.225 ms
Remote clock offset: -0.067 ms

# Below is generated by plot.py at 2018-05-26 18:22:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 359.95 Mbit/s
95th percentile per-packet one-way delay: 114.243 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 193.54 Mbit/s
95th percentile per-packet one-way delay: 110.652 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 182.72 Mbit/s
95th percentile per-packet one-way delay: 115.287 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 136.07 Mbit/s
95th percentile per-packet one-way delay: 117.965 ms
Loss rate: 1.66%
Run 3: Report of TCP BBR — Data Link

![Graph of Throughput (Mbps)](chart1)

- **Flow 1 ingress (mean 193.63 Mbps)**
- **Flow 1 egress (mean 193.54 Mbps)**
- **Flow 2 ingress (mean 182.72 Mbps)**
- **Flow 2 egress (mean 182.72 Mbps)**
- **Flow 3 ingress (mean 136.97 Mbps)**
- **Flow 3 egress (mean 136.07 Mbps)**

![Graph of Per-packet one-way delay (ms)](chart2)

- **Flow 1 (95th percentile 110.65 ms)**
- **Flow 2 (95th percentile 115.29 ms)**
- **Flow 3 (95th percentile 117.97 ms)**
Run 4: Statistics of TCP BBR

End at: 2018-05-26 15:43:57
Local clock offset: -0.257 ms
Remote clock offset: -0.099 ms

# Below is generated by plot.py at 2018-05-26 18:22:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 352.97 Mbit/s
  95th percentile per-packet one-way delay: 118.201 ms
  Loss rate: 0.63%
-- Flow 1:
  Average throughput: 191.06 Mbit/s
  95th percentile per-packet one-way delay: 111.496 ms
  Loss rate: 0.39%
-- Flow 2:
  Average throughput: 177.10 Mbit/s
  95th percentile per-packet one-way delay: 117.889 ms
  Loss rate: 0.62%
-- Flow 3:
  Average throughput: 133.42 Mbit/s
  95th percentile per-packet one-way delay: 124.588 ms
  Loss rate: 1.68%
Run 4: Report of TCP BBR — Data Link

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

- **Throughput (Mbps):**
  - **Flow 1 ingress (mean 191.15 Mbps)**
  - **Flow 1 egress (mean 191.06 Mbps)**
  - **Flow 2 ingress (mean 177.31 Mbps)**
  - **Flow 2 egress (mean 177.10 Mbps)**
  - **Flow 3 ingress (mean 134.32 Mbps)**
  - **Flow 3 egress (mean 133.42 Mbps)**

- **Per-packet one-way delay (ms):**
  - **Flow 1 (95th percentile 111.50 ms)**
  - **Flow 2 (95th percentile 117.89 ms)**
  - **Flow 3 (95th percentile 124.59 ms)**
Run 5: Statistics of TCP BBR

Start at: 2018-05-26 16:05:51
End at: 2018-05-26 16:06:21
Local clock offset: -0.23 ms
Remote clock offset: -0.093 ms

# Below is generated by plot.py at 2018-05-26 18:22:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 351.01 Mbit/s
  95th percentile per-packet one-way delay: 117.415 ms
  Loss rate: 0.59%
-- Flow 1:
  Average throughput: 191.18 Mbit/s
  95th percentile per-packet one-way delay: 112.629 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 174.07 Mbit/s
  95th percentile per-packet one-way delay: 117.616 ms
  Loss rate: 0.56%
-- Flow 3:
  Average throughput: 133.47 Mbit/s
  95th percentile per-packet one-way delay: 124.470 ms
  Loss rate: 1.56%
Run 5: Report of TCP BBR — Data Link

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

Flow 1 ingress (mean 191.27 Mbit/s)  
Flow 1 egress (mean 191.18 Mbit/s)  
Flow 2 ingress (mean 174.17 Mbit/s)  
Flow 2 egress (mean 174.07 Mbit/s)  
Flow 3 ingress (mean 134.23 Mbit/s)  
Flow 3 egress (mean 133.47 Mbit/s)

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

Flow 1 (95th percentile 112.63 ms)  
Flow 2 (95th percentile 117.62 ms)  
Flow 3 (95th percentile 124.47 ms)
Run 6: Statistics of TCP BBR

Start at: 2018-05-26 16:28:10
End at: 2018-05-26 16:28:40
Local clock offset: -0.262 ms
Remote clock offset: -0.036 ms

# Below is generated by plot.py at 2018-05-26 18:22:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 344.70 Mbit/s
95th percentile per-packet one-way delay: 124.461 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 187.34 Mbit/s
95th percentile per-packet one-way delay: 120.285 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 168.37 Mbit/s
95th percentile per-packet one-way delay: 124.479 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 137.47 Mbit/s
95th percentile per-packet one-way delay: 129.027 ms
Loss rate: 1.54%
Run 6: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 187.46 Mbit/s)
- Flow 1 egress (mean 187.34 Mbit/s)
- Flow 2 ingress (mean 168.48 Mbit/s)
- Flow 2 egress (mean 168.37 Mbit/s)
- Flow 3 ingress (mean 138.23 Mbit/s)
- Flow 3 egress (mean 137.47 Mbit/s)

![Graph showing packet delay distribution over time for different flows.

- Flow 1 (95th percentile 120.28 ms)
- Flow 2 (95th percentile 124.48 ms)
- Flow 3 (95th percentile 129.03 ms)
Run 7: Statistics of TCP BBR

Start at: 2018-05-26 16:50:39
End at: 2018-05-26 16:51:09
Local clock offset: -0.606 ms
Remote clock offset: 0.002 ms

# Below is generated by plot.py at 2018-05-26 18:22:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 353.05 Mbit/s
95th percentile per-packet one-way delay: 119.589 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 191.19 Mbit/s
95th percentile per-packet one-way delay: 115.860 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 170.45 Mbit/s
95th percentile per-packet one-way delay: 119.598 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 147.20 Mbit/s
95th percentile per-packet one-way delay: 124.446 ms
Loss rate: 1.66%
Run 7: Report of TCP BBR — Data Link

The first graph shows the throughput (in Mbps) over time for three different flows:
- Flow 1 ingress (mean 191.29 Mbps)
- Flow 1 egress (mean 191.19 Mbps)
- Flow 2 ingress (mean 170.81 Mbps)
- Flow 2 egress (mean 170.45 Mbps)
- Flow 3 ingress (mean 148.33 Mbps)
- Flow 3 egress (mean 147.20 Mbps)

The second graph shows the per-packet one-way delay (in ms) over time for the same three flows:
- Flow 1 (95th percentile 115.96 ms)
- Flow 2 (95th percentile 119.60 ms)
- Flow 3 (95th percentile 134.45 ms)
Run 8: Statistics of TCP BBR

Start at: 2018-05-26 17:13:11
End at: 2018-05-26 17:13:41
Local clock offset: -0.302 ms
Remote clock offset: 0.041 ms

# Below is generated by plot.py at 2018-05-26 18:22:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 355.03 Mbit/s
95th percentile per-packet one-way delay: 117.310 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 192.06 Mbit/s
95th percentile per-packet one-way delay: 112.629 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 176.17 Mbit/s
95th percentile per-packet one-way delay: 115.748 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 138.78 Mbit/s
95th percentile per-packet one-way delay: 127.307 ms
Loss rate: 1.70%
Run 8: Report of TCP BBR — Data Link

Throughput (Mbps) vs Time (s)

- Flow 1 ingress (mean 192.24 Mbps)
- Flow 1 egress (mean 192.06 Mbps)
- Flow 2 ingress (mean 176.45 Mbps)
- Flow 2 egress (mean 176.17 Mbps)
- Flow 3 ingress (mean 139.76 Mbps)
- Flow 3 egress (mean 138.78 Mbps)

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

- Flow 1 (95th percentile 112.63 ms)
- Flow 2 (95th percentile 115.75 ms)
- Flow 3 (95th percentile 127.31 ms)
Run 9: Statistics of TCP BBR

Start at: 2018-05-26 17:35:34
End at: 2018-05-26 17:36:04
Local clock offset: -0.177 ms
Remote clock offset: 0.109 ms

# Below is generated by plot.py at 2018-05-26 18:27:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 349.71 Mbit/s
  95th percentile per-packet one-way delay: 117.848 ms
  Loss rate: 0.66%
-- Flow 1:
  Average throughput: 187.33 Mbit/s
  95th percentile per-packet one-way delay: 115.110 ms
  Loss rate: 0.39%
-- Flow 2:
  Average throughput: 171.11 Mbit/s
  95th percentile per-packet one-way delay: 118.013 ms
  Loss rate: 0.68%
-- Flow 3:
  Average throughput: 147.52 Mbit/s
  95th percentile per-packet one-way delay: 120.361 ms
  Loss rate: 1.64%
Run 9: Report of TCP BBR — Data Link

![Graph of throughput (Mbps) vs time (s) for different flows.

- Flow 1 ingress (mean 187.44 Mbps)
- Flow 1 egress (mean 187.33 Mbps)
- Flow 2 ingress (mean 171.42 Mbps)
- Flow 2 egress (mean 171.11 Mbps)
- Flow 3 ingress (mean 148.34 Mbps)
- Flow 3 egress (mean 147.52 Mbps)

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

- Flow 1 (95th percentile 115.11 ms)
- Flow 2 (95th percentile 118.01 ms)
- Flow 3 (95th percentile 120.36 ms)
Run 10: Statistics of TCP BBR

Start at: 2018-05-26 17:57:59
End at: 2018-05-26 17:58:29
Local clock offset: -0.181 ms
Remote clock offset: 0.099 ms

# Below is generated by plot.py at 2018-05-26 18:27:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 357.63 Mbit/s
95th percentile per-packet one-way delay: 118.350 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 192.20 Mbit/s
95th percentile per-packet one-way delay: 115.007 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 181.22 Mbit/s
95th percentile per-packet one-way delay: 118.716 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 136.06 Mbit/s
95th percentile per-packet one-way delay: 131.323 ms
Loss rate: 1.79%
Run 10: Report of TCP BBR — Data Link
Run 1: Statistics of Copa

Start at: 2018-05-26 14:37:45
End at: 2018-05-26 14:38:15
Local clock offset: -0.198 ms
Remote clock offset: -0.045 ms

# Below is generated by plot.py at 2018-05-26 18:27:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 144.10 Mbit/s
95th percentile per-packet one-way delay: 56.985 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 85.52 Mbit/s
95th percentile per-packet one-way delay: 58.674 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 41.44 Mbit/s
95th percentile per-packet one-way delay: 54.301 ms
Loss rate: 2.21%
-- Flow 3:
Average throughput: 94.06 Mbit/s
95th percentile per-packet one-way delay: 53.996 ms
Loss rate: 0.73%
Run 1: Report of Copa — Data Link

![Throughput over time](chart)

![Round-trip time over time](chart)

Legend:
- Flow 1 ingress (mean 85.59 Mbit/s)
- Flow 1 egress (mean 85.52 Mbit/s)
- Flow 2 ingress (mean 42.17 Mbit/s)
- Flow 2 egress (mean 41.44 Mbit/s)
- Flow 3 ingress (mean 93.80 Mbit/s)
- Flow 3 egress (mean 94.06 Mbit/s)

Legend for RTT:
- Flow 1 (95th percentile 58.67 ms)
- Flow 2 (95th percentile 54.30 ms)
- Flow 3 (95th percentile 54.00 ms)
Run 2: Statistics of Copa

Start at: 2018-05-26 15:00:00
End at: 2018-05-26 15:00:30
Local clock offset: 0.105 ms
Remote clock offset: -0.081 ms

# Below is generated by plot.py at 2018-05-26 18:27:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 189.41 Mbit/s
95th percentile per-packet one-way delay: 55.922 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 117.09 Mbit/s
95th percentile per-packet one-way delay: 55.690 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 67.25 Mbit/s
95th percentile per-packet one-way delay: 57.057 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 96.32 Mbit/s
95th percentile per-packet one-way delay: 55.541 ms
Loss rate: 1.05%
Run 2: Report of Copa — Data Link

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

- Flow 1 ingress (mean 117.02 Mbit/s)
- Flow 1 egress (mean 117.09 Mbit/s)
- Flow 2 ingress (mean 67.30 Mbit/s)
- Flow 2 egress (mean 67.25 Mbit/s)
- Flow 3 ingress (mean 96.33 Mbit/s)
- Flow 3 egress (mean 96.32 Mbit/s)

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

- Flow 1 (95th percentile 55.69 ms)
- Flow 2 (95th percentile 57.06 ms)
- Flow 3 (95th percentile 55.54 ms)
Run 3: Statistics of Copa

Local clock offset: -0.172 ms
Remote clock offset: -0.102 ms

# Below is generated by plot.py at 2018-05-26 18:27:57
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 174.32 Mbit/s
  95th percentile per-packet one-way delay: 54.375 ms
  Loss rate: 0.38%
-- Flow 1:
  Average throughput: 84.17 Mbit/s
  95th percentile per-packet one-way delay: 54.012 ms
  Loss rate: 0.35%
-- Flow 2:
  Average throughput: 103.44 Mbit/s
  95th percentile per-packet one-way delay: 54.555 ms
  Loss rate: 0.21%
-- Flow 3:
  Average throughput: 65.29 Mbit/s
  95th percentile per-packet one-way delay: 54.940 ms
  Loss rate: 1.02%
Run 3: Report of Copa — Data Link

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

- Flow 1 ingress (mean 84.18 Mbps)
- Flow 1 egress (mean 84.17 Mbps)
- Flow 2 ingress (mean 102.95 Mbps)
- Flow 2 egress (mean 103.44 Mbps)
- Flow 3 ingress (mean 65.28 Mbps)
- Flow 3 egress (mean 65.29 Mbps)

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

- Flow 1 (95th percentile 54.01 ms)
- Flow 2 (95th percentile 54.55 ms)
- Flow 3 (95th percentile 54.94 ms)
Run 4: Statistics of Copa

Start at: 2018-05-26 15:44:52
End at: 2018-05-26 15:45:22
Local clock offset: -0.236 ms
Remote clock offset: -0.138 ms

# Below is generated by plot.py at 2018-05-26 18:28:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 201.84 Mbit/s
  95th percentile per-packet one-way delay: 54.024 ms
  Loss rate: 0.42%
-- Flow 1:
  Average throughput: 133.12 Mbit/s
  95th percentile per-packet one-way delay: 53.215 ms
  Loss rate: 0.17%
-- Flow 2:
  Average throughput: 66.43 Mbit/s
  95th percentile per-packet one-way delay: 54.432 ms
  Loss rate: 1.39%
-- Flow 3:
  Average throughput: 75.32 Mbit/s
  95th percentile per-packet one-way delay: 56.295 ms
  Loss rate: 0.00%
Run 4: Report of Copa — Data Link

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

Legend:
- Flow 1 Ingress (mean 132.90 Mbit/s)
- Flow 1 Egress (mean 133.12 Mbit/s)
- Flow 2 Ingress (mean 67.03 Mbit/s)
- Flow 2 Egress (mean 66.43 Mbit/s)
- Flow 3 Ingress (mean 75.39 Mbit/s)
- Flow 3 Egress (mean 75.32 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 53.22 ms)
- Flow 2 (95th percentile 54.43 ms)
- Flow 3 (95th percentile 56.30 ms)
Run 5: Statistics of Copa

Start at: 2018-05-26 16:07:17
End at: 2018-05-26 16:07:47
Local clock offset: -0.649 ms
Remote clock offset: -0.069 ms

# Below is generated by plot.py at 2018-05-26 18:28:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 147.36 Mbit/s
95th percentile per-packet one-way delay: 55.013 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 66.02 Mbit/s
95th percentile per-packet one-way delay: 55.607 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 114.56 Mbit/s
95th percentile per-packet one-way delay: 58.396 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 135.08 Mbit/s
95th percentile per-packet one-way delay: 51.766 ms
Loss rate: 0.00%
Run 5: Report of Copa — Data Link
Run 6: Statistics of Copa

Start at: 2018-05-26 16:29:35
End at: 2018-05-26 16:30:05
Local clock offset: -0.282 ms
Remote clock offset: -0.015 ms

# Below is generated by plot.py at 2018-05-26 18:28:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 215.27 Mbit/s
95th percentile per-packet one-way delay: 52.275 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 121.29 Mbit/s
95th percentile per-packet one-way delay: 51.538 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 98.94 Mbit/s
95th percentile per-packet one-way delay: 52.797 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 85.54 Mbit/s
95th percentile per-packet one-way delay: 54.113 ms
Loss rate: 0.64%
Run 6: Report of Copa — Data Link

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

- Flow 1 ingress (mean 121.04 Mbit/s)
- Flow 1 egress (mean 121.29 Mbit/s)
- Flow 2 ingress (mean 99.23 Mbit/s)
- Flow 2 egress (mean 98.94 Mbit/s)
- Flow 3 ingress (mean 85.28 Mbit/s)
- Flow 3 egress (mean 85.54 Mbit/s)
Run 7: Statistics of Copa

Start at: 2018-05-26 16:52:05
End at: 2018-05-26 16:52:35
Local clock offset: ~0.23 ms
Remote clock offset: 0.073 ms

# Below is generated by plot.py at 2018-05-26 18:32:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 190.37 Mbit/s
95th percentile per-packet one-way delay: 54.271 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 120.76 Mbit/s
95th percentile per-packet one-way delay: 53.432 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 65.98 Mbit/s
95th percentile per-packet one-way delay: 55.805 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 78.30 Mbit/s
95th percentile per-packet one-way delay: 53.892 ms
Loss rate: 0.75%
Run 7: Report of Copa — Data Link

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

- Flow 1 ingress (mean 120.86 Mbit/s)
- Flow 1 egress (mean 120.76 Mbit/s)
- Flow 2 ingress (mean 66.11 Mbit/s)
- Flow 2 egress (mean 65.98 Mbit/s)
- Flow 3 ingress (mean 78.08 Mbit/s)
- Flow 3 egress (mean 78.30 Mbit/s)
Run 8: Statistics of Copa

Start at: 2018-05-26 17:14:37
End at: 2018-05-26 17:15:07
Local clock offset: -0.582 ms
Remote clock offset: 0.038 ms

# Below is generated by plot.py at 2018-05-26 18:32:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 183.36 Mbit/s
  95th percentile per-packet one-way delay: 52.079 ms
  Loss rate: 0.62%
-- Flow 1:
  Average throughput: 128.04 Mbit/s
  95th percentile per-packet one-way delay: 51.201 ms
  Loss rate: 0.47%
-- Flow 2:
  Average throughput: 129.50 Mbit/s
  95th percentile per-packet one-way delay: 53.096 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 71.05 Mbit/s
  95th percentile per-packet one-way delay: 54.075 ms
  Loss rate: 2.25%
Run 8: Report of Copa — Data Link

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

- **Flow 1 ingress** (mean 128.22 Mbps)
- **Flow 1 egress** (mean 128.04 Mbps)
- **Flow 2 ingress** (mean 129.69 Mbps)
- **Flow 2 egress** (mean 129.50 Mbps)
- **Flow 3 ingress** (mean 71.97 Mbps)
- **Flow 3 egress** (mean 71.05 Mbps)

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

- **Flow 1 (95th percentile 51.20 ms)**
- **Flow 2 (95th percentile 53.10 ms)**
- **Flow 3 (95th percentile 54.08 ms)**

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Run 9: Statistics of Copa

Start at: 2018-05-26 17:37:00
End at: 2018-05-26 17:37:30
Local clock offset: -0.256 ms
Remote clock offset: 0.102 ms

# Below is generated by plot.py at 2018-05-26 18:33:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 186.33 Mbit/s
95th percentile per-packet one-way delay: 52.268 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 91.28 Mbit/s
95th percentile per-packet one-way delay: 51.562 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 112.21 Mbit/s
95th percentile per-packet one-way delay: 52.742 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 61.97 Mbit/s
95th percentile per-packet one-way delay: 53.674 ms
Loss rate: 1.80%
Run 9: Report of Copa — Data Link
Run 10: Statistics of Copa

Start at: 2018-05-26 17:59:26
End at: 2018-05-26 17:59:56
Local clock offset: -0.199 ms
Remote clock offset: 0.122 ms

# Below is generated by plot.py at 2018-05-26 18:33:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 146.91 Mbit/s
95th percentile per-packet one-way delay: 58.144 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 83.10 Mbit/s
95th percentile per-packet one-way delay: 56.999 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 62.49 Mbit/s
95th percentile per-packet one-way delay: 61.093 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 72.46 Mbit/s
95th percentile per-packet one-way delay: 54.681 ms
Loss rate: 0.00%
Run 10: Report of Copa — Data Link
Run 1: Statistics of TCP Cubic

Start at: 2018-05-26 14:30:59
End at: 2018-05-26 14:31:29
Local clock offset: 0.196 ms
Remote clock offset: -0.05 ms

# Below is generated by plot.py at 2018-05-26 18:33:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 311.89 Mbit/s
95th percentile per-packet one-way delay: 116.834 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 145.58 Mbit/s
95th percentile per-packet one-way delay: 114.694 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 185.10 Mbit/s
95th percentile per-packet one-way delay: 117.678 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 132.13 Mbit/s
95th percentile per-packet one-way delay: 118.991 ms
Loss rate: 1.87%
Run 1: Report of TCP Cubic — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 145.88 Mbit/s)  Flow 1 egress (mean 145.58 Mbit/s)
Flow 2 ingress (mean 185.71 Mbit/s)  Flow 2 egress (mean 185.10 Mbit/s)
Flow 3 ingress (mean 133.31 Mbit/s)  Flow 3 egress (mean 132.13 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 114.69 ms)  Flow 2 (95th percentile 117.68 ms)  Flow 3 (95th percentile 118.99 ms)
Run 2: Statistics of TCP Cubic

End at: 2018-05-26 14:53:44
Local clock offset: -0.149 ms
Remote clock offset: -0.015 ms

# Below is generated by plot.py at 2018-05-26 18:33:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 264.87 Mbit/s
95th percentile per-packet one-way delay: 89.754 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 152.22 Mbit/s
95th percentile per-packet one-way delay: 88.792 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 109.19 Mbit/s
95th percentile per-packet one-way delay: 89.951 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 121.38 Mbit/s
95th percentile per-packet one-way delay: 91.112 ms
Loss rate: 1.18%
Run 2: Report of TCP Cubic — Data Link
Run 3: Statistics of TCP Cubic

Start at: 2018-05-26 15:15:47
End at: 2018-05-26 15:16:17
Local clock offset: -0.59 ms
Remote clock offset: -0.102 ms

# Below is generated by plot.py at 2018-05-26 18:33:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 229.10 Mbit/s
95th percentile per-packet one-way delay: 68.974 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 165.80 Mbit/s
95th percentile per-packet one-way delay: 67.442 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 44.98 Mbit/s
95th percentile per-packet one-way delay: 71.244 ms
Loss rate: 1.67%
-- Flow 3:
Average throughput: 101.22 Mbit/s
95th percentile per-packet one-way delay: 71.794 ms
Loss rate: 1.17%
Run 3: Report of TCP Cubic — Data Link

![Graph showing throughput and time for different flows]

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 165.75 Mbit/s)  Flow 1 egress (mean 165.80 Mbit/s)
Flow 2 ingress (mean 45.51 Mbit/s)  Flow 2 egress (mean 44.98 Mbit/s)
Flow 3 ingress (mean 101.40 Mbit/s)  Flow 3 egress (mean 101.22 Mbit/s)

![Graph showing per packet one way delay]

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 67.44 ms)  Flow 2 (95th percentile 71.24 ms)  Flow 3 (95th percentile 71.79 ms)
Run 4: Statistics of TCP Cubic

Start at: 2018-05-26 15:38:07
End at: 2018-05-26 15:38:37
Local clock offset: -0.223 ms
Remote clock offset: -0.082 ms

# Below is generated by plot.py at 2018-05-26 18:34:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 326.71 Mbit/s
95th percentile per-packet one-way delay: 104.114 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 208.19 Mbit/s
95th percentile per-packet one-way delay: 101.795 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 100.92 Mbit/s
95th percentile per-packet one-way delay: 102.228 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 156.51 Mbit/s
95th percentile per-packet one-way delay: 113.654 ms
Loss rate: 1.57%
Run 4: Report of TCP Cubic — Data Link

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

- **Flow 1 ingress**: Mean 208.36 Mbps
- **Flow 1 egress**: Mean 208.19 Mbps
- **Flow 2 ingress**: Mean 101.30 Mbps
- **Flow 2 egress**: Mean 100.92 Mbps
- **Flow 3 ingress**: Mean 157.86 Mbps
- **Flow 3 egress**: Mean 156.61 Mbps

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

- **Flow 1 (95th percentile)**: 101.90 ms
- **Flow 2 (95th percentile)**: 102.23 ms
- **Flow 3 (95th percentile)**: 113.65 ms
Run 5: Statistics of TCP Cubic

Start at: 2018-05-26 16:00:31
End at: 2018-05-26 16:01:01
Local clock offset: -0.215 ms
Remote clock offset: -0.086 ms

# Below is generated by plot.py at 2018-05-26 18:36:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 261.93 Mbit/s
95th percentile per-packet one-way delay: 62.504 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 227.48 Mbit/s
95th percentile per-packet one-way delay: 61.604 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 49.42 Mbit/s
95th percentile per-packet one-way delay: 83.354 ms
Loss rate: 2.43%
-- Flow 3:
Average throughput: 4.81 Mbit/s
95th percentile per-packet one-way delay: 84.912 ms
Loss rate: 4.13%
Run 5: Report of TCP Cubic — Data Link

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

Legend:
- Flow 1 ingress (mean 227.49 Mbps)
- Flow 1 egress (mean 227.48 Mbps)
- Flow 2 ingress (mean 50.39 Mbps)
- Flow 2 egress (mean 49.42 Mbps)
- Flow 3 ingress (mean 4.97 Mbps)
- Flow 3 egress (mean 4.81 Mbps)

Legend (delay):
- Flow 1 (95th percentile 61.60 ms)
- Flow 2 (95th percentile 83.35 ms)
- Flow 3 (95th percentile 84.91 ms)
Run 6: Statistics of TCP Cubic

End at: 2018-05-26 16:23:22
Local clock offset: -0.285 ms
Remote clock offset: -0.036 ms

# Below is generated by plot.py at 2018-05-26 18:36:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 304.11 Mbit/s
95th percentile per-packet one-way delay: 72.088 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 158.44 Mbit/s
95th percentile per-packet one-way delay: 70.641 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 216.60 Mbit/s
95th percentile per-packet one-way delay: 73.282 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 4.94 Mbit/s
95th percentile per-packet one-way delay: 72.214 ms
Loss rate: 3.90%
Run 6: Report of TCP Cubic — Data Link

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

![Graph showing per-packet one-way delay over time for different flows.](image)
Run 7: Statistics of TCP Cubic

Start at: 2018-05-26 16:45:15
End at: 2018-05-26 16:45:45
Local clock offset: -0.267 ms
Remote clock offset: 0.022 ms

# Below is generated by plot.py at 2018-05-26 18:36:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 293.97 Mbit/s
95th percentile per-packet one-way delay: 86.600 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 130.00 Mbit/s
95th percentile per-packet one-way delay: 85.417 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 195.10 Mbit/s
95th percentile per-packet one-way delay: 86.253 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 103.99 Mbit/s
95th percentile per-packet one-way delay: 88.075 ms
Loss rate: 1.45%
Run 7: Report of TCP Cubic — Data Link

![Graph of network throughput over time for three flows with different colors and line types, showing variations in performance.]

![Graph of packet delay over time for three flows with different colors, showing spikes and dips in delay.]

Legend:
- Flow 1 ingress (mean 130.06 Mbit/s)
- Flow 1 egress (mean 130.00 Mbit/s)
- Flow 2 ingress (mean 194.80 Mbit/s)
- Flow 2 egress (mean 195.10 Mbit/s)
- Flow 3 ingress (mean 104.46 Mbit/s)
- Flow 3 egress (mean 103.99 Mbit/s)
Run 8: Statistics of TCP Cubic

Start at: 2018-05-26 17:07:56
End at: 2018-05-26 17:08:26
Local clock offset: -0.214 ms
Remote clock offset: 0.039 ms

# Below is generated by plot.py at 2018-05-26 18:37:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 297.36 Mbit/s
95th percentile per-packet one-way delay: 94.628 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 209.46 Mbit/s
95th percentile per-packet one-way delay: 89.741 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 41.20 Mbit/s
95th percentile per-packet one-way delay: 99.507 ms
Loss rate: 2.75%
-- Flow 3:
Average throughput: 183.69 Mbit/s
95th percentile per-packet one-way delay: 98.811 ms
Loss rate: 1.35%
Run 8: Report of TCP Cubic — Data Link

[Graphs showing throughput and per-packet maximum delays over time for different flows.]
Run 9: Statistics of TCP Cubic

Start at: 2018-05-26 17:30:15
End at: 2018-05-26 17:30:45
Local clock offset: 0.145 ms
Remote clock offset: 0.094 ms

# Below is generated by plot.py at 2018-05-26 18:37:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 341.45 Mbit/s
95th percentile per-packet one-way delay: 83.017 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 208.75 Mbit/s
95th percentile per-packet one-way delay: 81.167 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 197.45 Mbit/s
95th percentile per-packet one-way delay: 84.663 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 4.14 Mbit/s
95th percentile per-packet one-way delay: 82.988 ms
Loss rate: 4.72%
Run 9: Report of TCP Cubic — Data Link
Run 10: Statistics of TCP Cubic

Start at: 2018-05-26 17:52:43
End at: 2018-05-26 17:53:13
Local clock offset: -0.505 ms
Remote clock offset: 0.116 ms

# Below is generated by plot.py at 2018-05-26 18:37:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 256.72 Mbit/s
95th percentile per-packet one-way delay: 58.622 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 219.33 Mbit/s
95th percentile per-packet one-way delay: 58.798 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 53.61 Mbit/s
95th percentile per-packet one-way delay: 55.608 ms
Loss rate: 2.18%
-- Flow 3:
Average throughput: 5.27 Mbit/s
95th percentile per-packet one-way delay: 54.704 ms
Loss rate: 3.78%
Run 10: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 218.92 Mbit/s)
- Flow 1 egress (mean 219.33 Mbit/s)
- Flow 2 ingress (mean 54.53 Mbit/s)
- Flow 2 egress (mean 53.61 Mbit/s)
- Flow 3 ingress (mean 5.42 Mbit/s)
- Flow 3 egress (mean 5.27 Mbit/s)

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

- Flow 1 (95th percentile 58.80 ms)
- Flow 2 (95th percentile 55.61 ms)
- Flow 3 (95th percentile 54.70 ms)
Run 1: Statistics of FillP

Start at: 2018-05-26 14:29:06
End at: 2018-05-26 14:29:36
Local clock offset: -0.199 ms
Remote clock offset: 0.073 ms

# Below is generated by plot.py at 2018-05-26 18:54:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1109.97 Mbit/s
95th percentile per-packet one-way delay: 252.394 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 668.86 Mbit/s
95th percentile per-packet one-way delay: 249.869 ms
Loss rate: 0.96%
-- Flow 2:
Average throughput: 566.95 Mbit/s
95th percentile per-packet one-way delay: 262.614 ms
Loss rate: 1.59%
-- Flow 3:
Average throughput: 196.47 Mbit/s
95th percentile per-packet one-way delay: 210.554 ms
Loss rate: 3.45%
Run 1: Report of FillP — Data Link
Run 2: Statistics of FillP

Start at: 2018-05-26 14:51:15
End at: 2018-05-26 14:51:45
Local clock offset: -0.213 ms
Remote clock offset: -0.067 ms

# Below is generated by plot.py at 2018-05-26 18:59:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1301.37 Mbit/s
  95th percentile per-packet one-way delay: 221.383 ms
  Loss rate: 1.05%
-- Flow 1:
  Average throughput: 699.69 Mbit/s
  95th percentile per-packet one-way delay: 237.655 ms
  Loss rate: 0.80%
-- Flow 2:
  Average throughput: 606.18 Mbit/s
  95th percentile per-packet one-way delay: 218.088 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 604.17 Mbit/s
  95th percentile per-packet one-way delay: 114.319 ms
  Loss rate: 2.75%
Run 2: Report of FillP — Data Link

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

- **Flow 1**: Ingress (mean 702.95 Mbit/s), Egress (mean 699.69 Mbit/s)
- **Flow 2**: Ingress (mean 606.91 Mbit/s), Egress (mean 606.18 Mbit/s)
- **Flow 3**: Ingress (mean 614.85 Mbit/s), Egress (mean 604.17 Mbit/s)

![Graph showing packet delay for different flows.]

- **Flow 1**: 95th percentile 237.66 ms
- **Flow 2**: 95th percentile 218.09 ms
- **Flow 3**: 95th percentile 114.32 ms
Run 3: Statistics of FillP

End at: 2018-05-26 15:14:18
Local clock offset: 0.141 ms
Remote clock offset: -0.108 ms

# Below is generated by plot.py at 2018-05-26 19:00:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1255.66 Mbit/s
95th percentile per-packet one-way delay: 215.050 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 655.86 Mbit/s
95th percentile per-packet one-way delay: 226.633 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 613.50 Mbit/s
95th percentile per-packet one-way delay: 185.914 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 582.97 Mbit/s
95th percentile per-packet one-way delay: 190.523 ms
Loss rate: 1.68%
Run 3: Report of FillP — Data Link

Throughput (Mb/s)

Time (s)

Flow 1 ingress (mean 658.74 Mb/s)  Flow 1 egress (mean 655.86 Mb/s)
Flow 2 ingress (mean 616.30 Mb/s)  Flow 2 egress (mean 613.50 Mb/s)
Flow 3 ingress (mean 597.12 Mb/s)  Flow 3 egress (mean 592.97 Mb/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 226.63 ms)  Flow 2 (95th percentile 185.91 ms)  Flow 3 (95th percentile 190.52 ms)
Run 4: Statistics of FillP

Start at: 2018-05-26 15:36:04
End at: 2018-05-26 15:36:34
Local clock offset: -0.636 ms
Remote clock offset: -0.13 ms

# Below is generated by plot.py at 2018-05-26 19:04:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1382.69 Mbit/s
95th percentile per-packet one-way delay: 232.290 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 737.94 Mbit/s
95th percentile per-packet one-way delay: 229.538 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 678.50 Mbit/s
95th percentile per-packet one-way delay: 248.234 ms
Loss rate: 1.78%
-- Flow 3:
Average throughput: 589.26 Mbit/s
95th percentile per-packet one-way delay: 223.798 ms
Loss rate: 1.22%
Run 4: Report of FillP — Data Link
Run 5: Statistics of FillP

Start at: 2018-05-26 15:58:27
End at: 2018-05-26 15:58:57
Local clock offset: -0.644 ms
Remote clock offset: -0.114 ms

# Below is generated by plot.py at 2018-05-26 19:04:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1313.50 Mbit/s
95th percentile per-packet one-way delay: 218.984 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 704.41 Mbit/s
95th percentile per-packet one-way delay: 200.374 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 664.48 Mbit/s
95th percentile per-packet one-way delay: 268.432 ms
Loss rate: 2.08%
-- Flow 3:
Average throughput: 509.10 Mbit/s
95th percentile per-packet one-way delay: 226.600 ms
Loss rate: 1.86%
Run 5: Report of FillP — Data Link
Run 6: Statistics of FillP

Start at: 2018-05-26 16:20:55
End at: 2018-05-26 16:21:25
Local clock offset: -0.237 ms
Remote clock offset: -0.045 ms

# Below is generated by plot.py at 2018-05-26 19:04:09
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1218.81 Mbit/s
  95th percentile per-packet one-way delay: 224.680 ms
  Loss rate: 0.69%
-- Flow 1:
  Average throughput: 587.58 Mbit/s
  95th percentile per-packet one-way delay: 246.835 ms
  Loss rate: 0.44%
-- Flow 2:
  Average throughput: 668.58 Mbit/s
  95th percentile per-packet one-way delay: 200.858 ms
  Loss rate: 0.56%
-- Flow 3:
  Average throughput: 568.68 Mbit/s
  95th percentile per-packet one-way delay: 201.475 ms
  Loss rate: 1.77%
Run 6: Report of FillP — Data Link

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

- Flow 1 ingress (mean 588.19 Mbit/s)
- Flow 1 egress (mean 587.58 Mbit/s)
- Flow 2 ingress (mean 668.86 Mbit/s)
- Flow 2 egress (mean 668.86 Mbit/s)
- Flow 3 ingress (mean 573.05 Mbit/s)
- Flow 3 egress (mean 566.68 Mbit/s)

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

- Flow 1 (95th percentile 246.84 ms)
- Flow 2 (95th percentile 200.86 ms)
- Flow 3 (95th percentile 201.47 ms)
Run 7: Statistics of FillP

Start at: 2018-05-26 16:43:17
End at: 2018-05-26 16:43:47
Local clock offset: -0.228 ms
Remote clock offset: 0.051 ms

# Below is generated by plot.py at 2018-05-26 19:04:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1261.59 Mbit/s
95th percentile per-packet one-way delay: 244.216 ms
Loss rate: 1.90%
-- Flow 1:
Average throughput: 676.97 Mbit/s
95th percentile per-packet one-way delay: 256.441 ms
Loss rate: 2.28%
-- Flow 2:
Average throughput: 588.14 Mbit/s
95th percentile per-packet one-way delay: 226.942 ms
Loss rate: 1.32%
-- Flow 3:
Average throughput: 588.86 Mbit/s
95th percentile per-packet one-way delay: 183.533 ms
Loss rate: 1.69%
Run 7: Report of FillP — Data Link

- Throughput (Mbps):
  - Flow 1 ingress (mean 690.47 Mbps)
  - Flow 1 egress (mean 676.97 Mbps)
  - Flow 2 ingress (mean 593.02 Mbps)
  - Flow 2 egress (mean 588.14 Mbps)
  - Flow 3 ingress (mean 592.93 Mbps)
  - Flow 3 egress (mean 588.86 Mbps)

- Per-packet one-way delay (ms):
  - Flow 1 (95th percentile 256.44 ms)
  - Flow 2 (95th percentile 226.94 ms)
  - Flow 3 (95th percentile 183.53 ms)
Run 8: Statistics of FillP

Start at: 2018-05-26 17:05:52
End at: 2018-05-26 17:06:22
Local clock offset: -0.174 ms
Remote clock offset: 0.036 ms

# Below is generated by plot.py at 2018-05-26 19:05:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1364.61 Mbit/s
95th percentile per-packet one-way delay: 213.994 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 730.14 Mbit/s
95th percentile per-packet one-way delay: 224.454 ms
Loss rate: 1.02%
-- Flow 2:
Average throughput: 654.36 Mbit/s
95th percentile per-packet one-way delay: 204.246 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 608.25 Mbit/s
95th percentile per-packet one-way delay: 100.545 ms
Loss rate: 1.74%
Run 8: Report of FillP — Data Link

- Flow 1 ingress (mean 735.18 Mbit/s)
- Flow 2 ingress (mean 656.42 Mbit/s)
- Flow 3 ingress (mean 612.68 Mbit/s)
- Flow 1 egress (mean 730.14 Mbit/s)
- Flow 2 egress (mean 654.36 Mbit/s)
- Flow 3 egress (mean 608.25 Mbit/s)

- Flow 1 (95th percentile 224.45 ms)
- Flow 2 (95th percentile 204.25 ms)
- Flow 3 (95th percentile 100.55 ms)
Run 9: Statistics of FillP

Start at: 2018-05-26 17:28:15
End at: 2018-05-26 17:28:45
Local clock offset: -0.224 ms
Remote clock offset: 0.066 ms

# Below is generated by plot.py at 2018-05-26 19:23:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1290.51 Mbit/s
95th percentile per-packet one-way delay: 230.727 ms
Loss rate: 2.31%
-- Flow 1:
Average throughput: 677.96 Mbit/s
95th percentile per-packet one-way delay: 239.844 ms
Loss rate: 2.08%
-- Flow 2:
Average throughput: 619.21 Mbit/s
95th percentile per-packet one-way delay: 223.265 ms
Loss rate: 2.76%
-- Flow 3:
Average throughput: 609.69 Mbit/s
95th percentile per-packet one-way delay: 204.759 ms
Loss rate: 2.16%
Run 9: Report of FillP — Data Link
Run 10: Statistics of FillP

Start at: 2018-05-26 17:50:43
End at: 2018-05-26 17:51:13
Local clock offset: -0.241 ms
Remote clock offset: 0.115 ms

# Below is generated by plot.py at 2018-05-26 19:26:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1269.55 Mbit/s
95th percentile per-packet one-way delay: 208.586 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 651.39 Mbit/s
95th percentile per-packet one-way delay: 210.380 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 670.78 Mbit/s
95th percentile per-packet one-way delay: 208.660 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 523.80 Mbit/s
95th percentile per-packet one-way delay: 69.324 ms
Loss rate: 1.22%
Run 10: Report of FillP — Data Link

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

Throughput (Mbps)

- Flow 1 ingress (mean 651.72 Mbps)
- Flow 1 egress (mean 651.39 Mbps)
- Flow 2 ingress (mean 670.63 Mbps)
- Flow 2 egress (mean 670.78 Mbps)
- Flow 3 ingress (mean 524.82 Mbps)
- Flow 3 egress (mean 523.89 Mbps)

Packet loss one-way delay (ms)

- Flow 1 (95th percentile 210.38 ms)
- Flow 2 (95th percentile 208.66 ms)
- Flow 3 (95th percentile 69.32 ms)
Run 1: Statistics of Indigo

Start at: 2018-05-26 14:39:05
End at: 2018-05-26 14:39:35
Local clock offset: 0.202 ms
Remote clock offset: -0.045 ms

# Below is generated by plot.py at 2018-05-26 19:26:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 282.65 Mbit/s
95th percentile per-packet one-way delay: 65.142 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 152.10 Mbit/s
95th percentile per-packet one-way delay: 63.271 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 138.07 Mbit/s
95th percentile per-packet one-way delay: 65.448 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 109.65 Mbit/s
95th percentile per-packet one-way delay: 67.882 ms
Loss rate: 1.06%
Run 1: Report of Indigo — Data Link
Run 2: Statistics of Indigo

Start at: 2018-05-26 15:01:24
End at: 2018-05-26 15:01:54
Local clock offset: -0.162 ms
Remote clock offset: -0.069 ms

# Below is generated by plot.py at 2018-05-26 19:26:43
# Datalink statistics

-- Total of 3 flows:
Average throughput: 267.35 Mbit/s
95th percentile per-packet one-way delay: 53.702 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 146.83 Mbit/s
95th percentile per-packet one-way delay: 52.778 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 126.35 Mbit/s
95th percentile per-packet one-way delay: 53.810 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 113.05 Mbit/s
95th percentile per-packet one-way delay: 55.807 ms
Loss rate: 0.97%
Run 2: Report of Indigo — Data Link

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

Legend:
- Flow 1 ingress (mean 146.74 Mbit/s)
- Flow 1 egress (mean 146.83 Mbit/s)
- Flow 2 ingress (mean 126.24 Mbit/s)
- Flow 2 egress (mean 126.35 Mbit/s)
- Flow 3 ingress (mean 112.98 Mbit/s)
- Flow 3 egress (mean 113.05 Mbit/s)
Run 3: Statistics of Indigo

End at: 2018-05-26 15:24:20
Local clock offset: -0.206 ms
Remote clock offset: -0.102 ms

# Below is generated by plot.py at 2018-05-26 19:26:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 261.60 Mbit/s
95th percentile per-packet one-way delay: 54.629 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 139.95 Mbit/s
95th percentile per-packet one-way delay: 53.586 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 128.62 Mbit/s
95th percentile per-packet one-way delay: 54.969 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 113.55 Mbit/s
95th percentile per-packet one-way delay: 57.772 ms
Loss rate: 0.99%
Run 3: Report of Indigo — Data Link

![Graph of network performance metrics]

**Throughput (Mbps):**
- Flow 1 ingress (mean 139.90 Mbps)
- Flow 1 egress (mean 139.95 Mbps)
- Flow 2 ingress (mean 128.54 Mbps)
- Flow 2 egress (mean 128.62 Mbps)
- Flow 3 ingress (mean 113.55 Mbps)
- Flow 3 egress (mean 113.55 Mbps)

**Per-packet round-trip delay (ms):**
- Flow 1 (95th percentile 53.59 ms)
- Flow 2 (95th percentile 54.97 ms)
- Flow 3 (95th percentile 57.77 ms)
Run 4: Statistics of Indigo

Start at: 2018-05-26 15:46:17
End at: 2018-05-26 15:46:47
Local clock offset: -0.261 ms
Remote clock offset: -0.133 ms

# Below is generated by plot.py at 2018-05-26 19:26:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 245.99 Mbit/s
95th percentile per-packet one-way delay: 52.721 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 138.48 Mbit/s
95th percentile per-packet one-way delay: 52.084 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 120.32 Mbit/s
95th percentile per-packet one-way delay: 53.002 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 85.88 Mbit/s
95th percentile per-packet one-way delay: 54.555 ms
Loss rate: 1.22%
Run 4: Report of Indigo — Data Link
Run 5: Statistics of Indigo

Start at: 2018-05-26 16:08:38
End at: 2018-05-26 16:09:08
Local clock offset: -0.232 ms
Remote clock offset: -0.076 ms

# Below is generated by plot.py at 2018-05-26 19:26:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 268.87 Mbit/s
  95th percentile per-packet one-way delay: 53.466 ms
  Loss rate: 0.44%
-- Flow 1:
  Average throughput: 146.07 Mbit/s
  95th percentile per-packet one-way delay: 52.643 ms
  Loss rate: 0.27%
-- Flow 2:
  Average throughput: 134.11 Mbit/s
  95th percentile per-packet one-way delay: 53.854 ms
  Loss rate: 0.47%
-- Flow 3:
  Average throughput: 105.98 Mbit/s
  95th percentile per-packet one-way delay: 55.156 ms
  Loss rate: 1.07%
Run 5: Report of Indigo — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 145.96 Mbps)  Flow 1 egress (mean 146.07 Mbps)
Flow 2 ingress (mean 134.68 Mbps)  Flow 2 egress (mean 134.11 Mbps)
Flow 3 ingress (mean 196.01 Mbps)  Flow 3 egress (mean 105.98 Mbps)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 52.64 ms)  Flow 2 (95th percentile 53.83 ms)  Flow 3 (95th percentile 55.16 ms)
Run 6: Statistics of Indigo

Start at: 2018-05-26 16:31:02
End at: 2018-05-26 16:31:32
Local clock offset: 0.099 ms
Remote clock offset: -0.006 ms

# Below is generated by plot.py at 2018-05-26 19:26:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 263.87 Mbit/s
95th percentile per-packet one-way delay: 61.992 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 139.44 Mbit/s
95th percentile per-packet one-way delay: 59.638 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 134.90 Mbit/s
95th percentile per-packet one-way delay: 62.030 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 101.42 Mbit/s
95th percentile per-packet one-way delay: 67.640 ms
Loss rate: 1.05%
Run 6: Report of Indigo — Data Link

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**Graph 1:**
- *Y-axis:* Throughput (Mbit/s)
- *X-axis:* Time (s)
- Legend:
  - Flow 1 ingress (mean 139.41 Mbit/s)
  - Flow 1 egress (mean 139.44 Mbit/s)
  - Flow 2 ingress (mean 134.88 Mbit/s)
  - Flow 2 egress (mean 134.90 Mbit/s)
  - Flow 3 ingress (mean 131.44 Mbit/s)
  - Flow 3 egress (mean 131.42 Mbit/s)

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**Graph 2:**
- *Y-axis:* Per packet one way delay (ms)
- *X-axis:* Time (s)
- Legend:
  - Flow 1 (95th percentile 59.64 ms)
  - Flow 2 (95th percentile 62.03 ms)
  - Flow 3 (95th percentile 67.64 ms)

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Run 7: Statistics of Indigo

Start at: 2018-05-26 16:53:29
End at: 2018-05-26 16:53:59
Local clock offset: -0.229 ms
Remote clock offset: 0.038 ms

# Below is generated by plot.py at 2018-05-26 19:26:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 293.78 Mbit/s
  95th percentile per-packet one-way delay: 58.506 ms
  Loss rate: 0.43%
-- Flow 1:
  Average throughput: 165.94 Mbit/s
  95th percentile per-packet one-way delay: 56.516 ms
  Loss rate: 0.29%
-- Flow 2:
  Average throughput: 136.51 Mbit/s
  95th percentile per-packet one-way delay: 58.937 ms
  Loss rate: 0.44%
-- Flow 3:
  Average throughput: 115.82 Mbit/s
  95th percentile per-packet one-way delay: 63.934 ms
  Loss rate: 1.05%
Run 7: Report of Indigo — Data Link

![Graph showing throughput and packet loss over time]

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 165.86 Mbps)
  - Flow 1 egress (mean 165.94 Mbps)
  - Flow 2 ingress (mean 136.41 Mbps)
  - Flow 2 egress (mean 136.31 Mbps)
  - Flow 3 ingress (mean 115.84 Mbps)
  - Flow 3 egress (mean 115.62 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 56.52 ms)
  - Flow 2 (95th percentile 58.94 ms)
  - Flow 3 (95th percentile 63.93 ms)
Run 8: Statistics of Indigo

Start at: 2018-05-26 17:16:01
End at: 2018-05-26 17:16:31
Local clock offset: -0.235 ms
Remote clock offset: 0.061 ms

# Below is generated by plot.py at 2018-05-26 19:26:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 251.21 Mbit/s
  95th percentile per-packet one-way delay: 58.027 ms
  Loss rate: 0.44%
-- Flow 1:
  Average throughput: 135.84 Mbit/s
  95th percentile per-packet one-way delay: 53.979 ms
  Loss rate: 0.27%
-- Flow 2:
  Average throughput: 126.08 Mbit/s
  95th percentile per-packet one-way delay: 57.966 ms
  Loss rate: 0.46%
-- Flow 3:
  Average throughput: 97.71 Mbit/s
  95th percentile per-packet one-way delay: 62.352 ms
  Loss rate: 1.11%
Run 8: Report of Indigo — Data Link
Run 9: Statistics of Indigo

Start at: 2018-05-26 17:38:23
End at: 2018-05-26 17:38:53
Local clock offset: -0.226 ms
Remote clock offset: 0.091 ms

# Below is generated by plot.py at 2018-05-26 19:26:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 278.53 Mbit/s
  95th percentile per-packet one-way delay: 57.232 ms
  Loss rate: 0.45%
-- Flow 1:
  Average throughput: 151.77 Mbit/s
  95th percentile per-packet one-way delay: 54.364 ms
  Loss rate: 0.30%
-- Flow 2:
  Average throughput: 132.63 Mbit/s
  95th percentile per-packet one-way delay: 57.584 ms
  Loss rate: 0.48%
-- Flow 3:
  Average throughput: 119.94 Mbit/s
  95th percentile per-packet one-way delay: 62.534 ms
  Loss rate: 0.96%
Run 9: Report of Indigo — Data Link
Run 10: Statistics of Indigo

Start at: 2018-05-26 18:00:45
End at: 2018-05-26 18:01:15
Local clock offset: -0.228 ms
Remote clock offset: 0.139 ms

# Below is generated by plot.py at 2018-05-26 19:26:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 279.13 Mbit/s
95th percentile per-packet one-way delay: 62.623 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 153.89 Mbit/s
95th percentile per-packet one-way delay: 60.503 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 128.82 Mbit/s
95th percentile per-packet one-way delay: 62.668 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 122.43 Mbit/s
95th percentile per-packet one-way delay: 66.675 ms
Loss rate: 1.18%
Run 10: Report of Indigo — Data Link
Run 1: Statistics of LEDBAT

End at: 2018-05-26 14:23:02
Local clock offset: -0.619 ms
Remote clock offset: -0.086 ms

# Below is generated by plot.py at 2018-05-26 19:26:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 54.39 Mbit/s
  95th percentile per-packet one-way delay: 52.459 ms
  Loss rate: 0.86%
-- Flow 1:
  Average throughput: 35.10 Mbit/s
  95th percentile per-packet one-way delay: 52.376 ms
  Loss rate: 0.67%
-- Flow 2:
  Average throughput: 23.41 Mbit/s
  95th percentile per-packet one-way delay: 52.753 ms
  Loss rate: 1.01%
-- Flow 3:
  Average throughput: 11.37 Mbit/s
  95th percentile per-packet one-way delay: 51.629 ms
  Loss rate: 2.06%
Run 1: Report of LEDBAT — Data Link

Run 1 LEDBAT Data Link Results

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Run 1 LEDBAT Summary

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Run 1 LEDBAT Data Link Graphs

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Run 1 LEDBAT Data Link Table

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Run 1 LEDBAT Data Link Summary

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Run 1 LEDBAT Data Link Additional Notes

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Run 1 LEDBAT Data Link Figures

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Run 1 LEDBAT Data Link Conclusions

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Run 1 LEDBAT Data Link Recommendations

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Run 1 LEDBAT Data Link Acknowledgments

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Run 1 LEDBAT Data Link References

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Run 1 LEDBAT Data Link Appendix

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Run 1 LEDBAT Data Link Appendix Figures

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Run 1 LEDBAT Data Link Appendix Tables

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Run 1 LEDBAT Data Link Appendix Notes

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Run 1 LEDBAT Data Link Appendix Summary
Run 2: Statistics of LEDBAT

Start at: 2018-05-26 14:44:40
End at: 2018-05-26 14:45:10
Local clock offset: -0.161 ms
Remote clock offset: -0.015 ms

# Below is generated by plot.py at 2018-05-26 19:26:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 54.08 Mbit/s
95th percentile per-packet one-way delay: 52.224 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 34.71 Mbit/s
95th percentile per-packet one-way delay: 52.179 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 23.44 Mbit/s
95th percentile per-packet one-way delay: 52.365 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 11.53 Mbit/s
95th percentile per-packet one-way delay: 52.062 ms
Loss rate: 2.04%
Run 2: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 34.83 Mbit/s)
- Flow 1 egress (mean 34.71 Mbit/s)
- Flow 2 ingress (mean 23.36 Mbit/s)
- Flow 2 egress (mean 23.44 Mbit/s)
- Flow 3 ingress (mean 11.65 Mbit/s)
- Flow 3 egress (mean 11.53 Mbit/s)

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

- Flow 1 (95th percentile 52.18 ms)
- Flow 2 (95th percentile 52.37 ms)
- Flow 3 (95th percentile 52.06 ms)
Run 3: Statistics of LEDBAT

Start at: 2018-05-26 15:07:00
End at: 2018-05-26 15:07:30
Local clock offset: -0.23 ms
Remote clock offset: -0.096 ms

# Below is generated by plot.py at 2018-05-26 19:26:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 54.88 Mbit/s
  95th percentile per-packet one-way delay: 52.158 ms
  Loss rate: 0.86%
-- Flow 1:
  Average throughput: 35.54 Mbit/s
  95th percentile per-packet one-way delay: 52.107 ms
  Loss rate: 0.66%
-- Flow 2:
  Average throughput: 23.49 Mbit/s
  95th percentile per-packet one-way delay: 52.280 ms
  Loss rate: 1.01%
-- Flow 3:
  Average throughput: 11.39 Mbit/s
  95th percentile per-packet one-way delay: 51.696 ms
  Loss rate: 2.05%
Run 3: Report of LEDBAT — Data Link

Graph 1: Throughput vs Time (s)
- Flow 1 ingress (mean 35.66 Mbit/s)
- Flow 1 egress (mean 35.54 Mbit/s)
- Flow 2 ingress (mean 23.81 Mbit/s)
- Flow 2 egress (mean 23.49 Mbit/s)
- Flow 3 ingress (mean 11.51 Mbit/s)
- Flow 3 egress (mean 11.39 Mbit/s)

Graph 2: Per packet one way delay (ms)
- Flow 1 (95th percentile 52.11 ms)
- Flow 2 (95th percentile 52.28 ms)
- Flow 3 (95th percentile 51.70 ms)
Run 4: Statistics of LEDBAT

Local clock offset: -0.177 ms
Remote clock offset: -0.116 ms

# Below is generated by plot.py at 2018-05-26 19:26:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.40 Mbit/s
95th percentile per-packet one-way delay: 52.606 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 34.24 Mbit/s
95th percentile per-packet one-way delay: 52.602 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 23.14 Mbit/s
95th percentile per-packet one-way delay: 52.869 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 11.58 Mbit/s
95th percentile per-packet one-way delay: 51.789 ms
Loss rate: 2.05%
Run 4: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 34.43 Mbit/s)
- Flow 1 egress (mean 34.24 Mbit/s)
- Flow 2 ingress (mean 23.26 Mbit/s)
- Flow 2 egress (mean 23.14 Mbit/s)
- Flow 3 ingress (mean 11.70 Mbit/s)
- Flow 3 egress (mean 11.58 Mbit/s)

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

- Flow 1 (95th percentile 52.60 ms)
- Flow 2 (95th percentile 52.87 ms)
- Flow 3 (95th percentile 51.79 ms)
Run 5: Statistics of LEDBAT

End at: 2018-05-26 15:52:23
Local clock offset: -0.272 ms
Remote clock offset: -0.101 ms

# Below is generated by plot.py at 2018-05-26 19:26:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 54.08 Mbit/s
95th percentile per-packet one-way delay: 52.096 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 35.05 Mbit/s
95th percentile per-packet one-way delay: 52.145 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 23.06 Mbit/s
95th percentile per-packet one-way delay: 52.063 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 11.43 Mbit/s
95th percentile per-packet one-way delay: 51.647 ms
Loss rate: 2.07%
Run 5: Report of LEDBAT — Data Link
Run 6: Statistics of LEDBAT

Start at: 2018-05-26 16:14:17  
End at: 2018-05-26 16:14:47  
Local clock offset: -0.287 ms  
Remote clock offset: -0.055 ms

# Below is generated by plot.py at 2018-05-26 19:26:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 53.01 Mbit/s  
95th percentile per-packet one-way delay: 52.187 ms  
Loss rate: 0.84%  
-- Flow 1:  
Average throughput: 35.26 Mbit/s  
95th percentile per-packet one-way delay: 52.098 ms  
Loss rate: 0.67%  
-- Flow 2:  
Average throughput: 23.33 Mbit/s  
95th percentile per-packet one-way delay: 52.170 ms  
Loss rate: 0.99%  
-- Flow 3:  
Average throughput: 7.04 Mbit/s  
95th percentile per-packet one-way delay: 53.352 ms  
Loss rate: 2.52%
Run 6: Report of LEDBAT — Data Link

[Graph showing throughput and packet round-trip time over time for different flows.]
Run 7: Statistics of LEDBAT

Start at: 2018-05-26 16:36:40
End at: 2018-05-26 16:37:10
Local clock offset: -0.282 ms
Remote clock offset: -0.033 ms

# Below is generated by plot.py at 2018-05-26 19:26:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 54.67 Mbit/s
95th percentile per-packet one-way delay: 51.807 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 35.25 Mbit/s
95th percentile per-packet one-way delay: 51.988 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 23.49 Mbit/s
95th percentile per-packet one-way delay: 51.527 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 11.78 Mbit/s
95th percentile per-packet one-way delay: 51.199 ms
Loss rate: 2.02%
Run 7: Report of LEDBAT — Data Link

**Graph 1:**
- **Y-axis:** Throughput (Mbit/s)
- **X-axis:** Time (s)
- **Legend:**
  - Flow 1 ingress (mean 35.37 Mbit/s)
  - Flow 1 egress (mean 35.25 Mbit/s)
  - Flow 2 ingress (mean 23.61 Mbit/s)
  - Flow 2 egress (mean 23.49 Mbit/s)
  - Flow 3 ingress (mean 11.91 Mbit/s)
  - Flow 3 egress (mean 11.78 Mbit/s)

**Graph 2:**
- **Y-axis:** Per packet one way delay (ms)
- **X-axis:** Time (s)
- **Legend:**
  - Flow 1 (95th percentile 51.99 ms)
  - Flow 2 (95th percentile 51.53 ms)
  - Flow 3 (95th percentile 51.20 ms)

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Run 8: Statistics of LEDBAT

Start at: 2018-05-26 16:59:11
End at: 2018-05-26 16:59:41
Local clock offset: -0.234 ms
Remote clock offset: 0.027 ms

# Below is generated by plot.py at 2018-05-26 19:26:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 53.49 Mbit/s
  95th percentile per-packet one-way delay: 52.240 ms
  Loss rate: 0.87%
-- Flow 1:
  Average throughput: 34.25 Mbit/s
  95th percentile per-packet one-way delay: 52.068 ms
  Loss rate: 0.67%
-- Flow 2:
  Average throughput: 23.29 Mbit/s
  95th percentile per-packet one-way delay: 52.816 ms
  Loss rate: 1.01%
-- Flow 3:
  Average throughput: 11.62 Mbit/s
  95th percentile per-packet one-way delay: 51.262 ms
  Loss rate: 2.05%
Run 8: Report of LEDBAT — Data Link

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

- **Flow 1 ingress (mean 34.37 Mbit/s)**
- **Flow 1 egress (mean 34.25 Mbit/s)**
- **Flow 2 ingress (mean 23.41 Mbit/s)**
- **Flow 2 egress (mean 23.29 Mbit/s)**
- **Flow 3 ingress (mean 11.75 Mbit/s)**
- **Flow 3 egress (mean 11.62 Mbit/s)**

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

- **Flow 1 (95th percentile 52.07 ms)**
- **Flow 2 (95th percentile 52.82 ms)**
- **Flow 3 (95th percentile 51.26 ms)**

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Run 9: Statistics of LEDBAT

Start at: 2018-05-26 17:21:37
End at: 2018-05-26 17:22:07
Local clock offset: 0.163 ms
Remote clock offset: 0.063 ms

# Below is generated by plot.py at 2018-05-26 19:26:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 54.51 Mbit/s
95th percentile per-packet one-way delay: 52.937 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 35.05 Mbit/s
95th percentile per-packet one-way delay: 52.905 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 23.75 Mbit/s
95th percentile per-packet one-way delay: 53.183 ms
Loss rate: 1.00%
-- Flow 3:
Average throughput: 11.21 Mbit/s
95th percentile per-packet one-way delay: 52.440 ms
Loss rate: 2.05%
Run 9: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 35.17 Mbit/s)
- Flow 1 egress (mean 35.05 Mbit/s)
- Flow 2 ingress (mean 23.87 Mbit/s)
- Flow 2 egress (mean 23.75 Mbit/s)
- Flow 3 ingress (mean 11.33 Mbit/s)
- Flow 3 egress (mean 11.21 Mbit/s)

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

- Flow 1 (95th percentile 52.91 ms)
- Flow 2 (95th percentile 53.18 ms)
- Flow 3 (95th percentile 52.44 ms)
Run 10: Statistics of LEDBAT

Start at: 2018-05-26 17:44:03
End at: 2018-05-26 17:44:33
Local clock offset: -0.196 ms
Remote clock offset: 0.104 ms

# Below is generated by plot.py at 2018-05-26 19:26:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 54.46 Mbit/s
  95th percentile per-packet one-way delay: 51.272 ms
  Loss rate: 0.86%
-- Flow 1:
  Average throughput: 34.82 Mbit/s
  95th percentile per-packet one-way delay: 51.178 ms
  Loss rate: 0.67%
-- Flow 2:
  Average throughput: 24.23 Mbit/s
  95th percentile per-packet one-way delay: 51.381 ms
  Loss rate: 0.99%
-- Flow 3:
  Average throughput: 10.76 Mbit/s
  95th percentile per-packet one-way delay: 51.264 ms
  Loss rate: 2.11%
Run 10: Report of LEDBAT — Data Link

The diagrams show the throughput and per-packet end-to-end delay over time for three different flows. The throughput graphs indicate steady increases, with Flow 1 ingressing at a mean of 34.94 Mbit/s and Flow 1 egressing at 34.82 Mbit/s, Flow 2 ingressing at 24.35 Mbit/s and egressing at 24.23 Mbit/s, and Flow 3 ingressing at 10.88 Mbit/s and egressing at 10.76 Mbit/s.

The per-packet end-to-end delay graphs show a range of values with a 95th percentile for Flow 1 at 51.18 ms, Flow 2 at 51.38 ms, and Flow 3 at 51.26 ms.
Run 1: Statistics of PCC-Allegro

Start at: 2018-05-26 14:18:20
End at: 2018-05-26 14:18:50
Local clock offset: 0.19 ms
Remote clock offset: -0.087 ms

# Below is generated by plot.py at 2018-05-26 19:26:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 362.71 Mbit/s
95th percentile per-packet one-way delay: 158.205 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 357.00 Mbit/s
95th percentile per-packet one-way delay: 158.072 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 4.40 Mbit/s
95th percentile per-packet one-way delay: 156.424 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 8.53 Mbit/s
95th percentile per-packet one-way delay: 168.686 ms
Loss rate: 1.04%
Run 1: Report of PCC-Allegro — Data Link

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

- Flow 1 ingress (mean 357.00 Mbps)
- Flow 1 egress (mean 357.00 Mbps)
- Flow 2 ingress (mean 4.40 Mbps)
- Flow 2 egress (mean 4.40 Mbps)
- Flow 3 ingress (mean 8.53 Mbps)
- Flow 3 egress (mean 8.53 Mbps)

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

- Flow 1 (95th percentile 158.07 ms)
- Flow 2 (95th percentile 156.42 ms)
- Flow 3 (95th percentile 160.69 ms)
Run 2: Statistics of PCC-Allegro

Start at: 2018-05-26 14:40:31
End at: 2018-05-26 14:41:01
Local clock offset: -0.248 ms
Remote clock offset: -0.019 ms

# Below is generated by plot.py at 2018-05-26 19:26:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 349.91 Mbit/s
95th percentile per-packet one-way delay: 181.540 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 306.68 Mbit/s
95th percentile per-packet one-way delay: 181.300 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 32.80 Mbit/s
95th percentile per-packet one-way delay: 181.711 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 65.89 Mbit/s
95th percentile per-packet one-way delay: 182.630 ms
Loss rate: 1.17%
Run 2: Report of PCC-Allegro — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 306.69 Mbps)
Flow 1 egress (mean 306.68 Mbps)
Flow 2 ingress (mean 32.80 Mbps)
Flow 2 egress (mean 32.80 Mbps)
Flow 3 ingress (mean 65.99 Mbps)
Flow 3 egress (mean 65.89 Mbps)

Per packet one-way delay (ms)

Time (s)

Flow 1 (99th percentile 181.30 ms)
Flow 2 (95th percentile 181.71 ms)
Flow 3 (99th percentile 182.63 ms)
Run 3: Statistics of PCC-Allegro

Start at: 2018-05-26 15:02:50
End at: 2018-05-26 15:03:20
Local clock offset: -0.201 ms
Remote clock offset: -0.084 ms

# Below is generated by plot.py at 2018-05-26 19:26:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 376.47 Mbit/s
95th percentile per-packet one-way delay: 159.727 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 344.12 Mbit/s
95th percentile per-packet one-way delay: 158.761 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 16.85 Mbit/s
95th percentile per-packet one-way delay: 160.303 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 64.74 Mbit/s
95th percentile per-packet one-way delay: 162.704 ms
Loss rate: 1.06%
Run 3: Report of PCC-Allegro — Data Link

**Graph 1:**
Throughput vs Time
- Flow 1 ingress (mean 344.01 Mbit/s)
- Flow 1 egress (mean 344.12 Mbit/s)
- Flow 2 ingress (mean 16.85 Mbit/s)
- Flow 2 egress (mean 16.85 Mbit/s)
- Flow 3 ingress (mean 64.77 Mbit/s)
- Flow 3 egress (mean 64.74 Mbit/s)

**Graph 2:**
Per-packet one-way delay vs Time
- Flow 1 (95th percentile 158.76 ms)
- Flow 2 (95th percentile 160.30 ms)
- Flow 3 (95th percentile 162.70 ms)
Run 4: Statistics of PCC-Allegro

Start at: 2018-05-26 15:25:16
End at: 2018-05-26 15:25:46
Local clock offset: -0.191 ms
Remote clock offset: -0.126 ms

# Below is generated by plot.py at 2018-05-26 19:26:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 342.68 Mbit/s
  95th percentile per-packet one-way delay: 95.243 ms
  Loss rate: 0.41%
-- Flow 1:
  Average throughput: 319.24 Mbit/s
  95th percentile per-packet one-way delay: 95.420 ms
  Loss rate: 0.40%
-- Flow 2:
  Average throughput: 31.30 Mbit/s
  95th percentile per-packet one-way delay: 94.176 ms
  Loss rate: 0.51%
-- Flow 3:
  Average throughput: 8.13 Mbit/s
  95th percentile per-packet one-way delay: 88.113 ms
  Loss rate: 1.06%
Run 4: Report of PCC-Allegro — Data Link

![Graphs showing data link performance metrics over time.](Image)

- Throughput (Mbps): Various flows exhibit different throughput patterns over time, with peaks and troughs indicating variability.
- Delay: Each flow shows distinct delay characteristics, with flow 1 having a 95th percentile of 95.42 ms, flow 2 at 94.18 ms, and flow 3 at 88.11 ms.

The graphs illustrate the dynamic nature of data link performance, highlighting the importance of monitoring and optimization for consistent and reliable services.
Run 5: Statistics of PCC-Allegro

Start at: 2018-05-26 15:47:42
End at: 2018-05-26 15:48:12
Local clock offset: -0.28 ms
Remote clock offset: -0.113 ms

# Below is generated by plot.py at 2018-05-26 19:26:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 362.98 Mbit/s
  95th percentile per-packet one-way delay: 216.962 ms
  Loss rate: 1.48%
-- Flow 1:
  Average throughput: 342.04 Mbit/s
  95th percentile per-packet one-way delay: 216.928 ms
  Loss rate: 1.45%
-- Flow 2:
  Average throughput: 29.50 Mbit/s
  95th percentile per-packet one-way delay: 217.513 ms
  Loss rate: 1.96%
-- Flow 3:
  Average throughput: 4.32 Mbit/s
  95th percentile per-packet one-way delay: 104.185 ms
  Loss rate: 1.18%
Run 5: Report of PCC-Allegro — Data Link
Run 6: Statistics of PCC-Allegro

Start at: 2018-05-26 16:10:04
End at: 2018-05-26 16:10:34
Local clock offset: -0.239 ms
Remote clock offset: -0.058 ms

# Below is generated by plot.py at 2018-05-26 19:26:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 392.41 Mbit/s
95th percentile per-packet one-way delay: 200.200 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 370.34 Mbit/s
95th percentile per-packet one-way delay: 200.078 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 32.19 Mbit/s
95th percentile per-packet one-way delay: 201.624 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 202.903 ms
Loss rate: 2.08%
Run 6: Report of PCC-Allegro — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 371.35 Mbps)
Flow 1 egress (mean 370.34 Mbps)
Flow 2 ingress (mean 32.33 Mbps)
Flow 2 egress (mean 32.19 Mbps)
Flow 3 ingress (mean 2.16 Mbps)
Flow 3 egress (mean 2.14 Mbps)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 200.08 ms)
Flow 2 (95th percentile 201.62 ms)
Flow 3 (95th percentile 202.90 ms)
Run 7: Statistics of PCC-Allegro

Start at: 2018-05-26 16:32:27
End at: 2018-05-26 16:32:57
Local clock offset: -0.311 ms
Remote clock offset: -0.014 ms

# Below is generated by plot.py at 2018-05-26 19:26:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 338.90 Mbit/s
95th percentile per-packet one-way delay: 183.550 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 330.38 Mbit/s
95th percentile per-packet one-way delay: 184.251 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 4.47 Mbit/s
95th percentile per-packet one-way delay: 181.911 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 17.03 Mbit/s
95th percentile per-packet one-way delay: 82.143 ms
Loss rate: 1.31%
Run 7: Report of PCC-Allegro — Data Link
Run 8: Statistics of PCC-Allegro

Start at: 2018-05-26 16:54:57
Local clock offset: -0.179 ms
Remote clock offset: 0.023 ms

# Below is generated by plot.py at 2018-05-26 19:26:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 377.37 Mbit/s
  95th percentile per-packet one-way delay: 140.573 ms
  Loss rate: 0.35%
-- Flow 1:
  Average throughput: 335.84 Mbit/s
  95th percentile per-packet one-way delay: 140.553 ms
  Loss rate: 0.31%
-- Flow 2:
  Average throughput: 60.46 Mbit/s
  95th percentile per-packet one-way delay: 140.309 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 4.34 Mbit/s
  95th percentile per-packet one-way delay: 147.236 ms
  Loss rate: 1.15%
Run 8: Report of PCC-Allegro — Data Link
Run 9: Statistics of PCC-Allegro

Start at: 2018-05-26 17:17:25
End at: 2018-05-26 17:17:55
Local clock offset: -0.175 ms
Remote clock offset: 0.09 ms

# Below is generated by plot.py at 2018-05-26 19:26:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 360.28 Mbit/s
95th percentile per-packet one-way delay: 155.823 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 315.60 Mbit/s
95th percentile per-packet one-way delay: 154.984 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 37.56 Mbit/s
95th percentile per-packet one-way delay: 156.883 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 60.45 Mbit/s
95th percentile per-packet one-way delay: 159.859 ms
Loss rate: 1.40%
Run 9: Report of PCC-Allegro — Data Link
Run 10: Statistics of PCC-Allegro

Start at: 2018-05-26 17:39:49
End at: 2018-05-26 17:40:19
Local clock offset: -0.162 ms
Remote clock offset: 0.099 ms

# Below is generated by plot.py at 2018-05-26 19:26:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 361.05 Mbit/s
  95th percentile per-packet one-way delay: 130.931 ms
  Loss rate: 0.33%
-- Flow 1:
  Average throughput: 332.90 Mbit/s
  95th percentile per-packet one-way delay: 130.745 ms
  Loss rate: 0.31%
-- Flow 2:
  Average throughput: 34.44 Mbit/s
  95th percentile per-packet one-way delay: 131.012 ms
  Loss rate: 0.56%
-- Flow 3:
  Average throughput: 16.35 Mbit/s
  95th percentile per-packet one-way delay: 141.129 ms
  Loss rate: 1.01%
Run 10: Report of PCC-Allegro — Data Link
Run 1: Statistics of PCC-Expr

Start at: 2018-05-26 14:20:55
End at: 2018-05-26 14:21:25
Local clock offset: -0.628 ms
Remote clock offset: -0.064 ms

# Below is generated by plot.py at 2018-05-26 19:28:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 353.85 Mbit/s
  95th percentile per-packet one-way delay: 74.269 ms
  Loss rate: 0.50%
-- Flow 1:
  Average throughput: 285.55 Mbit/s
  95th percentile per-packet one-way delay: 74.249 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 78.53 Mbit/s
  95th percentile per-packet one-way delay: 73.860 ms
  Loss rate: 0.88%
-- Flow 3:
  Average throughput: 49.32 Mbit/s
  95th percentile per-packet one-way delay: 75.590 ms
  Loss rate: 1.35%
Run 1: Report of PCC-Expr — Data Link
Run 2: Statistics of PCC-Expr

Start at: 2018-05-26 14:43:06
End at: 2018-05-26 14:43:36
Local clock offset: -0.168 ms
Remote clock offset: -0.05 ms

# Below is generated by plot.py at 2018-05-26 19:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 299.34 Mbit/s
95th percentile per-packet one-way delay: 58.678 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 153.11 Mbit/s
95th percentile per-packet one-way delay: 56.017 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 192.35 Mbit/s
95th percentile per-packet one-way delay: 63.073 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 56.64 Mbit/s
95th percentile per-packet one-way delay: 55.568 ms
Loss rate: 1.41%
Run 2: Report of PCC-Expr — Data Link

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*Throughput (Mbps)*

- **Flow 1 ingress** (mean 153.10 Mbps)
- **Flow 1 egress** (mean 153.11 Mbps)
- **Flow 2 ingress** (mean 192.23 Mbps)
- **Flow 2 egress** (mean 192.35 Mbps)
- **Flow 3 ingress** (mean 56.61 Mbps)
- **Flow 3 egress** (mean 56.64 Mbps)

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

- **Flow 1** (95th percentile 56.02 ms)
- **Flow 2** (95th percentile 63.07 ms)
- **Flow 3** (95th percentile 55.57 ms)
Run 3: Statistics of PCC-Expr

Start at: 2018-05-26 15:05:26
End at: 2018-05-26 15:05:56
Local clock offset: -0.239 ms
Remote clock offset: -0.054 ms

# Below is generated by plot.py at 2018-05-26 19:33:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 333.67 Mbit/s
95th percentile per-packet one-way delay: 98.139 ms
Loss rate: 3.56%
-- Flow 1:
Average throughput: 221.70 Mbit/s
95th percentile per-packet one-way delay: 84.434 ms
Loss rate: 2.97%
-- Flow 2:
Average throughput: 124.42 Mbit/s
95th percentile per-packet one-way delay: 128.728 ms
Loss rate: 4.14%
-- Flow 3:
Average throughput: 89.64 Mbit/s
95th percentile per-packet one-way delay: 195.090 ms
Loss rate: 6.25%
Run 3: Report of PCC-Expr — Data Link

![Graph showing network performance metrics]

**Throughput (Mb/s)**

**Time (s)**

**Flow 1 ingress (mean 227.72 Mb/s)**

**Flow 1 egress (mean 221.70 Mb/s)**

**Flow 2 ingress (mean 129.13 Mb/s)**

**Flow 2 egress (mean 124.42 Mb/s)**

**Flow 3 ingress (mean 94.64 Mb/s)**

**Flow 3 egress (mean 89.64 Mb/s)**

![Graph showing packet delay]

**Packet delay (ms)**

**Time (s)**

**Flow 1 (95th percentile 84.43 ms)**

**Flow 2 (95th percentile 128.73 ms)**

**Flow 3 (95th percentile 195.09 ms)**
Run 4: Statistics of PCC-Expr

End at: 2018-05-26 15:28:21
Local clock offset: -0.217 ms
Remote clock offset: -0.145 ms

# Below is generated by plot.py at 2018-05-26 19:33:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 301.74 Mbit/s
95th percentile per-packet one-way delay: 56.365 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 200.68 Mbit/s
95th percentile per-packet one-way delay: 55.720 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 125.70 Mbit/s
95th percentile per-packet one-way delay: 56.438 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 53.77 Mbit/s
95th percentile per-packet one-way delay: 61.356 ms
Loss rate: 1.39%
Run 4: Report of PCC-Expr — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 200.53 Mbps)
- Flow 1 egress (mean 200.68 Mbps)
- Flow 2 ingress (mean 125.69 Mbps)
- Flow 2 egress (mean 125.70 Mbps)
- Flow 3 ingress (mean 53.97 Mbps)
- Flow 3 egress (mean 53.77 Mbps)

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

- Flow 1 (95th percentile 55.72 ms)
- Flow 2 (95th percentile 56.44 ms)
- Flow 3 (95th percentile 61.36 ms)
Run 5: Statistics of PCC-Expr

Start at: 2018-05-26 15:50:17
End at: 2018-05-26 15:50:47
Local clock offset: -0.277 ms
Remote clock offset: -0.134 ms

# Below is generated by plot.py at 2018-05-26 19:34:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 361.58 Mbit/s
95th percentile per-packet one-way delay: 195.997 ms
Loss rate: 4.91%
-- Flow 1:
Average throughput: 161.05 Mbit/s
95th percentile per-packet one-way delay: 194.317 ms
Loss rate: 3.19%
-- Flow 2:
Average throughput: 268.04 Mbit/s
95th percentile per-packet one-way delay: 198.001 ms
Loss rate: 6.38%
-- Flow 3:
Average throughput: 68.71 Mbit/s
95th percentile per-packet one-way delay: 192.977 ms
Loss rate: 5.26%
Run 6: Statistics of PCC-Expr

Start at: 2018-05-26 16:12:41
Local clock offset: -0.307 ms
Remote clock offset: -0.08 ms

# Below is generated by plot.py at 2018-05-26 19:34:57
# DataLink statistics
-- Total of 3 flows:
Average throughput: 354.59 Mbit/s
95th percentile per-packet one-way delay: 75.014 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 253.43 Mbit/s
95th percentile per-packet one-way delay: 79.215 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 105.77 Mbit/s
95th percentile per-packet one-way delay: 63.013 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 94.53 Mbit/s
95th percentile per-packet one-way delay: 63.562 ms
Loss rate: 1.32%
Run 6: Report of PCC-Expr — Data Link
Run 7: Statistics of PCC-Expr

Start at: 2018-05-26 16:35:02
End at: 2018-05-26 16:35:32
Local clock offset: -0.251 ms
Remote clock offset: 0.004 ms

# Below is generated by plot.py at 2018-05-26 19:36:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 383.26 Mbit/s
  95th percentile per-packet one-way delay: 66.646 ms
  Loss rate: 0.42%
-- Flow 1:
  Average throughput: 302.77 Mbit/s
  95th percentile per-packet one-way delay: 68.388 ms
  Loss rate: 0.32%
-- Flow 2:
  Average throughput: 108.22 Mbit/s
  95th percentile per-packet one-way delay: 63.344 ms
  Loss rate: 0.68%
-- Flow 3:
  Average throughput: 26.33 Mbit/s
  95th percentile per-packet one-way delay: 56.653 ms
  Loss rate: 1.73%
Run 7: Report of PCC-Expr — Data Link

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

**Throughput (Mbps)**
- **Flow 1 ingress** (mean 302.72 Mbps)
- **Flow 1 egress** (mean 302.77 Mbps)
- **Flow 2 ingress** (mean 108.42 Mbps)
- **Flow 2 egress** (mean 108.22 Mbps)
- **Flow 3 ingress** (mean 26.52 Mbps)
- **Flow 3 egress** (mean 26.33 Mbps)

**Per-packet round-trip delay (ms)**
- **Flow 1** (95th percentile 68.39 ms)
- **Flow 2** (95th percentile 63.34 ms)
- **Flow 3** (95th percentile 56.65 ms)
Run 8: Statistics of PCC-Expr

Start at: 2018-05-26 16:57:34
End at: 2018-05-26 16:58:04
Local clock offset: -0.622 ms
Remote clock offset: 0.054 ms

# Below is generated by plot.py at 2018-05-26 19:40:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 384.90 Mbit/s
  95th percentile per-packet one-way delay: 201.758 ms
  Loss rate: 3.20%
-- Flow 1:
  Average throughput: 283.21 Mbit/s
  95th percentile per-packet one-way delay: 196.328 ms
  Loss rate: 2.18%
-- Flow 2:
  Average throughput: 89.91 Mbit/s
  95th percentile per-packet one-way delay: 202.666 ms
  Loss rate: 4.58%
-- Flow 3:
  Average throughput: 128.16 Mbit/s
  95th percentile per-packet one-way delay: 204.827 ms
  Loss rate: 7.79%
Run 8: Report of PCC-Expr — Data Link
Run 9: Statistics of PCC-Expr

Start at: 2018-05-26 17:20:01
End at: 2018-05-26 17:20:31
Local clock offset: -0.208 ms
Remote clock offset: 0.101 ms

# Below is generated by plot.py at 2018-05-26 19:42:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 407.79 Mbit/s
95th percentile per-packet one-way delay: 236.974 ms
Loss rate: 3.39%
-- Flow 1:
Average throughput: 359.17 Mbit/s
95th percentile per-packet one-way delay: 239.204 ms
Loss rate: 3.31%
-- Flow 2:
Average throughput: 64.18 Mbit/s
95th percentile per-packet one-way delay: 206.091 ms
Loss rate: 3.58%
-- Flow 3:
Average throughput: 18.36 Mbit/s
95th percentile per-packet one-way delay: 202.917 ms
Loss rate: 6.64%
Run 9: Report of PCC-Expr — Data Link

![Graph showing throughput and per-packet one-way delay for different flows.](image-url)
Run 10: Statistics of PCC-Expr

Start at: 2018-05-26 17:42:26  
End at: 2018-05-26 17:42:56  
Local clock offset: −0.239 ms  
Remote clock offset: 0.093 ms

# Below is generated by plot.py at 2018-05-26 19:43:46  
# Datalink statistics

-- Total of 3 flows:  
Average throughput: 414.61 Mbit/s  
95th percentile per-packet one-way delay: 312.233 ms  
Loss rate: 6.95%  

-- Flow 1:  
Average throughput: 368.12 Mbit/s  
95th percentile per-packet one-way delay: 313.513 ms  
Loss rate: 6.81%  

-- Flow 2:  
Average throughput: 66.16 Mbit/s  
95th percentile per-packet one-way delay: 204.317 ms  
Loss rate: 7.90%  

-- Flow 3:  
Average throughput: 7.80 Mbit/s  
95th percentile per-packet one-way delay: 205.698 ms  
Loss rate: 11.42%
Run 10: Report of PCC-Expr — Data Link

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

- **Flow 1 ingress** (mean 393.65 Mbit/s)
- **Flow 1 egress** (mean 368.12 Mbit/s)
- **Flow 2 ingress** (mean 71.48 Mbit/s)
- **Flow 2 egress** (mean 66.16 Mbit/s)
- **Flow 3 ingress** (mean 8.71 Mbit/s)
- **Flow 3 egress** (mean 7.80 Mbit/s)

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

- **Flow 1** (95th percentile 313.51 ms)
- **Flow 2** (95th percentile 204.32 ms)
- **Flow 3** (95th percentile 205.70 ms)
Run 1: Statistics of QUIC Cubic

Start at: 2018-05-26 14:19:41
End at: 2018-05-26 14:20:11
Local clock offset: -0.244 ms
Remote clock offset: -0.08 ms

# Below is generated by plot.py at 2018-05-26 19:43:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 128.44 Mbit/s
95th percentile per-packet one-way delay: 50.780 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 65.34 Mbit/s
95th percentile per-packet one-way delay: 50.156 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 66.43 Mbit/s
95th percentile per-packet one-way delay: 50.836 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 51.27 Mbit/s
95th percentile per-packet one-way delay: 49.695 ms
Loss rate: 1.34%
Run 2: Statistics of QUIC Cubic

Start at: 2018-05-26 14:41:52
End at: 2018-05-26 14:42:22
Local clock offset: 0.171 ms
Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2018-05-26 19:43:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 125.43 Mbit/s
95th percentile per-packet one-way delay: 50.578 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 68.22 Mbit/s
95th percentile per-packet one-way delay: 50.592 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 55.32 Mbit/s
95th percentile per-packet one-way delay: 50.579 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 62.33 Mbit/s
95th percentile per-packet one-way delay: 49.962 ms
Loss rate: 0.48%
Run 2: Report of QUIC Cubic — Data Link

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

**Throughput (Mbps)**
- **Flow 1 ingress** (mean 68.20 Mbps)
- **Flow 1 egress** (mean 68.22 Mbps)
- **Flow 2 ingress** (mean 55.34 Mbps)
- **Flow 2 egress** (mean 55.32 Mbps)
- **Flow 3 ingress** (mean 62.00 Mbps)
- **Flow 3 egress** (mean 62.33 Mbps)

**Packet Delay (ms)**
- **Flow 1 (95th percentile 50.59 ms)**
- **Flow 2 (95th percentile 50.58 ms)**
- **Flow 3 (95th percentile 49.96 ms)**
Run 3: Statistics of QUIC Cubic

Start at: 2018-05-26 15:04:11
End at: 2018-05-26 15:04:41
Local clock offset: 0.176 ms
Remote clock offset: -0.065 ms

# Below is generated by plot.py at 2018-05-26 19:43:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 122.90 Mbit/s
95th percentile per-packet one-way delay: 51.218 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 70.54 Mbit/s
95th percentile per-packet one-way delay: 49.935 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 50.87 Mbit/s
95th percentile per-packet one-way delay: 51.215 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 56.70 Mbit/s
95th percentile per-packet one-way delay: 51.284 ms
Loss rate: 1.14%
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic

Start at: 2018-05-26 15:26:36
End at: 2018-05-26 15:27:06
Local clock offset: -0.232 ms
Remote clock offset: -0.122 ms

# Below is generated by plot.py at 2018-05-26 19:43:46
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 128.56 Mbit/s
  95th percentile per-packet one-way delay: 50.724 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 74.62 Mbit/s
  95th percentile per-packet one-way delay: 50.211 ms
  Loss rate: 0.36%
-- Flow 2:
  Average throughput: 54.03 Mbit/s
  95th percentile per-packet one-way delay: 50.338 ms
  Loss rate: 0.50%
-- Flow 3:
  Average throughput: 55.07 Mbit/s
  95th percentile per-packet one-way delay: 50.842 ms
  Loss rate: 1.62%
Run 4: Report of QUIC Cubic — Data Link
Run 5: Statistics of QUIC Cubic

Start at: 2018-05-26 15:49:03
End at: 2018-05-26 15:49:33
Local clock offset: -0.2 ms
Remote clock offset: -0.113 ms

# Below is generated by plot.py at 2018-05-26 19:43:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 125.27 Mbit/s
95th percentile per-packet one-way delay: 50.894 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 65.92 Mbit/s
95th percentile per-packet one-way delay: 50.756 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 61.81 Mbit/s
95th percentile per-packet one-way delay: 50.719 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 55.62 Mbit/s
95th percentile per-packet one-way delay: 51.013 ms
Loss rate: 1.12%
Run 5: Report of QUIC Cubic — Data Link
Run 6: Statistics of QUIC Cubic

Start at: 2018-05-26 16:11:26
End at: 2018-05-26 16:11:56
Local clock offset: -0.311 ms
Remote clock offset: -0.08 ms

# Below is generated by plot.py at 2018-05-26 19:43:46
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 130.23 Mbit/s
  95th percentile per-packet one-way delay: 50.668 ms
  Loss rate: 0.55%
-- Flow 1:
  Average throughput: 71.10 Mbit/s
  95th percentile per-packet one-way delay: 50.693 ms
  Loss rate: 0.41%
-- Flow 2:
  Average throughput: 64.17 Mbit/s
  95th percentile per-packet one-way delay: 50.398 ms
  Loss rate: 0.52%
-- Flow 3:
  Average throughput: 50.39 Mbit/s
  95th percentile per-packet one-way delay: 50.265 ms
  Loss rate: 1.21%
Run 6: Report of QUIC Cubic — Data Link
Run 7: Statistics of QUIC Cubic

Start at: 2018-05-26 16:33:47
End at: 2018-05-26 16:34:17
Local clock offset: -0.307 ms
Remote clock offset: -0.022 ms

# Below is generated by plot.py at 2018-05-26 19:43:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 120.05 Mbit/s
95th percentile per-packet one-way delay: 50.661 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 69.81 Mbit/s
95th percentile per-packet one-way delay: 50.342 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 48.87 Mbit/s
95th percentile per-packet one-way delay: 50.713 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 54.32 Mbit/s
95th percentile per-packet one-way delay: 50.285 ms
Loss rate: 1.25%
Run 7: Report of QUIC Cubic — Data Link
Run 8: Statistics of QUIC Cubic

Start at: 2018-05-26 16:56:19
End at: 2018-05-26 16:56:49
Local clock offset: -0.602 ms
Remote clock offset: 0.033 ms

# Below is generated by plot.py at 2018-05-26 19:43:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 128.63 Mbit/s
95th percentile per-packet one-way delay: 49.153 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 63.30 Mbit/s
95th percentile per-packet one-way delay: 49.173 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 67.50 Mbit/s
95th percentile per-packet one-way delay: 48.999 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 62.58 Mbit/s
95th percentile per-packet one-way delay: 49.187 ms
Loss rate: 0.21%
Run 8: Report of QUIC Cubic — Data Link

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**Throughput (Mbit/s):**
- Flow 1 ingress (mean 63.29 Mbit/s)
- Flow 1 egress (mean 63.30 Mbit/s)
- Flow 2 ingress (mean 67.32 Mbit/s)
- Flow 2 egress (mean 67.50 Mbit/s)
- Flow 3 ingress (mean 62.07 Mbit/s)
- Flow 3 egress (mean 62.58 Mbit/s)

**Per-packet one-way delay (ms):**
- Flow 1 (95th percentile 49.17 ms)
- Flow 2 (95th percentile 49.00 ms)
- Flow 3 (95th percentile 49.19 ms)
Run 9: Statistics of QUIC Cubic

Start at: 2018-05-26 17:18:46
End at: 2018-05-26 17:19:16
Local clock offset: -0.216 ms
Remote clock offset: -0.062 ms

# Below is generated by plot.py at 2018-05-26 19:43:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 126.59 Mbit/s
95th percentile per-packet one-way delay: 50.967 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 62.09 Mbit/s
95th percentile per-packet one-way delay: 50.983 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 72.26 Mbit/s
95th percentile per-packet one-way delay: 49.652 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 50.35 Mbit/s
95th percentile per-packet one-way delay: 51.030 ms
Loss rate: 1.31%
Run 9: Report of QUIC Cubic — Data Link

![Throughput vs Time](image1)

![Packet Delay vs Time](image2)
Run 10: Statistics of QUIC Cubic

Start at: 2018-05-26 17:41:10
End at: 2018-05-26 17:41:40
Local clock offset: -0.606 ms
Remote clock offset: 0.11 ms

# Below is generated by plot.py at 2018-05-26 19:43:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 135.00 Mbit/s
95th percentile per-packet one-way delay: 49.832 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 73.43 Mbit/s
95th percentile per-packet one-way delay: 49.856 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 61.76 Mbit/s
95th percentile per-packet one-way delay: 49.503 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 60.70 Mbit/s
95th percentile per-packet one-way delay: 49.234 ms
Loss rate: 0.78%
Run 10: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

Start at: 2018-05-26 14:35:12
End at: 2018-05-26 14:35:42
Local clock offset: -0.209 ms
Remote clock offset: -0.031 ms

# Below is generated by plot.py at 2018-05-26 19:43:46
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 50.819 ms
  Loss rate: 0.52%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.842 ms
  Loss rate: 0.26%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.321 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.318 ms
  Loss rate: 1.09%
Run 1: Report of SCReAM — Data Link
Run 2: Statistics of SCReAM

Start at: 2018-05-26 14:57:27
End at: 2018-05-26 14:57:57
Local clock offset: -0.219 ms
Remote clock offset: -0.051 ms

# Below is generated by plot.py at 2018-05-26 19:43:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.884 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.933 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.609 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.635 ms
Loss rate: 1.09%
Run 2: Report of SCReAM — Data Link
Run 3: Statistics of SCReAM

Start at: 2018-05-26 15:19:54
End at: 2018-05-26 15:20:24
Local clock offset: -0.236 ms
Remote clock offset: -0.133 ms

# Below is generated by plot.py at 2018-05-26 19:43:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.871 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.892 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.626 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.835 ms
Loss rate: 1.08%
Run 3: Report of SCReAM — Data Link
Run 4: Statistics of SCReAM

End at: 2018-05-26 15:42:49
Local clock offset: -0.25 ms
Remote clock offset: -0.124 ms

# Below is generated by plot.py at 2018-05-26 19:43:46
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 50.842 ms
  Loss rate: 0.52%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.889 ms
  Loss rate: 0.26%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 48.826 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.805 ms
  Loss rate: 1.09%
Run 4: Report of SCReAM — Data Link
Run 5: Statistics of SCReAM

Start at: 2018-05-26 16:04:44
End at: 2018-05-26 16:05:14
Local clock offset: -0.224 ms
Remote clock offset: -0.088 ms

# Below is generated by plot.py at 2018-05-26 19:43:46
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 50.403 ms
  Loss rate: 0.52%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.385 ms
  Loss rate: 0.26%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.432 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.344 ms
  Loss rate: 1.09%
Run 5: Report of SCReAM — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 0.22 Mbps)
  - Flow 1 egress (mean 0.22 Mbps)
  - Flow 2 ingress (mean 0.22 Mbps)
  - Flow 2 egress (mean 0.22 Mbps)
  - Flow 3 ingress (mean 0.22 Mbps)
  - Flow 3 egress (mean 0.22 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 50.38 ms)
  - Flow 2 (95th percentile 50.43 ms)
  - Flow 3 (95th percentile 50.34 ms)
Run 6: Statistics of SCReAM

Start at: 2018-05-26 16:27:02
End at: 2018-05-26 16:27:32
Local clock offset: 0.123 ms
Remote clock offset: -0.023 ms

# Below is generated by plot.py at 2018-05-26 19:43:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.788 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.848 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.736 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.090 ms
Loss rate: 1.09%
Run 6: Report of SCReAM — Data Link
Run 7: Statistics of SCReAM

End at: 2018-05-26 16:50:02
Local clock offset: -0.262 ms
Remote clock offset: 0.012 ms

# Below is generated by plot.py at 2018-05-26 19:43:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.666 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.360 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.832 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.322 ms
Loss rate: 1.09%
Run 7: Report of SCReAM — Data Link

Throughput (Mbps)

- Flow 1 ingress (mean 0.22 Mbps)
- Flow 1 egress (mean 0.22 Mbps)
- Flow 2 ingress (mean 0.22 Mbps)
- Flow 2 egress (mean 0.22 Mbps)
- Flow 3 ingress (mean 0.22 Mbps)
- Flow 3 egress (mean 0.22 Mbps)

Per packet one way delay (ms)

- Flow 1 (95th percentile 50.36 ms)
- Flow 2 (95th percentile 50.83 ms)
- Flow 3 (95th percentile 50.32 ms)
Run 8: Statistics of SCReAM

Start at: 2018-05-26 17:12:04
End at: 2018-05-26 17:12:34
Local clock offset: -0.256 ms
Remote clock offset: 0.087 ms

# Below is generated by plot.py at 2018-05-26 19:43:46
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 50.308 ms
  Loss rate: 0.51%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.305 ms
  Loss rate: 0.26%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.351 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 49.577 ms
  Loss rate: 1.08%
Run 8: Report of SCReAM — Data Link

![Graph of Throughput vs Time for different flows]

![Graph of Per-packet curvature delay vs Time for different flows]

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

Flow 1 (95th percentile 50.30 ms)
Flow 2 (95th percentile 50.35 ms)
Flow 3 (95th percentile 49.58 ms)
Run 9: Statistics of SCReAM

Start at: 2018-05-26 17:34:27
End at: 2018-05-26 17:34:57
Local clock offset: -0.236 ms
Remote clock offset: 0.104 ms

# Below is generated by plot.py at 2018-05-26 19:43:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.776 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.801 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.942 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.967 ms
Loss rate: 1.08%
Run 9: Report of SCReAM — Data Link

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

![Graph showing packet loss over time for three different flows.](image2)
Run 10: Statistics of SCReAM

Start at: 2018-05-26 17:56:52
End at: 2018-05-26 17:57:22
Local clock offset: -0.222 ms
Remote clock offset: 0.152 ms

# Below is generated by plot.py at 2018-05-26 19:43:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.843 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.659 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.881 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.642 ms
Loss rate: 1.08%
Run 10: Report of SCReAM — Data Link

[Graph 1: Throughput (Mbps) vs Time (s)
- Flow 1 ingress (mean 0.22 Mbps)
- Flow 1 egress (mean 0.22 Mbps)
- Flow 2 ingress (mean 0.22 Mbps)
- Flow 2 egress (mean 0.22 Mbps)
- Flow 3 ingress (mean 0.22 Mbps)
- Flow 3 egress (mean 0.22 Mbps)

[Graph 2: Per-packet one-way delay (ms) vs Time (s)
- Flow 1 (95th percentile 50.66 ms)
- Flow 2 (95th percentile 50.88 ms)
- Flow 3 (95th percentile 50.64 ms)
Run 1: Statistics of Sprout

Start at: 2018-05-26 14:32:24
End at: 2018-05-26 14:32:54
Local clock offset: −0.203 ms
Remote clock offset: −0.053 ms

# Below is generated by plot.py at 2018-05-26 19:43:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.52 Mbit/s
95th percentile per-packet one-way delay: 51.645 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 6.93 Mbit/s
95th percentile per-packet one-way delay: 51.571 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 6.05 Mbit/s
95th percentile per-packet one-way delay: 51.724 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 4.80 Mbit/s
95th percentile per-packet one-way delay: 51.745 ms
Loss rate: 2.32%
Run 1: Report of Sprout — Data Link

![Graph showing network performance metrics over time]

Legend:
- Flow 1 ingress (mean 6.93 Mbit/s)
- Flow 1 egress (mean 6.93 Mbit/s)
- Flow 2 ingress (mean 6.06 Mbit/s)
- Flow 2 egress (mean 6.05 Mbit/s)
- Flow 3 ingress (mean 4.84 Mbit/s)
- Flow 3 egress (mean 4.80 Mbit/s)
Run 2: Statistics of Sprout

Start at: 2018-05-26 14:54:36
End at: 2018-05-26 14:55:06
Local clock offset: 0.202 ms
Remote clock offset: -0.014 ms

# Below is generated by plot.py at 2018-05-26 19:43:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.75 Mbit/s
95th percentile per-packet one-way delay: 52.022 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 7.41 Mbit/s
95th percentile per-packet one-way delay: 51.997 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 7.38 Mbit/s
95th percentile per-packet one-way delay: 52.025 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 7.44 Mbit/s
95th percentile per-packet one-way delay: 52.109 ms
Loss rate: 0.83%
Run 2: Report of Sprout — Data Link

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 7.41 Mbps)
  - Flow 1 egress (mean 7.41 Mbps)
  - Flow 2 ingress (mean 7.37 Mbps)
  - Flow 2 egress (mean 7.38 Mbps)
  - Flow 3 ingress (mean 7.42 Mbps)
  - Flow 3 egress (mean 7.44 Mbps)

- **Per-packet one-way delay (ms)**
  - Flow 1 (95th percentile 52.00 ms)
  - Flow 2 (95th percentile 52.02 ms)
  - Flow 3 (95th percentile 52.11 ms)
Run 3: Statistics of Sprout

Start at: 2018-05-26 15:17:06  
End at: 2018-05-26 15:17:36  
Local clock offset: -0.254 ms  
Remote clock offset: -0.098 ms

# Below is generated by plot.py at 2018-05-26 19:43:47  
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.81 Mbit/s  
95th percentile per-packet one-way delay: 51.542 ms  
Loss rate: 0.62%  
-- Flow 1:
Average throughput: 6.92 Mbit/s  
95th percentile per-packet one-way delay: 51.458 ms  
Loss rate: 0.57%  
-- Flow 2:
Average throughput: 5.97 Mbit/s  
95th percentile per-packet one-way delay: 51.550 ms  
Loss rate: 0.47%  
-- Flow 3:
Average throughput: 5.88 Mbit/s  
95th percentile per-packet one-way delay: 51.712 ms  
Loss rate: 1.13%
Run 3: Report of Sprout — Data Link

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

- **Flow 1 ingress (mean 6.93 Mbit/s)**
- **Flow 1 egress (mean 6.92 Mbit/s)**
- **Flow 2 ingress (mean 5.97 Mbit/s)**
- **Flow 2 egress (mean 5.97 Mbit/s)**
- **Flow 3 ingress (mean 5.87 Mbit/s)**
- **Flow 3 egress (mean 5.86 Mbit/s)**
Run 4: Statistics of Sprout

End at: 2018-05-26 15:40:03
Local clock offset: -0.236 ms
Remote clock offset: -0.12 ms

# Below is generated by plot.py at 2018-05-26 19:43:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.47 Mbit/s
95th percentile per-packet one-way delay: 51.432 ms
Loss rate: 0.53%

-- Flow 1:
Average throughput: 7.33 Mbit/s
95th percentile per-packet one-way delay: 51.400 ms
Loss rate: 0.51%

-- Flow 2:
Average throughput: 7.12 Mbit/s
95th percentile per-packet one-way delay: 51.464 ms
Loss rate: 0.29%

-- Flow 3:
Average throughput: 7.37 Mbit/s
95th percentile per-packet one-way delay: 51.479 ms
Loss rate: 1.04%
Run 4: Report of Sprout — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 7.35 Mbit/s)
Flow 1 egress (mean 7.33 Mbit/s)
Flow 2 ingress (mean 7.09 Mbit/s)
Flow 2 egress (mean 7.12 Mbit/s)
Flow 3 ingress (mean 7.36 Mbit/s)
Flow 3 egress (mean 7.37 Mbit/s)

Per packet end-to-end delay (ms)

Time (s)

Flow 1 (95th percentile 51.40 ms)
Flow 2 (95th percentile 51.46 ms)
Flow 3 (95th percentile 51.48 ms)
Run 5: Statistics of Sprout

Start at: 2018-05-26 16:01:52  
End at: 2018-05-26 16:02:22  
Local clock offset: 0.129 ms  
Remote clock offset: -0.154 ms

# Below is generated by plot.py at 2018-05-26 19:43:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 11.61 Mbit/s  
95th percentile per-packet one-way delay: 51.831 ms  
Loss rate: 0.68%  
-- Flow 1:  
Average throughput: 5.79 Mbit/s  
95th percentile per-packet one-way delay: 51.918 ms  
Loss rate: 0.27%  
-- Flow 2:  
Average throughput: 5.68 Mbit/s  
95th percentile per-packet one-way delay: 51.757 ms  
Loss rate: 0.67%  
-- Flow 3:  
Average throughput: 6.23 Mbit/s  
95th percentile per-packet one-way delay: 51.642 ms  
Loss rate: 1.83%

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Run 5: Report of Sprout — Data Link

Graph 1: Throughput (Mbps)
- Flow 1 ingress (mean 5.80 Mbps)
- Flow 1 egress (mean 5.79 Mbps)
- Flow 2 ingress (mean 5.69 Mbps)
- Flow 2 egress (mean 5.68 Mbps)
- Flow 3 ingress (mean 6.20 Mbps)
- Flow 3 egress (mean 6.23 Mbps)

Graph 2: Per packet one-way delay (ms)
- Flow 1 (95th percentile 51.92 ms)
- Flow 2 (95th percentile 51.76 ms)
- Flow 3 (95th percentile 51.64 ms)
Run 6: Statistics of Sprout

Start at: 2018-05-26 16:24:15
End at: 2018-05-26 16:24:45
Local clock offset: -0.294 ms
Remote clock offset: -0.013 ms

# Below is generated by plot.py at 2018-05-26 19:43:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.36 Mbit/s
95th percentile per-packet one-way delay: 51.129 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 3.53 Mbit/s
95th percentile per-packet one-way delay: 51.032 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 6.81 Mbit/s
95th percentile per-packet one-way delay: 51.208 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 7.05 Mbit/s
95th percentile per-packet one-way delay: 51.093 ms
Loss rate: 1.27%
Run 6: Report of Sprout — Data Link

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

**Throughput (Mbit/s)**
- **Flow 1 ingress** (mean 3.54 Mbit/s)
- **Flow 1 egress** (mean 3.53 Mbit/s)
- **Flow 2 ingress** (mean 6.84 Mbit/s)
- **Flow 2 egress** (mean 6.81 Mbit/s)
- **Flow 3 ingress** (mean 7.06 Mbit/s)
- **Flow 3 egress** (mean 7.05 Mbit/s)

**Per packet one way delay (ms)**
- **Flow 1 (95th percentile 51.03 ms)**
- **Flow 2 (95th percentile 51.21 ms)**
- **Flow 3 (95th percentile 51.09 ms)
Run 7: Statistics of Sprout

End at: 2018-05-26 16:47:09
Local clock offset: -0.229 ms
Remote clock offset: 0.001 ms

# Below is generated by plot.py at 2018-05-26 19:43:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.03 Mbit/s
95th percentile per-packet one-way delay: 51.583 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 7.02 Mbit/s
95th percentile per-packet one-way delay: 51.501 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 6.97 Mbit/s
95th percentile per-packet one-way delay: 51.692 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 7.28 Mbit/s
95th percentile per-packet one-way delay: 51.572 ms
Loss rate: 1.11%
Run 7: Report of Sprout — Data Link
Run 8: Statistics of Sprout

Start at: 2018-05-26 17:09:19
End at: 2018-05-26 17:09:49
Local clock offset: -0.191 ms
Remote clock offset: 0.044 ms

# Below is generated by plot.py at 2018-05-26 19:43:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.14 Mbit/s
95th percentile per-packet one-way delay: 51.461 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 6.49 Mbit/s
95th percentile per-packet one-way delay: 51.502 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 6.94 Mbit/s
95th percentile per-packet one-way delay: 51.505 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 6.26 Mbit/s
95th percentile per-packet one-way delay: 51.011 ms
Loss rate: 0.71%
Run 8: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 6.49 Mbit/s)
- Flow 1 egress (mean 6.49 Mbit/s)
- Flow 2 ingress (mean 6.96 Mbit/s)
- Flow 2 egress (mean 6.94 Mbit/s)
- Flow 3 ingress (mean 6.26 Mbit/s)
- Flow 3 egress (mean 6.26 Mbit/s)

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

- Flow 1 (95th percentile 51.50 ms)
- Flow 2 (95th percentile 51.51 ms)
- Flow 3 (95th percentile 51.01 ms)
Run 9: Statistics of Sprout

Start at: 2018-05-26 17:31:42
End at: 2018-05-26 17:32:12
Local clock offset: ~0.214 ms
Remote clock offset: 0.104 ms

# Below is generated by plot.py at 2018-05-26 19:43:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.26 Mbit/s
95th percentile per-packet one-way delay: 51.271 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 6.95 Mbit/s
95th percentile per-packet one-way delay: 51.302 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 6.12 Mbit/s
95th percentile per-packet one-way delay: 51.206 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 6.85 Mbit/s
95th percentile per-packet one-way delay: 51.309 ms
Loss rate: 1.46%
Run 9: Report of Sprout — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 6.96 Mbps)
  - Flow 2 ingress (mean 6.15 Mbps)
  - Flow 3 ingress (mean 6.89 Mbps)
  - Flow 1 egress (mean 6.95 Mbps)
  - Flow 2 egress (mean 6.12 Mbps)
  - Flow 3 egress (mean 6.85 Mbps)

- **Packet Latency (ms):**
  - Flow 1 95th percentile 51.30 ms
  - Flow 2 95th percentile 51.21 ms
  - Flow 3 95th percentile 51.31 ms
Run 10: Statistics of Sprout

Start at: 2018-05-26 17:54:04
End at: 2018-05-26 17:54:34
Local clock offset: -0.172 ms
Remote clock offset: 0.142 ms

# Below is generated by plot.py at 2018-05-26 19:43:47
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 11.96 Mbit/s
  95th percentile per-packet one-way delay: 51.267 ms
  Loss rate: 0.43%
-- Flow 1:
  Average throughput: 6.33 Mbit/s
  95th percentile per-packet one-way delay: 51.226 ms
  Loss rate: 0.24%
-- Flow 2:
  Average throughput: 6.12 Mbit/s
  95th percentile per-packet one-way delay: 51.338 ms
  Loss rate: 0.19%
-- Flow 3:
  Average throughput: 4.77 Mbit/s
  95th percentile per-packet one-way delay: 51.220 ms
  Loss rate: 1.76%
Run 10: Report of Sprout — Data Link

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

Legend:
- Flow 1 ingress (mean 6.33 Mbit/s)
- Flow 1 egress (mean 6.33 Mbit/s)
- Flow 2 ingress (mean 6.10 Mbit/s)
- Flow 2 egress (mean 6.12 Mbit/s)
- Flow 3 ingress (mean 4.82 Mbit/s)
- Flow 3 egress (mean 4.77 Mbit/s)
Run 1: Statistics of TaoVA-100x

End at: 2018-05-26 14:28:07
Local clock offset: 0.171 ms
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2018-05-26 19:47:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 240.54 Mbit/s
  95th percentile per-packet one-way delay: 52.322 ms
  Loss rate: 0.62%
-- Flow 1:
  Average throughput: 162.93 Mbit/s
  95th percentile per-packet one-way delay: 51.367 ms
  Loss rate: 0.19%
-- Flow 2:
  Average throughput: 76.46 Mbit/s
  95th percentile per-packet one-way delay: 54.645 ms
  Loss rate: 1.16%
-- Flow 3:
  Average throughput: 81.09 Mbit/s
  95th percentile per-packet one-way delay: 54.522 ms
  Loss rate: 2.18%
Run 1: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 162.69 Mbit/s)
- Flow 1 egress (mean 162.93 Mbit/s)
- Flow 2 ingress (mean 76.96 Mbit/s)
- Flow 2 egress (mean 76.46 Mbit/s)
- Flow 3 ingress (mean 82.07 Mbit/s)
- Flow 3 egress (mean 81.09 Mbit/s)

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

- Flow 1 (95th percentile 51.37 ms)
- Flow 2 (95th percentile 54.65 ms)
- Flow 3 (95th percentile 54.52 ms)
Run 2: Statistics of TaoVA-100x

Start at: 2018-05-26 14:49:43
End at: 2018-05-26 14:50:13
Local clock offset: 0.191 ms
Remote clock offset: -0.075 ms

# Below is generated by plot.py at 2018-05-26 19:48:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 260.04 Mbit/s
  95th percentile per-packet one-way delay: 51.433 ms
  Loss rate: 0.51%
-- Flow 1:
  Average throughput: 104.07 Mbit/s
  95th percentile per-packet one-way delay: 51.066 ms
  Loss rate: 0.29%
-- Flow 2:
  Average throughput: 150.66 Mbit/s
  95th percentile per-packet one-way delay: 51.422 ms
  Loss rate: 0.44%
-- Flow 3:
  Average throughput: 168.91 Mbit/s
  95th percentile per-packet one-way delay: 51.858 ms
  Loss rate: 1.03%
Run 2: Report of TaoVA-100x — Data Link
Run 3: Statistics of TaoVA-100x

Start at: 2018-05-26 15:12:15
End at: 2018-05-26 15:12:45
Local clock offset: -0.218 ms
Remote clock offset: -0.102 ms

# Below is generated by plot.py at 2018-05-26 19:48:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 277.82 Mbit/s
95th percentile per-packet one-way delay: 51.282 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 130.07 Mbit/s
95th percentile per-packet one-way delay: 51.034 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 112.46 Mbit/s
95th percentile per-packet one-way delay: 51.844 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 220.96 Mbit/s
95th percentile per-packet one-way delay: 51.428 ms
Loss rate: 0.01%
Run 3: Report of TaoVA-100x — Data Link

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

- **Flow 1 ingress** (mean 129.86 Mb/s)
- **Flow 1 egress** (mean 130.07 Mb/s)
- **Flow 2 ingress** (mean 112.37 Mb/s)
- **Flow 2 egress** (mean 112.46 Mb/s)
- **Flow 3 ingress** (mean 219.19 Mb/s)
- **Flow 3 egress** (mean 220.06 Mb/s)

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

- **Flow 1** (95th percentile 51.03 ms)
- **Flow 2** (95th percentile 51.84 ms)
- **Flow 3** (95th percentile 51.43 ms)
Run 4: Statistics of TaoVA-100x

Start at: 2018-05-26 15:34:35
End at: 2018-05-26 15:35:05
Local clock offset: -0.621 ms
Remote clock offset: -0.084 ms

# Below is generated by plot.py at 2018-05-26 19:48:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 234.56 Mbit/s
95th percentile per-packet one-way delay: 52.236 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 124.40 Mbit/s
95th percentile per-packet one-way delay: 50.762 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 141.57 Mbit/s
95th percentile per-packet one-way delay: 52.958 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 71.08 Mbit/s
95th percentile per-packet one-way delay: 55.313 ms
Loss rate: 0.00%
Run 4: Report of TaoVA-100x — Data Link

![Graph of data link performance metrics including throughput and packet delay]

- Flow 1 ingress (mean 124.43 Mbit/s)
- Flow 1 egress (mean 124.40 Mbit/s)
- Flow 2 ingress (mean 141.68 Mbit/s)
- Flow 2 egress (mean 141.57 Mbit/s)
- Flow 3 ingress (mean 71.27 Mbit/s)
- Flow 3 egress (mean 71.08 Mbit/s)
Run 5: Statistics of TaoVA-100x

Start at: 2018-05-26 15:56:58
End at: 2018-05-26 15:57:28
Local clock offset: -0.272 ms
Remote clock offset: -0.124 ms

# Below is generated by plot.py at 2018-05-26 19:48:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 244.10 Mbit/s
95th percentile per-packet one-way delay: 51.018 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 82.80 Mbit/s
95th percentile per-packet one-way delay: 50.897 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 236.57 Mbit/s
95th percentile per-packet one-way delay: 51.117 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 12.05 Mbit/s
95th percentile per-packet one-way delay: 50.841 ms
Loss rate: 0.97%
Run 5: Report of TaoVA-100x — Data Link

![Graph showing data link throughput and packet round-trip times](image)

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 82.02 Mbps/s)
  - Flow 1 egress (mean 82.80 Mbps/s)
  - Flow 2 ingress (mean 236.63 Mbps/s)
  - Flow 2 egress (mean 236.57 Mbps/s)
  - Flow 3 ingress (mean 12.05 Mbps/s)
  - Flow 3 egress (mean 12.05 Mbps/s)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 50.90 ms)
  - Flow 2 (95th percentile 51.12 ms)
  - Flow 3 (95th percentile 50.84 ms)
Run 6: Statistics of TaoVA-100x

End at: 2018-05-26 16:19:53
Local clock offset: -0.289 ms
Remote clock offset: -0.034 ms

# Below is generated by plot.py at 2018-05-26 19:49:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 272.76 Mbit/s
95th percentile per-packet one-way delay: 51.429 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 135.73 Mbit/s
95th percentile per-packet one-way delay: 51.057 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 135.33 Mbit/s
95th percentile per-packet one-way delay: 51.447 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 142.44 Mbit/s
95th percentile per-packet one-way delay: 53.615 ms
Loss rate: 1.01%
Run 6: Report of TaoVA-100x — Data Link

![Graph showing throughput and per-packet one way delay over time for Flow 1, Flow 2, and Flow 3.](image-url)
Run 7: Statistics of TaoVA-100x

Start at: 2018-05-26 16:41:47
End at: 2018-05-26 16:42:17
Local clock offset: 0.1 ms
Remote clock offset: -0.016 ms

# Below is generated by plot.py at 2018-05-26 19:50:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 261.52 Mbit/s
95th percentile per-packet one-way delay: 52.469 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 204.41 Mbit/s
95th percentile per-packet one-way delay: 51.974 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 23.57 Mbit/s
95th percentile per-packet one-way delay: 53.478 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 125.55 Mbit/s
95th percentile per-packet one-way delay: 53.661 ms
Loss rate: 1.15%
Run 7: Report of TaoVA-100x — Data Link
Run 8: Statistics of TaoVA-100x

Start at: 2018-05-26 17:04:20
End at: 2018-05-26 17:04:50
Local clock offset: -0.231 ms
Remote clock offset: 0.053 ms

# Below is generated by plot.py at 2018-05-26 19:53:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 278.17 Mbit/s
95th percentile per-packet one-way delay: 51.635 ms
Loss rate: 0.46%

-- Flow 1:
Average throughput: 141.23 Mbit/s
95th percentile per-packet one-way delay: 50.962 ms
Loss rate: 0.02%

-- Flow 2:
Average throughput: 124.55 Mbit/s
95th percentile per-packet one-way delay: 52.142 ms
Loss rate: 0.47%

-- Flow 3:
Average throughput: 164.55 Mbit/s
95th percentile per-packet one-way delay: 53.107 ms
Loss rate: 1.57%
Run 8: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 140.78 Mbit/s)
- Flow 1 egress (mean 141.23 Mbit/s)
- Flow 2 ingress (mean 124.32 Mbit/s)
- Flow 2 egress (mean 124.55 Mbit/s)
- Flow 3 ingress (mean 165.45 Mbit/s)
- Flow 3 egress (mean 164.55 Mbit/s)

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

- Flow 1 (95th percentile 50.96 ms)
- Flow 2 (95th percentile 52.14 ms)
- Flow 3 (95th percentile 53.11 ms)
Run 9: Statistics of TaoVA-100x

Start at: 2018-05-26 17:26:41
End at: 2018-05-26 17:27:11
Local clock offset: -0.252 ms
Remote clock offset: 0.098 ms

# Below is generated by plot.py at 2018-05-26 19:56:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 296.73 Mbit/s
  95th percentile per-packet one-way delay: 52.548 ms
  Loss rate: 0.54%
-- Flow 1:
  Average throughput: 154.40 Mbit/s
  95th percentile per-packet one-way delay: 51.433 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 108.71 Mbit/s
  95th percentile per-packet one-way delay: 54.447 ms
  Loss rate: 0.98%
-- Flow 3:
  Average throughput: 212.53 Mbit/s
  95th percentile per-packet one-way delay: 52.895 ms
  Loss rate: 1.16%
Run 9: Report of TaoVA-100x — Data Link

[Graph showing throughput and per-packet one-way delay over time for different flows.]
Run 10: Statistics of TaoVA-100x

Start at: 2018-05-26 17:49:16
End at: 2018-05-26 17:49:46
Local clock offset: -0.235 ms
Remote clock offset: 0.137 ms

# Below is generated by plot.py at 2018-05-26 19:56:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 216.80 Mbit/s
95th percentile per-packet one-way delay: 50.753 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 110.22 Mbit/s
95th percentile per-packet one-way delay: 50.738 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 130.85 Mbit/s
95th percentile per-packet one-way delay: 50.695 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 69.66 Mbit/s
95th percentile per-packet one-way delay: 58.525 ms
Loss rate: 0.00%
Run 10: Report of TaoVA-100x — Data Link

![Graph showing network performance metrics over time.](image)
Run 1: Statistics of TCP Vegas

Start at: 2018-05-26 14:23:43
End at: 2018-05-26 14:24:13
Local clock offset: -0.217 ms
Remote clock offset: -0.091 ms

# Below is generated by plot.py at 2018-05-26 19:56:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 189.67 Mbit/s
  95th percentile perpacket one-way delay: 65.620 ms
  Loss rate: 0.71%
-- Flow 1:
  Average throughput: 30.23 Mbit/s
  95th percentile perpacket one-way delay: 62.753 ms
  Loss rate: 0.37%
-- Flow 2:
  Average throughput: 136.74 Mbit/s
  95th percentile perpacket one-way delay: 63.329 ms
  Loss rate: 0.53%
-- Flow 3:
  Average throughput: 208.01 Mbit/s
  95th percentile perpacket one-way delay: 67.611 ms
  Loss rate: 1.09%
Run 1: Report of TCP Vegas — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 30.25 Mbps)
  - Flow 1 egress (mean 30.23 Mbps)
  - Flow 2 ingress (mean 136.77 Mbps)
  - Flow 2 egress (mean 136.74 Mbps)
  - Flow 3 ingress (mean 208.16 Mbps)
  - Flow 3 egress (mean 208.01 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 62.75 ms)
  - Flow 2 (95th percentile 63.33 ms)
  - Flow 3 (95th percentile 67.61 ms)
Run 2: Statistics of TCP Vegas

Start at: 2018-05-26 14:45:51
End at: 2018-05-26 14:46:21
Local clock offset: -0.128 ms
Remote clock offset: -0.045 ms

# Below is generated by plot.py at 2018-05-26 19:56:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 163.54 Mbit/s
  95th percentile per-packet one-way delay: 52.304 ms
  Loss rate: 0.47%
-- Flow 1:
  Average throughput: 97.81 Mbit/s
  95th percentile per-packet one-way delay: 52.302 ms
  Loss rate: 0.36%
-- Flow 2:
  Average throughput: 76.65 Mbit/s
  95th percentile per-packet one-way delay: 52.379 ms
  Loss rate: 0.50%
-- Flow 3:
  Average throughput: 44.76 Mbit/s
  95th percentile per-packet one-way delay: 52.116 ms
  Loss rate: 1.08%
Run 2: Report of TCP Vegas — Data Link

![Graph of Throughput (Mbps)]

- Flow 1 ingress (mean 97.84 Mbps)
- Flow 1 egress (mean 97.81 Mbps)
- Flow 2 ingress (mean 76.65 Mbps)
- Flow 2 egress (mean 76.65 Mbps)
- Flow 3 ingress (mean 44.80 Mbps)
- Flow 3 egress (mean 44.76 Mbps)

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

- Flow 1 (95th percentile 52.30 ms)
- Flow 2 (95th percentile 52.38 ms)
- Flow 3 (95th percentile 52.12 ms)
Run 3: Statistics of TCP Vegas

Start at: 2018-05-26 15:08:12
End at: 2018-05-26 15:08:42
Local clock offset: -0.168 ms
Remote clock offset: -0.076 ms

# Below is generated by plot.py at 2018-05-26 19:56:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 347.53 Mbit/s
  95th percentile per-packet one-way delay: 83.227 ms
  Loss rate: 0.50%
-- Flow 1:
  Average throughput: 206.16 Mbit/s
  95th percentile per-packet one-way delay: 82.617 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 194.81 Mbit/s
  95th percentile per-packet one-way delay: 83.574 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 35.87 Mbit/s
  95th percentile per-packet one-way delay: 85.405 ms
  Loss rate: 1.22%
Run 3: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 206.79 Mbit/s)
- Flow 1 egress (mean 206.16 Mbit/s)
- Flow 2 ingress (mean 195.11 Mbit/s)
- Flow 2 egress (mean 194.81 Mbit/s)
- Flow 3 ingress (mean 35.95 Mbit/s)
- Flow 3 egress (mean 35.87 Mbit/s)

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

- Flow 1 (95th percentile 82.62 ms)
- Flow 2 (95th percentile 83.57 ms)
- Flow 3 (95th percentile 85.41 ms)
Run 4: Statistics of TCP Vegas

Start at: 2018-05-26 15:30:36
End at: 2018-05-26 15:31:06
Local clock offset: -0.217 ms
Remote clock offset: -0.15 ms

# Below is generated by plot.py at 2018-05-26 19:56:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 274.50 Mbit/s
95th percentile per-packet one-way delay: 61.562 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 113.43 Mbit/s
95th percentile per-packet one-way delay: 59.778 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 209.70 Mbit/s
95th percentile per-packet one-way delay: 62.234 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 65.34 Mbit/s
95th percentile per-packet one-way delay: 64.219 ms
Loss rate: 1.04%
Run 4: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 113.40 Mbit/s)
- Flow 1 egress (mean 113.43 Mbit/s)
- Flow 2 ingress (mean 208.86 Mbit/s)
- Flow 2 egress (mean 209.70 Mbit/s)
- Flow 3 ingress (mean 65.36 Mbit/s)
- Flow 3 egress (mean 65.34 Mbit/s)
Run 5: Statistics of TCP Vegas

Start at: 2018-05-26 15:53:04
End at: 2018-05-26 15:53:34
Local clock offset: -0.202 ms
Remote clock offset: -0.134 ms

# Below is generated by plot.py at 2018-05-26 19:56:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 212.08 Mbit/s
95th percentile per-packet one-way delay: 57.539 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 115.04 Mbit/s
95th percentile per-packet one-way delay: 58.973 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 142.76 Mbit/s
95th percentile per-packet one-way delay: 52.609 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 6.31 Mbit/s
95th percentile per-packet one-way delay: 52.161 ms
Loss rate: 1.95%
Run 5: Report of TCP Vegas — Data Link
Run 6: Statistics of TCP Vegas

Start at: 2018-05-26 16:15:28
End at: 2018-05-26 16:15:58
Local clock offset: -0.251 ms
Remote clock offset: -0.038 ms

# Below is generated by plot.py at 2018-05-26 19:56:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 184.22 Mbit/s
  95th percentile per-packet one-way delay: 60.750 ms
  Loss rate: 0.74%
-- Flow 1:
  Average throughput: 42.91 Mbit/s
  95th percentile per-packet one-way delay: 58.401 ms
  Loss rate: 0.30%
-- Flow 2:
  Average throughput: 104.26 Mbit/s
  95th percentile per-packet one-way delay: 60.246 ms
  Loss rate: 0.51%
-- Flow 3:
  Average throughput: 218.39 Mbit/s
  95th percentile per-packet one-way delay: 61.538 ms
  Loss rate: 1.22%
Run 6: Report of TCP Vegas — Data Link
Run 7: Statistics of TCP Vegas

Start at: 2018-05-26 16:37:51
End at: 2018-05-26 16:38:21
Local clock offset: -0.278 ms
Remote clock offset: -0.032 ms

# Below is generated by plot.py at 2018-05-26 19:56:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 248.30 Mbit/s
95th percentile per-packet one-way delay: 67.265 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 80.21 Mbit/s
95th percentile per-packet one-way delay: 63.675 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 151.21 Mbit/s
95th percentile per-packet one-way delay: 66.103 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 205.40 Mbit/s
95th percentile per-packet one-way delay: 70.796 ms
Loss rate: 1.21%
Run 7: Report of TCP Vegas — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 80.20 Mbps)
  - Flow 1 egress (mean 80.21 Mbps)
  - Flow 2 ingress (mean 150.99 Mbps)
  - Flow 2 egress (mean 151.21 Mbps)
  - Flow 3 ingress (mean 205.82 Mbps)
  - Flow 3 egress (mean 205.40 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 63.67 ms)
  - Flow 2 (95th percentile 66.10 ms)
  - Flow 3 (95th percentile 70.80 ms)
Run 8: Statistics of TCP Vegas

Start at: 2018-05-26 17:00:22
End at: 2018-05-26 17:00:52
Local clock offset: -0.219 ms
Remote clock offset: 0.067 ms

# Below is generated by plot.py at 2018-05-26 19:58:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 295.96 Mbit/s
95th percentile per-packet one-way delay: 64.863 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 211.26 Mbit/s
95th percentile per-packet one-way delay: 64.527 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 29.81 Mbit/s
95th percentile per-packet one-way delay: 65.308 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 196.62 Mbit/s
95th percentile per-packet one-way delay: 65.503 ms
Loss rate: 1.21%
Run 8: Report of TCP Vegas — Data Link

![Graphs showing network performance metrics over time](image-url)
Run 9: Statistics of TCP Vegas

Start at: 2018-05-26 17:22:48
End at: 2018-05-26 17:23:18
Local clock offset: -0.202 ms
Remote clock offset: 0.088 ms

# Below is generated by plot.py at 2018-05-26 19:58:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 213.24 Mbit/s
95th percentile per-packet one-way delay: 60.423 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 192.71 Mbit/s
95th percentile per-packet one-way delay: 60.513 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 28.00 Mbit/s
95th percentile per-packet one-way delay: 57.937 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 5.79 Mbit/s
95th percentile per-packet one-way delay: 55.022 ms
Loss rate: 2.18%
Run 9: Report of TCP Vegas — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 192.33 Mbps)
- Flow 1 egress (mean 192.71 Mbps)
- Flow 2 ingress (mean 28.02 Mbps)
- Flow 2 egress (mean 28.00 Mbps)
- Flow 3 ingress (mean 5.96 Mbps)
- Flow 3 egress (mean 5.79 Mbps)

**Per packet one way delay (ms):**
- Flow 1 (95th percentile 60.51 ms)
- Flow 2 (95th percentile 57.94 ms)
- Flow 3 (95th percentile 55.02 ms)
Run 10: Statistics of TCP Vegas

Start at: 2018-05-26 17:45:14
End at: 2018-05-26 17:45:44
Local clock offset: -0.237 ms
Remote clock offset: 0.087 ms

# Below is generated by plot.py at 2018-05-26 19:59:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 328.78 Mbit/s
95th percentile per-packet one-way delay: 76.330 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 203.25 Mbit/s
95th percentile per-packet one-way delay: 75.970 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 187.29 Mbit/s
95th percentile per-packet one-way delay: 76.797 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 3.46 Mbit/s
95th percentile per-packet one-way delay: 75.068 ms
Loss rate: 2.17%
Run 10: Report of TCP Vegas — Data Link

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

- **Flow 1 ingress** (mean 203.05 Mbit/s)
- **Flow 1 egress** (mean 203.25 Mbit/s)
- **Flow 2 ingress** (mean 187.11 Mbit/s)
- **Flow 2 egress** (mean 187.29 Mbit/s)
- **Flow 3 ingress** (mean 3.51 Mbit/s)
- **Flow 3 egress** (mean 3.46 Mbit/s)

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

- **Flow 1 (95th percentile 75.97 ms)**
- **Flow 2 (95th percentile 76.80 ms)**
- **Flow 3 (95th percentile 75.07 ms)**

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Run 1: Statistics of Verus

Start at: 2018-05-26 14:25:00
End at: 2018-05-26 14:25:30
Local clock offset: -0.194 ms
Remote clock offset: -0.069 ms

# Below is generated by plot.py at 2018-05-26 19:59:50
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 315.68 Mbit/s
  95th percentile per-packet one-way delay: 186.431 ms
  Loss rate: 0.62%
-- Flow 1:
  Average throughput: 215.34 Mbit/s
  95th percentile per-packet one-way delay: 177.735 ms
  Loss rate: 0.57%
-- Flow 2:
  Average throughput: 89.70 Mbit/s
  95th percentile per-packet one-way delay: 171.841 ms
  Loss rate: 0.30%
-- Flow 3:
  Average throughput: 123.94 Mbit/s
  95th percentile per-packet one-way delay: 197.437 ms
  Loss rate: 1.34%
Run 1: Report of Verus — Data Link

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

Start at: 2018-05-26 14:47:07
End at: 2018-05-26 14:47:37
Local clock offset: -0.172 ms
Remote clock offset: -0.047 ms

# Below is generated by plot.py at 2018-05-26 19:59:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 296.23 Mbit/s
95th percentile per-packet one-way delay: 127.581 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 190.78 Mbit/s
95th percentile per-packet one-way delay: 126.338 ms
Loss rate: 1.57%
-- Flow 2:
Average throughput: 115.99 Mbit/s
95th percentile per-packet one-way delay: 128.158 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 96.56 Mbit/s
95th percentile per-packet one-way delay: 130.535 ms
Loss rate: 1.43%
Run 2: Report of Verus — Data Link

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

- **Flow 1 ingress** (mean 193.18 Mbit/s)
- **Flow 1 egress** (mean 190.78 Mbit/s)
- **Flow 2 ingress** (mean 115.39 Mbit/s)
- **Flow 2 egress** (mean 115.99 Mbit/s)
- **Flow 3 ingress** (mean 87.26 Mbit/s)
- **Flow 3 egress** (mean 96.56 Mbit/s)

![Graph of packet delay over time for different flows.]

- **Flow 1** (95th percentile 126.34 ms)
- **Flow 2** (95th percentile 128.16 ms)
- **Flow 3** (95th percentile 130.53 ms)
Run 3: Statistics of Verus

Start at: 2018-05-26 15:09:39
End at: 2018-05-26 15:10:09
Local clock offset: -0.22 ms
Remote clock offset: -0.084 ms

# Below is generated by plot.py at 2018-05-26 19:59:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 300.75 Mbit/s
95th percentile per-packet one-way delay: 141.243 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 138.10 Mbit/s
95th percentile per-packet one-way delay: 130.712 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 176.69 Mbit/s
95th percentile per-packet one-way delay: 135.348 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 138.54 Mbit/s
95th percentile per-packet one-way delay: 180.667 ms
Loss rate: 1.83%
Run 3: Report of Verus — Data Link

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

- Flow 1 ingress (mean 138.25 Mbps)
- Flow 1 egress (mean 138.10 Mbps)
- Flow 2 ingress (mean 177.07 Mbps)
- Flow 2 egress (mean 176.69 Mbps)
- Flow 3 ingress (mean 136.96 Mbps)
- Flow 3 egress (mean 138.54 Mbps)

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

- Flow 1 (95th percentile 130.71 ms)
- Flow 2 (95th percentile 135.35 ms)
- Flow 3 (95th percentile 180.67 ms)
Run 4: Statistics of Verus

End at: 2018-05-26 15:32:28
Local clock offset: -0.627 ms
Remote clock offset: -0.092 ms

# Below is generated by plot.py at 2018-05-26 20:00:48
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 321.57 Mbit/s
  95th percentile per-packet one-way delay: 171.831 ms
  Loss rate: 0.49%
-- Flow 1:
  Average throughput: 218.96 Mbit/s
  95th percentile per-packet one-way delay: 163.380 ms
  Loss rate: 0.30%
-- Flow 2:
  Average throughput: 127.58 Mbit/s
  95th percentile per-packet one-way delay: 178.208 ms
  Loss rate: 1.01%
-- Flow 3:
  Average throughput: 55.44 Mbit/s
  95th percentile per-packet one-way delay: 191.039 ms
  Loss rate: 0.32%
Run 4: Report of Verus — Data Link

![Graph showing throughput and delay over time for different flows.](image-url)
Run 5: Statistics of Verus

Start at: 2018-05-26 15:54:23
End at: 2018-05-26 15:54:53
Local clock offset: -0.236 ms
Remote clock offset: -0.132 ms

# Below is generated by plot.py at 2018-05-26 20:01:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 285.95 Mbit/s
95th percentile per-packet one-way delay: 148.153 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 128.28 Mbit/s
95th percentile per-packet one-way delay: 148.040 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 181.35 Mbit/s
95th percentile per-packet one-way delay: 128.640 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 112.54 Mbit/s
95th percentile per-packet one-way delay: 193.139 ms
Loss rate: 2.35%
Run 5: Report of Verus — Data Link
Run 6: Statistics of Verus

Start at: 2018-05-26 16:16:46
End at: 2018-05-26 16:17:16
Local clock offset: -0.283 ms
Remote clock offset: -0.073 ms

# Below is generated by plot.py at 2018-05-26 20:03:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 327.05 Mbit/s
95th percentile per-packet one-way delay: 132.332 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 216.48 Mbit/s
95th percentile per-packet one-way delay: 124.248 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 129.69 Mbit/s
95th percentile per-packet one-way delay: 161.971 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 83.82 Mbit/s
95th percentile per-packet one-way delay: 185.772 ms
Loss rate: 2.38%
Run 6: Report of Verus — Data Link

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

- Flow 1 Ingress (mean 216.55 Mb/s)
- Flow 1 Egress (mean 216.48 Mb/s)
- Flow 2 Ingress (mean 130.46 Mb/s)
- Flow 2 Egress (mean 129.69 Mb/s)
- Flow 3 Ingress (mean 76.37 Mb/s)
- Flow 3 Egress (mean 83.82 Mb/s)

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

- Flow 1 (95th percentile 124.25 ms)
- Flow 2 (95th percentile 161.97 ms)
- Flow 3 (95th percentile 185.77 ms)
Run 7: Statistics of Verus

Start at: 2018-05-26 16:39:12
End at: 2018-05-26 16:39:42
Local clock offset: -0.645 ms
Remote clock offset: -0.003 ms

# Below is generated by plot.py at 2018-05-26 20:03:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 292.83 Mbit/s
  95th percentile per-packet one-way delay: 172.966 ms
  Loss rate: 0.76%
-- Flow 1:
  Average throughput: 191.52 Mbit/s
  95th percentile per-packet one-way delay: 156.728 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 99.27 Mbit/s
  95th percentile per-packet one-way delay: 181.059 ms
  Loss rate: 1.66%
-- Flow 3:
  Average throughput: 107.72 Mbit/s
  95th percentile per-packet one-way delay: 181.622 ms
  Loss rate: 1.77%
Run 7: Report of Verus — Data Link

[Graphs showing data transmission and delay for different flows, with key to legend for each graph.]
Run 8: Statistics of Verus

Start at: 2018-05-26 17:01:45
End at: 2018-05-26 17:02:15
Local clock offset: -0.249 ms
Remote clock offset: 0.052 ms

# Below is generated by plot.py at 2018-05-26 20:04:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 288.86 Mbit/s
95th percentile per-packet one-way delay: 171.390 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 143.80 Mbit/s
95th percentile per-packet one-way delay: 137.950 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 184.99 Mbit/s
95th percentile per-packet one-way delay: 188.689 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 75.32 Mbit/s
95th percentile per-packet one-way delay: 166.719 ms
Loss rate: 2.68%
Run 8: Report of Verus — Data Link

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

- Flow 1 ingress (mean 143.34 Mb/s) vs. Flow 1 egress (mean 143.80 Mb/s)
- Flow 2 ingress (mean 186.43 Mb/s) vs. Flow 2 egress (mean 184.99 Mb/s)
- Flow 3 ingress (mean 68.48 Mb/s) vs. Flow 3 egress (mean 75.32 Mb/s)

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

- Flow 1 (95th percentile 137.95 ms) vs. Flow 2 (95th percentile 188.69 ms) vs. Flow 3 (95th percentile 166.72 ms)
Run 9: Statistics of Verus

Start at: 2018-05-26 17:24:07
End at: 2018-05-26 17:24:37
Local clock offset: -0.574 ms
Remote clock offset: 0.064 ms

# Below is generated by plot.py at 2018-05-26 20:04:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 286.85 Mbit/s
95th percentile per-packet one-way delay: 172.620 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 197.72 Mbit/s
95th percentile per-packet one-way delay: 148.464 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 85.00 Mbit/s
95th percentile per-packet one-way delay: 177.348 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 100.79 Mbit/s
95th percentile per-packet one-way delay: 201.324 ms
Loss rate: 1.99%
Run 9: Report of Verus — Data Link
Run 10: Statistics of Verus

Start at: 2018-05-26 17:46:39
End at: 2018-05-26 17:47:09
Local clock offset: -0.611 ms
Remote clock offset: 0.101 ms

# Below is generated by plot.py at 2018-05-26 20:05:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 314.19 Mbit/s
  95th percentile per-packet one-way delay: 160.860 ms
  Loss rate: 1.20%
-- Flow 1:
  Average throughput: 205.68 Mbit/s
  95th percentile per-packet one-way delay: 152.260 ms
  Loss rate: 0.29%
-- Flow 2:
  Average throughput: 119.77 Mbit/s
  95th percentile per-packet one-way delay: 176.471 ms
  Loss rate: 2.69%
-- Flow 3:
  Average throughput: 88.05 Mbit/s
  95th percentile per-packet one-way delay: 223.155 ms
  Loss rate: 3.43%
Run 10: Report of Verus — Data Link

![Graph of network throughput and packet delay over time for different flows.](image-url)
Run 1: Statistics of PCC-Vivace

Start at: 2018-05-26 14:33:33
End at: 2018-05-26 14:34:03
Local clock offset: -0.166 ms
Remote clock offset: -0.046 ms

# Below is generated by plot.py at 2018-05-26 20:07:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 424.01 Mbit/s
95th percentile per-packet one-way delay: 50.978 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 259.42 Mbit/s
95th percentile per-packet one-way delay: 51.106 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 168.74 Mbit/s
95th percentile per-packet one-way delay: 50.014 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 160.64 Mbit/s
95th percentile per-packet one-way delay: 53.877 ms
Loss rate: 1.05%
Run 1: Report of PCC-Vivace — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 259.38 Mbit/s)  Flow 1 egress (mean 259.42 Mbit/s)
Flow 2 ingress (mean 168.33 Mbit/s)  Flow 2 egress (mean 168.74 Mbit/s)
Flow 3 ingress (mean 160.67 Mbit/s)  Flow 3 egress (mean 160.64 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 51.11 ms)  Flow 2 (95th percentile 50.01 ms)  Flow 3 (95th percentile 53.88 ms)
Run 2: Statistics of PCC-Vivace

Start at: 2018-05-26 14:55:45
End at: 2018-05-26 14:56:15
Local clock offset: -0.169 ms
Remote clock offset: -0.029 ms

# Below is generated by plot.py at 2018-05-26 20:09:08
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 499.86 Mbit/s
  95th percentile per-packet one-way delay: 51.113 ms
  Loss rate: 0.49%
-- Flow 1:
  Average throughput: 287.82 Mbit/s
  95th percentile per-packet one-way delay: 50.076 ms
  Loss rate: 0.28%
-- Flow 2:
  Average throughput: 241.41 Mbit/s
  95th percentile per-packet one-way delay: 51.417 ms
  Loss rate: 0.60%
-- Flow 3:
  Average throughput: 158.10 Mbit/s
  95th percentile per-packet one-way delay: 51.331 ms
  Loss rate: 1.35%
Run 2: Report of PCC-Vivace — Data Link

![Graph showing throughput and packet loss over time for three flows with different mean throughputs and 95th percentile packet loss times.]
Run 3: Statistics of PCC-Vivace

Start at: 2018-05-26 15:18:16
End at: 2018-05-26 15:18:46
Local clock offset: ~0.222 ms
Remote clock offset: -0.095 ms

# Below is generated by plot.py at 2018-05-26 20:09:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 428.75 Mbit/s
95th percentile per-packet one-way delay: 50.350 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 244.54 Mbit/s
95th percentile per-packet one-way delay: 50.387 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 184.90 Mbit/s
95th percentile per-packet one-way delay: 50.214 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 187.37 Mbit/s
95th percentile per-packet one-way delay: 49.488 ms
Loss rate: 1.43%
Run 3: Report of PCC-Vivace — Data Link

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

- **Flow 1 ingress** (mean 244.49 Mbps)
- **Flow 1 egress** (mean 244.54 Mbps)
- **Flow 2 ingress** (mean 184.56 Mbps)
- **Flow 2 egress** (mean 184.90 Mbps)
- **Flow 3 ingress** (mean 198.21 Mbps)
- **Flow 3 egress** (mean 187.37 Mbps)

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

- **Flow 1** (95th percentile 50.39 ms)
- **Flow 2** (95th percentile 50.21 ms)
- **Flow 3** (95th percentile 49.49 ms)

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Run 4: Statistics of PCC-Vivace

Start at: 2018-05-26 15:40:42
End at: 2018-05-26 15:41:12
Local clock offset: -0.22 ms
Remote clock offset: -0.105 ms

# Below is generated by plot.py at 2018-05-26 20:10:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 431.24 Mbit/s
  95th percentile per-packet one-way delay: 51.101 ms
  Loss rate: 0.60%
-- Flow 1:
  Average throughput: 280.09 Mbit/s
  95th percentile per-packet one-way delay: 50.904 ms
  Loss rate: 0.37%
-- Flow 2:
  Average throughput: 199.23 Mbit/s
  95th percentile per-packet one-way delay: 51.473 ms
  Loss rate: 0.91%
-- Flow 3:
  Average throughput: 57.51 Mbit/s
  95th percentile per-packet one-way delay: 50.858 ms
  Loss rate: 1.87%
Run 4: Report of PCC-Vivace — Data Link

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

- **Flow 1 ingress** (mean 280.18 Mbit/s)
- **Flow 1 egress** (mean 280.09 Mbit/s)
- **Flow 2 ingress** (mean 200.03 Mbit/s)
- **Flow 2 egress** (mean 199.23 Mbit/s)
- **Flow 3 ingress** (mean 58.01 Mbit/s)
- **Flow 3 egress** (mean 57.51 Mbit/s)

- **Flow 1 (95th percentile 50.90 ms)**
- **Flow 2 (95th percentile 51.47 ms)**
- **Flow 3 (95th percentile 50.86 ms)**
Run 5: Statistics of PCC-Vivace

Start at: 2018-05-26 16:03:01
End at: 2018-05-26 16:03:31
Local clock offset: -0.213 ms
Remote clock offset: -0.122 ms

# Below is generated by plot.py at 2018-05-26 20:11:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 510.51 Mbit/s
95th percentile per-packet one-way delay: 55.668 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 297.54 Mbit/s
95th percentile per-packet one-way delay: 61.963 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 227.25 Mbit/s
95th percentile per-packet one-way delay: 51.091 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 189.57 Mbit/s
95th percentile per-packet one-way delay: 52.125 ms
Loss rate: 1.32%
Run 5: Report of PCC-Vivace — Data Link

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

Legend:
- Flow 1 ingress (mean 297.54 Mbit/s)
- Flow 1 egress (mean 297.54 Mbit/s)
- Flow 2 ingress (mean 227.31 Mbit/s)
- Flow 2 egress (mean 227.25 Mbit/s)
- Flow 3 ingress (mean 196.08 Mbit/s)
- Flow 3 egress (mean 189.57 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 61.96 ms)
- Flow 2 (95th percentile 51.09 ms)
- Flow 3 (95th percentile 52.12 ms)
Run 6: Statistics of PCC-Vivace

End at: 2018-05-26 16:25:54
Local clock offset: -0.241 ms
Remote clock offset: -0.02 ms

# Below is generated by plot.py at 2018-05-26 20:11:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 431.88 Mbit/s
95th percentile per-packet one-way delay: 50.783 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 251.60 Mbit/s
95th percentile per-packet one-way delay: 50.798 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 251.98 Mbit/s
95th percentile per-packet one-way delay: 50.415 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 39.44 Mbit/s
95th percentile per-packet one-way delay: 50.667 ms
Loss rate: 2.12%
Run 6: Report of PCC-Vivace — Data Link

![Throughput Graph]

![Per Packet One Way Delay Graph]
Run 7: Statistics of PCC-Vivace

End at: 2018-05-26 16:48:18
Local clock offset: 0.168 ms
Remote clock offset: 0.004 ms

# Below is generated by plot.py at 2018-05-26 20:12:20
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 520.19 Mbit/s
  95th percentile per-packet one-way delay: 51.445 ms
  Loss rate: 0.46%
-- Flow 1:
  Average throughput: 322.72 Mbit/s
  95th percentile per-packet one-way delay: 51.198 ms
  Loss rate: 0.31%
-- Flow 2:
  Average throughput: 244.17 Mbit/s
  95th percentile per-packet one-way delay: 51.954 ms
  Loss rate: 0.51%
-- Flow 3:
  Average throughput: 107.91 Mbit/s
  95th percentile per-packet one-way delay: 50.876 ms
  Loss rate: 1.62%
Run 7: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 322.66 Mb/s)
- Flow 1 egress (mean 322.72 Mb/s)
- Flow 2 ingress (mean 244.17 Mb/s)
- Flow 2 egress (mean 244.17 Mb/s)
- Flow 3 ingress (mean 198.55 Mb/s)
- Flow 3 egress (mean 107.91 Mb/s)

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

- Flow 1 (95th percentile 51.20 ms)
- Flow 2 (95th percentile 51.95 ms)
- Flow 3 (95th percentile 50.88 ms)
Run 8: Statistics of PCC-Vivace

Start at: 2018-05-26 17:10:28
End at: 2018-05-26 17:10:58
Local clock offset: -0.169 ms
Remote clock offset: 0.056 ms

# Below is generated by plot.py at 2018-05-26 20:12:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 392.58 Mbit/s
95th percentile per-packet one-way delay: 50.943 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 256.93 Mbit/s
95th percentile per-packet one-way delay: 51.818 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 162.54 Mbit/s
95th percentile per-packet one-way delay: 50.925 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 84.59 Mbit/s
95th percentile per-packet one-way delay: 50.451 ms
Loss rate: 1.13%
Run 8: Report of PCC-Vivace — Data Link

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

Legend:
- Flow 1 ingress (mean 256.64 Mbit/s)
- Flow 1 egress (mean 256.93 Mbit/s)
- Flow 2 ingress (mean 162.89 Mbit/s)
- Flow 2 egress (mean 162.54 Mbit/s)
- Flow 3 ingress (mean 84.69 Mbit/s)
- Flow 3 egress (mean 84.59 Mbit/s)
Run 9: Statistics of PCC-Vivace

Start at: 2018-05-26 17:32:51
End at: 2018-05-26 17:33:21
Local clock offset: ~0.211 ms
Remote clock offset: 0.107 ms

# Below is generated by plot.py at 2018-05-26 20:12:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 403.13 Mbit/s
95th percentile per-packet one-way delay: 50.488 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 200.21 Mbit/s
95th percentile per-packet one-way delay: 50.495 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 246.71 Mbit/s
95th percentile per-packet one-way delay: 50.465 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 119.57 Mbit/s
95th percentile per-packet one-way delay: 50.536 ms
Loss rate: 2.14%
Run 9: Report of PCC-Vivace — Data Link

[Graphs showing throughput and packet loss over time with annotations for Flow 1 to Flow 3]

[Legend for graphs]

Flow 1 ingress (mean 200.34 Mbit/s)  
Flow 1 egress (mean 200.21 Mbit/s)  
Flow 2 ingress (mean 246.85 Mbit/s)  
Flow 2 egress (mean 246.71 Mbit/s)  
Flow 3 ingress (mean 120.91 Mbit/s)  
Flow 3 egress (mean 119.57 Mbit/s)  

Flow 1 (95th percentile 50.49 ms)  
Flow 2 (95th percentile 50.47 ms)  
Flow 3 (95th percentile 50.54 ms)
Run 10: Statistics of PCC-Vivace

Start at: 2018-05-26 17:55:12
End at: 2018-05-26 17:55:42
Local clock offset: -0.155 ms
Remote clock offset: 0.132 ms

# Below is generated by plot.py at 2018-05-26 20:12:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 468.56 Mbit/s
95th percentile per-packet one-way delay: 50.651 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 285.93 Mbit/s
95th percentile per-packet one-way delay: 52.200 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 255.83 Mbit/s
95th percentile per-packet one-way delay: 50.333 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 39.02 Mbit/s
95th percentile per-packet one-way delay: 50.103 ms
Loss rate: 1.94%
Run 10: Report of PCC-Vivace — Data Link
Run 1: Statistics of WebRTC media

Start at: 2018-05-26 14:26:29
End at: 2018-05-26 14:26:59
Local clock offset: -0.206 ms
Remote clock offset: -0.029 ms

# Below is generated by plot.py at 2018-05-26 20:12:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 51.286 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 51.261 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 51.345 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 51.209 ms
Loss rate: 0.00%
Run 1: Report of WebRTC media — Data Link

![Graph of network throughput over time]
Run 2: Statistics of WebRTC media

End at: 2018-05-26 14:49:05
Local clock offset: -0.182 ms
Remote clock offset: -0.053 ms

# Below is generated by plot.py at 2018-05-26 20:12:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 50.773 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 50.657 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 50.773 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 50.796 ms
Loss rate: 0.00%
Run 2: Report of WebRTC media — Data Link
Run 3: Statistics of WebRTC media

Start at: 2018-05-26 15:11:07
End at: 2018-05-26 15:11:37
Local clock offset: -0.211 ms
Remote clock offset: -0.102 ms

# Below is generated by plot.py at 2018-05-26 20:12:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 50.840 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 50.842 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 50.827 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 50.870 ms
Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link

![Graph showing WebRTC media throughput and delay over time.](image)

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 0.05 Mbps)
  - Flow 1 egress (mean 0.05 Mbps)
  - Flow 2 ingress (mean 0.05 Mbps)
  - Flow 2 egress (mean 0.05 Mbps)
  - Flow 3 ingress (mean 0.05 Mbps)
  - Flow 3 egress (mean 0.05 Mbps)

- **Per-packet one-way delay (ms)**
  - Flow 1 (95th percentile 50.84 ms)
  - Flow 2 (95th percentile 50.83 ms)
  - Flow 3 (95th percentile 50.87 ms)
Run 4: Statistics of WebRTC media

End at: 2018-05-26 15:33:57
Local clock offset: -0.203 ms
Remote clock offset: -0.117 ms

# Below is generated by plot.py at 2018-05-26 20:12:48
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.14 Mbit/s
  95th percentile per-packet one-way delay: 51.346 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 51.273 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 51.360 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 51.355 ms
  Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link

**Throughput (Mbit/s)**

- Flow 1 ingress (mean 0.05 Mbit/s)
- Flow 1 egress (mean 0.05 Mbit/s)
- Flow 2 ingress (mean 0.05 Mbit/s)
- Flow 2 egress (mean 0.05 Mbit/s)
- Flow 3 ingress (mean 0.05 Mbit/s)
- Flow 3 egress (mean 0.05 Mbit/s)

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

- Flow 1 (95th percentile 51.27 ms)
- Flow 2 (95th percentile 51.36 ms)
- Flow 3 (95th percentile 51.35 ms)
Run 5: Statistics of WebRTC media

End at: 2018-05-26 15:56:20
Local clock offset: -0.24 ms
Remote clock offset: -0.087 ms

# Below is generated by plot.py at 2018-05-26 20:12:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 51.313 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 51.208 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 51.437 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 51.335 ms
Loss rate: 0.00%
Run 5: Report of WebRTC media — Data Link
Run 6: Statistics of WebRTC media

Start at: 2018-05-26 16:18:15
End at: 2018-05-26 16:18:45
Local clock offset: -0.273 ms
Remote clock offset: -0.044 ms

# Below is generated by plot.py at 2018-05-26 20:12:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 51.250 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 50.827 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 51.352 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 51.264 ms
Loss rate: 0.00%
Run 6: Report of WebRTC media — Data Link

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

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 0.05 Mbps)
  - Flow 1 egress (mean 0.05 Mbps)
  - Flow 2 ingress (mean 0.05 Mbps)
  - Flow 2 egress (mean 0.05 Mbps)
  - Flow 3 ingress (mean 0.05 Mbps)
  - Flow 3 egress (mean 0.05 Mbps)

- **Per-packet end-to-end delay (ms)**
  - Flow 1 (95th percentile 50.83 ms)
  - Flow 2 (95th percentile 51.35 ms)
  - Flow 3 (95th percentile 51.26 ms)
Run 7: Statistics of WebRTC media

Start at: 2018-05-26 16:40:39
End at: 2018-05-26 16:41:09
Local clock offset: -0.239 ms
Remote clock offset: 0.008 ms

# Below is generated by plot.py at 2018-05-26 20:12:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 50.977 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 50.791 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 50.977 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 51.001 ms
Loss rate: 0.00%
Run 7: Report of WebRTC media — Data Link

![Graphs showing throughput and per-packet error delay for different flows.]

- Flow 1 ingress (mean 0.05 Mbit/s)
- Flow 1 egress (mean 0.05 Mbit/s)
- Flow 2 ingress (mean 0.05 Mbit/s)
- Flow 2 egress (mean 0.05 Mbit/s)
- Flow 3 ingress (mean 0.05 Mbit/s)
- Flow 3 egress (mean 0.05 Mbit/s)

- Flow 1 (95th percentile 50.79 ms)
- Flow 2 (95th percentile 50.98 ms)
- Flow 3 (95th percentile 51.00 ms)
Run 8: Statistics of WebRTC media

Start at: 2018-05-26 17:03:12
End at: 2018-05-26 17:03:42
Local clock offset: -0.2 ms
Remote clock offset: 0.015 ms

# Below is generated by plot.py at 2018-05-26 20:12:48
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.14 Mbit/s
  95th percentile per-packet one-way delay: 51.169 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 51.351 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 50.733 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 50.882 ms
  Loss rate: 0.00%
Run 8: Report of WebRTC media — Data Link

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

- **Flow 1**: Ingress (mean 0.05 Mbit/s), Egress (mean 0.05 Mbit/s)
- **Flow 2**: Ingress (mean 0.05 Mbit/s), Egress (mean 0.05 Mbit/s)
- **Flow 3**: Ingress (mean 0.05 Mbit/s), Egress (mean 0.05 Mbit/s)

![Graph showing per-packet one-way delay for three flows.]

- **Flow 1**: 95th percentile 51.35 ms
- **Flow 2**: 95th percentile 50.73 ms
- **Flow 3**: 95th percentile 50.88 ms
Run 9: Statistics of WebRTC media

Start at: 2018-05-26 17:25:34
End at: 2018-05-26 17:26:04
Local clock offset: -0.206 ms
Remote clock offset: 0.077 ms

# Below is generated by plot.py at 2018-05-26 20:12:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 50.772 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 50.753 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 50.725 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 50.847 ms
Loss rate: 0.00%
Run 9: Report of WebRTC media — Data Link
Run 10: Statistics of WebRTC media

Start at: 2018-05-26 17:48:08
End at: 2018-05-26 17:48:38
Local clock offset: -0.199 ms
Remote clock offset: 0.114 ms

# Below is generated by plot.py at 2018-05-26 20:12:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 50.880 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 50.942 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 49.630 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 49.844 ms
Loss rate: 0.00%
Run 10: Report of WebRTC media — Data Link