Pantheon Report

Generated at 2018-06-30 01:39:15 (UTC).
Data path: AWS California 2 Ethernet (local) → Mexico Ethernet (remote).
Repeated the test of 17 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.stanford.edu and have been applied to correct the timestamps in logs.

Git summary:
branch: master @ 715dc5f09d172e19699f6f17f1cb4c45064f212
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ 30060ab034deb3424347f5cc3db86198ac35d2a
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf85e62f4
third_party/indigo @ 2601c92e4a9d58d38d4dfe0edcbf90c077e64d
third_party/libutp @ b3465b92e2826f2b179eaab4a906ce6b7cf3c
third_party/pantheon-tunnel @ 6f038ed31259d366f9840f65b82cbe8f464b1b39
third_party/pcc @ 1afca958fa0d6618b623c091a55fec872b49e1e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08f92c4eb24f974ab
third_party/proto-quic @ 77961f1a8273a86b42f1bc8143ebc978f3c0f42
third_party/scream-reproduce @ f099118d1421aa3131bf1ff9e64974e1da3dbb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
third_party/verus @ d4b447ea74c6c60a261149af2629562539f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2bab86211435ae071a32f96b7d8c504587f5d7f4
third_party/webRTC @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
test from AWS California 2 to Mexico, 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     flow 2     flow 3</td>
<td>flow 1     flow 2     flow 3</td>
<td>flow 1     flow 2     flow 3</td>
</tr>
<tr>
<td>TCP BBR</td>
<td>10</td>
<td>64.42      29.38      32.71</td>
<td>73.42      74.26      73.93</td>
<td>9.10       11.52      12.24</td>
</tr>
<tr>
<td>Copa</td>
<td>10</td>
<td>57.51      25.14      21.66</td>
<td>52.63      46.72      47.40</td>
<td>0.55       0.17       0.12</td>
</tr>
<tr>
<td>TCP Cubic</td>
<td>10</td>
<td>61.65      35.21      25.79</td>
<td>74.46      72.98      69.13</td>
<td>0.73       0.78       0.66</td>
</tr>
<tr>
<td>FillP</td>
<td>10</td>
<td>61.51      35.94      29.55</td>
<td>74.16      75.00      75.01</td>
<td>21.51      31.15      35.29</td>
</tr>
<tr>
<td>FillP-Sheep</td>
<td>10</td>
<td>0.00       0.00       0.00</td>
<td>36.78      36.86      36.98</td>
<td>0.00       0.00       0.20</td>
</tr>
<tr>
<td>Indigo</td>
<td>10</td>
<td>64.33      30.26      27.89</td>
<td>52.30      57.76      60.50</td>
<td>0.09       0.11       0.37</td>
</tr>
<tr>
<td>LEDBAT</td>
<td>10</td>
<td>38.84      24.10      15.69</td>
<td>68.56      70.32      54.23</td>
<td>0.11       0.21       0.13</td>
</tr>
<tr>
<td>PCC-Allegro</td>
<td>10</td>
<td>77.97      10.82      7.00</td>
<td>70.14      71.49      70.67</td>
<td>5.73       5.25       5.97</td>
</tr>
<tr>
<td>PCC-Expr</td>
<td>10</td>
<td>64.77      20.32      13.70</td>
<td>67.69      70.04      69.94</td>
<td>1.82       1.62       1.89</td>
</tr>
<tr>
<td>QUIC Cubic</td>
<td>10</td>
<td>54.45      20.53      16.24</td>
<td>72.75      73.16      73.56</td>
<td>4.27       1.14       1.52</td>
</tr>
<tr>
<td>SCReAM</td>
<td>10</td>
<td>0.22       0.22       0.21</td>
<td>36.96      36.88      37.16</td>
<td>0.00       0.02       0.09</td>
</tr>
<tr>
<td>Sprout</td>
<td>10</td>
<td>10.29      10.14      9.60</td>
<td>43.45      43.98      44.29</td>
<td>0.03       0.03       0.06</td>
</tr>
<tr>
<td>TaoVA-100x</td>
<td>10</td>
<td>51.98      39.66      24.82</td>
<td>67.15      70.74      72.25</td>
<td>12.42      21.90      19.51</td>
</tr>
<tr>
<td>TCP Vegas</td>
<td>10</td>
<td>60.98      29.68      20.44</td>
<td>47.98      48.40      47.47</td>
<td>0.55       0.10       0.10</td>
</tr>
<tr>
<td>Verus</td>
<td>10</td>
<td>39.57      24.18      19.05</td>
<td>73.89      74.48      73.50</td>
<td>38.18      45.37      39.84</td>
</tr>
<tr>
<td>PCC-Vivace</td>
<td>10</td>
<td>59.31      19.44      11.60</td>
<td>50.95      51.83      53.49</td>
<td>0.25       0.28       0.35</td>
</tr>
<tr>
<td>WebRTC media</td>
<td>10</td>
<td>2.05       1.30       0.46</td>
<td>38.36      38.83      39.90</td>
<td>0.03       0.01       0.00</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

Start at: 2018-06-29 21:01:12
End at: 2018-06-29 21:01:42
Local clock offset: 0.7 ms
Remote clock offset: 7.16 ms

# Below is generated by plot.py at 2018-06-30 01:17:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.73 Mbit/s
95th percentile per-packet one-way delay: 73.453 ms
Loss rate: 10.64%

-- Flow 1:
Average throughput: 65.34 Mbit/s
95th percentile per-packet one-way delay: 72.842 ms
Loss rate: 10.01%

-- Flow 2:
Average throughput: 29.85 Mbit/s
95th percentile per-packet one-way delay: 74.651 ms
Loss rate: 12.07%

-- Flow 3:
Average throughput: 28.66 Mbit/s
95th percentile per-packet one-way delay: 74.021 ms
Loss rate: 11.92%
Run 2: Statistics of TCP BBR

Start at: 2018-06-29 21:27:06  
End at: 2018-06-29 21:27:36  
Local clock offset: -0.715 ms  
Remote clock offset: 7.678 ms

# Below is generated by plot.py at 2018-06-30 01:17:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.54 Mbit/s  
95th percentile per-packet one-way delay: 74.184 ms  
Loss rate: 12.06%  
-- Flow 1:  
Average throughput: 59.44 Mbit/s  
95th percentile per-packet one-way delay: 74.055 ms  
Loss rate: 10.27%  
-- Flow 2:  
Average throughput: 33.90 Mbit/s  
95th percentile per-packet one-way delay: 74.338 ms  
Loss rate: 13.95%  
-- Flow 3:  
Average throughput: 37.63 Mbit/s  
95th percentile per-packet one-way delay: 74.351 ms  
Loss rate: 16.66%
Run 2: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 66.29 Mbps)
- Flow 1 egress (mean 59.44 Mbps)
- Flow 2 ingress (mean 39.46 Mbps)
- Flow 2 egress (mean 33.90 Mbps)
- Flow 3 ingress (mean 45.33 Mbps)
- Flow 3 egress (mean 37.63 Mbps)

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

- Flow 1 (95th percentile 74.06 ms)
- Flow 2 (95th percentile 74.34 ms)
- Flow 3 (95th percentile 74.35 ms)
Run 3: Statistics of TCP BBR

Start at: 2018-06-29 21:53:05
End at: 2018-06-29 21:53:35
Local clock offset: 1.867 ms
Remote clock offset: 8.972 ms

# Below is generated by plot.py at 2018-06-30 01:17:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.39 Mbit/s
95th percentile per-packet one-way delay: 74.376 ms
Loss rate: 10.53%
-- Flow 1:
Average throughput: 60.65 Mbit/s
95th percentile per-packet one-way delay: 74.166 ms
Loss rate: 9.50%
-- Flow 2:
Average throughput: 31.40 Mbit/s
95th percentile per-packet one-way delay: 74.321 ms
Loss rate: 12.48%
-- Flow 3:
Average throughput: 38.56 Mbit/s
95th percentile per-packet one-way delay: 75.076 ms
Loss rate: 12.04%
Run 3: Report of TCP BBR — Data Link

![Throughput Graph](image1)

![Packet Delay Graph](image2)
Run 4: Statistics of TCP BBR

Start at: 2018-06-29 22:18:30
End at: 2018-06-29 22:19:00
Local clock offset: 5.434 ms
Remote clock offset: 8.727 ms

# Below is generated by plot.py at 2018-06-30 01:17:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 95.00 Mbit/s
  95th percentile per-packet one-way delay: 74.685 ms
  Loss rate: 11.20%
-- Flow 1:
  Average throughput: 61.87 Mbit/s
  95th percentile per-packet one-way delay: 74.060 ms
  Loss rate: 10.11%
-- Flow 2:
  Average throughput: 41.18 Mbit/s
  95th percentile per-packet one-way delay: 75.701 ms
  Loss rate: 12.95%
-- Flow 3:
  Average throughput: 17.18 Mbit/s
  95th percentile per-packet one-way delay: 75.262 ms
  Loss rate: 14.21%
Run 4: Report of TCP BBR — Data Link
Run 5: Statistics of TCP BBR

Start at: 2018-06-29 22:45:03
End at: 2018-06-29 22:45:33
Local clock offset: 7.269 ms
Remote clock offset: 3.525 ms

# Below is generated by plot.py at 2018-06-30 01:17:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 95.10 Mbit/s
  95th percentile per-packet one-way delay: 74.051 ms
  Loss rate: 10.21%
-- Flow 1:
  Average throughput: 68.93 Mbit/s
  95th percentile per-packet one-way delay: 74.435 ms
  Loss rate: 9.94%
-- Flow 2:
  Average throughput: 20.57 Mbit/s
  95th percentile per-packet one-way delay: 73.370 ms
  Loss rate: 11.33%
-- Flow 3:
  Average throughput: 37.54 Mbit/s
  95th percentile per-packet one-way delay: 71.753 ms
  Loss rate: 10.46%
Run 5: Report of TCP BBR — Data Link
Run 6: Statistics of TCP BBR

Start at: 2018-06-29 23:12:33
End at: 2018-06-29 23:13:03
Local clock offset: 3.728 ms
Remote clock offset: 3.359 ms

# Below is generated by plot.py at 2018-06-30 01:17:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 94.90 Mbit/s
  95th percentile per-packet one-way delay: 74.095 ms
  Loss rate: 8.73%
-- Flow 1:
  Average throughput: 65.74 Mbit/s
  95th percentile per-packet one-way delay: 73.883 ms
  Loss rate: 7.70%
-- Flow 2:
  Average throughput: 30.21 Mbit/s
  95th percentile per-packet one-way delay: 74.693 ms
  Loss rate: 10.04%
-- Flow 3:
  Average throughput: 30.28 Mbit/s
  95th percentile per-packet one-way delay: 73.963 ms
  Loss rate: 12.70%
Run 6: Report of TCP BBR — Data Link

![Throughput Graph](image1)

![Delay Graph](image2)
Run 7: Statistics of TCP BBR

Start at: 2018-06-29 23:37:40
End at: 2018-06-29 23:38:10
Local clock offset: 0.13 ms
Remote clock offset: 3.877 ms

# Below is generated by plot.py at 2018-06-30 01:17:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.54 Mbit/s
95th percentile per-packet one-way delay: 71.876 ms
Loss rate: 8.18%
-- Flow 1:
Average throughput: 63.32 Mbit/s
95th percentile per-packet one-way delay: 71.745 ms
Loss rate: 7.67%
-- Flow 2:
Average throughput: 28.71 Mbit/s
95th percentile per-packet one-way delay: 72.344 ms
Loss rate: 9.02%
-- Flow 3:
Average throughput: 36.48 Mbit/s
95th percentile per-packet one-way delay: 71.795 ms
Loss rate: 9.48%
Run 7: Report of TCP BBR — Data Link

![Throughput Graph]

![Per-packet one-way delay graph]

Legend:
- Flow 1 ingress (mean 68.62 Mbit/s)
- Flow 1 egress (mean 63.32 Mbit/s)
- Flow 2 ingress (mean 31.57 Mbit/s)
- Flow 2 egress (mean 28.71 Mbit/s)
- Flow 3 ingress (mean 40.24 Mbit/s)
- Flow 3 egress (mean 36.48 Mbit/s)

Legend for per-packet one-way delay:
- Flow 1 (95th percentile 71.75 ms)
- Flow 2 (95th percentile 72.34 ms)
- Flow 3 (95th percentile 71.80 ms)
Run 8: Statistics of TCP BBR

Start at: 2018-06-30 00:02:25
End at: 2018-06-30 00:02:55
Local clock offset: 0.033 ms
Remote clock offset: 4.039 ms

# Below is generated by plot.py at 2018-06-30 01:17:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.24 Mbit/s
95th percentile per-packet one-way delay: 73.414 ms
Loss rate: 9.47%
-- Flow 1:
Average throughput: 71.36 Mbit/s
95th percentile per-packet one-way delay: 73.032 ms
Loss rate: 8.69%
-- Flow 2:
Average throughput: 19.24 Mbit/s
95th percentile per-packet one-way delay: 74.193 ms
Loss rate: 12.35%
-- Flow 3:
Average throughput: 30.24 Mbit/s
95th percentile per-packet one-way delay: 74.563 ms
Loss rate: 11.15%
Run 8: Report of TCP BBR — Data Link

![Graph showing throughput and packet delay over time for three flows (Flow 1, Flow 2, Flow 3). The graphs display average throughput and 95th percentile packet delay for each flow.](image-url)
Run 9: Statistics of TCP BBR

Start at: 2018-06-30 00:27:36
End at: 2018-06-30 00:28:06
Local clock offset: 0.261 ms
Remote clock offset: 3.632 ms

# Below is generated by plot.py at 2018-06-30 01:18:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.92 Mbit/s
95th percentile per-packet one-way delay: 73.514 ms
Loss rate: 9.30%
-- Flow 1:
Average throughput: 59.27 Mbit/s
95th percentile per-packet one-way delay: 72.839 ms
Loss rate: 8.55%
-- Flow 2:
Average throughput: 33.66 Mbit/s
95th percentile per-packet one-way delay: 74.609 ms
Loss rate: 9.70%
-- Flow 3:
Average throughput: 39.91 Mbit/s
95th percentile per-packet one-way delay: 73.810 ms
Loss rate: 11.91%
Run 9: Report of TCP BBR — Data Link

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

Legend:
- Flow 1 ingress (mean 64.81 Mbit/s)
- Flow 1 egress (mean 59.27 Mbit/s)
- Flow 2 ingress (mean 37.28 Mbit/s)
- Flow 2 egress (mean 33.66 Mbit/s)
- Flow 3 ingress (mean 45.14 Mbit/s)
- Flow 3 egress (mean 39.90 Mbit/s)
Run 10: Statistics of TCP BBR

Start at: 2018-06-30 00:53:19
End at: 2018-06-30 00:53:49
Local clock offset: 0.329 ms
Remote clock offset: 4.491 ms

# Below is generated by plot.py at 2018-06-30 01:18:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.08 Mbit/s
95th percentile per-packet one-way delay: 73.615 ms
Loss rate: 9.41%
-- Flow 1:
Average throughput: 68.23 Mbit/s
95th percentile per-packet one-way delay: 73.146 ms
Loss rate: 8.57%
-- Flow 2:
Average throughput: 25.03 Mbit/s
95th percentile per-packet one-way delay: 74.339 ms
Loss rate: 11.29%
-- Flow 3:
Average throughput: 30.63 Mbit/s
95th percentile per-packet one-way delay: 74.716 ms
Loss rate: 11.84%
Run 10: Report of TCP BBR — Data Link

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

- **Flow 1 ingress** (mean 74.63 Mbit/s)
- **Flow 1 egress** (mean 68.23 Mbit/s)
- **Flow 2 ingress** (mean 28.21 Mbit/s)
- **Flow 2 egress** (mean 25.03 Mbit/s)
- **Flow 3 ingress** (mean 34.72 Mbit/s)
- **Flow 3 egress** (mean 30.63 Mbit/s)
Run 1: Statistics of Copa

Start at: 2018-06-29 21:02:49
End at: 2018-06-29 21:03:19
Local clock offset: 0.552 ms
Remote clock offset: 7.147 ms

# Below is generated by plot.py at 2018-06-30 01:19:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.57 Mbit/s
95th percentile per-packet one-way delay: 45.777 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 71.53 Mbit/s
95th percentile per-packet one-way delay: 45.361 ms
Loss rate: 0.94%
-- Flow 2:
Average throughput: 16.01 Mbit/s
95th percentile per-packet one-way delay: 50.202 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 10.14 Mbit/s
95th percentile per-packet one-way delay: 44.581 ms
Loss rate: 0.00%
Run 1: Report of Copa — Data Link

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

Legend:
- Flow 1 ingress (mean 72.21 Mbit/s)
- Flow 1 egress (mean 71.53 Mbit/s)
- Flow 2 ingress (mean 16.09 Mbit/s)
- Flow 2 egress (mean 16.01 Mbit/s)
- Flow 3 ingress (mean 10.14 Mbit/s)
- Flow 3 egress (mean 10.14 Mbit/s)
Run 2: Statistics of Copa

Start at: 2018-06-29 21:28:40
End at: 2018-06-29 21:29:10
Local clock offset: -0.677 ms
Remote clock offset: 7.661 ms

# Below is generated by plot.py at 2018-06-30 01:19:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.28 Mbit/s
95th percentile per-packet one-way delay: 46.778 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 75.34 Mbit/s
95th percentile per-packet one-way delay: 47.319 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 14.66 Mbit/s
95th percentile per-packet one-way delay: 43.412 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 12.55 Mbit/s
95th percentile per-packet one-way delay: 44.107 ms
Loss rate: 0.00%
Run 2: Report of Copa — Data Link

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

- Flow 1 ingress (mean 75.50 Mbit/s)
- Flow 1 egress (mean 75.34 Mbit/s)
- Flow 2 ingress (mean 14.66 Mbit/s)
- Flow 2 egress (mean 14.66 Mbit/s)
- Flow 3 ingress (mean 12.55 Mbit/s)
- Flow 3 egress (mean 12.55 Mbit/s)

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

- Flow 1 (95th percentile 47.32 ms)
- Flow 2 (95th percentile 43.41 ms)
- Flow 3 (95th percentile 44.11 ms)
Run 3: Statistics of Copa

Start at: 2018-06-29 21:54:43
Local clock offset: 2.325 ms
Remote clock offset: 9.067 ms

# Below is generated by plot.py at 2018-06-30 01:19:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.76 Mbit/s
95th percentile per-packet one-way delay: 53.994 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 56.82 Mbit/s
95th percentile per-packet one-way delay: 54.735 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 26.93 Mbit/s
95th percentile per-packet one-way delay: 47.032 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 15.06 Mbit/s
95th percentile per-packet one-way delay: 57.804 ms
Loss rate: 0.00%
Run 3: Report of Copa — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 56.96 Mbit/s)
Flow 1 egress (mean 56.82 Mbit/s)
Flow 2 ingress (mean 26.97 Mbit/s)
Flow 2 egress (mean 26.93 Mbit/s)
Flow 3 ingress (mean 15.06 Mbit/s)
Flow 3 egress (mean 15.06 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 54.73 ms)
Flow 2 (95th percentile 47.03 ms)
Flow 3 (95th percentile 57.80 ms)
Run 4: Statistics of Copa

Start at: 2018-06-29 22:20:06  
End at: 2018-06-29 22:20:36  
Local clock offset: 5.553 ms  
Remote clock offset: 7.794 ms

# Below is generated by plot.py at 2018-06-30 01:19:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 82.89 Mbit/s  
95th percentile per-packet one-way delay: 47.327 ms  
Loss rate: 1.05%  
-- Flow 1:  
Average throughput: 58.39 Mbit/s  
95th percentile per-packet one-way delay: 45.514 ms  
Loss rate: 1.23%  
-- Flow 2:  
Average throughput: 19.56 Mbit/s  
95th percentile per-packet one-way delay: 50.984 ms  
Loss rate: 0.61%  
-- Flow 3:  
Average throughput: 35.23 Mbit/s  
95th percentile per-packet one-way delay: 52.053 ms  
Loss rate: 0.64%
Run 4: Report of Copa — Data Link

**Throughput (Mbps)**

- **Flow 1 ingress** (mean 59.12 Mbps)
- **Flow 1 egress** (mean 58.39 Mbps)
- **Flow 2 ingress** (mean 19.68 Mbps)
- **Flow 2 egress** (mean 19.56 Mbps)
- **Flow 3 ingress** (mean 34.79 Mbps)
- **Flow 3 egress** (mean 35.23 Mbps)

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

- **Flow 1** (95th percentile 45.51 ms)
- **Flow 2** (95th percentile 50.98 ms)
- **Flow 3** (95th percentile 52.05 ms)
Run 5: Statistics of Copa

Start at: 2018-06-29 22:47:02
End at: 2018-06-29 22:47:32
Local clock offset: 6.774 ms
Remote clock offset: 3.421 ms

# Below is generated by plot.py at 2018-06-30 01:19:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 55.56 Mbit/s
  95th percentile per-packet one-way delay: 51.325 ms
  Loss rate: 0.37%
  -- Flow 1:
  Average throughput: 30.06 Mbit/s
  95th percentile per-packet one-way delay: 59.209 ms
  Loss rate: 0.42%
  -- Flow 2:
  Average throughput: 25.28 Mbit/s
  95th percentile per-packet one-way delay: 41.838 ms
  Loss rate: 0.24%
  -- Flow 3:
  Average throughput: 26.07 Mbit/s
  95th percentile per-packet one-way delay: 44.251 ms
  Loss rate: 0.49%
Run 5: Report of Copa — Data Link
Run 6: Statistics of Copa

Start at: 2018-06-29 23:14:02
End at: 2018-06-29 23:14:32
Local clock offset: 3.72 ms
Remote clock offset: 3.381 ms

# Below is generated by plot.py at 2018-06-30 01:19:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.28 Mbit/s
95th percentile per-packet one-way delay: 55.377 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 47.67 Mbit/s
95th percentile per-packet one-way delay: 59.242 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 22.91 Mbit/s
95th percentile per-packet one-way delay: 53.239 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 46.15 Mbit/s
95th percentile per-packet one-way delay: 53.759 ms
Loss rate: 0.00%
Run 6: Report of Copa — Data Link
Run 7: Statistics of Copa

End at: 2018-06-29 23:39:46
Local clock offset: 0.036 ms
Remote clock offset: 3.951 ms

# Below is generated by plot.py at 2018-06-30 01:20:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.42 Mbit/s
95th percentile per-packet one-way delay: 50.997 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 36.29 Mbit/s
95th percentile per-packet one-way delay: 64.121 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 67.89 Mbit/s
95th percentile per-packet one-way delay: 45.379 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 8.71 Mbit/s
95th percentile per-packet one-way delay: 44.350 ms
Loss rate: 0.02%
Run 7: Report of Copa — Data Link

![Graph of data link throughput and packet delay over time for Flow 1, Flow 2, and Flow 3.](image)

- **Flow 1 ingress (mean 36.45 Mbit/s)**
- **Flow 1 egress (mean 36.29 Mbit/s)**
- **Flow 2 ingress (mean 67.92 Mbit/s)**
- **Flow 2 egress (mean 67.89 Mbit/s)**
- **Flow 3 ingress (mean 8.71 Mbit/s)**
- **Flow 3 egress (mean 8.71 Mbit/s)**
Run 8: Statistics of Copa

Start at: 2018-06-30 00:03:55
End at: 2018-06-30 00:04:25
Local clock offset: 0.09 ms
Remote clock offset: 3.983 ms

# Below is generated by plot.py at 2018-06-30 01:20:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.34 Mbit/s
95th percentile per-packet one-way delay: 50.471 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 71.26 Mbit/s
95th percentile per-packet one-way delay: 51.956 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 16.59 Mbit/s
95th percentile per-packet one-way delay: 42.656 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 12.14 Mbit/s
95th percentile per-packet one-way delay: 43.376 ms
Loss rate: 0.08%
Run 8: Report of Copa — Data Link

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**Throughput (Mbps)**

- Flow 1 ingress (mean 71.53 Mbit/s)
- Flow 1 egress (mean 71.26 Mbit/s)
- Flow 2 ingress (mean 16.59 Mbit/s)
- Flow 2 egress (mean 16.59 Mbit/s)
- Flow 3 ingress (mean 12.15 Mbit/s)
- Flow 3 egress (mean 12.14 Mbit/s)

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

- Flow 1 (95th percentile 51.96 ms)
- Flow 2 (95th percentile 42.66 ms)
- Flow 3 (95th percentile 43.38 ms)

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Run 9: Statistics of Copa

Start at: 2018-06-30 00:29:20
End at: 2018-06-30 00:29:50
Local clock offset: 0.167 ms
Remote clock offset: 3.781 ms

# Below is generated by plot.py at 2018-06-30 01:20:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.66 Mbit/s
95th percentile per-packet one-way delay: 51.553 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 59.22 Mbit/s
95th percentile per-packet one-way delay: 52.620 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 25.55 Mbit/s
95th percentile per-packet one-way delay: 49.614 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 22.36 Mbit/s
95th percentile per-packet one-way delay: 42.971 ms
Loss rate: 0.02%
Run 9: Report of Copa — Data Link

[Graph showing throughput and packet delay with data on flows.

Legend:
- Flow 1 ingress (mean 59.38 Mbit/s)
- Flow 1 egress (mean 59.22 Mbit/s)
- Flow 2 ingress (mean 25.60 Mbit/s)
- Flow 2 egress (mean 25.55 Mbit/s)
- Flow 3 ingress (mean 22.34 Mbit/s)
- Flow 3 egress (mean 22.36 Mbit/s)

Packet delay:
- Flow 1 (95th percentile 52.62 ms)
- Flow 2 (95th percentile 49.61 ms)
- Flow 3 (95th percentile 42.97 ms)
Run 10: Statistics of Copa

Start at: 2018-06-30 00:54:47
End at: 2018-06-30 00:55:17
Local clock offset: 0.351 ms
Remote clock offset: 4.437 ms

# Below is generated by plot.py at 2018-06-30 01:21:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.58 Mbit/s
95th percentile per-packet one-way delay: 45.587 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 68.52 Mbit/s
95th percentile per-packet one-way delay: 46.226 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 16.02 Mbit/s
95th percentile per-packet one-way delay: 42.805 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 28.20 Mbit/s
95th percentile per-packet one-way delay: 46.796 ms
Loss rate: 0.00%
Run 10: Report of Copa — Data Link

![Graph 1: Throughput (Mbps)]

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

Legend:
- Flow 1 ingress (mean 69.23 Mbit/s)
- Flow 1 egress (mean 68.52 Mbit/s)
- Flow 2 ingress (mean 16.02 Mbit/s)
- Flow 2 egress (mean 16.02 Mbit/s)
- Flow 3 ingress (mean 28.21 Mbit/s)
- Flow 3 egress (mean 28.20 Mbit/s)
Run 1: Statistics of TCP Cubic

Start at: 2018-06-29 21:07:38
End at: 2018-06-29 21:08:08
Local clock offset: 0.122 ms
Remote clock offset: 7.257 ms

# Below is generated by plot.py at 2018-06-30 01:21:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.24 Mbit/s
95th percentile per-packet one-way delay: 71.981 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 64.43 Mbit/s
95th percentile per-packet one-way delay: 73.269 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 30.38 Mbit/s
95th percentile per-packet one-way delay: 68.245 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 31.75 Mbit/s
95th percentile per-packet one-way delay: 60.765 ms
Loss rate: 0.25%
Run 1: Report of TCP Cubic — Data Link
Run 2: Statistics of TCP Cubic

Start at: 2018-06-29 21:33:39
End at: 2018-06-29 21:34:09
Local clock offset: -0.834 ms
Remote clock offset: 7.972 ms

# Below is generated by plot.py at 2018-06-30 01:21:30
# Datalink statistics
 -- Total of 3 flows:
 Average throughput: 96.15 Mbit/s
 95th percentile per-packet one-way delay: 75.462 ms
 Loss rate: 0.75%
 -- Flow 1:
 Average throughput: 76.42 Mbit/s
 95th percentile per-packet one-way delay: 75.319 ms
 Loss rate: 0.78%
 -- Flow 2:
 Average throughput: 20.25 Mbit/s
 95th percentile per-packet one-way delay: 75.474 ms
 Loss rate: 0.49%
 -- Flow 3:
 Average throughput: 18.86 Mbit/s
 95th percentile per-packet one-way delay: 75.839 ms
 Loss rate: 0.91%
Run 2: Report of TCP Cubic — Data Link
Run 3: Statistics of TCP Cubic

Start at: 2018-06-29 21:59:37
End at: 2018-06-29 22:00:07
Local clock offset: 3.482 ms
Remote clock offset: 9.327 ms

# Below is generated by plot.py at 2018-06-30 01:21:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.09 Mbit/s
95th percentile per-packet one-way delay: 74.196 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 23.58 Mbit/s
95th percentile per-packet one-way delay: 74.989 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 65.45 Mbit/s
95th percentile per-packet one-way delay: 73.764 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 29.90 Mbit/s
95th percentile per-packet one-way delay: 52.379 ms
Loss rate: 0.96%
Run 3: Report of TCP Cubic — Data Link
Run 4: Statistics of TCP Cubic

Start at: 2018-06-29 22:25:16
End at: 2018-06-29 22:25:46
Local clock offset: 5.919 ms
Remote clock offset: 5.854 ms

# Below is generated by plot.py at 2018-06-30 01:21:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 95.91 Mbit/s
  95th percentile per-packet one-way delay: 73.906 ms
  Loss rate: 0.60%
-- Flow 1:
  Average throughput: 71.71 Mbit/s
  95th percentile per-packet one-way delay: 74.115 ms
  Loss rate: 0.56%
-- Flow 2:
  Average throughput: 23.73 Mbit/s
  95th percentile per-packet one-way delay: 74.826 ms
  Loss rate: 0.86%
-- Flow 3:
  Average throughput: 25.38 Mbit/s
  95th percentile per-packet one-way delay: 69.253 ms
  Loss rate: 0.42%
Run 4: Report of TCP Cubic — Data Link

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

Flow 1 ingress (mean 72.16 Mbps), Flow 1 egress (mean 71.71 Mbps), Flow 2 ingress (mean 23.95 Mbps), Flow 2 egress (mean 23.75 Mbps), Flow 3 ingress (mean 25.50 Mbps), Flow 3 egress (mean 25.36 Mbps)

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

Flow 1 (95th percentile 74.11 ms), Flow 2 (95th percentile 74.83 ms), Flow 3 (95th percentile 69.25 ms)
Run 5: Statistics of TCP Cubic

End at: 2018-06-29 22:53:06
Local clock offset: 5.264 ms
Remote clock offset: 3.351 ms

# Below is generated by plot.py at 2018-06-30 01:21:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.94 Mbit/s
95th percentile per-packet one-way delay: 73.847 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 72.76 Mbit/s
95th percentile per-packet one-way delay: 74.016 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 26.55 Mbit/s
95th percentile per-packet one-way delay: 73.082 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 16.63 Mbit/s
95th percentile per-packet one-way delay: 73.483 ms
Loss rate: 1.00%
Run 5: Report of TCP Cubic — Data Link

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**Throughput (Mbps)**

- Flow 1 ingress (mean 73.32 Mbps)
- Flow 1 egress (mean 72.76 Mbps)
- Flow 2 ingress (mean 26.86 Mbps)
- Flow 2 egress (mean 26.55 Mbps)
- Flow 3 ingress (mean 16.77 Mbps)
- Flow 3 egress (mean 16.63 Mbps)

---

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

- Flow 1 (95th percentile 74.02 ms)
- Flow 2 (95th percentile 73.08 ms)
- Flow 3 (95th percentile 73.48 ms)
Run 6: Statistics of TCP Cubic

Start at: 2018-06-29 23:19:04
End at: 2018-06-29 23:19:34
Local clock offset: 2.661 ms
Remote clock offset: 3.385 ms

# Below is generated by plot.py at 2018-06-30 01:21:47
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 95.87 Mbit/s
  95th percentile per-packet one-way delay: 75.270 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 73.90 Mbit/s
  95th percentile per-packet one-way delay: 75.448 ms
  Loss rate: 0.54%
-- Flow 2:
  Average throughput: 19.59 Mbit/s
  95th percentile per-packet one-way delay: 71.213 ms
  Loss rate: 0.41%
-- Flow 3:
  Average throughput: 26.93 Mbit/s
  95th percentile per-packet one-way delay: 71.346 ms
  Loss rate: 1.00%
Run 6: Report of TCP Cubic — Data Link
Run 7: Statistics of TCP Cubic

Start at: 2018-06-29 23:43:52
End at: 2018-06-29 23:44:22
Local clock offset: -0.231 ms
Remote clock offset: 3.92 ms

# Below is generated by plot.py at 2018-06-30 01:21:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.77 Mbit/s
95th percentile per-packet one-way delay: 73.623 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 56.65 Mbit/s
95th percentile per-packet one-way delay: 73.316 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 56.08 Mbit/s
95th percentile per-packet one-way delay: 74.042 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 5.25 Mbit/s
95th percentile per-packet one-way delay: 73.884 ms
Loss rate: 0.34%
Run 7: Report of TCP Cubic — Data Link

![Graph showing network performance metrics over time]

- **Throughput (Mbit/s):**
  - Flow 1 ingress (mean 57.12 Mbit/s)
  - Flow 1 egress (mean 56.65 Mbit/s)
  - Flow 2 ingress (mean 56.39 Mbit/s)
  - Flow 2 egress (mean 56.08 Mbit/s)
  - Flow 3 ingress (mean 5.27 Mbit/s)
  - Flow 3 egress (mean 5.25 Mbit/s)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 73.32 ms)
  - Flow 2 (95th percentile 74.04 ms)
  - Flow 3 (95th percentile 73.88 ms)
Run 8: Statistics of TCP Cubic

Start at: 2018-06-30 00:08:41
End at: 2018-06-30 00:09:11
Local clock offset: -0.089 ms
Remote clock offset: 3.815 ms

# Below is generated by plot.py at 2018-06-30 01:21:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.42 Mbit/s
95th percentile per-packet one-way delay: 74.803 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 55.87 Mbit/s
95th percentile per-packet one-way delay: 75.120 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 35.09 Mbit/s
95th percentile per-packet one-way delay: 73.976 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 48.78 Mbit/s
95th percentile per-packet one-way delay: 74.879 ms
Loss rate: 0.15%
Run 8: Report of TCP Cubic — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 56.32 Mbps)  |  Flow 1 egress (mean 55.87 Mbps)
Flow 2 ingress (mean 35.60 Mbps)  |  Flow 2 egress (mean 35.09 Mbps)
Flow 3 ingress (mean 48.94 Mbps)  |  Flow 3 egress (mean 48.78 Mbps)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 75.12 ms)  |  Flow 2 (95th percentile 73.98 ms)  |  Flow 3 (95th percentile 74.88 ms)
Run 9: Statistics of TCP Cubic

Start at: 2018-06-30 00:34:27
End at: 2018-06-30 00:34:57
Local clock offset: 0.141 ms
Remote clock offset: 3.715 ms

# Below is generated by plot.py at 2018-06-30 01:21:59
# Datalink statistics

-- Total of 3 flows:
Average throughput: 96.08 Mbit/s
95th percentile per-packet one-way delay: 73.812 ms
Loss rate: 0.83%

-- Flow 1:
Average throughput: 70.99 Mbit/s
95th percentile per-packet one-way delay: 74.072 ms
Loss rate: 0.84%

-- Flow 2:
Average throughput: 25.85 Mbit/s
95th percentile per-packet one-way delay: 73.009 ms
Loss rate: 0.60%

-- Flow 3:
Average throughput: 23.73 Mbit/s
95th percentile per-packet one-way delay: 71.704 ms
Loss rate: 1.29%
Run 9: Report of TCP Cubic — Data Link
Run 10: Statistics of TCP Cubic

Start at: 2018-06-30 00:59:35
End at: 2018-06-30 01:00:05
Local clock offset: 0.373 ms
Remote clock offset: 4.581 ms

# Below is generated by plot.py at 2018-06-30 01:22:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.12 Mbit/s
95th percentile per-packet one-way delay: 73.722 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 50.19 Mbit/s
95th percentile per-packet one-way delay: 74.900 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 49.15 Mbit/s
95th percentile per-packet one-way delay: 72.203 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 30.71 Mbit/s
95th percentile per-packet one-way delay: 67.740 ms
Loss rate: 0.19%
Run 10: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 50.65 Mbit/s)
- Flow 1 egress (mean 50.19 Mbit/s)
- Flow 2 ingress (mean 49.65 Mbit/s)
- Flow 2 egress (mean 49.15 Mbit/s)
- Flow 3 ingress (mean 30.77 Mbit/s)
- Flow 3 egress (mean 30.71 Mbit/s)

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

- Flow 1 (95th percentile 74.90 ms)
- Flow 2 (95th percentile 72.20 ms)
- Flow 3 (95th percentile 67.74 ms)
Run 1: Statistics of FillP

Start at: 2018-06-29 21:16:11
End at: 2018-06-29 21:16:41
Local clock offset: -0.285 ms
Remote clock offset: 7.341 ms

# Below is generated by plot.py at 2018-06-30 01:22:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.10 Mbit/s
95th percentile per-packet one-way delay: 74.782 ms
Loss rate: 25.63%
-- Flow 1:
Average throughput: 59.48 Mbit/s
95th percentile per-packet one-way delay: 74.238 ms
Loss rate: 21.52%
-- Flow 2:
Average throughput: 39.75 Mbit/s
95th percentile per-packet one-way delay: 75.322 ms
Loss rate: 26.45%
-- Flow 3:
Average throughput: 27.63 Mbit/s
95th percentile per-packet one-way delay: 75.458 ms
Loss rate: 43.16%
Run 1: Report of FillP — Data Link

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**Throughput (Mbps):**
- Flow 1 ingress (mean 75.85 Mbps)
- Flow 1 egress (mean 59.48 Mbps)
- Flow 2 ingress (mean 54.10 Mbps)
- Flow 2 egress (mean 39.75 Mbps)
- Flow 3 ingress (mean 48.56 Mbps)
- Flow 3 egress (mean 27.63 Mbps)

**Per-packet one-way delay (ms):**
- Flow 1 (95th percentile 74.24 ms)
- Flow 2 (95th percentile 75.32 ms)
- Flow 3 (95th percentile 75.46 ms)
Run 2: Statistics of FillP

End at: 2018-06-29 21:42:46
Local clock offset: -1.301 ms
Remote clock offset: 8.274 ms

# Below is generated by plot.py at 2018-06-30 01:23:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 95.18 Mbit/s
  95th percentile per-packet one-way delay: 74.505 ms
  Loss rate: 27.86%
-- Flow 1:
  Average throughput: 65.07 Mbit/s
  95th percentile per-packet one-way delay: 74.095 ms
  Loss rate: 21.43%
-- Flow 2:
  Average throughput: 24.22 Mbit/s
  95th percentile per-packet one-way delay: 74.789 ms
  Loss rate: 38.03%
-- Flow 3:
  Average throughput: 42.29 Mbit/s
  95th percentile per-packet one-way delay: 75.457 ms
  Loss rate: 39.43%
Run 2: Report of FillP — Data Link

![Graph 1: Throughput (Mbps)]

- **Flow 1 ingress (mean 82.87 Mbps)**
- **Flow 1 egress (mean 65.07 Mbps)**
- **Flow 2 ingress (mean 39.69 Mbps)**
- **Flow 2 egress (mean 24.22 Mbps)**
- **Flow 3 ingress (mean 69.75 Mbps)**
- **Flow 3 egress (mean 42.29 Mbps)**

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

- **Flow 1 (95th percentile 74.09 ms)**
- **Flow 2 (95th percentile 74.79 ms)**
- **Flow 3 (95th percentile 75.46 ms)**
Run 3: Statistics of FillP

Start at: 2018-06-29 22:08:07
End at: 2018-06-29 22:08:37
Local clock offset: 4.598 ms
Remote clock offset: 9.7 ms

# Below is generated by plot.py at 2018-06-30 01:23:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.71 Mbit/s
95th percentile per-packet one-way delay: 73.859 ms
Loss rate: 24.13%
-- Flow 1:
Average throughput: 62.38 Mbit/s
95th percentile per-packet one-way delay: 73.350 ms
Loss rate: 21.96%
-- Flow 2:
Average throughput: 35.98 Mbit/s
95th percentile per-packet one-way delay: 74.581 ms
Loss rate: 27.60%
-- Flow 3:
Average throughput: 25.28 Mbit/s
95th percentile per-packet one-way delay: 74.410 ms
Loss rate: 29.12%
Run 3: Report of FillP — Data Link

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

- Flow 1 ingress (mean 79.96 Mbps)
- Flow 1 egress (mean 62.38 Mbps)
- Flow 2 ingress (mean 49.68 Mbps)
- Flow 2 egress (mean 35.98 Mbps)
- Flow 3 ingress (mean 35.70 Mbps)
- Flow 3 egress (mean 25.28 Mbps)

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

- Flow 1 (95th percentile 73.35 ms)
- Flow 2 (95th percentile 74.58 ms)
- Flow 3 (95th percentile 74.41 ms)
Run 4: Statistics of FillP

Start at: 2018-06-29 22:34:19
End at: 2018-06-29 22:34:49
Local clock offset: 6.52 ms
Remote clock offset: 4.196 ms

# Below is generated by plot.py at 2018-06-30 01:23:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.02 Mbit/s
95th percentile per-packet one-way delay: 74.513 ms
Loss rate: 25.76%
-- Flow 1:
Average throughput: 62.68 Mbit/s
95th percentile per-packet one-way delay: 73.826 ms
Loss rate: 21.26%
-- Flow 2:
Average throughput: 38.85 Mbit/s
95th percentile per-packet one-way delay: 75.520 ms
Loss rate: 34.30%
-- Flow 3:
Average throughput: 19.67 Mbit/s
95th percentile per-packet one-way delay: 75.204 ms
Loss rate: 28.24%
Run 4: Report of FillP — Data Link
Run 5: Statistics of FilIP

Start at: 2018-06-29 23:01:21
End at: 2018-06-29 23:01:51
Local clock offset: 4.189 ms
Remote clock offset: 3.471 ms

# Below is generated by plot.py at 2018-06-30 01:23:35
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 95.19 Mbit/s
   95th percentile per-packet one-way delay: 74.774 ms
   Loss rate: 27.40%
-- Flow 1:
   Average throughput: 62.97 Mbit/s
   95th percentile per-packet one-way delay: 74.627 ms
   Loss rate: 21.50%
-- Flow 2:
   Average throughput: 34.73 Mbit/s
   95th percentile per-packet one-way delay: 74.619 ms
   Loss rate: 33.20%
-- Flow 3:
   Average throughput: 27.66 Mbit/s
   95th percentile per-packet one-way delay: 75.814 ms
   Loss rate: 44.09%
Run 5: Report of FillP — Data Link
Run 6: Statistics of FillP

Local clock offset: 1.078 ms
Remote clock offset: 3.515 ms

# Below is generated by plot.py at 2018-06-30 01:23:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 95.24 Mbit/s
  95th percentile per-packet one-way delay: 74.486 ms
  Loss rate: 25.51%
-- Flow 1:
  Average throughput: 60.08 Mbit/s
  95th percentile per-packet one-way delay: 74.327 ms
  Loss rate: 21.40%
-- Flow 2:
  Average throughput: 38.62 Mbit/s
  95th percentile per-packet one-way delay: 74.511 ms
  Loss rate: 32.67%
-- Flow 3:
  Average throughput: 28.57 Mbit/s
  95th percentile per-packet one-way delay: 75.165 ms
  Loss rate: 28.61%
Run 6: Report of FillP — Data Link
Run 7: Statistics of FillP

Start at: 2018-06-29 23:52:18
End at: 2018-06-29 23:52:48
Local clock offset: 0.043 ms
Remote clock offset: 4.052 ms

# Below is generated by plot.py at 2018-06-30 01:23:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.22 Mbit/s
95th percentile per-packet one-way delay: 74.584 ms
Loss rate: 23.75%
-- Flow 1:
Average throughput: 62.41 Mbit/s
95th percentile per-packet one-way delay: 74.277 ms
Loss rate: 21.44%
-- Flow 2:
Average throughput: 38.24 Mbit/s
95th percentile per-packet one-way delay: 75.255 ms
Loss rate: 27.42%
-- Flow 3:
Average throughput: 22.10 Mbit/s
95th percentile per-packet one-way delay: 74.477 ms
Loss rate: 29.07%
Run 7: Report of FillP — Data Link

---

**Throughput (Mbps) vs Time (s)**
- **Flow 1 ingress** (mean 79.46 Mbps)
- **Flow 1 egress** (mean 62.41 Mbps)
- **Flow 2 ingress** (mean 52.69 Mbps)
- **Flow 2 egress** (mean 38.24 Mbps)
- **Flow 3 ingress** (mean 31.17 Mbps)
- **Flow 3 egress** (mean 22.10 Mbps)

**Per-packet one-way delay (ms) vs Time (s)**
- **Flow 1** (95th percentile 74.28 ms)
- **Flow 2** (95th percentile 75.25 ms)
- **Flow 3** (95th percentile 74.48 ms)
Run 8: Statistics of FillP

Start at: 2018-06-30 00:17:16  
End at: 2018-06-30 00:17:46  
Local clock offset: -0.058 ms  
Remote clock offset: 3.692 ms

# Below is generated by plot.py at 2018-06-30 01:23:46  
# Datalink statistics

-- Total of 3 flows:  
Average throughput: 95.18 Mbit/s  
95th percentile per-packet one-way delay: 74.553 ms  
Loss rate: 29.86%  
-- Flow 1:  
Average throughput: 62.62 Mbit/s  
95th percentile per-packet one-way delay: 74.325 ms  
Loss rate: 22.85%  
-- Flow 2:  
Average throughput: 32.09 Mbit/s  
95th percentile per-packet one-way delay: 74.806 ms  
Loss rate: 38.57%  
-- Flow 3:  
Average throughput: 34.52 Mbit/s  
95th percentile per-packet one-way delay: 75.002 ms  
Loss rate: 43.31%
Run 8: Report of FillP — Data Link

![Graph of throughput and packet delay over time for multiple flows.](image)

Legend:
- Flow 1 ingress (mean 81.23 Mbit/s)
- Flow 1 egress (mean 62.62 Mbit/s)
- Flow 2 ingress (mean 52.24 Mbit/s)
- Flow 2 egress (mean 32.09 Mbit/s)
- Flow 3 ingress (mean 59.74 Mbit/s)
- Flow 3 egress (mean 34.52 Mbit/s)

Legend for packet delay:
- Flow 1 (95th percentile 74.33 ms)
- Flow 2 (95th percentile 74.81 ms)
- Flow 3 (95th percentile 75.00 ms)
Run 9: Statistics of FillP

Start at: 2018-06-30 00:43:04
End at: 2018-06-30 00:43:34
Local clock offset: 0.091 ms
Remote clock offset: 4.316 ms

# Below is generated by plot.py at 2018-06-30 01:24:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.46 Mbit/s
95th percentile per-packet one-way delay: 74.634 ms
Loss rate: 23.32%
-- Flow 1:
Average throughput: 60.81 Mbit/s
95th percentile per-packet one-way delay: 74.207 ms
Loss rate: 20.27%
-- Flow 2:
Average throughput: 34.62 Mbit/s
95th percentile per-packet one-way delay: 75.353 ms
Loss rate: 26.22%
-- Flow 3:
Average throughput: 36.44 Mbit/s
95th percentile per-packet one-way delay: 74.640 ms
Loss rate: 31.60%
Run 9: Report of FillP — Data Link

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

![Graph of Per packet one way delay (ms) vs Time (s)]
Run 10: Statistics of F illP

Start at: 2018-06-30 01:08:03
End at: 2018-06-30 01:08:33
Local clock offset: 0.334 ms
Remote clock offset: 4.616 ms

# Below is generated by plot.py at 2018-06-30 01:24:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.17 Mbit/s
95th percentile per-packet one-way delay: 74.676 ms
Loss rate: 25.06%
-- Flow 1:
Average throughput: 56.61 Mbit/s
95th percentile per-packet one-way delay: 74.303 ms
Loss rate: 21.45%
-- Flow 2:
Average throughput: 42.26 Mbit/s
95th percentile per-packet one-way delay: 75.238 ms
Loss rate: 27.06%
-- Flow 3:
Average throughput: 31.33 Mbit/s
95th percentile per-packet one-way delay: 74.458 ms
Loss rate: 36.22%
Run 10: Report of FillIP — Data Link

![Throughput Graph](image1)

![Delay Graph](image2)

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Flow 1 ingress (mean 72.15 Mbit/s)  
Flow 1 egress (mean 56.61 Mbit/s)  
Flow 2 ingress (mean 56.03 Mbit/s)  
Flow 2 egress (mean 42.26 Mbit/s)  
Flow 3 ingress (mean 49.26 Mbit/s)  
Flow 3 egress (mean 31.33 Mbit/s)
Run 1: Statistics of FillP-Sheep

Start at: 2018-06-29 21:09:05
End at: 2018-06-29 21:09:35
Local clock offset: 0.15 ms
Remote clock offset: 7.318 ms

# Below is generated by plot.py at 2018-06-30 01:24:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 37.159 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 37.189 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 36.504 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 36.452 ms
  Loss rate: 0.00%
Run 1: Report of FillP-Sheep — Data Link
Run 2: Statistics of FillP-Sheep

Start at: 2018-06-29 21:35:13
End at: 2018-06-29 21:35:43
Local clock offset: -0.997 ms
Remote clock offset: 7.911 ms

# Below is generated by plot.py at 2018-06-30 01:24:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 37.212 ms
  Loss rate: 0.67%
-- Flow 1:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 37.230 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 36.533 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 37.183 ms
  Loss rate: 2.00%
Run 2: Report of FillP-Sheep — Data Link

[Graphs showing throughput and delay over time for different flows]
Run 3: Statistics of FillP-Sheep

Start at: 2018-06-29 22:01:08
End at: 2018-06-29 22:01:38
Local clock offset: 3.619 ms
Remote clock offset: 9.406 ms

# Below is generated by plot.py at 2018-06-30 01:24:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 37.393 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 36.784 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 37.381 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 37.416 ms
  Loss rate: 0.00%
Run 3: Report of FillP-Sheep — Data Link
Run 4: Statistics of FillP-Sheep

Local clock offset: 6.015 ms
Remote clock offset: 5.387 ms

# Below is generated by plot.py at 2018-06-30 01:24:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 37.420 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 36.638 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 36.711 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 37.459 ms
Loss rate: 0.00%
Run 4: Report of FillP-Sheep — Data Link

![Graph showing throughput over time]

Throughput (Mbps)

![Graph showing packet delivery over time]

Packet delivery (95th percentile)

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Run 5: Statistics of FillP-Sheep

Start at: 2018-06-29 22:54:07
End at: 2018-06-29 22:54:37
Local clock offset: 5.004 ms
Remote clock offset: 3.39 ms

# Below is generated by plot.py at 2018-06-30 01:24:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 37.121 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 37.146 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 37.149 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 36.569 ms
Loss rate: 0.00%
Run 5: Report of FillP-Sheep — Data Link
Run 6: Statistics of FillP-Sheep

Start at: 2018-06-29 23:20:35
End at: 2018-06-29 23:21:05
Local clock offset: 2.275 ms
Remote clock offset: 3.328 ms

# Below is generated by plot.py at 2018-06-30 01:24:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 37.003 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 36.340 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 37.008 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 37.003 ms
  Loss rate: 0.00%
Run 6: Report of FillP-Sheep — Data Link

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

- Flow 1 Ingress (mean 0.00 Mbps)
- Flow 1 Egress (mean 0.00 Mbps)
- Flow 2 Ingress (mean 0.00 Mbps)
- Flow 2 Egress (mean 0.00 Mbps)
- Flow 3 Ingress (mean 0.00 Mbps)
- Flow 3 Egress (mean 0.00 Mbps)

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

- Flow 1 (95th percentile 36.34 ms)
- Flow 2 (95th percentile 37.01 ms)
- Flow 3 (95th percentile 37.00 ms)
Run 7: Statistics of FillP-Sheep

Start at: 2018-06-29 23:45:18
End at: 2018-06-29 23:45:48
Local clock offset: -0.418 ms
Remote clock offset: 3.961 ms

# Below is generated by plot.py at 2018-06-30 01:24:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 37.322 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 36.652 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 37.330 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 37.336 ms
Loss rate: 0.00%
Run 7: Report of FillP-Sheep — Data Link

![Graph showing network performance metrics](image1)

![Graph showing packet delay](image2)
Run 8: Statistics of FillP-Sheep

Start at: 2018-06-30 00:10:10
End at: 2018-06-30 00:10:40
Local clock offset: -0.038 ms
Remote clock offset: 3.932 ms

# Below is generated by plot.py at 2018-06-30 01:24:59
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 0.00 Mbit/s
   95th percentile per-packet one-way delay: 36.621 ms
   Loss rate: 0.00%
-- Flow 1:
   Average throughput: 0.00 Mbit/s
   95th percentile per-packet one-way delay: 36.637 ms
   Loss rate: 0.00%
-- Flow 2:
   Average throughput: 0.00 Mbit/s
   95th percentile per-packet one-way delay: 36.620 ms
   Loss rate: 0.00%
-- Flow 3:
   Average throughput: 0.00 Mbit/s
   95th percentile per-packet one-way delay: 36.623 ms
   Loss rate: 0.00%
Run 8: Report of FillP-Sheep — Data Link

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[Graphs showing throughput and per-packet one-way delay over time for different flows and ingress/egress measurements.]
Run 9: Statistics of FillP-Sheep

Start at: 2018-06-30 00:36:01
End at: 2018-06-30 00:36:31
Local clock offset: 0.224 ms
Remote clock offset: 3.948 ms

# Below is generated by plot.py at 2018-06-30 01:24:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 37.136 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 36.546 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 36.619 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 37.160 ms
  Loss rate: 0.00%
Run 9: Report of FillP-Sheep — Data Link
Run 10: Statistics of FillP-Sheep

Start at: 2018-06-30 01:01:10
End at: 2018-06-30 01:01:40
Local clock offset: 0.381 ms
Remote clock offset: 4.709 ms

# Below is generated by plot.py at 2018-06-30 01:24:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 36.668 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 36.630 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 36.701 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 36.642 ms
  Loss rate: 0.00%
Run 10: Report of FillIP-Sheep — Data Link

![Graph showing throughput over time for different flows](image1)

![Graph showing round-trip delay over time for different flows](image2)
Run 1: Statistics of Indigo

Start at: 2018-06-29 20:59:36
End at: 2018-06-29 21:00:06
Local clock offset: 0.874 ms
Remote clock offset: 7.119 ms

# Below is generated by plot.py at 2018-06-30 01:24:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.08 Mbit/s
95th percentile per-packet one-way delay: 59.601 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 65.77 Mbit/s
95th percentile per-packet one-way delay: 56.834 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 29.25 Mbit/s
95th percentile per-packet one-way delay: 62.298 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 30.30 Mbit/s
95th percentile per-packet one-way delay: 68.562 ms
Loss rate: 1.10%
Run 1: Report of Indigo — Data Link
Run 2: Statistics of Indigo

Local clock offset: -0.643 ms
Remote clock offset: 7.671 ms

# Below is generated by plot.py at 2018-06-30 01:24:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.85 Mbit/s
95th percentile per-packet one-way delay: 50.822 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 67.45 Mbit/s
95th percentile per-packet one-way delay: 49.078 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 26.13 Mbit/s
95th percentile per-packet one-way delay: 53.315 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 27.68 Mbit/s
95th percentile per-packet one-way delay: 51.785 ms
Loss rate: 0.00%
Run 2: Report of Indigo — Data Link
Run 3: Statistics of Indigo

Start at: 2018-06-29 21:51:30
End at: 2018-06-29 21:52:00
Local clock offset: 1.331 ms
Remote clock offset: 8.874 ms

# Below is generated by plot.py at 2018-06-30 01:24:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.00 Mbit/s
95th percentile per-packet one-way delay: 49.783 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 59.40 Mbit/s
95th percentile per-packet one-way delay: 48.734 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.28 Mbit/s
95th percentile per-packet one-way delay: 49.828 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 24.14 Mbit/s
95th percentile per-packet one-way delay: 51.392 ms
Loss rate: 0.02%
Run 3: Report of Indigo — Data Link
Run 4: Statistics of Indigo

Start at: 2018-06-29 22:16:50
End at: 2018-06-29 22:17:20
Local clock offset: 5.322 ms
Remote clock offset: 9.924 ms

# Below is generated by plot.py at 2018-06-30 01:24:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.88 Mbit/s
95th percentile per-packet one-way delay: 55.954 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 66.07 Mbit/s
95th percentile per-packet one-way delay: 52.377 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 23.71 Mbit/s
95th percentile per-packet one-way delay: 58.704 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 33.88 Mbit/s
95th percentile per-packet one-way delay: 66.806 ms
Loss rate: 0.00%
Run 4: Report of Indigo — Data Link

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

| Flow 1 ingress (mean 66.10 Mbit/s) | Flow 1 egress (mean 66.07 Mbit/s) |
| Flow 2 ingress (mean 23.72 Mbit/s) | Flow 2 egress (mean 23.71 Mbit/s) |
| Flow 3 ingress (mean 33.87 Mbit/s) | Flow 3 egress (mean 33.86 Mbit/s) |

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

| Flow 1 (95th percentile 52.38 ms) | Flow 2 (95th percentile 58.70 ms) | Flow 3 (95th percentile 66.81 ms) |
Run 5: Statistics of Indigo

Start at: 2018-06-29 22:43:15
End at: 2018-06-29 22:43:45
Local clock offset: 7.143 ms
Remote clock offset: 3.591 ms

# Below is generated by plot.py at 2018-06-30 01:24:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.15 Mbit/s
95th percentile per-packet one-way delay: 57.289 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 59.25 Mbit/s
95th percentile per-packet one-way delay: 53.353 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 31.57 Mbit/s
95th percentile per-packet one-way delay: 58.383 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 27.39 Mbit/s
95th percentile per-packet one-way delay: 67.114 ms
Loss rate: 0.01%
Run 5: Report of Indigo — Data Link

![Graph 1](Image)

![Graph 2](Image)
Run 6: Statistics of Indigo

Start at: 2018-06-29 23:10:51
End at: 2018-06-29 23:11:21
Local clock offset: 3.795 ms
Remote clock offset: 3.449 ms

# Below is generated by plot.py at 2018-06-30 01:25:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.37 Mbit/s
95th percentile per-packet one-way delay: 54.553 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 62.99 Mbit/s
95th percentile per-packet one-way delay: 53.119 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 35.63 Mbit/s
95th percentile per-packet one-way delay: 60.637 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 20.56 Mbit/s
95th percentile per-packet one-way delay: 52.264 ms
Loss rate: 0.00%
Run 6: Report of Indigo — Data Link
Run 7: Statistics of Indigo

Start at: 2018-06-29 23:36:10
End at: 2018-06-29 23:36:40
Local clock offset: 0.237 ms
Remote clock offset: 3.872 ms

# Below is generated by plot.py at 2018-06-30 01:25:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.67 Mbit/s
95th percentile per-packet one-way delay: 55.479 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 68.05 Mbit/s
95th percentile per-packet one-way delay: 52.000 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 26.41 Mbit/s
95th percentile per-packet one-way delay: 57.724 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 27.76 Mbit/s
95th percentile per-packet one-way delay: 64.522 ms
Loss rate: 0.00%
Run 7: Report of Indigo — Data Link

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

- Flow 1 ingress (mean 68.07 Mbit/s)
- Flow 1 egress (mean 68.05 Mbit/s)
- Flow 2 ingress (mean 26.41 Mbit/s)
- Flow 2 egress (mean 26.41 Mbit/s)
- Flow 3 ingress (mean 27.75 Mbit/s)
- Flow 3 egress (mean 27.76 Mbit/s)
Run 8: Statistics of Indigo

Start at: 2018-06-30 00:00:48
End at: 2018-06-30 00:01:18
Local clock offset: 0.136 ms
Remote clock offset: 3.985 ms

# Below is generated by plot.py at 2018-06-30 01:25:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.99 Mbit/s
95th percentile per-packet one-way delay: 51.065 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 69.10 Mbit/s
95th percentile per-packet one-way delay: 49.626 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 26.96 Mbit/s
95th percentile per-packet one-way delay: 56.067 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 24.56 Mbit/s
95th percentile per-packet one-way delay: 50.926 ms
Loss rate: 0.00%
Run 8: Report of Indigo — Data Link
Run 9: Statistics of Indigo

Start at: 2018-06-30 00:26:01
End at: 2018-06-30 00:26:31
Local clock offset: 0.262 ms
Remote clock offset: 3.829 ms

# Below is generated by plot.py at 2018-06-30 01:25:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.77 Mbit/s
95th percentile per-packet one-way delay: 62.161 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 62.08 Mbit/s
95th percentile per-packet one-way delay: 57.239 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 33.48 Mbit/s
95th percentile per-packet one-way delay: 64.933 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 32.28 Mbit/s
95th percentile per-packet one-way delay: 68.323 ms
Loss rate: 2.60%
Run 9: Report of Indigo — Data Link
Run 10: Statistics of Indigo

Start at: 2018-06-30 00:51:43
End at: 2018-06-30 00:52:13
Local clock offset: 0.268 ms
Remote clock offset: 4.559 ms

# Below is generated by plot.py at 2018-06-30 01:26:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 94.34 Mbit/s
  95th percentile per-packet one-way delay: 54.966 ms
  Loss rate: 0.18%
-- Flow 1:
  Average throughput: 63.13 Mbit/s
  95th percentile per-packet one-way delay: 50.672 ms
  Loss rate: 0.10%
-- Flow 2:
  Average throughput: 32.14 Mbit/s
  95th percentile per-packet one-way delay: 55.722 ms
  Loss rate: 0.48%
-- Flow 3:
  Average throughput: 30.31 Mbit/s
  95th percentile per-packet one-way delay: 63.270 ms
  Loss rate: 0.00%
Run 10: Report of Indigo — Data Link

[Graph showing throughput vs. time and per-packet one-way delay vs. time for different flows with annotations for mean throughput.]
Run 1: Statistics of LEDBAT

Start at: 2018-06-29 21:17:47
End at: 2018-06-29 21:18:17
Local clock offset: -0.363 ms
Remote clock offset: 7.512 ms

# Below is generated by plot.py at 2018-06-30 01:26:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.50 Mbit/s
95th percentile per-packet one-way delay: 71.436 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 42.46 Mbit/s
95th percentile per-packet one-way delay: 69.670 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 30.91 Mbit/s
95th percentile per-packet one-way delay: 72.395 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 7.49 Mbit/s
95th percentile per-packet one-way delay: 74.744 ms
Loss rate: 0.57%
Run 1: Report of LEDBAT — Data Link

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**Graph 1:**
- **Throughput (Mbps):**
  - Flow 1 Ingress (mean 42.47 Mbps)
  - Flow 1 Egress (mean 42.46 Mbps)
  - Flow 2 Ingress (mean 30.92 Mbps)
  - Flow 2 Egress (mean 30.91 Mbps)
  - Flow 3 Ingress (mean 7.51 Mbps)
  - Flow 3 Egress (mean 7.49 Mbps)

**Graph 2:**
- **Per packet one way delay (ms):**
  - Flow 1 (95th percentile 69.67 ms)
  - Flow 2 (95th percentile 72.39 ms)
  - Flow 3 (95th percentile 74.74 ms)
Run 2: Statistics of LEDBAT

Start at: 2018-06-29 21:43:49
End at: 2018-06-29 21:44:19
Local clock offset: −1.345 ms
Remote clock offset: 8.384 ms

# Below is generated by plot.py at 2018-06-30 01:26:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.01 Mbit/s
95th percentile per-packet one-way delay: 59.838 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 35.51 Mbit/s
95th percentile per-packet one-way delay: 60.123 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 34.53 Mbit/s
95th percentile per-packet one-way delay: 59.758 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 19.61 Mbit/s
95th percentile per-packet one-way delay: 59.097 ms
Loss rate: 0.02%
Run 2: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 35.55 Mbit/s)
- Flow 1 egress (mean 35.51 Mbit/s)
- Flow 2 ingress (mean 34.38 Mbit/s)
- Flow 2 egress (mean 34.53 Mbit/s)
- Flow 3 ingress (mean 19.61 Mbit/s)
- Flow 3 egress (mean 19.61 Mbit/s)

![Graph 2: Packet Error Rate vs. Time](image)

- Flow 1 (95th percentile 60.12 ms)
- Flow 2 (95th percentile 59.76 ms)
- Flow 3 (95th percentile 59.10 ms)
Run 3: Statistics of LEDBAT

Start at: 2018-06-29 22:09:37
End at: 2018-06-29 22:10:07
Local clock offset: 4.745 ms
Remote clock offset: 9.782 ms

# Below is generated by plot.py at 2018-06-30 01:26:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 59.71 Mbit/s
  95th percentile per-packet one-way delay: 67.366 ms
  Loss rate: 0.03%
-- Flow 1:
  Average throughput: 33.56 Mbit/s
  95th percentile per-packet one-way delay: 63.547 ms
  Loss rate: 0.04%
-- Flow 2:
  Average throughput: 30.33 Mbit/s
  95th percentile per-packet one-way delay: 67.996 ms
  Loss rate: 0.02%
-- Flow 3:
  Average throughput: 17.79 Mbit/s
  95th percentile per-packet one-way delay: 70.293 ms
  Loss rate: 0.01%
Run 4: Statistics of LEDBAT

Start at: 2018-06-29 22:35:48
End at: 2018-06-29 22:36:18
Local clock offset: 6.659 ms
Remote clock offset: 4.037 ms

# Below is generated by plot.py at 2018-06-30 01:26:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.44 Mbit/s
95th percentile per-packet one-way delay: 68.380 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 36.72 Mbit/s
95th percentile per-packet one-way delay: 68.679 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 29.21 Mbit/s
95th percentile per-packet one-way delay: 68.437 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 15.86 Mbit/s
95th percentile per-packet one-way delay: 56.594 ms
Loss rate: 0.15%
Run 4: Report of LEDBAT — Data Link

![Graph showing throughput and round-trip time for different data flows over time.](image-url)

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 35.77 Mbps)
  - Flow 1 egress (mean 36.72 Mbps)
  - Flow 2 ingress (mean 29.25 Mbps)
  - Flow 2 egress (mean 29.21 Mbps)
  - Flow 3 ingress (mean 15.88 Mbps)
  - Flow 3 egress (mean 15.86 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 68.68 ms)
  - Flow 2 (95th percentile 68.44 ms)
  - Flow 3 (95th percentile 56.59 ms)
Run 5: Statistics of LEDBAT

Start at: 2018-06-29 23:03:07
End at: 2018-06-29 23:03:37
Local clock offset: 4.086 ms
Remote clock offset: 2.711 ms

# Below is generated by plot.py at 2018-06-30 01:26:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 54.33 Mbit/s
95th percentile per-packet one-way delay: 69.007 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 36.80 Mbit/s
95th percentile per-packet one-way delay: 68.449 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 18.61 Mbit/s
95th percentile per-packet one-way delay: 70.478 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 15.50 Mbit/s
95th percentile per-packet one-way delay: 41.083 ms
Loss rate: 0.20%
Run 5: Report of LEDBAT — Data Link
Run 6: Statistics of LEDBAT

End at: 2018-06-29 23:29:21
Local clock offset: 0.832 ms
Remote clock offset: 3.003 ms

# Below is generated by plot.py at 2018-06-30 01:26:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.22 Mbit/s
95th percentile per-packet one-way delay: 70.684 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 49.72 Mbit/s
95th percentile per-packet one-way delay: 70.372 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 14.88 Mbit/s
95th percentile per-packet one-way delay: 72.417 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 10.88 Mbit/s
95th percentile per-packet one-way delay: 70.521 ms
Loss rate: 0.10%
Run 7: Statistics of LEDBAT

Start at: 2018-06-29 23:53:43
End at: 2018-06-29 23:54:13
Local clock offset: -0.002 ms
Remote clock offset: 4.14 ms

# Below is generated by plot.py at 2018-06-30 01:26:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 56.92 Mbit/s
  95th percentile per-packet one-way delay: 71.892 ms
  Loss rate: 0.22%
-- Flow 1:
  Average throughput: 38.91 Mbit/s
  95th percentile per-packet one-way delay: 71.428 ms
  Loss rate: 0.18%
-- Flow 2:
  Average throughput: 18.52 Mbit/s
  95th percentile per-packet one-way delay: 73.648 ms
  Loss rate: 0.43%
-- Flow 3:
  Average throughput: 17.18 Mbit/s
  95th percentile per-packet one-way delay: 39.389 ms
  Loss rate: 0.10%
Run 8: Statistics of LEDBAT

Start at: 2018-06-30 00:18:46
End at: 2018-06-30 00:19:16
Local clock offset: -0.042 ms
Remote clock offset: 3.759 ms

# Below is generated by plot.py at 2018-06-30 01:26:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 57.27 Mbit/s
95th percentile per-packet one-way delay: 71.748 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 38.81 Mbit/s
95th percentile per-packet one-way delay: 71.325 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 17.95 Mbit/s
95th percentile per-packet one-way delay: 73.653 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 19.61 Mbit/s
95th percentile per-packet one-way delay: 39.523 ms
Loss rate: 0.01%
Run 8: Report of LEDBAT — Data Link

![Graph of throughput over time for different flows]

- Flow 1 ingress (mean 38.90 Mbit/s)
- Flow 1 egress (mean 38.81 Mbit/s)
- Flow 2 ingress (mean 18.01 Mbit/s)
- Flow 2 egress (mean 17.95 Mbit/s)
- Flow 3 ingress (mean 19.57 Mbit/s)
- Flow 3 egress (mean 19.61 Mbit/s)

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

- Flow 1 (95th percentile 71.33 ms)
- Flow 2 (95th percentile 73.65 ms)
- Flow 3 (95th percentile 39.52 ms)
Run 9: Statistics of LEDBAT

Start at: 2018-06-30 00:44:31
End at: 2018-06-30 00:45:01
Local clock offset: 0.044 ms
Remote clock offset: 4.269 ms

# Below is generated by plot.py at 2018-06-30 01:26:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.18 Mbit/s
95th percentile per-packet one-way delay: 69.749 ms
Loss rate: 0.07%

-- Flow 1:
Average throughput: 37.48 Mbit/s
95th percentile per-packet one-way delay: 69.735 ms
Loss rate: 0.07%

-- Flow 2:
Average throughput: 27.46 Mbit/s
95th percentile per-packet one-way delay: 70.678 ms
Loss rate: 0.07%

-- Flow 3:
Average throughput: 16.41 Mbit/s
95th percentile per-packet one-way delay: 53.300 ms
Loss rate: 0.11%
Run 10: Statistics of LEDBAT

Start at: 2018-06-30 01:09:29
End at: 2018-06-30 01:09:59
Local clock offset: 0.328 ms
Remote clock offset: 4.579 ms

# Below is generated by plot.py at 2018-06-30 01:26:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.27 Mbit/s
95th percentile per-packet one-way delay: 72.431 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 38.41 Mbit/s
95th percentile per-packet one-way delay: 72.235 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 18.63 Mbit/s
95th percentile per-packet one-way delay: 73.727 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 16.55 Mbit/s
95th percentile per-packet one-way delay: 37.783 ms
Loss rate: 0.02%
Run 10: Report of LEDBAT — Data Link

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

[Graph showing packet loss over time for different flows]
Run 1: Statistics of PCC-Allegro

Start at: 2018-06-29 20:58:11
End at: 2018-06-29 20:58:41
Local clock offset: 1.05 ms
Remote clock offset: 7.121 ms

# Below is generated by plot.py at 2018-06-30 01:27:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.85 Mbit/s
95th percentile per-packet one-way delay: 66.329 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 81.24 Mbit/s
95th percentile per-packet one-way delay: 66.278 ms
Loss rate: 1.46%
-- Flow 2:
Average throughput: 9.42 Mbit/s
95th percentile per-packet one-way delay: 69.527 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 10.16 Mbit/s
95th percentile per-packet one-way delay: 56.842 ms
Loss rate: 1.49%
Run 1: Report of PCC-Allegro — Data Link
Run 2: Statistics of PCC-Allegro

End at: 2018-06-29 21:24:22
Local clock offset: -0.496 ms
Remote clock offset: 7.564 ms

# Below is generated by plot.py at 2018-06-30 01:27:13
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 90.84 Mbit/s
  95th percentile per-packet one-way delay: 72.308 ms
  Loss rate: 4.18%
-- Flow 1:
  Average throughput: 80.76 Mbit/s
  95th percentile per-packet one-way delay: 71.803 ms
  Loss rate: 3.93%
-- Flow 2:
  Average throughput: 11.52 Mbit/s
  95th percentile per-packet one-way delay: 73.793 ms
  Loss rate: 5.08%
-- Flow 3:
  Average throughput: 7.33 Mbit/s
  95th percentile per-packet one-way delay: 74.862 ms
  Loss rate: 9.30%
Run 3: Statistics of PCC-Allegro

End at: 2018-06-29 21:50:25
Local clock offset: 0.734 ms
Remote clock offset: 8.826 ms

# Below is generated by plot.py at 2018-06-30 01:27:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 86.54 Mbit/s
  95th percentile per-packet one-way delay: 65.641 ms
  Loss rate: 1.05%
-- Flow 1:
  Average throughput: 72.75 Mbit/s
  95th percentile per-packet one-way delay: 65.603 ms
  Loss rate: 1.13%
-- Flow 2:
  Average throughput: 18.76 Mbit/s
  95th percentile per-packet one-way delay: 66.019 ms
  Loss rate: 0.74%
-- Flow 3:
  Average throughput: 4.00 Mbit/s
  95th percentile per-packet one-way delay: 65.306 ms
  Loss rate: 0.09%
Run 3: Report of PCC-Allegro — Data Link

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

- Blue dashed line: Flow 1 ingress (mean 73.58 Mbps)
- Blue line: Flow 1 egress (mean 72.75 Mbps)
- Green dashed line: Flow 2 ingress (mean 18.90 Mbps)
- Green line: Flow 2 egress (mean 18.76 Mbps)
- Red dashed line: Flow 3 ingress (mean 4.00 Mbps)
- Red line: Flow 3 egress (mean 4.00 Mbps)

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

- Blue line: Flow 1 (95th percentile 65.60 ms)
- Green line: Flow 2 (95th percentile 66.02 ms)
- Red line: Flow 3 (95th percentile 65.31 ms)
Run 4: Statistics of PCC-Allegro

End at: 2018-06-29 22:15:55
Local clock offset: 5.207 ms
Remote clock offset: 10.045 ms

# Below is generated by plot.py at 2018-06-30 01:27:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.33 Mbit/s
95th percentile per-packet one-way delay: 71.966 ms
Loss rate: 2.65%
-- Flow 1:
Average throughput: 39.07 Mbit/s
95th percentile per-packet one-way delay: 71.443 ms
Loss rate: 2.28%
-- Flow 2:
Average throughput: 32.42 Mbit/s
95th percentile per-packet one-way delay: 72.036 ms
Loss rate: 3.17%
-- Flow 3:
Average throughput: 8.20 Mbit/s
95th percentile per-packet one-way delay: 74.890 ms
Loss rate: 3.92%
Run 4: Report of PCC-Allegro — Data Link

![Graph of throughput over time for different flows]

![Graph of per-packet one-way delay over time for different flows]
Run 5: Statistics of PCC-Allegro

Start at: 2018-06-29 22:41:43
Local clock offset: 7.024 ms
Remote clock offset: 3.809 ms

# Below is generated by plot.py at 2018-06-30 01:27:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.39 Mbit/s
95th percentile per-packet one-way delay: 64.684 ms
Loss rate: 1.67%
-- Flow 1:
Average throughput: 79.68 Mbit/s
95th percentile per-packet one-way delay: 63.936 ms
Loss rate: 1.65%
-- Flow 2:
Average throughput: 7.80 Mbit/s
95th percentile per-packet one-way delay: 66.745 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 7.65 Mbit/s
95th percentile per-packet one-way delay: 69.892 ms
Loss rate: 3.43%
Run 5: Report of PCC-Allegro — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 81.03 Mbps)
- Flow 2 ingress (mean 7.69 Mbps)
- Flow 3 ingress (mean 7.92 Mbps)
- Flow 1 egress (mean 79.68 Mbps)
- Flow 2 egress (mean 7.60 Mbps)
- Flow 3 egress (mean 7.65 Mbps)

**Packet delay (ms):**
- Flow 1 (95th percentile 63.94 ms)
- Flow 2 (95th percentile 66.75 ms)
- Flow 3 (95th percentile 69.89 ms)
Run 6: Statistics of PCC-Allegro

Start at: 2018-06-29 23:09:20
End at: 2018-06-29 23:09:50
Local clock offset: 3.833 ms
Remote clock offset: 3.438 ms

# Below is generated by plot.py at 2018-06-30 01:27:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.88 Mbit/s
95th percentile per-packet one-way delay: 72.611 ms
Loss rate: 2.29%
-- Flow 1:
Average throughput: 82.95 Mbit/s
95th percentile per-packet one-way delay: 72.542 ms
Loss rate: 2.34%
-- Flow 2:
Average throughput: 8.17 Mbit/s
95th percentile per-packet one-way delay: 73.181 ms
Loss rate: 2.14%
-- Flow 3:
Average throughput: 4.56 Mbit/s
95th percentile per-packet one-way delay: 72.719 ms
Loss rate: 0.00%
Run 6: Report of PCC-Allegro — Data Link
Run 7: Statistics of PCC-Allegro

Start at: 2018-06-29 23:34:45
End at: 2018-06-29 23:35:15
Local clock offset: 0.268 ms
Remote clock offset: 3.731 ms

# Below is generated by plot.py at 2018-06-30 01:27:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.81 Mbit/s
95th percentile per-packet one-way delay: 75.909 ms
Loss rate: 14.39%
-- Flow 1:
Average throughput: 92.82 Mbit/s
95th percentile per-packet one-way delay: 75.908 ms
Loss rate: 14.51%
-- Flow 2:
Average throughput: 2.01 Mbit/s
95th percentile per-packet one-way delay: 76.004 ms
Loss rate: 9.65%
-- Flow 3:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 75.819 ms
Loss rate: 5.08%
Run 7: Report of PCC-Allegro — Data Link

![Graph of network performance metrics]

- **Throughput**:
  - Flow 1 ingress (mean 108.58 Mbit/s)
  - Flow 1 egress (mean 92.82 Mbit/s)
  - Flow 2 ingress (mean 2.23 Mbit/s)
  - Flow 2 egress (mean 2.01 Mbit/s)
  - Flow 3 ingress (mean 2.06 Mbit/s)
  - Flow 3 egress (mean 1.96 Mbit/s)

- **Per-packet one-way delay (ms)**:
  - Flow 1 (95th percentile 75.91 ms)
  - Flow 2 (95th percentile 76.00 ms)
  - Flow 3 (95th percentile 75.82 ms)
Run 8: Statistics of PCC-Allegro

End at: 2018-06-29 23:59:50
Local clock offset: 0.152 ms
Remote clock offset: 4.136 ms

# Below is generated by plot.py at 2018-06-30 01:27:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.86 Mbit/s
95th percentile per-packet one-way delay: 69.166 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 77.94 Mbit/s
95th percentile per-packet one-way delay: 69.204 ms
Loss rate: 1.48%
-- Flow 2:
Average throughput: 8.36 Mbit/s
95th percentile per-packet one-way delay: 69.818 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 10.20 Mbit/s
95th percentile per-packet one-way delay: 65.544 ms
Loss rate: 1.92%
Run 8: Report of PCC-Allegro — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 79.10 Mbit/s)  Flow 1 egress (mean 77.94 Mbit/s)
Flow 2 ingress (mean 8.43 Mbit/s)  Flow 2 egress (mean 8.36 Mbit/s)
Flow 3 ingress (mean 10.40 Mbit/s)  Flow 3 egress (mean 10.20 Mbit/s)

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 69.20 ms)  Flow 2 (95th percentile 69.82 ms)  Flow 3 (95th percentile 65.54 ms)
Run 9: Statistics of PCC-Allegro

Start at: 2018-06-30 00:24:33
End at: 2018-06-30 00:25:03
Local clock offset: 0.232 ms
Remote clock offset: 3.702 ms

# Below is generated by plot.py at 2018-06-30 01:28:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.26 Mbit/s
95th percentile per-packet one-way delay: 69.895 ms
Loss rate: 4.03%
-- Flow 1:
Average throughput: 78.94 Mbit/s
95th percentile per-packet one-way delay: 68.693 ms
Loss rate: 3.65%
-- Flow 2:
Average throughput: 8.37 Mbit/s
95th percentile per-packet one-way delay: 71.986 ms
Loss rate: 4.64%
-- Flow 3:
Average throughput: 14.40 Mbit/s
95th percentile per-packet one-way delay: 74.872 ms
Loss rate: 9.36%
Run 10: Statistics of PCC-Allegro

Start at: 2018-06-30 00:50:16
End at: 2018-06-30 00:50:46
Local clock offset: 0.16 ms
Remote clock offset: 4.532 ms

# Below is generated by plot.py at 2018-06-30 01:28:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.02 Mbit/s
95th percentile per-packet one-way delay: 75.982 ms
Loss rate: 24.89%
-- Flow 1:
Average throughput: 93.59 Mbit/s
95th percentile per-packet one-way delay: 75.983 ms
Loss rate: 24.90%
-- Flow 2:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 75.814 ms
Loss rate: 23.97%
-- Flow 3:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 75.911 ms
Loss rate: 25.10%
Run 10: Report of PCC-Allegro — Data Link

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

- **Flow 1 ingress (mean 124.62 Mbps)**
- **Flow 1 egress (mean 93.59 Mbps)**
- **Flow 2 ingress (mean 1.85 Mbps)**
- **Flow 2 egress (mean 1.41 Mbps)**
- **Flow 3 ingress (mean 2.01 Mbps)**
- **Flow 3 egress (mean 1.51 Mbps)**

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

- **Flow 1 (95th percentile 75.98 ms)**
- **Flow 2 (95th percentile 75.81 ms)**
- **Flow 3 (95th percentile 75.91 ms)**
Run 1: Statistics of PCC-Expr

Start at: 2018-06-29 21:10:22
End at: 2018-06-29 21:10:52
Local clock offset: 0.065 ms
Remote clock offset: 7.266 ms

# Below is generated by plot.py at 2018-06-30 01:29:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.43 Mbit/s
95th percentile per-packet one-way delay: 71.651 ms
Loss rate: 2.23%
-- Flow 1:
Average throughput: 52.00 Mbit/s
95th percentile per-packet one-way delay: 72.055 ms
Loss rate: 2.81%
-- Flow 2:
Average throughput: 26.65 Mbit/s
95th percentile per-packet one-way delay: 70.145 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 11.27 Mbit/s
95th percentile per-packet one-way delay: 67.169 ms
Loss rate: 0.70%
Run 1: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 53.50 Mbit/s)
- Flow 1 egress (mean 52.00 Mbit/s)
- Flow 2 ingress (mean 26.85 Mbit/s)
- Flow 2 egress (mean 26.65 Mbit/s)
- Flow 3 ingress (mean 11.35 Mbit/s)
- Flow 3 egress (mean 11.27 Mbit/s)

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

- Flow 1 (95th percentile 72.06 ms)
- Flow 2 (95th percentile 70.14 ms)
- Flow 3 (95th percentile 67.17 ms)
Run 2: Statistics of PCC-Expr

Start at: 2018-06-29 21:36:29
End at: 2018-06-29 21:36:59
Local clock offset: -1.047 ms
Remote clock offset: 7.993 ms

# Below is generated by plot.py at 2018-06-30 01:29:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.39 Mbit/s
95th percentile per-packet one-way delay: 70.522 ms
Loss rate: 1.93%
-- Flow 1:
Average throughput: 70.91 Mbit/s
95th percentile per-packet one-way delay: 68.068 ms
Loss rate: 1.90%
-- Flow 2:
Average throughput: 21.41 Mbit/s
95th percentile per-packet one-way delay: 73.675 ms
Loss rate: 2.02%
-- Flow 3:
Average throughput: 9.80 Mbit/s
95th percentile per-packet one-way delay: 74.081 ms
Loss rate: 2.19%
Run 2: Report of PCC-Expr — Data Link

**Throughput (Mbps):**
- Flow 1 ingress (mean 72.30 Mbps)
- Flow 1 egress (mean 70.91 Mbps)
- Flow 2 ingress (mean 21.85 Mbps)
- Flow 2 egress (mean 21.41 Mbps)
- Flow 3 ingress (mean 10.03 Mbps)
- Flow 3 egress (mean 9.80 Mbps)

**Per-packet one way delay (ms):**
- Flow 1 (95th percentile 66.07 ms)
- Flow 2 (95th percentile 73.67 ms)
- Flow 3 (95th percentile 74.08 ms)
Run 3: Statistics of PCC-Expr

Start at: 2018-06-29 22:02:24
End at: 2018-06-29 22:02:54
Local clock offset: 3.9 ms
Remote clock offset: 9.435 ms

# Below is generated by plot.py at 2018-06-30 01:29:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 87.46 Mbit/s
  95th percentile per-packet one-way delay: 68.234 ms
  Loss rate: 2.11%
-- Flow 1:
  Average throughput: 65.73 Mbit/s
  95th percentile per-packet one-way delay: 67.873 ms
  Loss rate: 2.31%
-- Flow 2:
  Average throughput: 26.19 Mbit/s
  95th percentile per-packet one-way delay: 69.902 ms
  Loss rate: 1.33%
-- Flow 3:
  Average throughput: 13.02 Mbit/s
  95th percentile per-packet one-way delay: 67.396 ms
  Loss rate: 2.24%
Run 3: Report of PCC-Expr — Data Link

![Throughput Graph](image1.png)

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

End at: 2018-06-29 22:28:42
Local clock offset: 6.03 ms
Remote clock offset: 5.142 ms

# Below is generated by plot.py at 2018-06-30 01:29:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.59 Mbit/s
95th percentile per-packet one-way delay: 67.586 ms
Loss rate: 1.88%
-- Flow 1:
Average throughput: 68.66 Mbit/s
95th percentile per-packet one-way delay: 67.289 ms
Loss rate: 1.87%
-- Flow 2:
Average throughput: 7.94 Mbit/s
95th percentile per-packet one-way delay: 69.757 ms
Loss rate: 2.04%
-- Flow 3:
Average throughput: 8.02 Mbit/s
95th percentile per-packet one-way delay: 70.319 ms
Loss rate: 1.95%
Run 4: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 69.97 Mbit/s)
- Flow 1 egress (mean 68.66 Mbit/s)
- Flow 2 ingress (mean 8.10 Mbit/s)
- Flow 2 egress (mean 7.94 Mbit/s)
- Flow 3 ingress (mean 8.18 Mbit/s)
- Flow 3 egress (mean 8.02 Mbit/s)

- Flow 1 (95th percentile 67.29 ms)
- Flow 2 (95th percentile 69.76 ms)
- Flow 3 (95th percentile 70.32 ms)
Run 5: Statistics of PCC-Expr

End at: 2018-06-29 22:55:54
Local clock offset: 4.817 ms
Remote clock offset: 3.382 ms

# Below is generated by plot.py at 2018-06-30 01:29:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 78.99 Mbit/s
  95th percentile per-packet one-way delay: 63.790 ms
  Loss rate: 0.17%
-- Flow 1:
  Average throughput: 62.24 Mbit/s
  95th percentile per-packet one-way delay: 59.021 ms
  Loss rate: 0.11%
-- Flow 2:
  Average throughput: 12.19 Mbit/s
  95th percentile per-packet one-way delay: 64.344 ms
  Loss rate: 0.27%
-- Flow 3:
  Average throughput: 26.14 Mbit/s
  95th percentile per-packet one-way delay: 70.362 ms
  Loss rate: 0.50%
Run 5: Report of PCC-Expr — Data Link

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

Legend:
- Blue line: Flow 1 ingress (mean 62.31 Mbit/s), Flow 1 egress (mean 62.24 Mbit/s)
- Green line: Flow 2 ingress (mean 12.23 Mbit/s), Flow 2 egress (mean 12.19 Mbit/s)
- Red line: Flow 3 ingress (mean 26.27 Mbit/s), Flow 3 egress (mean 26.14 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 59.02 ms)
- Flow 2 (95th percentile 64.34 ms)
- Flow 3 (95th percentile 70.36 ms)
Run 6: Statistics of PCC-Expr

Local clock offset: 1.909 ms
Remote clock offset: 3.421 ms

# Below is generated by plot.py at 2018-06-30 01:30:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.24 Mbit/s
95th percentile per-packet one-way delay: 67.924 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 70.57 Mbit/s
95th percentile per-packet one-way delay: 66.249 ms
Loss rate: 1.59%
-- Flow 2:
Average throughput: 14.77 Mbit/s
95th percentile per-packet one-way delay: 71.231 ms
Loss rate: 1.54%
-- Flow 3:
Average throughput: 17.65 Mbit/s
95th percentile per-packet one-way delay: 72.254 ms
Loss rate: 1.22%
Run 6: Report of PCC-Expr — Data Link

[Graph showing throughput and per-packet one-way delay over time for different flow types and their ingress and egress mean rates.]

Flow 1 ingress (mean 71.81 Mbit/s) | Flow 1 egress (mean 70.57 Mbit/s)
Flow 2 ingress (mean 15.02 Mbit/s) | Flow 2 egress (mean 14.77 Mbit/s)
Flow 3 ingress (mean 17.83 Mbit/s) | Flow 3 egress (mean 17.65 Mbit/s)
Run 7: Statistics of PCC-Expr

End at: 2018-06-29 23:47:05
Local clock offset: -0.274 ms
Remote clock offset: 4.012 ms

# Below is generated by plot.py at 2018-06-30 01:30:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.23 Mbit/s
95th percentile per-packet one-way delay: 67.432 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 62.32 Mbit/s
95th percentile per-packet one-way delay: 66.907 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 26.92 Mbit/s
95th percentile per-packet one-way delay: 68.903 ms
Loss rate: 1.50%
-- Flow 3:
Average throughput: 9.10 Mbit/s
95th percentile per-packet one-way delay: 70.075 ms
Loss rate: 2.07%
Run 7: Report of PCC-Expr — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 62.77 Mbps)
  - Flow 1 egress (mean 62.32 Mbps)
  - Flow 2 ingress (mean 27.33 Mbps)
  - Flow 2 egress (mean 26.92 Mbps)
  - Flow 3 ingress (mean 9.29 Mbps)
  - Flow 3 egress (mean 9.10 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 66.91 ms)
  - Flow 2 (95th percentile 68.90 ms)
  - Flow 3 (95th percentile 70.08 ms)
Run 8: Statistics of PCC-Expr

Start at: 2018-06-30 00:11:27  
End at: 2018-06-30 00:11:57  
Local clock offset: -0.068 ms  
Remote clock offset: 3.792 ms

# Below is generated by plot.py at 2018-06-30 01:30:47  
# Datalink statistics
  
  -- Total of 3 flows:  
  Average throughput: 89.21 Mbit/s  
  95th percentile per-packet one-way delay: 71.446 ms  
  Loss rate: 3.62%  
  -- Flow 1:  
  Average throughput: 75.53 Mbit/s  
  95th percentile per-packet one-way delay: 70.725 ms  
  Loss rate: 3.33%  
  -- Flow 2:  
  Average throughput: 12.07 Mbit/s  
  95th percentile per-packet one-way delay: 72.998 ms  
  Loss rate: 3.97%  
  -- Flow 3:  
  Average throughput: 17.13 Mbit/s  
  95th percentile per-packet one-way delay: 74.110 ms  
  Loss rate: 6.82%
Run 8: Report of PCC-Expr — Data Link

Graph 1: Throughput (Mbps)

- Flow 1 ingress (mean 78.15 Mbps)
- Flow 1 egress (mean 75.53 Mbps)
- Flow 2 ingress (mean 12.57 Mbps)
- Flow 2 egress (mean 12.07 Mbps)
- Flow 3 ingress (mean 18.40 Mbps)
- Flow 3 egress (mean 17.13 Mbps)

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

- Flow 1 (95th percentile 70.72 ms)
- Flow 2 (95th percentile 73.00 ms)
- Flow 3 (95th percentile 74.11 ms)
Run 9: Statistics of PCC-Expr

Start at: 2018-06-30 00:37:18
End at: 2018-06-30 00:37:48
Local clock offset: 0.115 ms
Remote clock offset: 4.015 ms

# Below is generated by plot.py at 2018-06-30 01:31:03
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 77.67 Mbit/s
  95th percentile per-packet one-way delay: 68.341 ms
  Loss rate: 1.04%
-- Flow 1:
  Average throughput: 57.97 Mbit/s
  95th percentile per-packet one-way delay: 68.340 ms
  Loss rate: 1.14%
-- Flow 2:
  Average throughput: 25.60 Mbit/s
  95th percentile per-packet one-way delay: 68.716 ms
  Loss rate: 0.79%
-- Flow 3:
  Average throughput: 8.14 Mbit/s
  95th percentile per-packet one-way delay: 65.851 ms
  Loss rate: 0.26%
Run 9: Report of PCC-Expr — Data Link

![Throughput Graph]

![Delay Graph]
Run 10: Statistics of PCC-Expr

Start at: 2018-06-30 01:02:26
End at: 2018-06-30 01:02:56
Local clock offset: 0.387 ms
Remote clock offset: 4.556 ms

# Below is generated by plot.py at 2018-06-30 01:31:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.87 Mbit/s
95th percentile per-packet one-way delay: 70.311 ms
Loss rate: 2.25%
-- Flow 1:
Average throughput: 61.76 Mbit/s
95th percentile per-packet one-way delay: 70.325 ms
Loss rate: 2.46%
-- Flow 2:
Average throughput: 29.51 Mbit/s
95th percentile per-packet one-way delay: 70.758 ms
Loss rate: 1.93%
-- Flow 3:
Average throughput: 16.76 Mbit/s
95th percentile per-packet one-way delay: 67.764 ms
Loss rate: 0.94%
Run 10: Report of PCC-Expr — Data Link

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**Graph 1:**
- Title: Throughout (Mbps)
- X-axis: Time (s)
- Y-axis: Throughout (Mbps)
- Legend:
  - Flow 1 ingress (mean 63.31 Mbps)
  - Flow 1 egress (mean 61.76 Mbps)
  - Flow 2 ingress (mean 30.03 Mbps)
  - Flow 2 egress (mean 29.51 Mbps)
  - Flow 3 ingress (mean 16.89 Mbps)
  - Flow 3 egress (mean 16.76 Mbps)

**Graph 2:**
- Title: Per-packet one way delay (ms)
- X-axis: Time (s)
- Y-axis: Per-packet one way delay (ms)
- Legend:
  - Flow 1 (95th percentile 70.33 ms)
  - Flow 2 (95th percentile 70.76 ms)
  - Flow 3 (95th percentile 67.76 ms)
Run 1: Statistics of QUIC Cubic

Start at: 2018-06-29 21:12:02
End at: 2018-06-29 21:12:32
Local clock offset: -0.114 ms
Remote clock offset: 7.29 ms

# Below is generated by plot.py at 2018-06-30 01:31:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.33 Mbit/s
95th percentile per-packet one-way delay: 72.997 ms
Loss rate: 3.56%
-- Flow 1:
Average throughput: 58.82 Mbit/s
95th percentile per-packet one-way delay: 72.797 ms
Loss rate: 4.09%
-- Flow 2:
Average throughput: 13.39 Mbit/s
95th percentile per-packet one-way delay: 73.792 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 14.07 Mbit/s
95th percentile per-packet one-way delay: 73.339 ms
Loss rate: 1.41%
Run 1: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 61.37 MB/s)
- Flow 1 egress (mean 58.82 MB/s)
- Flow 2 ingress (mean 13.32 MB/s)
- Flow 2 egress (mean 13.39 MB/s)
- Flow 3 ingress (mean 14.25 MB/s)
- Flow 3 egress (mean 14.07 MB/s)

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

- Flow 1 (95th percentile 72.80 ms)
- Flow 2 (95th percentile 73.79 ms)
- Flow 3 (95th percentile 73.34 ms)
Run 2: Statistics of QUIC Cubic

Start at: 2018-06-29 21:38:12
End at: 2018-06-29 21:38:42
Local clock offset: -1.031 ms
Remote clock offset: 8.059 ms

# Below is generated by plot.py at 2018-06-30 01:31:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.32 Mbit/s
95th percentile per-packet one-way delay: 73.267 ms
Loss rate: 3.66%
-- Flow 1:
Average throughput: 52.15 Mbit/s
95th percentile per-packet one-way delay: 73.201 ms
Loss rate: 4.65%
-- Flow 2:
Average throughput: 27.11 Mbit/s
95th percentile per-packet one-way delay: 72.930 ms
Loss rate: 1.09%
-- Flow 3:
Average throughput: 9.67 Mbit/s
95th percentile per-packet one-way delay: 74.334 ms
Loss rate: 1.40%
Run 2: Report of QUIC Cubic — Data Link
Run 3: Statistics of QUIC Cubic

Start at: 2018-06-29 22:04:05
End at: 2018-06-29 22:04:35
Local clock offset: 4.153 ms
Remote clock offset: 9.509 ms

# Below is generated by plot.py at 2018-06-30 01:31:51
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 73.76 Mbit/s
  95th percentile per-packet one-way delay: 74.093 ms
  Loss rate: 3.70%
-- Flow 1:
  Average throughput: 52.23 Mbit/s
  95th percentile per-packet one-way delay: 74.073 ms
  Loss rate: 4.68%
-- Flow 2:
  Average throughput: 27.76 Mbit/s
  95th percentile per-packet one-way delay: 74.193 ms
  Loss rate: 1.25%
-- Flow 3:
  Average throughput: 9.37 Mbit/s
  95th percentile per-packet one-way delay: 73.604 ms
  Loss rate: 1.18%
Run 3: Report of QUIC Cubic — Data Link

![Graph](image-url)

**Throughput (Mbit/s) vs Time (s)**
- Flow 1 ingress (mean 54.85 Mbit/s)
- Flow 1 egress (mean 52.23 Mbit/s)
- Flow 2 ingress (mean 28.13 Mbit/s)
- Flow 2 egress (mean 27.76 Mbit/s)
- Flow 3 ingress (mean 9.48 Mbit/s)
- Flow 3 egress (mean 9.37 Mbit/s)

**Per-packet round-trip delay (ms) vs Time (s)**
- Flow 1 (95th percentile 74.07 ms)
- Flow 2 (95th percentile 74.19 ms)
- Flow 3 (95th percentile 73.60 ms)
Run 4: Statistics of QUIC Cubic

Start at: 2018-06-29 22:30:10
End at: 2018-06-29 22:30:40
Local clock offset: 6.268 ms
Remote clock offset: 4.795 ms

# Below is generated by plot.py at 2018-06-30 01:31:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.29 Mbit/s
95th percentile per-packet one-way delay: 72.409 ms
Loss rate: 2.58%
-- Flow 1:
Average throughput: 56.26 Mbit/s
95th percentile per-packet one-way delay: 72.008 ms
Loss rate: 3.10%
-- Flow 2:
Average throughput: 25.72 Mbit/s
95th percentile per-packet one-way delay: 72.868 ms
Loss rate: 1.30%
-- Flow 3:
Average throughput: 18.04 Mbit/s
95th percentile per-packet one-way delay: 73.339 ms
Loss rate: 1.30%
Run 4: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 58.12 Mbit/s)
- Flow 1 egress (mean 56.26 Mbit/s)
- Flow 2 ingress (mean 26.07 Mbit/s)
- Flow 2 egress (mean 25.72 Mbit/s)
- Flow 3 ingress (mean 18.31 Mbit/s)
- Flow 3 egress (mean 18.04 Mbit/s)
Run 5: Statistics of QUIC Cubic

Start at: 2018-06-29 22:57:00
End at: 2018-06-29 22:57:30
Local clock offset: 4.598 ms
Remote clock offset: 3.399 ms

# Below is generated by plot.py at 2018-06-30 01:31:51
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 73.00 Mbit/s
  95th percentile per-packet one-way delay: 69.054 ms
  Loss rate: 3.31%
-- Flow 1:
  Average throughput: 46.23 Mbit/s
  95th percentile per-packet one-way delay: 68.658 ms
  Loss rate: 4.55%
-- Flow 2:
  Average throughput: 29.43 Mbit/s
  95th percentile per-packet one-way delay: 68.876 ms
  Loss rate: 1.17%
-- Flow 3:
  Average throughput: 21.92 Mbit/s
  95th percentile per-packet one-way delay: 71.705 ms
  Loss rate: 0.90%
Run 5: Report of QUIC Cubic — Data Link

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

![Graph 2: Per packet one-way delay (ms)]
Run 6: Statistics of QUIC Cubic

Local clock offset: 1.692 ms
Remote clock offset: 3.427 ms

# Below is generated by plot.py at 2018-06-30 01:31:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.68 Mbit/s
95th percentile per-packet one-way delay: 73.475 ms
Loss rate: 3.77%
-- Flow 1:
Average throughput: 52.77 Mbit/s
95th percentile per-packet one-way delay: 73.156 ms
Loss rate: 4.74%
-- Flow 2:
Average throughput: 26.99 Mbit/s
95th percentile per-packet one-way delay: 74.019 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 9.07 Mbit/s
95th percentile per-packet one-way delay: 74.313 ms
Loss rate: 1.55%
Run 6: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 55.45 Mbit/s)
- Flow 1 egress (mean 52.77 Mbit/s)
- Flow 2 ingress (mean 27.32 Mbit/s)
- Flow 2 egress (mean 26.99 Mbit/s)
- Flow 3 ingress (mean 9.20 Mbit/s)
- Flow 3 egress (mean 9.07 Mbit/s)
Run 7: Statistics of QUIC Cubic

End at: 2018-06-29 23:48:43
Local clock offset: -0.168 ms
Remote clock offset: 4.076 ms

# Below is generated by plot.py at 2018-06-30 01:31:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 72.95 Mbit/s
  95th percentile per-packet one-way delay: 73.715 ms
  Loss rate: 3.34%
-- Flow 1:
  Average throughput: 58.76 Mbit/s
  95th percentile per-packet one-way delay: 73.450 ms
  Loss rate: 3.86%
-- Flow 2:
  Average throughput: 13.53 Mbit/s
  95th percentile per-packet one-way delay: 74.453 ms
  Loss rate: 1.08%
-- Flow 3:
  Average throughput: 15.94 Mbit/s
  95th percentile per-packet one-way delay: 74.651 ms
  Loss rate: 1.29%
Run 7: Report of QUIC Cubic — Data Link

[Graph showing throughput over time for different flows with their respective ingress and egress speeds.]

[Graph showing per-packet one way delay over time for different flows with their 95th percentile delay.]
Run 8: Statistics of QUIC Cubic

Start at: 2018-06-30 00:13:11
End at: 2018-06-30 00:13:41
Local clock offset: -0.1 ms
Remote clock offset: 3.767 ms

# Below is generated by plot.py at 2018-06-30 01:32:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.66 Mbit/s
95th percentile per-packet one-way delay: 72.167 ms
Loss rate: 4.31%
-- Flow 1:
Average throughput: 49.61 Mbit/s
95th percentile per-packet one-way delay: 71.978 ms
Loss rate: 4.84%
-- Flow 2:
Average throughput: 12.40 Mbit/s
95th percentile per-packet one-way delay: 72.062 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 44.93 Mbit/s
95th percentile per-packet one-way delay: 72.466 ms
Loss rate: 4.10%
Run 8: Report of QUIC Cubic — Data Link
Run 9: Statistics of QUIC Cubic

Start at: 2018-06-30 00:38:58
End at: 2018-06-30 00:39:28
Local clock offset: 0.081 ms
Remote clock offset: 4.096 ms

# Below is generated by plot.py at 2018-06-30 01:32:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.34 Mbit/s
95th percentile per-packet one-way delay: 74.060 ms
Loss rate: 3.57%
-- Flow 1:
Average throughput: 58.45 Mbit/s
95th percentile per-packet one-way delay: 74.045 ms
Loss rate: 4.13%
-- Flow 2:
Average throughput: 14.54 Mbit/s
95th percentile per-packet one-way delay: 74.132 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 9.76 Mbit/s
95th percentile per-packet one-way delay: 74.073 ms
Loss rate: 1.16%
Run 9: Report of QUIC Cubic — Data Link
Run 10: Statistics of QUIC Cubic

Start at: 2018-06-30 01:04:05
End at: 2018-06-30 01:04:35
Local clock offset: 0.276 ms
Remote clock offset: 4.702 ms

# Below is generated by plot.py at 2018-06-30 01:32:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.97 Mbit/s
95th percentile per-packet one-way delay: 74.168 ms
Loss rate: 3.50%
-- Flow 1:
Average throughput: 59.23 Mbit/s
95th percentile per-packet one-way delay: 74.175 ms
Loss rate: 4.03%
-- Flow 2:
Average throughput: 14.40 Mbit/s
95th percentile per-packet one-way delay: 74.316 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 9.62 Mbit/s
95th percentile per-packet one-way delay: 73.742 ms
Loss rate: 0.95%
Run 10: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

End at: 2018-06-29 21:14:05
Local clock offset: -0.195 ms
Remote clock offset: 7.288 ms

# Below is generated by plot.py at 2018-06-30 01:32:23
# Datalink statistics
-- Total of 3 flows:
95th percentile per-packet one-way delay: 37.346 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 36.671 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 37.355 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 37.356 ms
Loss rate: 0.00%
Run 1: Report of SCReAM — Data Link

![Graph showing throughput and packet one-way delay over time for different flow ingress and egress rates.]

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 0.22 Mbps)
  - Flow 1 egress (mean 0.33 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 36.67 ms)
  - Flow 2 (95th percentile 37.35 ms)
  - Flow 3 (95th percentile 37.36 ms)
Run 2: Statistics of SCReAM

Start at: 2018-06-29 21:39:40
End at: 2018-06-29 21:40:10
Local clock offset: -1.196 ms
Remote clock offset: 8.089 ms

# Below is generated by plot.py at 2018-06-30 01:32:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 37.294 ms
Loss rate: 0.00%

-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 37.305 ms
Loss rate: 0.00%

-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 36.646 ms
Loss rate: 0.00%

-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 36.641 ms
Loss rate: 0.00%
Run 2: Report of SCReAM — Data Link
Run 3: Statistics of SCReAM

Start at: 2018-06-29 22:05:33
End at: 2018-06-29 22:06:03
Local clock offset: 4.303 ms
Remote clock offset: 9.609 ms

# Below is generated by plot.py at 2018-06-30 01:32:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 37.421 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 37.431 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 36.745 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 37.433 ms
  Loss rate: 0.00%
Run 3: Report of SCReAM — Data Link

![Graph of throughput and per-packet end-to-end delay over time for different flows.](image-url)
Run 4: Statistics of SCReAM

End at: 2018-06-29 22:32:14
Local clock offset: 6.374 ms
Remote clock offset: 4.5 ms

# Below is generated by plot.py at 2018-06-30 01:32:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 37.441 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 36.756 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 36.764 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 37.483 ms
Loss rate: 0.00%
Run 4: Report of SCReAM — Data Link

![Graphs showing throughput and per-packet mean/50th percentile delay over time for different flows.](image-url)
Run 5: Statistics of SCReAM

Start at: 2018-06-29 22:58:46
End at: 2018-06-29 22:59:16
Local clock offset: 4.392 ms
Remote clock offset: 3.357 ms

# Below is generated by plot.py at 2018-06-30 01:32:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 36.605 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 36.604 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 36.618 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 36.589 ms
  Loss rate: 0.00%
Run 5: Report of SCReAM — Data Link
Run 6: Statistics of SCReAM

Start at: 2018-06-29 23:24:51
End at: 2018-06-29 23:25:21
Local clock offset: 1.461 ms
Remote clock offset: 3.259 ms

# Below is generated by plot.py at 2018-06-30 01:32:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.42 Mbit/s
  95th percentile per-packet one-way delay: 37.045 ms
  Loss rate: 0.07%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 36.523 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 36.449 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.18 Mbit/s
  95th percentile per-packet one-way delay: 37.097 ms
  Loss rate: 0.46%
Run 6: Report of SCReAM — Data Link

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

- **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 0.19 Mbps)
  - Flow 3 egress (mean 0.18 Mbps)

- **Packet Delay (ms):**
  - Flow 1 (95th percentile 36.52 ms)
  - Flow 2 (95th percentile 36.45 ms)
  - Flow 3 (95th percentile 37.10 ms)
Run 7: Statistics of SCReAM

Start at: 2018-06-29 23:49:42
End at: 2018-06-29 23:50:12
Local clock offset: -0.037 ms
Remote clock offset: 3.965 ms

# Below is generated by plot.py at 2018-06-30 01:32:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 37.335 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 37.330 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 36.661 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 37.369 ms
Loss rate: 0.00%
Run 7: Report of SCReAM — Data Link

![Throughput and Delay Graphs]

- **Throughput Graph:**
  - 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)

- **Delay Graph:**
  - Flow 1 (95th percentile 37.33 ms)
  - Flow 2 (95th percentile 36.66 ms)
  - Flow 3 (95th percentile 37.37 ms)
Run 8: Statistics of SCReAM

Start at: 2018-06-30 00:14:40
End at: 2018-06-30 00:15:10
Local clock offset: -0.156 ms
Remote clock offset: 3.8 ms

# Below is generated by plot.py at 2018-06-30 01:32:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.41 Mbit/s
  95th percentile per-packet one-way delay: 37.310 ms
  Loss rate: 0.13%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 36.708 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 37.351 ms
  Loss rate: 0.21%
-- Flow 3:
  Average throughput: 0.18 Mbit/s
  95th percentile per-packet one-way delay: 36.678 ms
  Loss rate: 0.42%
Run 8: Report of SCReAM — Data Link

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

- **Throughput** (Mbps):
  - Flow 1 ing (mean 0.21 Mbps)
  - Flow 1 egress (mean 0.21 Mbps)
  - Flow 2 ing (mean 0.21 Mbps)
  - Flow 2 egress (mean 0.21 Mbps)
  - Flow 3 ing (mean 0.19 Mbps)
  - Flow 3 egress (mean 0.18 Mbps)

- **Packet one-way delay (ms):**
  - Flow 1 (95th percentile 36.71 ms)
  - Flow 2 (95th percentile 37.35 ms)
  - Flow 3 (95th percentile 36.68 ms)
Run 9: Statistics of SCReAM

Start at: 2018-06-30 00:40:30
End at: 2018-06-30 00:41:00
Local clock offset: 0.055 ms
Remote clock offset: 4.269 ms

# Below is generated by plot.py at 2018-06-30 01:32:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 37.534 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 37.537 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 37.525 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 37.531 ms
Loss rate: 0.00%
Run 9: Report of SCReAM — Data Link

Graph 1: Throughput in Mbps

Graph 2: One packet cause delay in ms

Legend:
- 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)
Run 10: Statistics of SCReAM

Start at: 2018-06-30 01:05:29
End at: 2018-06-30 01:05:59
Local clock offset: 0.365 ms
Remote clock offset: 4.653 ms

# Below is generated by plot.py at 2018-06-30 01:32:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 37.352 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 36.693 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 36.689 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 37.385 ms
Loss rate: 0.00%
Run 10: Report of SCReAM — Data Link

![Graph showing throughput and per-packet end-to-end delay over time for three flows, with mean values given for ingress and egress.]
Run 1: Statistics of Sprout

End at: 2018-06-29 21:19:52
Local clock offset: -0.337 ms
Remote clock offset: 7.375 ms

# Below is generated by plot.py at 2018-06-30 01:32:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.15 Mbit/s
95th percentile per-packet one-way delay: 43.404 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 10.30 Mbit/s
95th percentile per-packet one-way delay: 42.836 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 10.09 Mbit/s
95th percentile per-packet one-way delay: 44.263 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.52 Mbit/s
95th percentile per-packet one-way delay: 43.220 ms
Loss rate: 0.00%
Run 1: Report of Sprout — Data Link
Run 2: Statistics of Sprout

Start at: 2018-06-29 21:45:20
End at: 2018-06-29 21:45:50
Local clock offset: -1.332 ms
Remote clock offset: 8.518 ms

# Below is generated by plot.py at 2018-06-30 01:32:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.28 Mbit/s
95th percentile per-packet one-way delay: 45.322 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 10.46 Mbit/s
95th percentile per-packet one-way delay: 44.820 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 9.99 Mbit/s
95th percentile per-packet one-way delay: 46.154 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 9.59 Mbit/s
95th percentile per-packet one-way delay: 45.806 ms
Loss rate: 0.00%
Run 2: Report of Sprout — Data Link

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

- **Flow 1 ingress** (mean 10.46 Mbit/s)
- **Flow 1 egress** (mean 10.46 Mbit/s)
- **Flow 2 ingress** (mean 10.03 Mbit/s)
- **Flow 2 egress** (mean 9.99 Mbit/s)
- **Flow 3 ingress** (mean 9.59 Mbit/s)
- **Flow 3 egress** (mean 9.39 Mbit/s)

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

- **Flow 1** (95th percentile 44.82 ms)
- **Flow 2** (95th percentile 46.15 ms)
- **Flow 3** (95th percentile 45.81 ms)
Run 3: Statistics of Sprout

Start at: 2018-06-29 22:11:05
End at: 2018-06-29 22:11:35
Local clock offset: 4.882 ms
Remote clock offset: 9.828 ms

# Below is generated by plot.py at 2018-06-30 01:32:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 20.30 Mbit/s
  95th percentile per-packet one-way delay: 43.778 ms
  Loss rate: 0.09%
-- Flow 1:
  Average throughput: 10.36 Mbit/s
  95th percentile per-packet one-way delay: 43.465 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 10.16 Mbit/s
  95th percentile per-packet one-way delay: 44.034 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 9.62 Mbit/s
  95th percentile per-packet one-way delay: 44.226 ms
  Loss rate: 0.55%
Run 3: Report of Sprout — Data Link
Run 4: Statistics of Sprout

End at: 2018-06-29 22:37:44
Local clock offset: 6.741 ms
Remote clock offset: 3.916 ms

# Below is generated by plot.py at 2018-06-30 01:32:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.26 Mbit/s
95th percentile per-packet one-way delay: 43.153 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 10.31 Mbit/s
95th percentile per-packet one-way delay: 43.081 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 10.02 Mbit/s
95th percentile per-packet one-way delay: 43.005 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.93 Mbit/s
95th percentile per-packet one-way delay: 43.669 ms
Loss rate: 0.00%
Run 4: Report of Sprout — Data Link
Run 5: Statistics of Sprout

Start at: 2018-06-29 23:04:43
End at: 2018-06-29 23:05:13
Local clock offset: 3.911 ms
Remote clock offset: 3.404 ms

# Below is generated by plot.py at 2018-06-30 01:32:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.67 Mbit/s
95th percentile per-packet one-way delay: 43.694 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 9.94 Mbit/s
95th percentile per-packet one-way delay: 43.433 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 9.91 Mbit/s
95th percentile per-packet one-way delay: 43.916 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.53 Mbit/s
95th percentile per-packet one-way delay: 44.067 ms
Loss rate: 0.00%
Run 5: Report of Sprout — Data Link

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


Per-packet one-way delay (ms):
- Flow 1: 43.43 ms
- Flow 2: 43.92 ms
- Flow 3: 44.07 ms
Run 6: Statistics of Sprout

Start at: 2018-06-29 23:30:18
End at: 2018-06-29 23:30:48
Local clock offset: 0.668 ms
Remote clock offset: 3.606 ms

# Below is generated by plot.py at 2018-06-30 01:32:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.68 Mbit/s
95th percentile per-packet one-way delay: 43.729 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 10.50 Mbit/s
95th percentile per-packet one-way delay: 43.916 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 10.43 Mbit/s
95th percentile per-packet one-way delay: 43.208 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.83 Mbit/s
95th percentile per-packet one-way delay: 44.224 ms
Loss rate: 0.00%
Run 6: Report of Sprout — Data Link

![Graph showing network throughput and per-packet round-trip time](image)

- **Network Throughput**:
  - Flow 1 ingress (mean 10.50 Mbit/s)
  - Flow 1 egress (mean 10.50 Mbit/s)
  - Flow 2 ingress (mean 10.43 Mbit/s)
  - Flow 2 egress (mean 10.43 Mbit/s)
  - Flow 3 ingress (mean 9.83 Mbit/s)
  - Flow 3 egress (mean 9.83 Mbit/s)

- **Per-packet Round-trip Time**:
  - Flow 1 (95th percentile 43.92 ms)
  - Flow 2 (95th percentile 43.21 ms)
  - Flow 3 (95th percentile 44.22 ms)
Run 7: Statistics of Sprout

Local clock offset: 0.135 ms
Remote clock offset: 4.12 ms

# Below is generated by plot.py at 2018-06-30 01:32:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.04 Mbit/s
95th percentile per-packet one-way delay: 43.844 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 10.16 Mbit/s
95th percentile per-packet one-way delay: 43.629 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 10.14 Mbit/s
95th percentile per-packet one-way delay: 44.049 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.47 Mbit/s
95th percentile per-packet one-way delay: 44.213 ms
Loss rate: 0.00%
Run 7: Report of Sprout — Data Link

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

- **Flow 1 ingress (mean 10.16 Mbit/s)**
- **Flow 1 egress (mean 10.16 Mbit/s)**
- **Flow 2 ingress (mean 10.14 Mbit/s)**
- **Flow 2 egress (mean 10.14 Mbit/s)**
- **Flow 3 ingress (mean 9.48 Mbit/s)**
- **Flow 3 egress (mean 9.47 Mbit/s)**

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

- **Flow 1 95th percentile 43.63 ms**
- **Flow 2 95th percentile 44.05 ms**
- **Flow 3 95th percentile 44.21 ms**

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Run 8: Statistics of Sprout

Start at: 2018-06-30 00:20:14  
End at: 2018-06-30 00:20:44  
Local clock offset: 0.113 ms  
Remote clock offset: 3.766 ms

# Below is generated by plot.py at 2018-06-30 01:32:23  
# Datalink statistics
-- Total of 3 flows:  
  Average throughput: 20.19 Mbit/s  
  95th percentile per-packet one-way delay: 43.472 ms  
  Loss rate: 0.00%  
-- Flow 1:  
  Average throughput: 10.34 Mbit/s  
  95th percentile per-packet one-way delay: 43.156 ms  
  Loss rate: 0.00%  
-- Flow 2:  
  Average throughput: 9.92 Mbit/s  
  95th percentile per-packet one-way delay: 43.567 ms  
  Loss rate: 0.00%  
-- Flow 3:  
  Average throughput: 9.81 Mbit/s  
  95th percentile per-packet one-way delay: 43.976 ms  
  Loss rate: 0.00%
Run 8: Report of Sprout — Data Link

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

![Graph of packet interarrival time for different flows.]

Flow 1 ingress (mean 10.34 Mbit/s)  Flow 1 egress (mean 10.34 Mbit/s)
Flow 2 ingress (mean 9.92 Mbit/s)  Flow 2 egress (mean 9.92 Mbit/s)
Flow 3 ingress (mean 9.81 Mbit/s)  Flow 3 egress (mean 9.81 Mbit/s)
Run 9: Statistics of Sprout

Start at: 2018-06-30 00:45:56
End at: 2018-06-30 00:46:26
Local clock offset: -0.045 ms
Remote clock offset: 4.404 ms

# Below is generated by plot.py at 2018-06-30 01:32:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.21 Mbit/s
95th percentile per-packet one-way delay: 43.444 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 10.27 Mbit/s
95th percentile per-packet one-way delay: 42.912 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 10.40 Mbit/s
95th percentile per-packet one-way delay: 43.937 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.17 Mbit/s
95th percentile per-packet one-way delay: 44.378 ms
Loss rate: 0.00%
Run 9: Report of Sprout — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 10.27 Mbit/s)
Flow 1 egress (mean 10.27 Mbit/s)
Flow 2 ingress (mean 10.40 Mbit/s)
Flow 2 egress (mean 10.40 Mbit/s)
Flow 3 ingress (mean 9.17 Mbit/s)
Flow 3 egress (mean 9.17 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 42.91 ms)
Flow 2 (95th percentile 43.94 ms)
Flow 3 (95th percentile 44.38 ms)
Run 10: Statistics of Sprout

Start at: 2018-06-30 01:10:54
End at: 2018-06-30 01:11:24
Local clock offset: 0.332 ms
Remote clock offset: 4.601 ms

# Below is generated by plot.py at 2018-06-30 01:32:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.31 Mbit/s
95th percentile per-packet one-way delay: 43.724 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 10.31 Mbit/s
95th percentile per-packet one-way delay: 43.232 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 10.30 Mbit/s
95th percentile per-packet one-way delay: 43.705 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.54 Mbit/s
95th percentile per-packet one-way delay: 45.114 ms
Loss rate: 0.00%
Run 10: Report of Sprout — Data Link
Run 1: Statistics of TaoVA-100x

Start at: 2018-06-29 21:06:00
End at: 2018-06-29 21:06:30
Local clock offset: 0.236 ms
Remote clock offset: 7.239 ms

# Below is generated by plot.py at 2018-06-30 01:34:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.49 Mbit/s
95th percentile per-packet one-way delay: 70.351 ms
Loss rate: 16.75%
-- Flow 1:
Average throughput: 49.93 Mbit/s
95th percentile per-packet one-way delay: 67.622 ms
Loss rate: 12.75%
-- Flow 2:
Average throughput: 37.58 Mbit/s
95th percentile per-packet one-way delay: 71.321 ms
Loss rate: 22.81%
-- Flow 3:
Average throughput: 31.68 Mbit/s
95th percentile per-packet one-way delay: 73.431 ms
Loss rate: 19.23%
Run 1: Report of TaoVA-100x — Data Link

![Graph of Throughput](image1)

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

- Flow 1 ingress (mean 57.23 Mbit/s)
- Flow 1 egress (mean 49.93 Mbit/s)
- Flow 2 ingress (mean 48.68 Mbit/s)
- Flow 2 egress (mean 37.58 Mbit/s)
- Flow 3 ingress (mean 39.20 Mbit/s)
- Flow 3 egress (mean 31.68 Mbit/s)

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Run 2: Statistics of TaoVA-100x

Start at: 2018-06-29 21:31:49
End at: 2018-06-29 21:32:19
Local clock offset: -0.774 ms
Remote clock offset: 7.841 ms

# Below is generated by plot.py at 2018-06-30 01:34:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.16 Mbit/s
95th percentile per-packet one-way delay: 69.587 ms
Loss rate: 16.04%
-- Flow 1:
Average throughput: 51.45 Mbit/s
95th percentile per-packet one-way delay: 67.447 ms
Loss rate: 12.29%
-- Flow 2:
Average throughput: 39.94 Mbit/s
95th percentile per-packet one-way delay: 70.974 ms
Loss rate: 21.73%
-- Flow 3:
Average throughput: 24.96 Mbit/s
95th percentile per-packet one-way delay: 72.135 ms
Loss rate: 18.73%
Run 2: Report of TaoVA-100x — Data Link
Run 3: Statistics of TaoVA-100x

Start at: 2018-06-29 21:57:52
End at: 2018-06-29 21:58:22
Local clock offset: 3.08 ms
Remote clock offset: 9.288 ms

# Below is generated by plot.py at 2018-06-30 01:34:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 87.11 Mbit/s
  95th percentile per-packet one-way delay: 69.744 ms
  Loss rate: 16.13%
-- Flow 1:
  Average throughput: 51.18 Mbit/s
  95th percentile per-packet one-way delay: 67.021 ms
  Loss rate: 11.87%
-- Flow 2:
  Average throughput: 38.19 Mbit/s
  95th percentile per-packet one-way delay: 70.940 ms
  Loss rate: 21.80%
-- Flow 3:
  Average throughput: 31.51 Mbit/s
  95th percentile per-packet one-way delay: 72.716 ms
  Loss rate: 20.87%
Run 3: Report of TaoVA-100x — Data Link

Throughput (Mbps):

- Flow 1 ingress (mean 58.11 Mbps)
- Flow 1 egress (mean 51.18 Mbps)
- Flow 2 ingress (mean 48.87 Mbps)
- Flow 2 egress (mean 36.19 Mbps)
- Flow 3 ingress (mean 39.89 Mbps)
- Flow 3 egress (mean 31.51 Mbps)

Delay (ms):

- Flow 1 (95th percentile 67.02 ms)
- Flow 2 (95th percentile 70.94 ms)
- Flow 3 (95th percentile 72.72 ms)
Run 4: Statistics of TaoVA-100x

End at: 2018-06-29 22:23:51
Local clock offset: 5.709 ms
Remote clock offset: 6.506 ms

# Below is generated by plot.py at 2018-06-30 01:34:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.01 Mbit/s
95th percentile per-packet one-way delay: 70.634 ms
Loss rate: 15.59%
-- Flow 1:
Average throughput: 51.96 Mbit/s
95th percentile per-packet one-way delay: 67.917 ms
Loss rate: 11.66%
-- Flow 2:
Average throughput: 38.25 Mbit/s
95th percentile per-packet one-way delay: 71.891 ms
Loss rate: 21.58%
-- Flow 3:
Average throughput: 31.72 Mbit/s
95th percentile per-packet one-way delay: 72.574 ms
Loss rate: 18.44%
Run 4: Report of TaoVA-100x — Data Link

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

- Flow 1 Ingress (mean 58.87 Mbit/s)
- Flow 1 Egress (mean 51.96 Mbit/s)
- Flow 2 Ingress (mean 48.84 Mbit/s)
- Flow 2 Egress (mean 38.25 Mbit/s)
- Flow 3 Ingress (mean 38.99 Mbit/s)
- Flow 3 Egress (mean 31.72 Mbit/s)

![Graph 2: Per-packet round-trip delay](image2)

- Flow 1 (95th percentile 67.92 ms)
- Flow 2 (95th percentile 71.89 ms)
- Flow 3 (95th percentile 72.57 ms)
Run 5: Statistics of TaoVA-100x

Start at: 2018-06-29 22:50:40
End at: 2018-06-29 22:51:10
Local clock offset: 5.72 ms
Remote clock offset: 3.284 ms

# Below is generated by plot.py at 2018-06-30 01:34:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 86.33 Mbit/s
  95th percentile per-packet one-way delay: 69.131 ms
  Loss rate: 15.90%
-- Flow 1:
  Average throughput: 53.06 Mbit/s
  95th percentile per-packet one-way delay: 66.983 ms
  Loss rate: 12.51%
-- Flow 2:
  Average throughput: 40.80 Mbit/s
  95th percentile per-packet one-way delay: 70.601 ms
  Loss rate: 21.05%
-- Flow 3:
  Average throughput: 18.35 Mbit/s
  95th percentile per-packet one-way delay: 71.837 ms
  Loss rate: 19.65%
Run 5: Report of TaoVA-100x — Data Link
Run 6: Statistics of TaoVA-100x

Start at: 2018-06-29 23:17:19
End at: 2018-06-29 23:17:49
Local clock offset: 3.12 ms
Remote clock offset: 3.381 ms

# Below is generated by plot.py at 2018-06-30 01:34:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.72 Mbit/s
95th percentile per-packet one-way delay: 69.623 ms
Loss rate: 16.28%
-- Flow 1:
Average throughput: 51.91 Mbit/s
95th percentile per-packet one-way delay: 66.967 ms
Loss rate: 12.32%
-- Flow 2:
Average throughput: 38.25 Mbit/s
95th percentile per-packet one-way delay: 70.472 ms
Loss rate: 21.84%
-- Flow 3:
Average throughput: 31.19 Mbit/s
95th percentile per-packet one-way delay: 72.865 ms
Loss rate: 20.39%
Run 6: Report of TaoVA-100x — Data Link
Run 7: Statistics of TaoVA-100x

End at: 2018-06-29 23:42:50
Local clock offset: -0.165 ms
Remote clock offset: 3.901 ms

# Below is generated by plot.py at 2018-06-30 01:34:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.47 Mbit/s
95th percentile per-packet one-way delay: 69.550 ms
Loss rate: 16.28%
-- Flow 1:
Average throughput: 52.58 Mbit/s
95th percentile per-packet one-way delay: 67.565 ms
Loss rate: 12.16%
-- Flow 2:
Average throughput: 40.09 Mbit/s
95th percentile per-packet one-way delay: 70.502 ms
Loss rate: 22.06%
-- Flow 3:
Average throughput: 24.57 Mbit/s
95th percentile per-packet one-way delay: 72.379 ms
Loss rate: 20.95%
Run 7: Report of TaoVA-100x — Data Link

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

- **Throughput (Mb/s):**
  - Flow 1 ingress (mean 59.90 Mb/s)
  - Flow 1 egress (mean 52.58 Mb/s)
  - Flow 2 ingress (mean 51.49 Mb/s)
  - Flow 2 egress (mean 40.09 Mb/s)
  - Flow 3 ingress (mean 31.13 Mb/s)
  - Flow 3 egress (mean 24.57 Mb/s)

- **Packet round-trip delay (ms):**
  - Flow 1 (95th percentile 67.56 ms)
  - Flow 2 (95th percentile 70.50 ms)
  - Flow 3 (95th percentile 72.38 ms)
Run 8: Statistics of TaoVA-100x

Start at: 2018-06-30 00:07:08
End at: 2018-06-30 00:07:38
Local clock offset: -0.053 ms
Remote clock offset: 3.903 ms

# Below is generated by plot.py at 2018-06-30 01:34:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 85.20 Mbit/s
  95th percentile per-packet one-way delay: 69.339 ms
  Loss rate: 17.34%
-- Flow 1:
  Average throughput: 51.59 Mbit/s
  95th percentile per-packet one-way delay: 66.768 ms
  Loss rate: 13.86%
-- Flow 2:
  Average throughput: 41.29 Mbit/s
  95th percentile per-packet one-way delay: 70.150 ms
  Loss rate: 22.44%
-- Flow 3:
  Average throughput: 18.36 Mbit/s
  95th percentile per-packet one-way delay: 73.664 ms
  Loss rate: 20.99%
Run 8: Report of TaoVA-100x — Data Link
Run 9: Statistics of TaoVA-100x

Start at: 2018-06-30 00:32:46
End at: 2018-06-30 00:33:16
Local clock offset: 0.268 ms
Remote clock offset: 3.755 ms

# Below is generated by plot.py at 2018-06-30 01:36:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.82 Mbit/s
95th percentile per-packet one-way delay: 70.110 ms
Loss rate: 16.65%
-- Flow 1:
Average throughput: 52.24 Mbit/s
95th percentile per-packet one-way delay: 67.250 ms
Loss rate: 12.46%
-- Flow 2:
Average throughput: 38.11 Mbit/s
95th percentile per-packet one-way delay: 71.405 ms
Loss rate: 22.86%
-- Flow 3:
Average throughput: 30.63 Mbit/s
95th percentile per-packet one-way delay: 72.807 ms
Loss rate: 20.26%
Run 9: Report of TaoVA-100x — Data Link

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

- Flow 1 (mean 59.68 Mbit/s, 95th percentile 67.25 ms)
- Flow 2 (mean 49.41 Mbit/s, 95th percentile 71.41 ms)
- Flow 3 (mean 38.41 Mbit/s, 95th percentile 72.81 ms)
Run 10: Statistics of TaoVA-100x

Start at: 2018-06-30 00:57:57
End at: 2018-06-30 00:58:27
Local clock offset: 0.377 ms
Remote clock offset: 4.628 ms

# Below is generated by plot.py at 2018-06-30 01:36:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.91 Mbit/s
95th percentile per-packet one-way delay: 67.460 ms
Loss rate: 15.56%
-- Flow 1:
Average throughput: 53.85 Mbit/s
95th percentile per-packet one-way delay: 65.927 ms
Loss rate: 12.36%
-- Flow 2:
Average throughput: 44.05 Mbit/s
95th percentile per-packet one-way delay: 69.123 ms
Loss rate: 20.86%
-- Flow 3:
Average throughput: 5.25 Mbit/s
95th percentile per-packet one-way delay: 68.094 ms
Loss rate: 15.58%
Run 10: Report of TaoVA-100x — Data Link

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

![Graph of per-packet round-trip delay for different flows showing 95th percentile values.]

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Run 1: Statistics of TCP Vegas

Start at: 2018-06-29 20:56:38
End at: 2018-06-29 20:57:08
Local clock offset: 1.25 ms
Remote clock offset: 7.127 ms

# Below is generated by plot.py at 2018-06-30 01:36:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.75 Mbit/s
95th percentile per-packet one-way delay: 43.863 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 49.63 Mbit/s
95th percentile per-packet one-way delay: 43.904 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 43.15 Mbit/s
95th percentile per-packet one-way delay: 43.535 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 19.18 Mbit/s
95th percentile per-packet one-way delay: 42.984 ms
Loss rate: 0.00%
Run 1: Report of TCP Vegas — Data Link

[Graph showing throughput and per-packet one-way delay over time for different flows.]
Run 2: Statistics of TCP Vegas

Local clock offset: -0.449 ms
Remote clock offset: 7.564 ms

# Below is generated by plot.py at 2018-06-30 01:36:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.29 Mbit/s
95th percentile per-packet one-way delay: 51.245 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 54.58 Mbit/s
95th percentile per-packet one-way delay: 47.620 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 46.15 Mbit/s
95th percentile per-packet one-way delay: 51.848 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 17.95 Mbit/s
95th percentile per-packet one-way delay: 54.486 ms
Loss rate: 0.00%
Run 2: Report of TCP Vegas — Data Link

![Graph showing throughput over time for different flows with mean values and delay]

- Flow 1 ingress (mean 54.95 Mbit/s)
- Flow 1 egress (mean 54.58 Mbit/s)
- Flow 2 ingress (mean 46.20 Mbit/s)
- Flow 2 egress (mean 46.15 Mbit/s)
- Flow 3 ingress (mean 17.85 Mbit/s)
- Flow 3 egress (mean 17.95 Mbit/s)

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

- Flow 1 (95th percentile 47.62 ms)
- Flow 2 (95th percentile 51.85 ms)
- Flow 3 (95th percentile 54.49 ms)
Run 3: Statistics of TCP Vegas

End at: 2018-06-29 21:48:54
Local clock offset: 0.016 ms
Remote clock offset: 8.642 ms

# Below is generated by plot.py at 2018-06-30 01:36:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 73.25 Mbit/s
  95th percentile per-packet one-way delay: 42.909 ms
  Loss rate: 0.63%
-- Flow 1:
  Average throughput: 43.47 Mbit/s
  95th percentile per-packet one-way delay: 43.405 ms
  Loss rate: 0.82%
-- Flow 2:
  Average throughput: 35.93 Mbit/s
  95th percentile per-packet one-way delay: 39.394 ms
  Loss rate: 0.45%
-- Flow 3:
  Average throughput: 17.56 Mbit/s
  95th percentile per-packet one-way delay: 38.936 ms
  Loss rate: 0.00%
Run 3: Report of TCP Vegas — Data Link
Run 4: Statistics of TCP Vegas

End at: 2018-06-29 22:14:24
Local clock offset: 5.116 ms
Remote clock offset: 9.978 ms

# Below is generated by plot.py at 2018-06-30 01:36:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 83.00 Mbit/s
  95th percentile per-packet one-way delay: 43.244 ms
  Loss rate: 0.73%
-- Flow 1:
  Average throughput: 40.10 Mbit/s
  95th percentile per-packet one-way delay: 43.820 ms
  Loss rate: 0.94%
-- Flow 2:
  Average throughput: 40.71 Mbit/s
  95th percentile per-packet one-way delay: 38.599 ms
  Loss rate: 0.25%
-- Flow 3:
  Average throughput: 47.48 Mbit/s
  95th percentile per-packet one-way delay: 40.532 ms
  Loss rate: 0.99%
Run 4: Report of TCP Vegas — Data Link

![Graph showing TCP Vegas data link throughput and packet loss over time.](image-url)

- Throughput (Mbps)
- Time (s)
- Flow 1 ingress (mean 40.48 Mbps)
- Flow 1 egress (mean 40.10 Mbps)
- Flow 2 ingress (mean 40.81 Mbps)
- Flow 2 egress (mean 40.71 Mbps)
- Flow 3 ingress (mean 47.97 Mbps)
- Flow 3 egress (mean 47.48 Mbps)

![Graph showing TCP Vegas packet loss over time.](image-url)

- Per packet one way delay (ms)
- Time (s)
- Flow 1 (95th percentile 43.82 ms)
- Flow 2 (95th percentile 38.60 ms)
- Flow 3 (95th percentile 40.53 ms)
Run 5: Statistics of TCP Vegas

Start at: 2018-06-29 22:40:04
End at: 2018-06-29 22:40:34
Local clock offset: 6.84 ms
Remote clock offset: 3.717 ms

# Below is generated by plot.py at 2018-06-30 01:36:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.20 Mbit/s
95th percentile per-packet one-way delay: 51.844 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 57.09 Mbit/s
95th percentile per-packet one-way delay: 50.642 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 29.85 Mbit/s
95th percentile per-packet one-way delay: 52.754 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 12.76 Mbit/s
95th percentile per-packet one-way delay: 39.973 ms
Loss rate: 0.00%
Run 5: Report of TCP Vegas — Data Link

![Graph 1: Throughput vs Time](chart1)

![Graph 2: Per-packet one way delay vs Time](chart2)
Run 6: Statistics of TCP Vegas

Start at: 2018-06-29 23:07:46
End at: 2018-06-29 23:08:16
Local clock offset: 3.881 ms
Remote clock offset: 3.39 ms

# Below is generated by plot.py at 2018-06-30 01:36:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.36 Mbit/s
95th percentile per-packet one-way delay: 46.933 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 81.60 Mbit/s
95th percentile per-packet one-way delay: 46.095 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 10.89 Mbit/s
95th percentile per-packet one-way delay: 46.928 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 19.55 Mbit/s
95th percentile per-packet one-way delay: 52.220 ms
Loss rate: 0.00%
Run 6: Report of TCP Vegas — Data Link

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**Throughput (Mbps)**

- Flow 1 ingress (mean 81.87 Mbps)
- Flow 1 egress (mean 81.60 Mbps)
- Flow 2 ingress (mean 10.89 Mbps)
- Flow 2 egress (mean 10.89 Mbps)
- Flow 3 ingress (mean 19.56 Mbps)
- Flow 3 egress (mean 19.55 Mbps)

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

- Flow 1 (95th percentile 46.09 ms)
- Flow 2 (95th percentile 46.93 ms)
- Flow 3 (95th percentile 52.22 ms)
Run 7: Statistics of TCP Vegas

Start at: 2018-06-29 23:33:15
End at: 2018-06-29 23:33:45
Local clock offset: 0.488 ms
Remote clock offset: 3.712 ms

# Below is generated by plot.py at 2018-06-30 01:36:37
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 95.83 Mbit/s
  95th percentile per-packet one-way delay: 50.283 ms
  Loss rate: 0.27%
-- Flow 1:
  Average throughput: 80.57 Mbit/s
  95th percentile per-packet one-way delay: 49.012 ms
  Loss rate: 0.32%
-- Flow 2:
  Average throughput: 13.90 Mbit/s
  95th percentile per-packet one-way delay: 51.976 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 18.07 Mbit/s
  95th percentile per-packet one-way delay: 52.980 ms
  Loss rate: 0.01%
Run 7: Report of TCP Vegas — Data Link

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

Start at: 2018-06-29 23:57:54
End at: 2018-06-29 23:58:24
Local clock offset: 0.053 ms
Remote clock offset: 4.175 ms

# Below is generated by plot.py at 2018-06-30 01:36:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.71 Mbit/s
95th percentile per-packet one-way delay: 52.062 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 53.47 Mbit/s
95th percentile per-packet one-way delay: 52.818 ms
Loss rate: 1.11%
-- Flow 2:
Average throughput: 37.31 Mbit/s
95th percentile per-packet one-way delay: 51.606 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 13.21 Mbit/s
95th percentile per-packet one-way delay: 44.538 ms
Loss rate: 0.03%
Run 9: Statistics of TCP Vegas

Start at: 2018-06-30 00:23:06
End at: 2018-06-30 00:23:36
Local clock offset: 0.11 ms
Remote clock offset: 3.818 ms

# Below is generated by plot.py at 2018-06-30 01:36:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.81 Mbit/s
95th percentile per-packet one-way delay: 51.469 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 80.37 Mbit/s
95th percentile per-packet one-way delay: 49.503 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 14.02 Mbit/s
95th percentile per-packet one-way delay: 53.760 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 18.34 Mbit/s
95th percentile per-packet one-way delay: 56.030 ms
Loss rate: 0.01%
Run 9: Report of TCP Vegas — Data Link
Run 10: Statistics of TCP Vegas

Start at: 2018-06-30 00:48:45
End at: 2018-06-30 00:49:15
Local clock offset: 0.098 ms
Remote clock offset: 4.459 ms

# Below is generated by plot.py at 2018-06-30 01:36:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.31 Mbit/s
95th percentile per-packet one-way delay: 53.023 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 68.96 Mbit/s
95th percentile per-packet one-way delay: 52.994 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 24.93 Mbit/s
95th percentile per-packet one-way delay: 53.576 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 20.33 Mbit/s
95th percentile per-packet one-way delay: 51.976 ms
Loss rate: 0.00%
Run 10: Report of TCP Vegas — Data Link

![Graph showing throughput and packet loss over time for different flows.](image-url)
Run 1: Statistics of Verus

Start at: 2018-06-29 21:04:30
End at: 2018-06-29 21:05:00
Local clock offset: 0.341 ms
Remote clock offset: 7.197 ms

# Below is generated by plot.py at 2018-06-30 01:36:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 64.60 Mbit/s
  95th percentile per-packet one-way delay: 72.904 ms
  Loss rate: 33.04%
-- Flow 1:
  Average throughput: 47.19 Mbit/s
  95th percentile per-packet one-way delay: 73.256 ms
  Loss rate: 33.17%
-- Flow 2:
  Average throughput: 25.08 Mbit/s
  95th percentile per-packet one-way delay: 71.810 ms
  Loss rate: 32.91%
-- Flow 3:
  Average throughput: 2.96 Mbit/s
  95th percentile per-packet one-way delay: 70.311 ms
  Loss rate: 28.98%
Run 2: Statistics of Verus

Start at: 2018-06-29 21:30:20
End at: 2018-06-29 21:30:50
Local clock offset: -0.719 ms
Remote clock offset: 7.775 ms

# Below is generated by plot.py at 2018-06-30 01:37:04
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 61.56 Mbit/s
  95th percentile per-packet one-way delay: 75.112 ms
  Loss rate: 62.06%
-- Flow 1:
  Average throughput: 47.49 Mbit/s
  95th percentile per-packet one-way delay: 75.593 ms
  Loss rate: 61.96%
-- Flow 2:
  Average throughput: 18.80 Mbit/s
  95th percentile per-packet one-way delay: 73.843 ms
  Loss rate: 65.45%
-- Flow 3:
  Average throughput: 5.94 Mbit/s
  95th percentile per-packet one-way delay: 65.467 ms
  Loss rate: 12.73%
Run 2: Report of Verus — Data Link

![Graph of throughput vs. time with legends for different flows and their ingress and egress speeds.]

![Another graph showing the per-packet one-way delay.]

Legend:
- Flow 1 (ingress mean 124.92 Mbit/s) and (egress mean 47.49 Mbit/s)
- Flow 2 (ingress mean 54.24 Mbit/s) and (egress mean 18.88 Mbit/s)
- Flow 3 (ingress mean 6.75 Mbit/s) and (egress mean 5.94 Mbit/s)

Legend for delay:
- Flow 1 (95th percentile 75.59 ms)
- Flow 2 (95th percentile 73.84 ms)
- Flow 3 (95th percentile 65.47 ms)
Run 3: Statistics of Verus

Start at: 2018-06-29 21:56:18  
End at: 2018-06-29 21:56:48  
Local clock offset: 2.704 ms  
Remote clock offset: 9.217 ms

# Below is generated by plot.py at 2018-06-30 01:37:27  
# Datalink statistics

-- Total of 3 flows:  
Average throughput: 65.95 Mbit/s  
95th percentile per-packet one-way delay: 74.100 ms  
Loss rate: 36.39%

-- Flow 1:  
Average throughput: 41.76 Mbit/s  
95th percentile per-packet one-way delay: 74.644 ms  
Loss rate: 40.98%

-- Flow 2:  
Average throughput: 30.13 Mbit/s  
95th percentile per-packet one-way delay: 72.704 ms  
Loss rate: 24.66%

-- Flow 3:  
Average throughput: 12.55 Mbit/s  
95th percentile per-packet one-way delay: 72.478 ms  
Loss rate: 34.40%
Run 3: Report of Verus — Data Link

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**Throughput (Mbps)**

- Flow 1 ingress (mean 70.84 Mbps)
- Flow 1 egress (mean 41.76 Mbps)
- Flow 2 ingress (mean 40.04 Mbps)
- Flow 2 egress (mean 30.13 Mbps)
- Flow 3 ingress (mean 19.15 Mbps)
- Flow 3 egress (mean 12.55 Mbps)

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

- Flow 1 (95th percentile 74.64 ms)
- Flow 2 (95th percentile 72.70 ms)
- Flow 3 (95th percentile 72.48 ms)
Run 4: Statistics of Verus

Start at: 2018-06-29 22:21:45
Local clock offset: 5.678 ms
Remote clock offset: 7.116 ms

# Below is generated by plot.py at 2018-06-30 01:37:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.73 Mbit/s
95th percentile per-packet one-way delay: 75.601 ms
Loss rate: 54.97%
-- Flow 1:
Average throughput: 35.08 Mbit/s
95th percentile per-packet one-way delay: 72.308 ms
Loss rate: 21.67%
-- Flow 2:
Average throughput: 28.75 Mbit/s
95th percentile per-packet one-way delay: 80.356 ms
Loss rate: 72.06%
-- Flow 3:
Average throughput: 23.69 Mbit/s
95th percentile per-packet one-way delay: 77.438 ms
Loss rate: 68.06%
Run 4: Report of Verus — Data Link

![Throughput and Latency Graphs]

- Flow 1 ingress (mean 44.67 Mbit/s)
- Flow 1 egress (mean 35.08 Mbit/s)
- Flow 2 ingress (mean 103.01 Mbit/s)
- Flow 2 egress (mean 28.75 Mbit/s)
- Flow 3 ingress (mean 73.33 Mbit/s)
- Flow 3 egress (mean 23.69 Mbit/s)

- Flow 1 (95th percentile 72.31 ms)
- Flow 2 (95th percentile 80.36 ms)
- Flow 3 (95th percentile 77.44 ms)
Run 5: Statistics of Verus

Start at: 2018-06-29 22:49:02
Local clock offset: 6.172 ms
Remote clock offset: 3.422 ms

# Below is generated by plot.py at 2018-06-30 01:37:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 55.76 Mbit/s
95th percentile per-packet one-way delay: 79.132 ms
Loss rate: 75.58%
-- Flow 1:
Average throughput: 29.87 Mbit/s
95th percentile per-packet one-way delay: 73.942 ms
Loss rate: 48.35%
-- Flow 2:
Average throughput: 23.33 Mbit/s
95th percentile per-packet one-way delay: 80.950 ms
Loss rate: 74.12%
-- Flow 3:
Average throughput: 33.76 Mbit/s
95th percentile per-packet one-way delay: 88.772 ms
Loss rate: 90.47%
Run 5: Report of Verus — Data Link
Run 6: Statistics of Verus

End at: 2018-06-29 23:16:11
Local clock offset: 3.596 ms
Remote clock offset: 3.413 ms

# Below is generated by plot.py at 2018-06-30 01:37:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.21 Mbit/s
95th percentile per-packet one-way delay: 72.633 ms
Loss rate: 36.13%
-- Flow 1:
Average throughput: 42.13 Mbit/s
95th percentile per-packet one-way delay: 72.242 ms
Loss rate: 31.46%
-- Flow 2:
Average throughput: 26.14 Mbit/s
95th percentile per-packet one-way delay: 73.381 ms
Loss rate: 44.12%
-- Flow 3:
Average throughput: 16.17 Mbit/s
95th percentile per-packet one-way delay: 73.500 ms
Loss rate: 41.31%
Run 6: Report of Verus — Data Link
Run 7: Statistics of Verus

Start at: 2018-06-29 23:40:52
End at: 2018-06-29 23:41:22
Local clock offset: ~0.055 ms
Remote clock offset: 3.935 ms

# Below is generated by plot.py at 2018-06-30 01:37:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.29 Mbit/s
95th percentile per-packet one-way delay: 72.886 ms
Loss rate: 33.04%
-- Flow 1:
Average throughput: 36.76 Mbit/s
95th percentile per-packet one-way delay: 72.814 ms
Loss rate: 27.67%
-- Flow 2:
Average throughput: 25.73 Mbit/s
95th percentile per-packet one-way delay: 72.321 ms
Loss rate: 33.75%
-- Flow 3:
Average throughput: 33.47 Mbit/s
95th percentile per-packet one-way delay: 74.009 ms
Loss rate: 46.17%
Run 7: Report of Verus — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 50.84 Mbps)  
Flow 1 egress (mean 36.76 Mbps)  
Flow 2 ingress (mean 38.87 Mbps)  
Flow 2 egress (mean 25.73 Mbps)  
Flow 3 ingress (mean 59.43 Mbps)  
Flow 3 egress (mean 33.47 Mbps)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 72.81 ms)  
Flow 2 (95th percentile 72.32 ms)  
Flow 3 (95th percentile 74.01 ms)
Run 8: Statistics of Verus

Start at: 2018-06-30 00:05:36
End at: 2018-06-30 00:06:06
Local clock offset: 0.067 ms
Remote clock offset: 3.867 ms

# Below is generated by plot.py at 2018-06-30 01:37:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 66.47 Mbit/s
  95th percentile per-packet one-way delay: 71.883 ms
  Loss rate: 22.45%
-- Flow 1:
  Average throughput: 48.35 Mbit/s
  95th percentile per-packet one-way delay: 72.129 ms
  Loss rate: 22.38%
-- Flow 2:
  Average throughput: 17.27 Mbit/s
  95th percentile per-packet one-way delay: 71.297 ms
  Loss rate: 19.96%
-- Flow 3:
  Average throughput: 21.30 Mbit/s
  95th percentile per-packet one-way delay: 70.483 ms
  Loss rate: 26.62%
Run 8: Report of Verus — Data Link

Graph 1: Throughput (Mbps) over Time (s)
- Flow 1 ingress (mean 62.35 Mbps)
- Flow 1 egress (mean 48.35 Mbps)
- Flow 2 ingress (mean 21.58 Mbps)
- Flow 2 egress (mean 17.27 Mbps)
- Flow 3 ingress (mean 29.01 Mbps)
- Flow 3 egress (mean 21.30 Mbps)

Graph 2: Per-packet one-way delay (ms) over Time (s)
- Flow 1 (95th percentile 72.13 ms)
- Flow 2 (95th percentile 71.30 ms)
- Flow 3 (95th percentile 70.48 ms)
Run 9: Statistics of Verus

Start at: 2018-06-30 00:31:16
End at: 2018-06-30 00:31:46
Local clock offset: 0.256 ms
Remote clock offset: 3.645 ms

# Below is generated by plot.py at 2018-06-30 01:37:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 55.55 Mbit/s
95th percentile per-packet one-way delay: 73.176 ms
Loss rate: 31.39%
-- Flow 1:
Average throughput: 34.21 Mbit/s
95th percentile per-packet one-way delay: 72.477 ms
Loss rate: 23.30%
-- Flow 2:
Average throughput: 26.12 Mbit/s
95th percentile per-packet one-way delay: 74.754 ms
Loss rate: 44.63%
-- Flow 3:
Average throughput: 12.40 Mbit/s
95th percentile per-packet one-way delay: 70.431 ms
Loss rate: 21.26%
Run 9: Report of Verus — Data Link

![Graph showing network performance metrics over time.](image)
Run 10: Statistics of Verus

Start at: 2018-06-30 00:56:29
End at: 2018-06-30 00:56:59
Local clock offset: 0.375 ms
Remote clock offset: 4.596 ms

# Below is generated by plot.py at 2018-06-30 01:38:13
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 55.71 Mbit/s
  95th percentile per-packet one-way delay: 76.701 ms
  Loss rate: 62.65%
-- Flow 1:
  Average throughput: 32.82 Mbit/s
  95th percentile per-packet one-way delay: 79.513 ms
  Loss rate: 70.89%
-- Flow 2:
  Average throughput: 20.43 Mbit/s
  95th percentile per-packet one-way delay: 73.412 ms
  Loss rate: 42.07%
-- Flow 3:
  Average throughput: 28.31 Mbit/s
  95th percentile per-packet one-way delay: 72.123 ms
  Loss rate: 28.38%
Run 10: Report of Verus — Data Link

**Throughput (Mbps):**
- Flow 1 ingress (mean 112.88 Mbps)
- Flow 1 egress (mean 32.82 Mbps)
- Flow 2 ingress (mean 35.27 Mbps)
- Flow 2 egress (mean 20.43 Mbps)
- Flow 3 ingress (mean 39.34 Mbps)
- Flow 3 egress (mean 28.31 Mbps)

**Per-packet Round-Trip Delay (ms):**
- Flow 1 (95th percentile 79.51 ms)
- Flow 2 (95th percentile 73.41 ms)
- Flow 3 (95th percentile 72.12 ms)
Run 1: Statistics of PCC-Vivace

Start at: 2018-06-29 21:20:44
End at: 2018-06-29 21:21:14
Local clock offset: -0.482 ms
Remote clock offset: 7.49 ms

# Below is generated by plot.py at 2018-06-30 01:38:32
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 77.88 Mbit/s
  95th percentile per-packet one-way delay: 44.083 ms
  Loss rate: 0.25%
-- Flow 1:
  Average throughput: 61.23 Mbit/s
  95th percentile per-packet one-way delay: 43.942 ms
  Loss rate: 0.24%
-- Flow 2:
  Average throughput: 19.83 Mbit/s
  95th percentile per-packet one-way delay: 44.703 ms
  Loss rate: 0.35%
-- Flow 3:
  Average throughput: 10.49 Mbit/s
  95th percentile per-packet one-way delay: 43.609 ms
  Loss rate: 0.05%
Run 1: Report of PCC-Vivace — Data Link

[Graph showing throughput and per-packet end-to-end delay over time for different flows with the following legend:
- Flow 1 ingress (mean 61.38 Mbit/s)
- Flow 1 egress (mean 61.23 Mbit/s)
- Flow 2 ingress (mean 19.90 Mbit/s)
- Flow 2 egress (mean 19.83 Mbit/s)
- Flow 3 ingress (mean 10.49 Mbit/s)
- Flow 3 egress (mean 10.49 Mbit/s)]
Run 2: Statistics of PCC-Vivace

Start at: 2018-06-29 21:46:45
End at: 2018-06-29 21:47:15
Local clock offset: -0.799 ms
Remote clock offset: 8.597 ms

# Below is generated by plot.py at 2018-06-30 01:38:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.57 Mbit/s
95th percentile per-packet one-way delay: 68.649 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 68.37 Mbit/s
95th percentile per-packet one-way delay: 65.362 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 15.04 Mbit/s
95th percentile per-packet one-way delay: 69.515 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 15.74 Mbit/s
95th percentile per-packet one-way delay: 72.003 ms
Loss rate: 1.10%
Run 2: Report of PCC-Vivace — Data Link
Run 3: Statistics of PCC-Vivace

Start at: 2018-06-29 22:12:24
End at: 2018-06-29 22:12:54
Local clock offset: 4.988 ms
Remote clock offset: 9.845 ms

# Below is generated by plot.py at 2018-06-30 01:38:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.58 Mbit/s
95th percentile per-packet one-way delay: 46.164 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 70.42 Mbit/s
95th percentile per-packet one-way delay: 43.937 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 15.06 Mbit/s
95th percentile per-packet one-way delay: 49.048 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 9.52 Mbit/s
95th percentile per-packet one-way delay: 54.254 ms
Loss rate: 0.01%
Run 3: Report of PCC-Vivace — Data Link
Run 4: Statistics of PCC-Vivace

Start at: 2018-06-29 22:38:34
Local clock offset: 6.738 ms
Remote clock offset: 3.831 ms

# Below is generated by plot.py at 2018-06-30 01:38:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 42.57 Mbit/s
  95th percentile per-packet one-way delay: 70.214 ms
  Loss rate: 1.44%
-- Flow 1:
  Average throughput: 21.96 Mbit/s
  95th percentile per-packet one-way delay: 69.056 ms
  Loss rate: 1.22%
-- Flow 2:
  Average throughput: 23.19 Mbit/s
  95th percentile per-packet one-way delay: 70.808 ms
  Loss rate: 1.55%
-- Flow 3:
  Average throughput: 15.67 Mbit/s
  95th percentile per-packet one-way delay: 71.317 ms
  Loss rate: 2.00%
Run 4: Report of PCC-Vivace — Data Link
Run 5: Statistics of PCC-Vivace

Start at: 2018-06-29 23:06:10
End at: 2018-06-29 23:06:40
Local clock offset: 3.923 ms
Remote clock offset: 3.341 ms

# Below is generated by plot.py at 2018-06-30 01:38:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.85 Mbit/s
95th percentile per-packet one-way delay: 39.500 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 58.77 Mbit/s
95th percentile per-packet one-way delay: 39.522 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 8.63 Mbit/s
95th percentile per-packet one-way delay: 39.091 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 4.04 Mbit/s
95th percentile per-packet one-way delay: 40.908 ms
Loss rate: 0.03%
Run 5: Report of PCC-Vivace — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 58.78 Mbps)
  - Flow 1 egress (mean 58.77 Mbps)
  - Flow 2 ingress (mean 8.64 Mbps)
  - Flow 2 egress (mean 8.63 Mbps)
  - Flow 3 ingress (mean 4.04 Mbps)
  - Flow 3 egress (mean 4.04 Mbps)

- **Packet delay (ms):**
  - Flow 1 (95th percentile 39.52 ms)
  - Flow 2 (95th percentile 39.09 ms)
  - Flow 3 (95th percentile 40.91 ms)
Run 6: Statistics of PCC-Vivace

End at: 2018-06-29 23:32:08
Local clock offset: 0.617 ms
Remote clock offset: 3.675 ms

# Below is generated by plot.py at 2018-06-30 01:38:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.17 Mbit/s
95th percentile per-packet one-way delay: 61.165 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 47.75 Mbit/s
95th percentile per-packet one-way delay: 61.257 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 26.29 Mbit/s
95th percentile per-packet one-way delay: 58.302 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 20.99 Mbit/s
95th percentile per-packet one-way delay: 62.593 ms
Loss rate: 0.01%
Run 6: Report of PCC-Vivace — Data Link

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

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 47.89 Mbps)
  - Flow 1 egress (mean 47.75 Mbps)
  - Flow 2 ingress (mean 26.29 Mbps)
  - Flow 2 egress (mean 26.29 Mbps)
  - Flow 3 ingress (mean 20.99 Mbps)
  - Flow 3 egress (mean 20.99 Mbps)

- **Packet Delay (ms)**
  - Flow 1 (95th percentile 61.26 ms)
  - Flow 2 (95th percentile 58.30 ms)
  - Flow 3 (95th percentile 62.59 ms)
Run 7: Statistics of PCC-Vivace

Start at: 2018-06-29 23:56:25
End at: 2018-06-29 23:56:55
Local clock offset: 0.132 ms
Remote clock offset: 4.094 ms

# Below is generated by plot.py at 2018-06-30 01:39:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.20 Mbit/s
95th percentile per-packet one-way delay: 52.001 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 60.68 Mbit/s
95th percentile per-packet one-way delay: 53.116 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 28.09 Mbit/s
95th percentile per-packet one-way delay: 47.255 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 8.59 Mbit/s
95th percentile per-packet one-way delay: 47.957 ms
Loss rate: 0.01%
Run 7: Report of PCC-Vivace — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 60.82 Mbps)
  - Flow 2 ingress (mean 28.09 Mbps)
  - Flow 3 ingress (mean 8.59 Mbps)
  - Flow 1 egress (mean 60.68 Mbps)
  - Flow 2 egress (mean 28.09 Mbps)
  - Flow 3 egress (mean 8.59 Mbps)

- **Packet Loss (ms):**
  - Flow 1 (95th percentile 53.12 ms)
  - Flow 2 (95th percentile 47.26 ms)
  - Flow 3 (95th percentile 47.96 ms)
Run 8: Statistics of PCC-Vivace

Start at: 2018-06-30 00:21:35
End at: 2018-06-30 00:22:05
Local clock offset: 0.183 ms
Remote clock offset: 3.842 ms

# Below is generated by plot.py at 2018-06-30 01:39:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.48 Mbit/s
95th percentile per-packet one-way delay: 41.808 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 68.25 Mbit/s
95th percentile per-packet one-way delay: 41.768 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 21.60 Mbit/s
95th percentile per-packet one-way delay: 41.492 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 8.69 Mbit/s
95th percentile per-packet one-way delay: 43.138 ms
Loss rate: 0.03%
Run 8: Report of PCC-Vivace — Data Link
Run 9: Statistics of PCC-Vivace

Start at: 2018-06-30 00:47:16
End at: 2018-06-30 00:47:46
Local clock offset: 0.122 ms
Remote clock offset: 4.309 ms

# Below is generated by plot.py at 2018-06-30 01:39:13
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 84.05 Mbit/s
  95th percentile per-packet one-way delay: 50.403 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 69.44 Mbit/s
  95th percentile per-packet one-way delay: 49.156 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 16.08 Mbit/s
  95th percentile per-packet one-way delay: 55.451 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 11.88 Mbit/s
  95th percentile per-packet one-way delay: 55.474 ms
  Loss rate: 0.00%
Run 10: Statistics of PCC-Vivace

Start at: 2018-06-30 01:12:14
End at: 2018-06-30 01:12:44
Local clock offset: 0.321 ms
Remote clock offset: 4.563 ms

# Below is generated by plot.py at 2018-06-30 01:39:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.33 Mbit/s
95th percentile per-packet one-way delay: 42.547 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 66.19 Mbit/s
95th percentile per-packet one-way delay: 42.368 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 20.61 Mbit/s
95th percentile per-packet one-way delay: 42.667 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 10.40 Mbit/s
95th percentile per-packet one-way delay: 43.645 ms
Loss rate: 0.24%
Run 10: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 65.28 Mb/s)
- Flow 1 egress (mean 66.19 Mb/s)
- Flow 2 ingress (mean 20.67 Mb/s)
- Flow 2 egress (mean 20.61 Mb/s)
- Flow 3 ingress (mean 10.43 Mb/s)
- Flow 3 egress (mean 10.40 Mb/s)

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

- Flow 1 (95th percentile 42.37 ms)
- Flow 2 (95th percentile 42.67 ms)
- Flow 3 (95th percentile 43.65 ms)
Run 1: Statistics of WebRTC media

End at: 2018-06-29 21:15:23
Local clock offset: -0.154 ms
Remote clock offset: 7.307 ms

# Below is generated by plot.py at 2018-06-30 01:39:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.08 Mbit/s
95th percentile per-packet one-way delay: 39.344 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 2.17 Mbit/s
95th percentile per-packet one-way delay: 38.646 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 1.46 Mbit/s
95th percentile per-packet one-way delay: 39.843 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 40.366 ms
Loss rate: 0.00%
Run 1: Report of WebRTC media — Data Link

[Graph showing throughput over time with different lines for ingress and egress for different flows with mean throughputs given in Mbps.]

[Graph showing per-packet one-way delay with different lines for different flows with 95th percentile delays given in ms.]
Run 2: Statistics of WebRTC media

Start at: 2018-06-29 21:40:58
End at: 2018-06-29 21:41:28
Local clock offset: -1.228 ms
Remote clock offset: 8.237 ms

# Below is generated by plot.py at 2018-06-30 01:39:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.64 Mbit/s
95th percentile per-packet one-way delay: 38.392 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 37.924 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 38.378 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 39.480 ms
Loss rate: 0.00%
Run 2: Report of WebRTC media — Data Link

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The image contains two graphs. The first graph shows the throughput over time for different flows, indicating the mean throughput rates for each flow. The second graph illustrates the per-packet round-trip time delay, with data points for each flow indicating their respective 95th percentile delays.
Run 3: Statistics of WebRTC media

Start at: 2018-06-29 22:06:50
End at: 2018-06-29 22:07:20
Local clock offset: 4.457 ms
Remote clock offset: 9.648 ms

# Below is generated by plot.py at 2018-06-30 01:39:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.72 Mbit/s
95th percentile per-packet one-way delay: 38.653 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 1.99 Mbit/s
95th percentile per-packet one-way delay: 38.192 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 38.368 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 40.528 ms
Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link

![Graph showing WebRTC media data](image1)

![Graph showing WebRTC media data](image2)
Run 4: Statistics of WebRTC media

Start at: 2018-06-29 22:33:01
End at: 2018-06-29 22:33:31
Local clock offset: 6.376 ms
Remote clock offset: 4.337 ms

# Below is generated by plot.py at 2018-06-30 01:39:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.03 Mbit/s
95th percentile per-packet one-way delay: 39.457 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 38.991 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 1.27 Mbit/s
95th percentile per-packet one-way delay: 38.911 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 41.127 ms
Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 2.36 Mbit/s)  Flow 1 egress (mean 2.35 Mbit/s)
Flow 2 ingress (mean 1.27 Mbit/s)  Flow 2 egress (mean 1.27 Mbit/s)
Flow 3 ingress (mean 0.42 Mbit/s)  Flow 3 egress (mean 0.42 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 38.99 ms)  Flow 2 (95th percentile 38.91 ms)  Flow 3 (95th percentile 41.13 ms)
Run 5: Statistics of WebRTC media

Start at: 2018-06-29 23:00:03
End at: 2018-06-29 23:00:33
Local clock offset: 4.299 ms
Remote clock offset: 3.424 ms

# Below is generated by plot.py at 2018-06-30 01:39:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.93 Mbit/s
  95th percentile per-packet one-way delay: 39.145 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 2.18 Mbit/s
  95th percentile per-packet one-way delay: 38.021 ms
  Loss rate: 0.03%
-- Flow 2:
  Average throughput: 1.29 Mbit/s
  95th percentile per-packet one-way delay: 39.546 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.48 Mbit/s
  95th percentile per-packet one-way delay: 40.518 ms
  Loss rate: 0.00%
Run 5: Report of WebRTC media — Data Link

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

![Graph 2: Per-packet round-trip delay over Time](image2)
Run 6: Statistics of WebRTC media

Start at: 2018-06-29 23:26:08
End at: 2018-06-29 23:26:38
Local clock offset: 1.248 ms
Remote clock offset: 3.305 ms

# Below is generated by plot.py at 2018-06-30 01:39:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.73 Mbit/s
95th percentile per-packet one-way delay: 38.227 ms
Loss rate: 0.00%
-- Flow 1:
  Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 37.366 ms
Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 38.215 ms
Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 39.594 ms
Loss rate: 0.00%
Run 6: Report of WebRTC media — Data Link

[Line charts showing throughput and per-packet round trip delay over time for different flows with mean throughputs indicated for each.]
Run 7: Statistics of WebRTC media

Start at: 2018-06-29 23:50:59
End at: 2018-06-29 23:51:29
Local clock offset: 0.018 ms
Remote clock offset: 4.082 ms

# Below is generated by plot.py at 2018-06-30 01:39:14
# Datalink statistics
-- Total of 3 flows:
    Average throughput: 3.71 Mbit/s
    95th percentile per-packet one-way delay: 39.182 ms
    Loss rate: 0.00%
-- Flow 1:
    Average throughput: 1.98 Mbit/s
    95th percentile per-packet one-way delay: 39.347 ms
    Loss rate: 0.00%
-- Flow 2:
    Average throughput: 1.29 Mbit/s
    95th percentile per-packet one-way delay: 39.189 ms
    Loss rate: 0.00%
-- Flow 3:
    Average throughput: 0.45 Mbit/s
    95th percentile per-packet one-way delay: 38.668 ms
    Loss rate: 0.00%
Run 7: Report of WebRTC media — Data Link
Run 8: Statistics of WebRTC media

Start at: 2018-06-30 00:15:57
End at: 2018-06-30 00:16:27
Local clock offset: -0.266 ms
Remote clock offset: 3.839 ms

# Below is generated by plot.py at 2018-06-30 01:39:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.71 Mbit/s
95th percentile per-packet one-way delay: 38.546 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.99 Mbit/s
95th percentile per-packet one-way delay: 37.832 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 38.824 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 39.375 ms
Loss rate: 0.00%
Run 8: Report of WebRTC media — Data Link
Run 9: Statistics of WebRTC media

Start at: 2018-06-30 00:41:47
End at: 2018-06-30 00:42:17
Local clock offset: 0.119 ms
Remote clock offset: 4.205 ms

# Below is generated by plot.py at 2018-06-30 01:39:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.69 Mbit/s
95th percentile per-packet one-way delay: 38.688 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.97 Mbit/s
95th percentile per-packet one-way delay: 38.574 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 38.136 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 40.254 ms
Loss rate: 0.00%
Run 9: Report of WebRTC media — Data Link
Run 10: Statistics of WebRTC media

Start at: 2018-06-30 01:06:46
End at: 2018-06-30 01:07:16
Local clock offset: 0.277 ms
Remote clock offset: 4.745 ms

# Below is generated by plot.py at 2018-06-30 01:39:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.72 Mbit/s
  95th percentile per-packet one-way delay: 38.852 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 1.98 Mbit/s
  95th percentile per-packet one-way delay: 38.725 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.28 Mbit/s
  95th percentile per-packet one-way delay: 38.878 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.48 Mbit/s
  95th percentile per-packet one-way delay: 39.132 ms
  Loss rate: 0.00%
Run 10: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 1.98 Mbit/s)
- Flow 1 egress (mean 1.98 Mbit/s)
- Flow 2 ingress (mean 1.28 Mbit/s)
- Flow 2 egress (mean 1.28 Mbit/s)
- Flow 3 ingress (mean 0.48 Mbit/s)
- Flow 3 egress (mean 0.48 Mbit/s)